RECORD OF DECISION
KENILWORTH PARK LANDFILL
NATIONAL CAPITAL PARKS—EAST
NATIONAL PARK SERVICE
WASHINGTON, D.C.

July 2022

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List of Abbreviations and Acronyms

µg/dL	Micrograms per Deciliter
95UCL	95% Upper Confidence Limit
ANC	Advisory Neighborhood Commission
APACC	Anacostia Park and Community Collaborative
ARAR	Applicable or Relevant and Appropriate Requirement
ATSDR	Agency for Toxic Substances and Disease Registry
ART	Anacostia Riverwalk Trail
BERA	Baseline Ecological Risk Assessment
BLL	Blood Lead Levels
BTAG	Biological Technical Assistance Group
BTVs	Background Threshold Values
CDC	Centers for Disease Control and Prevention
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIP	Community Involvement Plan
COC	Contaminant of Concern
COEC	Contaminant of Ecological Concern
COPC	Contaminant of Potential Concern
COPEC	Contaminant of Potential Ecological Concern
CSM	Conceptual Site Model
DDOT	District Department of Transportation
DO	Dissolved Oxygen
DOEE	Department of Energy and Environment
E&E	Ecology & Environment, Inc.
EPA	U.S. Environmental Protection Agency
EPC	Exposure Point Concentration
ERT	Environmental Response Team

ESD	Explanation of Significant Differences
ESV	Ecological Screening Value
FS	Feasibility Study
HHRA	Human Health Risk Assessment
HI	Hazard Index
HQ	Hazard Quotient
ISM	Incremental Sampling Methodology
JCO	The Johnson Company, Inc.
KPL	Kenilworth Park Landfill
KPN	Kenilworth Park North
KPS	Kenilworth Park South
LEL	Lower Explosive Limit
LOAEL	Lowest Observed Adverse Effect Level
MSW	Municipal Solid Waste
NACE	National Capital Parks – East
NAPL	Non-Aqueous Phase Liquid
NCP	National Oil and Hazardous Substances Pollution Contingency Plan (a.k.a. National Contingency Plan)
NOAEL	No Observed Adverse Effect Level
NPS	National Park Service
O&M	Operation and Maintenance
ORP	Oxygen Reduction Potential
OU	Operable Unit
PAH	Polycyclic Aromatic Hydrocarbons
PA/SI	Preliminary Assessment/Site Investigation
PCB	Polychlorinated Biphenyls
PF	Problem Formulation
PRG	Preliminary Remediation Goal
Q&A	Question and Answer

RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RfD	Reference Dose
RG	Remediation Goal
RI	Remedial Investigation
ROD	Record of Decision
RSL	Regional Screening Level
SARA	Superfund Amendments and Reauthorization Act
SGS	Supplemental Groundwater Study
SLERA	Screening Level Ecological Risk Assessment
SVOC	Semivolatile Organic Compound
TBC	To Be Considered
TEQ	Toxic Equivalency
TMV	Toxicity, Mobility, and Volume
TOC	Total Organic Carbon
TPH	Total Petroleum Hydrocarbons
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WQC	Water Quality Criteria

PART 1: THE DECLARATION

1.1 SITE NAME AND LOCATION

The Kenilworth Park Landfill (KPL) Site is located along the eastern bank of the Anacostia River within Anacostia Park, a unit of the national park system managed by the National Capital Parks – East (NACE) administrative unit of the National Park Service (NPS) in Washington, D.C. The Site is subdivided into two areas: Kenilworth Park North (KPN) and Kenilworth Park South (KPS). KPN and KPS are separated by Watts Branch, a tributary to the Anacostia River.

Public Law No. 108-335, § 344, 118 Stat. 1322, 1350 (2004), directed the United States (NPS) to transfer administrative jurisdiction of KPN and certain adjacent areas to the District of Columbia (District) "for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." Although the specific future use of KPN has yet to be determined by the District, some portion of the park is expected to be used for organized sport and recreation or community activities and special events. The District also intends to create new tidal wetlands adjacent to Watts Branch and the Anacostia River on portions of KPN. KPS will remain under the jurisdiction of NPS. The future land use of KPS is governed by the Anacostia Park Management Plan (NPS, 2017) and is zoned as a natural resources recreation area. KPS is expected to remain in its current natural state; however, current plans provide for a segment of the Anacostia Riverwalk Trail (ART) to be developed across KPS and link with segments of the trail in KPN.

NPS divided the Site into two Operable Units (OUs): OU1 consists of surface and subsurface soils, including waste material in the landfill, and OU2 consists of shallow groundwater beneath OU1. NPS determined that portions of OU1 present an unacceptable human health risk to park visitors under certain high-frequency, high-intensity land uses—such as participating in organized sports and recreation—and has selected a remedy to address those unacceptable risks. NPS determined that OU2 does not present unacceptable risks to human health or the environment; therefore, no further response activities are necessary for OU2.

1.2 STATEMENT OF BASIS AND PURPOSE

This Record of Decision (ROD) presents the Selected Remedy for the KPL Site in Washington D.C. The Selected Remedy was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (a.k.a. National Contingency Plan [NCP]). This decision is based on the Administrative Record file for this Site.

1.3 ASSESSMENT OF SITE

The response action selected in this Record of Decision (ROD) is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

1.4 DESCRIPTION OF SELECTED REMEDY

The unacceptable human health risks identified through multiple phases of sampling and analysis are related to contaminants present in the soil fill used to cover the landfill or placed over certain areas after closure. A 1-foot-thick, clean soil barrier will be placed in areas of the Site that are reserved for organized sports and recreation, community activities, and special events. Institutional controls will be implemented to:

- Maintain the new clean soil barrier and existing engineering controls in good condition
- Prevent exposure to remaining potential subsurface hazards (i.e., buried waste and landfill gas) that may be encountered during completion of excavation activities
- Limit future land use
- Monitor for potential erosion to confirm the landfill cover material is maintaining a barrier that prevents potential exposure to buried waste

This remedy is consistent with the intended future land use of the park outlined in Section 1.1.

The Selected Remedy does not address "source materials" constituting "principal threats" because such source materials are not present at the Site. The waste materials (or contaminants) present at the Site are of low to moderate toxicity and are relatively immobile in air or groundwater; therefore, they do not meet the definition of "principal threat wastes." Principal threat wastes are "source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained or would present a significant risk to human health or the environment should exposure occur" (EPA, 1991).

1.5 STATUTORY DETERMINATIONS

The Selected Remedy was chosen because it (1) is protective of human health and the environment, (2) complies with applicable or relevant and appropriate federal and District requirements, (3) is cost-effective, and (4) uses permanent solutions to the maximum extent practicable.

The remedy is not required to satisfy the statutory preference of treatment as a principal element because principal threat wastes are not present at the Site. The containment strategy of the Selected Remedy is consistent with landfill cleanup standard practice and is consistent with EPA guidance (EPA, 1993).

Although contaminants at the Site are relatively low in toxicity and relatively immobile in air and groundwater, hazardous substances, pollutants, or contaminants will remain on Site above levels that prohibit unlimited use and unrestricted exposure. Therefore, a statutory review will be conducted within five years after initiation of the remedial action, and every five years thereafter, to ensure that the remedy is, or will be at completion, protective of human health and the environment.

1.6 DATA CERTIFICATION CHECKLIST

The following information is included in the Decision Summary section of this ROD; additional information can be found in the Administrative Record file for this Site:

- Chemicals of concern (COCs) and their respective concentrations (Section 2.5 – Site Characteristics)
- Baseline risk posed by the COCs (Section 2.7 – Summary of Site Risks)

- Cleanup levels established for COCs and the basis for these levels (Section 2.8 – Remedial Action Objectives)
- How source materials constituting principal threats are addressed (Section 2.11 – Principal Threat Wastes)
- Current and reasonably anticipated future land use assumptions and current and potential future beneficial uses of groundwater used in the baseline risk assessment and ROD (Section 2.6 – Current and Potential Future Site and Resource Uses)
- Potential land and groundwater use that will be available at the Site as a result of the Selected Remedy (Section 2.12 – Selected Remedy)
- Estimated capital, annual operation and maintenance (O&M), and total present-worth costs, discount rate, and the number of years over which the remedy cost estimates are projected (Section 2.12 – Selected Remedy)
- Key factor(s) that led to selecting the remedy (Section 2.12 – Selected Remedy)

1.7 AUTHORIZING SIGNATURES

JOAN MOONEY Digitally signed by JOAN MOONEY
Date: 2022.12.08 16:27:50 -05'00'

Joan M. Mooney
Principal Deputy Assistant Secretary - Policy, Management and Budget

Date

PART 2: THE DECISION SUMMARY

This Decision Summary provides a description of the Site-specific factors and analyses that led to the selection of the remedy. It includes background information about the Kenilworth Park Landfill Site (Site), the nature and extent of contamination found at the Site, the assessment of human health and environmental risks posed by the contaminants at the Site, and the identification and evaluation of remedial action alternatives.

2.1 SITE NAME, LOCATION, AND DESCRIPTION

As shown on the Site Area Map (Figure 1), the Site is located along the eastern bank of the Anacostia River within Anacostia Park, a unit of the National Park System managed by the National Capital Parks – East (NACE) administrative unit of the National Park Service (NPS) in Washington, D.C. The Site is subdivided into two areas, Kenilworth Park North (KPN) and Kenilworth Park South (KPS). KPN and KPS are separated by Watts Branch, a tributary to the Anacostia River. KPN is accessible from Deane Avenue NE near the intersection with Lee Street NE. KPS is accessible from either the Deane Avenue extension within KPN (currently blocked by jersey barriers) or via the Anacostia Riverwalk Trail (ART) with access at the intersection of Foote Place NE and Foote Street NE.

KPN consists of grassy open space with buffers or transition zones of trees and shrubs along riparian or marsh boundaries. A large portion of KPN is used for public recreation (e.g., soccer fields, a football field, tennis courts, and basketball courts). In 2016, the District of Columbia Department of Transportation (DDOT) completed an extension of the asphalt-paved ART over a portion of KPN. The ART will soon be extended within KPN to connect to a new bridge that will cross the river and tie into the trail network within the National Arboretum. Administrative jurisdiction of KPN and some adjacent areas of the park are legislated to be transferred in the future to the District (Public Law 108-335 § 334) “for the provision of public recreational facilities, open space, or public outdoor recreational opportunities.” The District is in the beginning stages of the planning process for future uses of KPN. These uses are anticipated to include a mixture of developed areas for competitive athletic events and public gatherings and undeveloped open spaces and wetlands.

KPS consists of an open field with well-established grass cover and shrubs and areas that are more densely vegetated with shrubs and trees. Although KPS is currently administratively closed, the asphalt paved extension of Deane Avenue NE is used by the public for walking, running, and biking. KPS is also a popular location for bird watchers who likely explore off-trail areas. Plans for the ART include developing a segment that crosses KPS and joins the existing ART on KPN. KPS will remain under NPS administrative jurisdiction and has been designated as a Natural Resource Recreation Zone in the Management Plan for Anacostia Park (NPS, 2017). This designation has been made with the intention to preserve and protect natural areas and provide passive recreational opportunities. Recreational facilities at KPS will be limited to the ART; no other facilities (e.g., picnic areas, playgrounds, or recreation fields) will be developed in KPS.

2.2 SITE HISTORY AND ENFORCEMENT ACTIVITIES

2.2.1 Site History

The District operated a landfill at the Site from 1942 to 1970. Before landfill operation began, the Site consisted of low-lying wetland areas and recreational lakes, which were developed and excavated by the U.S. Army Corps of Engineers in the 1930s. These areas were filled with waste during landfill operations.

Waste disposed in the landfill included ash from District municipal solid waste (MSW) incinerators; municipal and other solid waste that was burned openly and buried on Site; and from 1968 to 1970, raw MSW that was buried without burning. Construction demolition debris and commercial waste were also disposed during operation of the landfill. Clay-rich soil was used to cover and encapsulate the landfills after they were closed in 1970, and the land was redeveloped for use as sports fields, trails, and picnic areas.

Nearly 30 years after the landfill closed, approximately 10 to 30 feet of soil and demolition debris fill was placed over KPS with the intention of creating more sports fields. Engineering design plans from 1996 show space designated for future ultimate frisbee and soccer fields. Filling activities were discontinued before the fields were completed and, in 2002, surface debris such as concrete, asphalt, and rebar that posed physical hazards to visitors was removed from KPS. NPS then constructed drainage ditches, berms, and sediment ponds to stabilize and revegetate the Site and protect against surface erosion. These improvements, in addition to the subsequent vegetation cover, created conditions at KPS that are suited to the park's intended purpose and use.

2.2.2 CERCLA Investigation Activities

NPS initiated Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) investigation activities at the Site in October 1998. Information from the investigation activities and associated reports are provided on Figure 2 (Site Investigation History). Key documents produced by NPS are listed below. Brief summaries of each CERCLA investigation are provided in the 2019 Remedial Investigation (RI) Addendum Report (JCO, 2019a).

Document Title	Publication Date
Preliminary Assessment/Site Investigation (PA/SI) Report for KPS	June 2000
PA/SI Report for KPN	February 2002
RI Report for KPN	November 2007
RI Report for KPS	June 2008
Feasibility Study (FS) Report for KPN and KPS	April 2012
Proposed Plan for KPN and KPS (remedial design and remedial action deferred)	February 2013
RI Addendum Report	June 2019
FS Addendum Report	September 2020
Proposed Plan	November 2020

2.2.3 CERCLA Enforcement Activities

NPS and the District are in discussions regarding the implementation of the Selected Remedy and resolution of claims related to past and future response costs incurred at the Site.

2.3 Community Participation

NPS first published a Community Involvement Plan (CIP) in 2008. The CIP, prepared in accordance with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan (a.k.a. National Contingency Plan [NCP]), serves as a guide for NPS to engage and inform community members, environmental groups, government officials, the media, and other interested parties about the environmental investigation and cleanup activities at the Site. The CIP is considered a living document and has been updated twice since 2008. The CIP was updated in 2013 with the release of the 2013 Proposed Plan, which was deferred pending results of an additional groundwater investigation. The CIP was last updated in September 2020 to coincide with the release of the 2020 Proposed Plan (NPS, 2020).

NPS accepted public comments on the 2013 Proposed Plan from March 5 through May 6, 2013. On April 11, 2013, NPS held a public meeting to explain that plan. Comments from the meeting and the public comment period were added to the Administrative Record file. NPS held an informational public meeting on October 17, 2018, to provide an update on the status of the Site and summarize investigations completed since the release of the 2013 Proposed Plan.

NPS has been a regular and active participant at meetings with the Leadership Council for a Cleaner Anacostia River and presented interim findings of the RI Addendum activities to that group in June 2018. Outside the established comment periods or public meetings, NPS also responds to questions and concerns raised by the public or the media.

The 2020 Proposed Plan, which superseded the 2013 Proposed Plan, was released for public comment on November 12, 2020, with the initial comment period set at 90 days. Notification of the public comment period was published in *The Washington Times*, *The Washington Informer*, and *East of the River* and was posted on the Kenilworth Park Landfill (KPL) Site web page. Upon request, the public comment period was extended by 30 days to end on March 12, 2021. Notification of the comment period extension was published in *The Washington Times*, *The Washington Informer*, and *East of the River*. On November 12, 2021, NPS posted a recorded presentation on the KPL Site web page that summarized the RI Addendum (JCO, 2019a), Feasibility Study (FS) Addendum (VHB, 2020), and Proposed Plan (NPS, 2020).

On November 18, 2020, NPS held a virtual public meeting, which included an introduction from the NACE superintendent Tara Morrison, followed by the prerecorded presentation referenced above, and a live question and answer (Q&A) session. Questions submitted orally and in writing through the Webinar Q&A feature were answered live until the meeting ended. All questions and comments were recorded, and NPS provided written responses in a memorandum dated December 29, 2020, with the subject heading: “Interim Response to Public Comments Received on the Proposed Plan for Cleanup of the Kenilworth Park Landfill Site.” A recording of the public meeting was posted on the KPL Site web page on December 3, 2020.

NPS presented the Proposed Plan at the virtual Leadership Council for a Cleaner Anacostia River meeting held on December 10, 2020. Questions were accepted and answered verbally. Questions submitted through

the webinar chat feature were recorded, and responses were included in the above-referenced Interim Response to Public Comments memorandum dated December 29, 2020, along with questions and comments received through email. NPS prepared an addendum (dated February 2, 2021) to the December 29, 2020, Interim Response to Public Comments memorandum that included questions and comments received after December 29, 2020, and posted the updated memorandum on the KPL website.

NPS supported efforts by Anacostia Park and Community Collaborative (APACC), a local community organization that posted information intended to be less technical and more accessible to the public on the organization's Facebook page. On February 29, 2021, NPS received written comments and questions on the 2020 Proposed Plan from APACC. NPS attended a virtual APACC meeting on March 5, 2021 and responded to questions APACC gathered and previously submitted to NPS, as well as additional questions posed during the meeting. NPS prepared a Response to Comments Memorandum answering the previously submitted APACC questions. The public outreach efforts for the 2020 Proposed Plan are summarized below.

Summary of Public Outreach for 2020 Proposed Plan

November 18, 2020	NPS hosted virtual public meeting to explain the Proposed Plan
December 2, 2020	NPS attended Anacostia Watershed Committee meeting to answer questions on the Proposed Plan
December 10, 2020	NPS presented at virtual Leadership Council for a Cleaner Anacostia River meeting and answered questions on the Proposed Plan
January 12, 2021	NPS attended virtual Advisory Neighborhood Commission (ANC) 7D meeting to answer questions and accept input on the Proposed Plan
January 15, 2021	NPS presented at virtual Anacostia Park and Community Collaborative (APACC) meeting and answered questions on the Proposed Plan
January 25, 2021	NPS attended virtual Deanwood Citizens Association meeting to answer questions and accept input on the Proposed Plan
March 5, 2021	NPS presented at virtual APACC meeting and answered questions submitted to NPS in advance on the Proposed Plan, as well as those posed during the meeting

NPS published eight Community Update Fact Sheets providing information on the status of the RI/FS activities since March 2011. Copies of the Community Update Fact Sheets are included in the Administrative Record. Dates of publication for the fact sheets are listed below:

Publication Dates for Community Update Fact Sheets

- March 2011
- August 2013
- December 2013
- December 2016
- August 2017
- October 2018
- March 2020
- October 2020

2.4 SCOPE AND ROLE OF THE OPERABLE UNIT OR RESPONSE ACTION

NPS divided the Site into two Operable Units (OUs): OU1 consists of surface and subsurface soils, including waste material in the landfill, and OU2 consists of shallow groundwater beneath OU1. NPS determined that OU1 presents an unacceptable human health risk to park visitors under certain high-frequency, high-intensity land uses - such as participating in organized sports and recreation - and has selected a remedy to address

those unacceptable risks. NPS determined that OU2 does not present unacceptable risks to human health or the environment; therefore, no further response activities are required for OU2.

The Selected Remedy outlined in this ROD addresses the unacceptable exposure risk associated with certain high-frequency and high-intensity uses of the Site. The Selected Remedy is expected to be the final CERCLA response action at the Site.

2.5 SITE CHARACTERISTICS

2.5.1 Overview of the Site

The KPL Site covers a total of approximately 130 acres (KPN is approximately 80 acres, and KPS is about 50 acres). As shown on Figure 1, the Anacostia River runs along the west side of both KPN and KPS. Kenilworth Marsh is located to the north of KPN; Watts Branch runs along part of the southern boundary of KPN then intersects KPN and KPS. An unnamed tributary to Watts Branch (Unnamed Tributary) runs along the east side of KPS. Areas along the bank of the river, the southern tip of KPN, and areas adjacent to Watts Branch and the Unnamed Tributary are mapped within the 100-year floodplain.

The former landfill surrounds a portion of Mayfair Terrace, a multifamily residential neighborhood separated from the Site by Watts Branch and the Unnamed Tributary. The Eastland Gardens residential neighborhood borders the Site to the east and southeast of KPN. The Kenilworth neighborhood is located east and northeast of KPN. Thomas Elementary School is located about 300 feet southeast of KPS. The Benning Road solid waste transfer station and the Pepco Benning Road site are to the south of KPS.

Prior to development as a landfill, the KPL Site consisted of low-lying marsh and mud flat areas connected to the Anacostia River. The mud flats consist of Holocene clay and silt alluvium. Recreational lakes were excavated out of the alluvium by the U.S. Army Corps of Engineers in the 1930s and subsequently backfilled with landfill waste. When landfill operations were discontinued in 1970, the District covered the waste with approximately 2 to 7 feet of soil fill. The surface soil fill, which has been found to contain chemicals of concern (COCs) at the Site, was reportedly amended with sewage sludge to support revegetation. Other than the reference to sludge amendment, the source of the soil fill used to cap the landfill is undocumented.

The current Site topography is graded such that surface water generally drains toward the surrounding surface water features. The topography tends to be steeper along the bank of the Anacostia River, Watts Branch, and Kenilworth Marsh. Several relatively small flat and low-lying areas are on top of the former landfill where rainwater and snowmelt pond periodically. Wetland inventory information obtained from the District identifies small, isolated wetland areas within the Site limits that consist of freshwater-emergent, freshwater-forested, and freshwater-shrub wetlands. One of the three sedimentation ponds is included in the inventory as a freshwater pond/freshwater-emergent wetland.

2.5.2 Conceptual Site Model

Figure 3 presents a graphic conceptual site model (CSM), and Figure 4 (Risk Assessment Pathways) identifies primary contaminant sources, release mechanisms, and receptor exposure risk pathways. Sources of contamination include buried waste and surface soil that was placed over the waste (i.e., landfill cover

material). There is no evidence that contaminants represent principal threat wastes[1] because their toxicity is relatively low, and they do not appear to be migrating. Pathways of exposure include direct contact with contaminants in surface soil by visitors and park workers and direct contact with contaminants in subsurface soil and buried waste by excavation contractors. There is also the potential for construction workers to encounter buried unexploded ordnance (UXO) and explosive levels of methane gas when excavating waste from the landfill. These explosive risks are considered to be low but cannot be ignored.

Under certain land use scenarios (such as organized sport, recreation, and community activities and special events), the direct contact exposure to contaminants in surface soil presents an unacceptable long-term cancer risk. The Selected Remedy will mitigate exposure to COCs in surface soil by installing a clean soil barrier in areas that may be used with higher frequency and higher intensity, such as over athletic fields and areas reserved for public gathering. The potential presence of buried UXO and explosive concentrations of methane gas present a potential risk to excavation workers; the explosion risks will be managed by institutional controls (e.g., requirements for safety planning and precautions when performing excavation activities).

The landfill was closed before the effective date of the Resource Conservation and Recovery Act (RCRA) landfill closure regulations; therefore, the requirements of those regulations are not applicable to the Site. However, several key criteria of the RCRA landfill closure regulations were met. Soil cover installed over the waste during landfill closure effectively prevents direct contact with landfill wastes by visitors and park workers; it limits infiltration of surface water and controls surface water runoff, which in turn limits potential erosion of landfill cover soils. Although certain contaminants have been found in groundwater samples, groundwater migration from the Site does not pose an unacceptable risk to ecological receptors. The current groundwater quality findings support the conclusion that no further response action is necessary for OU2, which is the shallow groundwater below OU1. Based on the assessment of landfill gas within and at the perimeter of the landfill, landfill gas migration beyond the Site limits does not appear to be a risk; however, the Selected Remedy includes performing a confirmatory assessment of landfill gas migration at the Site perimeter.

Site Geology: The Site stratigraphy at KPN varies slightly from KPS because of soil and demolition debris placed over KPS in the late 1990s. However, the two landfills are similar in that they were capped in the early 1970s with a clay-rich soil. Waste was placed in the former recreational lakes and, in most areas, over the clay and silt alluvium. The alluvium overlies a regional sand and gravel deposit that is part of the Wicomico formation, which is underlain by a regional clay deposit that is part of the Patapsco formation.

Site Hydrogeology: Two zones of shallow groundwater flow are present below the Site. The upper zone consists of the soil, waste, and high-energy stream deposits that are generally above the clay and silt alluvium. The lower zone consists of the Wicomico sand and gravel deposits that overlie the less permeable Patapsco clay. Groundwater in the upper flow zone is inferred to flow radially from the two landfills and discharges to porewater within the river, marsh, Watts Branch, and the Unnamed Tributary. In some areas, groundwater has been observed to seep from steep side slopes following periods of wet weather, and along the banks of the river and Watts Branch. Groundwater in the lower zone is part of a more regional system that flows across the Site and discharges to the river. The clay and silt alluvium, which is present in most

1 Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained, or would present a significant risk to human health or the environment should exposure occur (EPA, 1991).

areas of the Site, is considered an aquitard, which limits vertical migration of groundwater between the two shallow flow zones.

Surface Water Hydrology: The Anacostia River and the lower reach of Watts Branch are tidal. Kenilworth Marsh, which is connected to the river, also floods with the tides. Watts Branch and the Unnamed Tributary receive stormwater discharge from urban runoff, which causes rapid changes in flow when it rains. Drainage from urban areas also impacts surface-water quality. The landfill areas are generally graded to promote surface water runoff; however, there are a few depressions at KPN where water is observed to collect and pond. Three sedimentation ponds were constructed around the perimeter of KPS in the late 1990s as part of the grading plans. Other low-lying areas within KPS may also contain saturated surface soil. Surface water that does not run off infiltrates the landfill surface and recharges the shallow groundwater.

Sensitive Environments: The Site is bordered by an elementary school, a daycare center, and residential neighborhoods. Sensitive environments in the vicinity of the Site, such as wetlands are associated with the Anacostia River, Kenilworth Marsh, Watts Branch, and the Unnamed Tributary, and the Site is located within a unit of the National Park System.

Contaminants and Media of Concern: The COCs for the Site include polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), lead, the pesticide dieldrin (KPN only), and arsenic; each of these COCs was detected in some surface soil samples at concentrations that may pose an unacceptable long-term human health risk under certain high-intensity and high-frequency exposure scenarios. PAHs, PCBs, and lead were measured in some subsurface soil and landfill waste samples. Lead was found in waste material samples at levels that may cause unacceptable risks to construction workers undertaking longer-term (greater than 90-day) excavations without adequate safety precautions. One UXO was discovered during installation of the sprinkler system for the football field; therefore, precautions are necessary to screen for UXOs prior to excavation activities, despite the fact that the Site was not a former UXO disposal site. Dissolved iron was identified in porewater samples collected from the Anacostia River adjacent to the Site at concentrations that may represent an unacceptable risk to ecological receptors and is likely related to Site groundwater.

Migration and Exposure Pathways: Potential contaminant migration pathways include groundwater and overland flow. Contaminants present in groundwater have the potential to migrate through the subsurface and discharge to porewater in the surrounding surface water bodies, which in turn discharges to surface water. Groundwater also discharges directly to the ground surface in low elevation seepage areas. Shallow groundwater flowing below the Site is not a viable source of potable water supply; therefore, there is no exposure risk associated with human consumption of extracted groundwater. Visitors and park workers could potentially be exposed to contaminants in surface soil; however, most areas of the Site are well vegetated, limiting the potential for direct contact and dust generation. Workers conducting excavation activities could be exposed to contaminants present within buried soil and waste.

2.5.3 Surface and Subsurface Features

As noted in Section 2.2.1, the District operated a landfill at the Site from 1942 to 1970. The horizontal limits of the landfill are shown on Figure 1. The limits of waste were established using a combination of historical aerial photographs, abrupt changes observed in surface topography (denoting the edge of fill material), and geophysics (electromagnetic survey). Variations in waste material thickness across the landfill is the result of

filling of the recreational lakes and the varied surface topography. The original landfill waste thicknesses in soil borings have been measured to be as great as 40 feet. Investigations found that the landfill soil cover is generally between 2 and 7 feet.

Waste materials included ash from District MSW incinerators, MSW that was burned openly and buried onsite, and—in the last few years of operation (1968 to 1970)—raw MSW that was buried without burning. Based on review of soil boring logs completed as part of the RI, the waste thickness is as great as 40 feet at KPN and 25 feet at KPS. Other waste, including construction demolition debris was likely disposed on Site during facility operations. As noted in Section 2.5.2, clay-rich soil was used to cover the landfill after it was closed in 1970 and the land was developed with recreational facilities. After the landfill had been closed for almost 30 years, approximately 10 to 30 feet of soil and demolition debris fill were placed over KPS. In the early 2000s, surface debris (concrete, asphalt, rebar, etc.) was removed from KPS, surface water drainage improvements were made, and the ground surface was revegetated.

As is typical of MSW incinerator residue and burned and unburned MSW, waste buried at the Site contains elevated concentrations of metals and PAHs. Evidence of PCBs and dioxin/furan congeners is also present. One UXO was discovered during excavation for an irrigation system; therefore, the presence of buried UXO cannot be ruled out.

No areas of archeological or historical importance have been identified at the Site.

2.5.4 Sampling Strategy

As indicated on the Site Investigation History timeline (Figure 2), NPS initiated investigation activities at the Site in 1998. The last round of sampling was completed in 2017. Samples were collected of surface soil, subsurface soil/buried waste, sediment, groundwater, surface water, porewater, seep water, soil gas, and indoor air. The sampling approaches, locations, and dates are provided in each of the reports listed on Figure 2.

Initial Site investigation activities focused on characterizing surface and subsurface soil and buried waste, groundwater, and sediment at KPS and KPN. The early PA/SI and RI activities focused on KPS and KPN separately, culminating in separate PA/SI and RI reports. In 2010, NPS combined KPS and KPN into one site and created two OUs (OU1 and OU2, as defined in Section 2.4). In 2013, NPS initiated a Site-wide supplemental groundwater study (SGS) to fill data gaps related to groundwater quality conditions. The SGS included installation of new monitoring wells, piezometers, and staff gauges followed by groundwater sampling and water level gauging. The 2016 SGS report identified additional data gaps, resulting in investigations that included collecting and analyzing porewater samples, installing additional monitoring wells and conducting confirmatory groundwater sampling and analysis, conducting a thermographic survey to identify potential groundwater seep locations, collecting and analyzing seep water samples, and conducting an updated assessment of surface soil quality at KPS using incremental sampling methodology (ISM). The investigations and associated documents described here are summarized in the table below.

Milestone Document	KPS	KPN
PA/SI	June 2000	February 2002
RI	June 2008	November 2007
SGS	November 2016	
Porewater Study	August 2018	

Milestone Document	KPS	KPN
Groundwater Study	June 2019	
Seep Characterization	July 2018	
Surficial Soil Assessment	June 2019	Not Applicable

During the various investigations, multi-media samples were collected and analyzed for a variety of contaminants of potential concern (COPCs). The analytical parameters associated with the samples collected for each medium are listed in the table below. A comprehensive summary of investigation activities and associated interim findings and conclusions is provided in the 2019 RI Addendum Report (JCO 2019a).

Summary of Media Sampled and Associated Analytical Parameters

Media	Analytical Parameters
Surface soil	TPH, SVOCs (including PAHs), Metals, PCB Aroclors, Pesticides, VOCs, pH, TOC
Subsurface soil/buried waste	TPH, SVOCs (including PAHs), Metals, PCB Aroclors, Pesticides, VOCs
River/stream/marsh sediment	TPH, SVOCs (including PAHs), Metals, PCB Aroclors, Pesticides, VOCs
Groundwater	TPH, SVOCs (including PAHs), Metals, PCB Aroclors, Pesticides, VOCs, Dioxins and Furans, TOC, ORP, DO, Specific Conductance, pH
Surface water	Metals, ORP
Soil gas/indoor air	Methane

Notes:
DO – Dissolved Oxygen
ORP – Oxygen Reduction Potential
PAHs – Polycyclic Aromatic Hydrocarbons
PCBs – Polychlorinated Biphenyls
SVOCs – Semi-volatile Organic Compounds
TOC – Total Organic Carbon
TPH – Total Petroleum Hydrocarbons
VOCs – Volatile Organic Compounds

2.5.5 Known or Suspected Sources of Contamination

Sources of contamination include waste that was disposed in the landfill, which consisted of incinerator ash, solid waste that was burned and buried onsite, buried raw MSW, and demolition debris. Other sources of contamination include soil of uncertain origins that was placed over the landfill during closure and amended by sewage sludge to promote revegetation.

2.5.6 Types of Contamination and Affected Media

The types of contamination identified at the Site are summarized in the paragraphs below, categorized by media: surface soil, subsurface soil and landfill waste, groundwater, surface water, sediment, and soil gas.

Surface Soil: PAHs, PCBs, lead, and arsenic were measured in some surface soil samples at levels that may pose unacceptable human health risk under certain conditions (Section 2.7, Summary of Site Risks).

Subsurface Soil and Landfill Waste: PAHs, PCBs, and lead were measured in some subsurface soil and landfill waste samples. Lead was found in waste material samples at levels that may cause unacceptable risks to construction workers (Section 2.7 - Summary of Site Risks). One UXO was discovered during installation of the sprinkler system for the football field. Although the Site was not a former UXO disposal site, precautions are necessary to screen for UXOs prior to excavation.

Groundwater: Groundwater at or near the Site is not a source of drinking water and is not expected to be a source in the future; therefore, human exposure associated with drinking groundwater from the Site is not a concern. Volatile organic compounds (VOCs), PAHs, and iron have been identified in Site groundwater that discharges to the Anacostia River, Watts Branch, and Kenilworth Marsh. In most groundwater sampling locations, VOCs and PAHs were detected below the lowest ecological screening values. Except for dissolved iron, the risk assessment concluded that where organic and inorganic constituents are present in groundwater above screening levels, they do not pose an unacceptable risk to human health or the environment. Iron in the Anacostia River has been studied for the Anacostia River Sediment Project and determined to not pose a risk to human health or ecological receptors. Potential ecological risk caused by contributions of iron from Site groundwater discharging to the river are considered inconsequential.

Surface Water: Although contaminants were detected in surface water samples from Watts Branch and the Anacostia River, those contaminants do not appear to be attributable to the Site. Contaminants in surface waters near the Site appear to come primarily from urban stormwater discharges and tidal influences.

Sediment: Sediment samples were collected as part of the KPL Site investigations from the Anacostia River, Kenilworth Marsh, Watts Branch, and the Unnamed Tributary. PAHs, PCBs, and lead were detected at relatively elevated concentrations. NPS concluded there is no evidence that contaminants from KPL are currently migrating into surface water sediments and causing an unacceptable exposure risk. As noted in the 2012 FS Report (JCO, 2012), the concentrations of contaminants detected in sediment adjacent to KPL do not suggest that KPL is a significant source based on concentration trends from upstream to downstream. NPS has identified multiple potential historical sources of sediment contamination other than KPL, including the following:

- Documented releases of PCB-containing oil at the Pepco Benning Road Facility, which has led to sediment impacts in Pepco Cove and the Anacostia River. Sediment impacts in the Unnamed Tributary and Watts Branch from migration through the municipal separate storm sewer system (MS4) are also suspected to be associated with the storage and dismantling of PCB oil-containing transformers and capacitors in an area of the Pepco Benning Road Facility within the MS4 sewer-shed
- As indicated in the 2019 Anacostia River Sediment Project Tributary Study report (JCO, 2019), the highest concentration of PCBs detected in Watts Branch sediment samples was found in a sample collected approximately 2 miles upstream of KPL indicating an undocumented source of PCBs that is outside the potential influence of KPL
- Placement of sediment from the Anacostia River in Kenilworth Marsh during a marsh restoration project in the 1990s

NPS recognizes that impacts to sediment quality from historical waste disposal practices, or from overland flow of stormwater runoff prior to revegetation at KPL, cannot be ruled out. However, as described above, other identified sources are likely to have had a more significant impact on sediment quality than KPL. Sediment quality in the Anacostia River is being addressed by the Anacostia River Sediment Project (ARSP). Cleanup of the Anacostia River sediments will be completed in accordance with a separate ROD or RODs issued for the ARSP. NPS will work with other agencies to further investigate and, if necessary, remediate contaminated sediment in Watts Branch, the Unnamed Tributary, and Kenilworth Marsh.

Soil Gas: Consistent with recommendations by the Agency for Toxic Substances and Disease Registry (ATSDR), supplemental sampling was performed at and near the Site in 2008 and 2009 to assess potential migration of Site-related methane. Results of subsurface soil gas sampling at the Site indicate the presence of methane in certain areas in the landfill waste materials. Methane was not detected in indoor air in the former Kenilworth-Parkside Recreation Center, nor was it detected in the soil collected from the school yards behind Thomas Elementary School. Additional soil gas assessment is included in the Selected Remedy to confirm landfill gas is not migrating from the Site and presenting a potentially unacceptable risk to human health.

2.5.7 Location of Contamination and Known or Potential Routes of Migration and Exposure

Lateral and Vertical Extent of Contamination: The inferred limits of waste shown on Figure 1 are based on the review of historical aerial photographs and topography established as part of the 2007/2008 RIs. As shown, the inferred limits of waste extend up to and along the Anacostia riverbank at KPS and KPN. The depth of waste varies based on the mud flat and recreational lake bottom topography that existed prior to landfill operations. As noted in Section 2.5.3, the thickness of waste and cover soil ranges from a few feet around the perimeter of the landfill to 40 feet or more in central areas. The areas of contaminated cover soil that was placed over the landfill when it was closed coincide with the landfill limits.

Routes of Human and Environmental Exposure and Potentially Affected Populations: Routes of exposure to Site COCs include direct contact with soil and buried waste by visitors, park staff, and construction workers. Because of the relatively low concentrations of COCs in surface soil, the density of vegetation in areas frequented by visitors and staff, and protective measures required for excavation, these exposure pathways present relatively low potential exposure risks. Higher intensity exposure may occur on the athletic field during sporting events, or during excavation activities such as those that might be associated with installing buried utilities. Burrowing mammals may become exposed to contaminants in surface and shallow soil horizons; however, NPS evaluated this scenario and concluded that an unacceptable risk to ecological receptors is not present.

Likelihood for Migration of COCs: Potential routes of COC migration include groundwater that flows beneath and away from the Site and surface soil that may migrate because of surface drainage, erosion processes or wind-blown dust. Groundwater from below the Site, which in a few areas contains COCs, discharges to porewater and to the ground surface in areas of seepage (i.e., low elevation areas typically found at the bottom of slopes). NPS risk assessments concluded that the low concentrations of COCs detected in groundwater and seep water samples pose no unacceptable risk to human health or ecological receptors. Migration of COCs in surface soil may have occurred prior to installing surface-water drainage controls (swales, berms, and sedimentation ponds) and revegetation of the landfill cover soils; however, the

ground surface at the Site is stable and shows limited evidence of erosion and sediment transport. The vegetative cover limits wind-blown dust and erosion.

2.5.8 Groundwater Contamination

As summarized in Section 2.5.6, several contaminants were detected in groundwater; however, iron was the only constituent related to the Site that was detected at concentrations that potentially pose an unacceptable risk to ecological receptors in the Anacostia River (primarily fish in surface water). Iron in the Anacostia River has been studied for the ARSP. The investigation did not identify iron at levels that exceeded human health or ecological criteria; therefore, iron has not been identified as a COC in the Anacostia River. Any excess risk caused by contributions of iron from the Site to the river are considered inconsequential. In addition, iron is not a CERCLA hazardous substance and does not pose an imminent and substantial danger to public health or welfare in this case. Therefore, it is outside the scope of a CERCLA response action.

Groundwater Flow Zones: Shallow zones of contiguous groundwater flow are inferred to exist above and below the clay and silt unit that comprises the pre-landfill mud flat. The upper groundwater flow zone consists of the granular high-energy stream deposits, landfill waste, and less conductive clays and silts. The lower groundwater flow zone consists of sands and gravels that are characteristic of the regional Wicomico formation. The Holocene era clay and silt alluvium (former mud flat) is considered an aquitard, which is saturated, but limits the vertical migration of groundwater between the upper and lower flow zones. The upper flow zone is “unconfined” (i.e., the groundwater is not under pressure); the lower flow zone appears to be confined (under pressure). Depths to groundwater vary by location. At KPS, the depth to groundwater ranges from approximately 3 to 20 feet; at KPN the depth to groundwater ranges from approximately 3 to 25 feet. Neither the upper nor lower groundwater flow zones are considered productive aquifers that could be developed in the future for water supplies.

Groundwater Flow Directions: The most recent groundwater elevation contours and flow direction mapping is presented in the 2019 RI Addendum Report (JCO, 2019a). Groundwater flow patterns in the upper flow zone generally mimic topography and indicate that groundwater flows radially from areas of higher elevation near the landfill centers. Groundwater continues to flow toward the lower-lying surface water bodies, eventually discharging into these water bodies. Regional groundwater in the lower Wicomico formation generally flows from east to west under the Site, discharging upward into the river sediment.

Groundwater Quality: Groundwater quality findings are summarized below.

- VOCs including carbon disulfide (five locations); chlorobenzene (one location); methylene chloride (one location); and toluene (two locations) were detected at relatively low concentrations, but above conservative ecological screening values (ESVs).
- PAHs including anthracene (three locations); benzo(a)anthracene (four locations); benzo(a)pyrene (three locations); fluoranthene (four locations); naphthalene (one location); phenanthrene (one location); phenol (one location); and pyrene (five locations) were detected at relatively low concentrations but above the most conservative screening levels. Semivolatile organic compounds (SVOCs) are not COCs in groundwater at the Site.
- PCB Aroclors were not detected and therefore not considered COCs in groundwater.
- No pesticides were detected above the ESVs.

- Dioxin and furan congeners were not detected in 23 of the 27 monitoring wells located within or downgradient of the former landfill; the dioxin and furan congener concentrations that were detected were in the same range as (or below) the reference/background concentrations reported for the nearby Pepco Benning Road Site. In addition, total toxic equivalency (TEQ) concentrations (i.e., the value used for assessment of human health and ecological risk) were below the calculated background threshold values (BTVs). According to a Screening Level Ecological Risk Assessment (SLERA) and Refinement, the dioxin and furan congener concentrations do not pose an ecological exposure threat.
- No groundwater plumes or source areas were identified for the organic constituents.
- Non-aqueous phase liquids (NAPLs) do not appear to be present. This conclusion is based on direct observation or from the nature of the chemical constituents found in groundwater.
- Many of the metals analyzed were detected in groundwater samples at concentrations that were above the ESVs. Metals concentrations that exceeded ESVs were the reason NPS completed the porewater study and subsequent SLERA/Refinement. The SLERA and Refinement concluded that iron is the only metal that represents a potential ecological exposure risk that may be attributable to Site groundwater.

2.6 CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

KPN is currently used by the public for multiple recreational purposes. The eastern area is occupied by a football field, running track, tennis courts, basketball courts (currently in a condition of disrepair), and the remnants of the Kenilworth-Parkside Recreation Center facility, including a swimming pool and paved areas. Northern and eastern areas of KPN are mowed regularly and are used as athletic fields. The paved ART runs across the northern section of KPN. Undeveloped wooded areas are present between the developed and mowed areas of KPN and the Anacostia River, Watts Branch, and Kenilworth Marsh. Visitors walk and ride bikes in KPN and use the athletic facilities for organized youth sporting events. Multiple informal trails lead from KPN to the Anacostia River.

Congress has directed NPS to transfer administrative jurisdiction over KPN to the District “for the provision of public recreational facilities, open space, or public outdoor recreational opportunities” (PL 108-335 § 334). NPS anticipates that the District will develop formal plans for the use of KPN after the transfer is complete. However, NPS expects KPN will continue to be used for organized sports, recreation, and community activities, and will continue to provide undeveloped open spaces and wetland features. In comments on the Proposed Plan, the District of Columbia Department of Energy and Environment (DOEE) indicated that areas of the Site generally within the 500-year flood zone will be reserved for future tidal wetlands restoration.

KPS remains undeveloped and open for passive recreational use. The ground surface is densely vegetated with meadows, trees, and woody shrubs, providing stable and valuable wildlife habitat. An asphalt road extends from Deane Avenue in KPN across Watts Branch and through the middle of the former landfill. As indicated in the Anacostia Park Management Plan (NPS, 2017), KPS is zoned as “natural resources recreation.” The focus of the natural resource recreation zone is to preserve and protect the natural landscape of forests and wetlands in the park. No active recreational facilities (e.g., sports fields, playgrounds, picnic areas) will be developed within KPS. Passive recreational uses, such as walking, birdwatching, and biking,

will be permitted and encouraged. The only development planned for KPS is an extension of the ART, which is currently envisioned to run along the top of the landfill slope closest to the river and continue, across Watts Branch, to connect with existing and future trail segments in KPN. The final alignment of the ART through KPS has not been established.

2.7 SUMMARY OF SITE RISKS

As part of the RIs, NPS conducted assessments to determine potential current and future Site risks contaminants might pose to human health and ecological receptors. The Site poses slightly increased potential cancer and non-cancer risk to visitors who engage in activities in locations where they are more likely to encounter Site soil. Such activities include participating in or watching organized sporting events where visitors may ingest soil containing PAHs, PCBs, the pesticide dieldrin (KPN only), lead, or arsenic.

The Site poses an increased non-cancer health risk to construction and utility workers who, without appropriate protective measures (i.e., dust control, personal protective equipment, decontamination, landfill gas monitoring, UXO avoidance) may be exposed to lead-containing soil and waste or explosive landfill gases or UXOs during excavation within the landfill limits.

The human health risks identified with exposure to surface soil, subsurface soil, and buried landfill waste represent the basis for the decision to take remedial action at the Site. NPS identified no unacceptable risk to ecological receptors. More details of the risk assessments are summarized in the following sections.

2.7.1 Human Health Risks

Potential risks to human receptors from exposure to contaminants at KPN were evaluated in the Human Health Risk Assessment (HHRA) conducted as part of the 2007 KPN RI (Ecology and Environment [E&E], 2007a). The assessment relies on soil data collected during the RI, the 2002 PA/SI (E&E, 2002), and the 2005 investigation conducted by the District of Columbia Sports and Entertainment Commission (E&E, 2005). Potential risks to human receptors at KPS were evaluated in the HHRA conducted as part of the 2008 KPS RI (E&E, 2008), which was updated in 2019 (JCO, 2019a). The assessment relied on surface and subsurface soil data collected during the RI and the 2000 PA/SI (E&E, 2000). In 2017, NPS completed an updated assessment of surficial soil at KPS using ISM; the results were used to update the HHRA, which is documented in Appendix G of the 2019 Surficial Soil Quality Assessment Report (JCO, 2019b).

The HHRAs identified potentially unacceptable risks associated with exposure to surface soil, subsurface soil, and buried waste. NPS identified a subset of chemicals that present a potentially unacceptable exposure risk for KPN and KPS. This refined list of chemicals was identified as the COCs.

2.7.1.1 Identification of Chemicals of Concern

COCs (i.e., chemicals that were found to cause a potentially unacceptable risk, or a “risk driver”) were identified only in surface soil and subsurface soil/buried waste. COCs for KPN include metals, pesticides, PCB Aroclors, and PAHs. COCs for KPS include metals, PCB Aroclors, and PAHs. Each COC is listed in Table 1a (KPN surface soil), Table 1b (KPN subsurface soil/buried waste), Table 1c (KPS surface soil), and Table 1d (KPS subsurface soil/buried waste). These tables include the range of concentrations detected for each COC, the frequency of detection (i.e., the number of times the chemical was detected in the samples

collected at the Site), the exposure point concentration (EPC) (i.e., the concentration that is used to estimate the exposure and risk from each COC in the soil), and the type of statistical measure the EPC represents. The 95% upper confidence limit on the arithmetic mean (95UCL) was generally used as the EPC except for thallium, where the maximum detection is used because of the limited amount of sample data available.

2.7.1.2 Exposure Assessment

The pathways of human exposure to COCs are the same for KPN and KPS and include landfill cover materials (i.e., surface soil) and buried waste/subsurface soil (see Figure 4, Risk Assessment Pathways). The exposure medium for surface soil is the soil itself and fugitive dust. Potential exposure routes include inhalation, ingestion, and dermal (skin) contact. Human receptors include visitors, park workers (for exposure to surface soil), and excavation contractors (for exposure to subsurface soil/buried waste). The exposure assessment findings apply to both current and future land use scenarios.

2.7.1.3 Toxicity Assessment

The purpose of the toxicity assessment is to estimate the relationship between the extent of exposure to a contaminant and the likelihood and/or severity of adverse effects. Carcinogenic (cancer causing) and non-carcinogenic health effects were both evaluated quantitatively in the HHRAs.

As indicated in Tables 2a through 2d, the metals COCs are generally considered to be non-carcinogenic. The exception is arsenic, which is a metalloid (an element that exhibits some properties of metals and some of nonmetals). Carcinogenic effects are also affected by the exposure pathway. Table 2a and 2c identify the cancer toxicity properties of COCs used to assess human health risk through the oral and dermal exposure pathways; Table 2b and 2d identify the cancer toxicity properties of COCs through the inhalation pathway.

Table 3a and 3c provides non-carcinogenic risk (also referred to as “hazard”) information (i.e., reference dose, absorption factors, primary target organs, uncertainty modifying factors, and sources of toxicological data) used to calculate risk for each COC in soil via the oral/dermal exposure pathway. Tables 3b and 3d provide similar non-carcinogenic risk information to Table 3a and 3c but for the inhalation exposure pathway.

2.7.1.4 Risk Characterization

Carcinogenic Risk

This section summarizes and combines outputs of the exposure and toxicity assessments to characterize baseline risk at the Site. Baseline risks are those potential risks and hazards that the Site poses if no action were taken. Carcinogenic risk is expressed as the potential additional (or excess) cancer risk a human receptor (e.g., visitor, park worker) may experience given frequent repeated exposure to the Site COCs over a relatively long period of time.

The cumulative carcinogenic and non-carcinogenic risks are estimated by adding the risks estimated for each COC. Tables 4a, 4b, and 4c show the potential current/future carcinogenic risks towards children and/or adult Site visitors associated with the combined exposure by ingestion, inhalation, and dermal contact. Applying relatively conservative (protective) assumptions for recreational exposure that are similar to a residential setting with no institutional controls, NPS estimated an excess cancer risk of 3.1E-05 for child and adult visitors at KPN, and an excess cancer risk of 2.1E-05 for child/adult visitors at KPS. The HHRA for KPS

was updated as part of the 2019 RI Addendum and included a carcinogenic risk calculation for park workers of 1.9E-06. No similar calculation for park workers was made in the KPN risk assessment from 2007. However, the decision to take remedial action at KPN was made based on the more sensitive child/adult visitor risk factor; therefore, the lack of a park worker risk estimate for KPN is not considered a data gap.

Non-Carcinogenic Risk

The potential for noncarcinogenic effects is evaluated by comparing an exposure level over a specified time period with a reference dose (RfD) derived for a similar exposure period. An RfD represents an exposure level that is not expected to cause any deleterious effect in human receptors. The ratio of exposure to toxicity is called a hazard index (HI). An HI<1 indicates that a receptor's dose of a single contaminant is less than the RfD, and that noncarcinogenic adverse effects from that chemical are unlikely.

Non-carcinogenic risk characterization summaries for KPN are presented in Tables 5a (adult Site visitor), 5b (child Site Visitor), 5c (utility/construction worker), broken down by individual COCs. The estimates of non-cancer HIs for adult visitors, child visitors, and excavation workers at KPN were calculated to be 0.525, 3.47, and 2.77. Although the child visitor and excavation workers were above the HI benchmark of 1.0, the HI estimates for these receptors within KPN were subsequently reevaluated through a target organ analysis and the associated HI for each organ was calculated to be less than 1.0.

As noted above, HHRA for KPS was updated for the RI Addendum to consider updated surficial soil ISM results. The approach for the KPS HHRA combined the child/adult risk characterization and added a scenario for park workers. The results for each COC are presented in Tables 5d (child/adult visitor), 5e (park worker), and 5f (excavation worker). The estimates of non-cancer HIs for child/adult visitors, park workers, and excavation workers at KPS were calculated to be 1.5, 0.13, and 2.31, respectively. The risks to child/adult visitors and excavation workers were above the HI benchmark of 1.0; however, the HI estimate for these receptors was subsequently reevaluated through a target organ analysis and the associated HI was calculated to be less than 1.0.

Lead

Lead was identified as a COC in soil and subsurface soil/buried waste. However, because lead does not have a RfD or slope factor, hazards and risks from lead exposure cannot be quantitatively estimated using the procedures applied for other COCs. Risk associated with exposure to lead-impacted surface soil and subsurface soil/buried waste was evaluated for the visitor scenario using the U.S. Environmental Protection Agency (EPA) Integrated Exposure Uptake Biokinetic Model; and for the outdoor park worker scenario using the EPA Adult Lead Model. These models resulted in estimates of blood lead levels (BLL) based on relatively standard exposure scenarios. In recent years, the target BLL recommended by the Centers for Disease Control and Prevention (CDC) was revised from 10 micrograms per deciliter (µg/dL) to 5 µg/dL. The original risk assessments for KPN and KPS used the BLL modeling to show the estimated BLL for Site visitors was below 10 µg/dL based on surface soil concentrations and above 10 µg/dL for excavation worker exposure to subsurface soil/buried waste. The updated visitor and park worker risk assessment for KPS found that estimated BLLs were below 5 µg/dL.

Although the KPN risk assessment was not updated, risk-based preliminary remediation goals (PRGs) were developed based on the target BLL of 5 µg/dL. As described in Section 2.8, PRGs were developed for multiple land use scenarios. NPS found that the lead concentrations in surface soil at multiple locations within KPN were above the PRG for lead in areas with the highest potential exposure frequency and

intensity. Therefore, by applying the most conservative and protective assumptions for exposure (similar to a residential land use) and the updated CDC guidance for target BLL, the lead levels in surface soil at KPN could result in an unacceptable lead exposure risk. The selected remedial action for the Site was partially based on this updated assessment of potential lead exposure.

2.7.2 Ecological Risks

Potential ecological risks were evaluated in a multi-step process. Initially, contaminants of potential ecological concern (COPECs) were evaluated separately for KPN and KPS by completing SLERAs. The SLERAs are documented in the 2007 and 2008 RI Reports (E&E, 2007a; E&E, 2008). NPS refined the list of COPECs by completing Baseline Ecological Risk Assessment (BERA) Problem Formulations (PFs) for KPN and KPS. The BERA PF findings are referenced in the 2007 and 2008 RIs, but the details are documented in stand-alone BERA PF technical reports (E&E, 2007b; E&E 2007c).

Following recommendations included in the BERA PF technical reports, NPS collected and analyzed additional surface soil samples for pH and total organic carbon (TOC) to assess bioavailability of certain COPECs. For OU1, NPS concluded that the COPECs were either not bioavailable at the pH of Site soils or that the Site EPCs were comparable to Site-specific background concentrations and no COPECs were carried forward as Contaminants of Ecological Concern (COECs). The final analysis of COPCs for OU1 is documented in the 2012 FS Report (JCO, 2012).

NPS completed supplemental investigations and risk assessments to consider potential ecological risks associated with groundwater from the Site migrating toward and discharging to the surrounding surface water bodies (OU2). The data collected through these supplemental investigation activities are documented in the 2019 RI Addendum Report (JCO, 2019a). Appendix F of the 2019 RI Addendum Report includes a June 2019 SLERA and Refinement Report (Woodard & Curran, 2019). The 2019 SLERA and Refinement Report documents the process of identifying COPECs through a SLERA and a refinement process that considers Site and receptor-specific exposure scenarios. The OU2 SLERA and refinement process identified no COECs.

2.7.2.1 Identification of Chemicals of Ecological Concern

As noted, the development of COPECs included a multi-step process. Sources of toxicity data used to screen COPECs varied between studies as summarized below. Ultimately, no COECs were identified.

- For the KPN and KPS SLERAs, maximum concentrations of Site contaminants were compared against 1995 EPA Region 3 Biological Technical Assistance Group (BTAG) values (EPA, 1995c). The list of COPECs was further refined by considering bioaccumulation screening and food chain modeling. Finally, hazard quotients (HQs) were calculated using toxicity benchmarks established by the EPA Environmental Response Team (ERT); COPECs were dropped from the list if the No Observable Adverse Effect Level (NOAEL) HQs were less than 1.
- For the KPN and KPS BERA PFs, NPS adopted updated ecological screening levels for certain chemicals based on updated literature, including chemical-specific values published by EPA in 2003 (aluminum, iron, and aldrin/dieldrin), 2005 (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, lead, and vanadium), 2006 (silver), and 2007 (copper, nickel, manganese, and zinc).

- For the OU2 SLERA, NPS compared maximum concentrations of COPECs to NPS ESVs established in the document, "NPS Protocol for the Selection and Use of Ecological Screening Values for Non-Radiological Analytes" (CDM Smith, 2016).
- In the Refinement for OU2, constituents that exceeded ESVs were screened against 2016 EPA chronic Water Quality Criteria (WQC) (criterion continuous concentration). Constituents without promulgated WQC were compared to Tier II Secondary Acute Values (Suter and Tsao, 1996). The refined value for total aluminum was calculated using Site-specific water parameters in accord with EPA's revised WQC document for aluminum, published in 2018. The refined value for copper was calculated using the Biotic Ligand Model.

COPECs identified for OU1, along with the maximum detected concentrations and associated HQs are listed in the appendices to the 2007 and 2008 RI reports, the stand-alone 2007 BERA PF Reports for each medium with a notation as to which COPECs were retained for further evaluation. COPECs identified for OU2 are provided in the SLERA report (Woodard & Curran, 2019), which is included as Appendix F to the 2019 RI Addendum Report (JCO, 2019a).

The data used to assess ecological risks were validated by independent chemists and determined to be useable. Copies of data validation reports are provided with the laboratory analytical data reports for each milestone document for which new data were presented.

2.7.2.2 Exposure Assessment

The ecological setting within the limits of the Site consists of wooded and meadow upland with small, isolated areas of emergent wetlands in low-lying areas. Ecologically sensitive areas include: the Anacostia River, which is part of the Potomac River and Estuary System; Kenilworth Marsh, an open water marsh influenced by the tides in the Anacostia River; Watts Branch, a tributary to the Anacostia River that is tidal in the reach adjacent to the Site; and the Unnamed Tributary to Watts Branch.

As further documented in the 2007 and 2008 RI Reports (E&E, 2007a; E&E, 2008), key receptor species considered for terrestrial exposure included: meadow vole, short-tailed shrew, american robin, red-tailed hawk, and red fox. As further documented in the 2019 RI Addendum Report (JCO, 2019a), key receptors for the groundwater to surface water pathway included fish and aquatic macroinvertebrates within the aquatic environment.

Complete exposure pathways for soil include ingestion for invertebrates and terrestrial wildlife and direct contact for terrestrial plants, soil invertebrates, and terrestrial wildlife. Complete exposure pathways for surface water include ingestion and direct contact for benthic macroinvertebrates, fish, birds (insectivorous and piscivorous), and mammals (primarily through drinking water).

To assess potential ecological exposure risk associated with contaminants in soil and buried waste within KPN and KPS, NPS used the 95UCLs or the maximum detected concentration (whichever was lower). Exposure point concentrations for the groundwater to surface water pathway were established based on the maximum concentrations detected in each perimeter monitoring well and porewater sample.

2.7.2.3 Ecological Effects Assessment

The BERA PFs for KPN and KPS included calculation of HQs for each of the target receptors noted above. HQs were calculated using NOAELs and Lowest Observed Adverse Effect Levels (LOAELs) for each

receptor. Multiple sources were used to establish NOAELs and LOAELs, which are listed in the two BERA PF reports (E&E, 2007b; E&E, 2007c). COPECs with NOAEL HQs equal to or greater than 1 were retained for further evaluation. As noted above, based on bioavailability and Site-specific background considerations described in the 2012 FS report, none of the COPECs were identified as COECs. Consistent with this finding, no field studies were performed to further evaluate potential toxicological effects.

2.7.2.4 Ecological Risk Characterization

As noted above, no potentially unacceptable environmental risks were identified as a result of the SLERAs and Refinements.

2.8 REMEDIAL ACTION OBJECTIVES

The following Remedial Action Objectives (RAOs) were used to develop and evaluate the remedial alternatives for the Site:

- Reducing or eliminating carcinogenic and non-carcinogenic risks associated with surface soil contamination
- Reducing or eliminating non-carcinogenic risks associated with lead in subsurface soil/buried waste
- Reducing or eliminating risks associated with methane gas and UXOs
- Attainment of federal and state applicable or relevant and appropriate requirements (ARARs).

2.8.1 Remediation Goals

Remediation goals (RGs) establish acceptable exposure levels that are protective of human health and the environment. RGs are developed based on readily available information, such as chemical-specific ARARs and risk assessment calculations for target risk levels (e.g., excess cancer risk of 1E-6). Final RGs are established when an alternative is selected and recorded in the ROD.

As summarized in Appendix A to the 2020 FS Addendum Report (VHB, 2020), PRGs were developed for this Site, based on calculated risk-based cleanup levels. The Site-specific PRGs developed to address the anticipated future land use(s) for the Site are described in the Anacostia Park Management Plan (NPS, 2017). The Management Plan will not apply to KPN after management of the Site is transferred to the District; therefore, NPS based KPN future land-use scenarios on input received from the District (see Appendix A, Responsiveness Summary, Section 3.4.2).

PRGs for addressing carcinogenic risk of various organic compounds and arsenic are developed by choosing a target excess cancer risk level and factoring in the likely exposure scenarios. The exposure scenarios consider (1) the frequency a visitor might be exposed to surface soil at the Site and (2) the intensity of that exposure. For example, someone who visits the park daily has a higher frequency of exposure than someone who participates in an organized seasonal sporting activity a few times per week. However, a visitor who participates in a sporting activity has a higher intensity of exposure to soil than visitors who are walking their dogs or jogging on paved trails through the park.

NPS developed PRGs for three land use scenarios that are applicable to the current and future intended use of the park. NPS applied exposure assumptions to calculate long-term risk for each scenario with the highest potential exposure considered for Scenario 1 and the lowest for Scenario 3. The land use scenarios are listed below; details regarding the assumptions made for frequency and intensity of exposure are provided in the Feasibility Addendum Report (VHB, 2020).

- Scenario 1: Organized Sport and Recreation/Community Activities and Special Events (high frequency/moderate intensity). This scenario applies to visitors who would likely come into intimate contact with surface soil such as while playing contact sports like football or rugby.
- Scenario 2: Natural Resource Recreation (moderate frequency/moderate intensity). This scenario applies to regular visitors of the park who would primarily remain on trails such as neighborhood residents who run or walk their dogs in the park.
- Scenario 3: Natural Resource Recreation (low frequency/low intensity). This scenario applies to visitors who may, on a less frequent basis, explore areas off trails engaging in activities such as bird watching.

The PRGs were developed for target excess cancer risk levels of 1E-6; a hazard index of 1 was used for non-chronic/acute risks. PRGs for each COC are provided in Table 6 for each land-use scenario.

2.8.2 Implications of Preliminary Remediation Goals

The following sections include comparisons of EPCs and soil sample analytical results to various PRGs for KPN and KPS. EPCs are statistically calculated values derived from chemical analysis of samples collected from the Site. Statistical methods used to calculate EPCs are intended to provide conservative estimates of the overall concentration that a receptor such as a visitor or Site worker might be exposed to at the Site. EPCs are considered in the calculation of potential exposure risk along with assumptions of exposure frequency and intensity.

2.8.2.1 PRG Exceedances at KPN

NPS developed EPCs for surface soil at KPN based on discrete soil sample data reported in the 2007 KPN RI Report E&E, 2007a). Comparisons of PRGs for each scenario to EPCs are summarized below.

- **Scenario 1:** Benzo[a]pyrene and arsenic were above the Scenario 1 PRGs for a 1E-6 target cancer risk threshold.
- **Scenario 2:** Except for benzo[a]pyrene, no EPCs exceed the Scenario 2 PRGs for a 1E-6 target cancer risk threshold.
- **Scenario 3:** None of the EPCs exceeded the Scenario 3 PRGs for a 1E-6 target cancer risk threshold. This implies that the excess cancer risk for visitors who spend minimal time off the established trails and sports fields would remain below 1E-6 target excess cancer risk and below a hazard index of 1 for non-carcinogenic risk.

NPS calculated surface soil EPCs based on discrete samples collected from locations across KPN. Collecting and analyzing additional surface soil samples in selected areas is recommended as part of a pre-remedial design investigation to further evaluate the need for remediation in all areas of KPN.

Methane concentrations in one soil gas sampling location were detected as high as 81% of the Lower Explosive Limit (LEL), which is below the property boundary PRG (100% of the LEL). Methane concentrations did not exceed PRGs at the property boundaries or inside the Kenilworth-Parkside Recreation Center building (the sample was collected before the building was demolished in 2010).

2.8.2.2 PRG Exceedances at KPS

NPS evaluated surface soil quality at KPS based on analytical data obtained from discrete soil samples and samples collected using ISM (E&E, 2008; JCO, 2019b). These results were used to establish EPCs for the former KPS landfill area. The 95UCLs were established within each sampling unit and compared with PRGs for each land-use scenario, as summarized below.

- **Scenario 1:** Benzo[a]pyrene and arsenic were above the Scenario 1 PRGs for a 1E-6 target cancer risk threshold; however, neither sporting fields nor community event areas are a permitted use for KPS under the Anacostia Park Management Plan. Therefore, PRGs for Scenario 1 are not applicable in the foreseeable future. A change in proposed land use at KPS toward more recreational use, similar to what was proposed at the time of the 2013 Proposed Plan, could make Scenario 1 PRGs applicable.
- **Scenario 2:** The KPS-wide EPCs for benzo[a]pyrene and arsenic are slightly above the Scenario 2 PRGs for a 1E-6 target cancer risk threshold. This implies that if the areas most frequented by visitors (i.e., a future segment of the ART and existing asphalt roadway extension of Deane Avenue) are not covered with asphalt or imported clean fill, there is a potential for an unacceptable long-term exposure risk.
- **Scenario 3:** None of the KPS-wide COC EPCs exceed the Scenario 3 PRGs for a 1E-6 target cancer risk threshold. This implies the excess cancer risk will remain below this threshold for visitors who spend minimal time off paved or clean gravel trails.

Near the property boundary at two soil gas sampling locations within the KPS footprint, methane concentrations exceeded the methane PRG for soil gas at 181% and 280% of the LEL. These locations likely reflected methane concentrations in landfill waste as opposed to concentrations of soil gas that may be migrating toward the boundary. Additional methane testing near the Thomas Elementary School and D.C. Transfer Station in 2009 did not identify methane concentrations in excess of the property boundary PRG (100% of the LEL). Concentrations of methane near the transfer station were less than 0.02% and 4.6% of the LEL; concentrations of methane within a portion of the school yard, but within the park boundary, were all less than 0.02% of the LEL. These results indicated that methane was not migrating beyond the limits of waste disposal and did not present a risk to the school or the school yard.

2.9 REMEDIAL ALTERNATIVES

The General Response Actions considered for the Site include one or a combination of the following:

- No action
- Limited action
- Containment

- Removal with off-Site disposal

Based on these options, five alternatives were developed for the Site, which are described in the following sections. No unacceptable risk to ecological receptors was identified; therefore, the measures described in Alternatives 2 through 5 were selected to protect against potential human exposure to Site contaminants.

2.9.1 Description of Alternatives

Key elements of each alternative are summarized in the following sections. The descriptions highlight the range of response actions considered (no action, limited action, containment, and/or excavation) and estimated cleanup costs. Costs presented include capital, annual operation and maintenance (O&M), periodic, and present value costs. Present value cost is the total cost of an alternative over time in terms of today's dollar value. This allows for cost comparisons of different remedial alternatives based on a single cost figure for each alternative.

2.9.1.1 Alternative 1: No Action

Under the No Action alternative, contaminated soils and landfill waste materials would be left in place with no treatment or controls to prevent human or ecological exposure. Because the soil cover placed over the landfill at the time of closure inhibits waste exposure at the ground surface, is sloped to promote stormwater runoff, and limits the potential for surface soil erosion, engineering controls typically associated with landfill closure did not need to be considered in the development of alternatives.

Estimated capital cost	$0
Estimated total O&M costs	$0
Estimated total periodic costs	$30,000 every 5 years (Years 5–30)
Estimated total present value cost	$170,000
Estimated construction time frame	None
Estimated time to achieve RAOs	Will not achieve RAOs

2.9.1.2 Alternative 2: Limited Action/Institutional Controls

Under Alternative 2, the existing landfill waste containment measures (soil cover and vegetation) would remain in place and administrative institutional controls would be used to restrict and/or manage future activities that might otherwise result in human health risks or hazards. To comply with the Organic Act of 1916 and the General Authorities Act, institutional controls must not result in an impairment of national park resources; in other words, the institutional controls must allow the park to serve its intended use.

This alternative would include methane monitoring at the property boundary to confirm previous findings that landfill gas (methane) is not migrating off Site through the subsurface at potentially harmful levels. This alternative would include remedy assessment and reporting associated with Five-Year Reviews as generally required under CERCLA when contamination remains on Site above levels that permit unlimited use and unrestricted exposure.

Estimated capital cost	$86,000
Estimated annual O&M costs	$25,000/year (5 years)

Estimated total periodic costs	$50,000 (Year 5), then $30,000 every subsequent 5 years (Years 10 – 30+)
Estimated total present value cost	$400,000
Estimated construction time frame	None
Estimated time to achieve RAOs	Will not achieve RAOs

2.9.1.3 Alternative 3: Containment/Selective Placement of Clean Soil Barriers and Institutional Controls (Selected Alternative)

To mitigate potential unacceptable risk to Site visitors and workers under the anticipated future land-use scenario, Alternative 3 would involve the placement of clean soil barriers in areas of the Site reserved for organized sport, recreation, and community activities and special events. Official trails (e.g., the ART) would be paved with asphalt or covered with clean gravel. Institutional controls would be used to restrict and/or manage future activities that might otherwise result in human health risks or hazards. Alternative 3 would include a period of methane monitoring at the property boundary to confirm previous findings regarding the lack of subsurface migration of landfill gas (methane). As with Alternative 2, Five-Year Reviews would be required.

Estimated capital cost	$6,400,000
Estimated range of annual O&M costs	$60,000 to $35,000/year (30+ years; lower costs projected after 5 years)
Estimated total periodic costs	$50,000 (Year 5), then $30,000 every subsequent 5 years (Years 10 – 30+)
Estimated total present value cost	$7,700,000
Estimated construction time frame	Less than 1 year
Estimated time to achieve RAOs	1 to 2 years

2.9.1.4 Alternative 4: Containment/Site-wide Clean Soil Barrier and Institutional Controls

Alternative 4 would include installation of a Site-wide, 12-inch soil barrier to prevent human exposure to contaminated surface soils. The barrier would extend across the majority of both KPN and KPS. Steep slopes along the Anacostia River and adjacent to the Kenilworth Marsh, as well as ecologically sensitive areas generally located within the floodway and near the shoreline, would be left undisturbed to limit the potential for future erosion and sediment transport, as well as to mitigate associated impacts to the Anacostia River, Kenilworth Marsh, and Watts Branch. These areas, which represent a small portion of the total land area of the landfills, are heavily vegetated with mature bushes and trees and are not conducive to active recreation. The soil barrier would cover approximately 117 acres. Institutional controls (Section 2.9.2) would be used to restrict and/or manage future activities that might otherwise result in human health risks or hazards. As with Alternative 2, Five-Year Reviews would be required.

Estimated capital cost	$15,000,000
Estimated range of annual O&M costs	$130,000 to $83,000/year (30+ years; lower costs projected after 5 years)
Estimated total periodic costs	$50,000 (Year 5), then

	$30,000 every subsequent 5 years (Years 10 – 30)
Estimated total present value cost	$18,000,000
Estimated construction time frame	About 1 year
Estimated time to achieve RAOs	1 to 2 years

2.9.1.5 Alternative 5: Removal/Landfill Removal and Shoreline Stabilization

Alternative 5 involves removal and off-Site disposal of all waste materials and previously placed cover soils and replacement of the original grades and wetlands vegetation that existed before development of the landfill. Based on review of historical topographic maps and aerial photography, as well as subsurface boring data from the RI, NPS estimates this would involve the excavation and removal of approximately 4.3 million cubic yards (6.5 million tons) of waste, cover, and fill materials from the Site. The areal extent of wetlands restoration, estimated from historical maps/photographs, is approximately 150 acres. Over 0.5 mile of living shoreline would be reestablished to stabilize the shoreline and protect the tidal wetland area.

Vegetative monitoring would be required for a period of five years. Because this alternative considers complete removal of contaminated soil, municipal waste and incinerator ash, institutional controls and long-term monitoring (i.e., Five-Year Reviews) would not be required.

Estimated capital cost	$610,000,000
Estimated range of annual O&M costs	$350,000/year (5 years)
Estimated total periodic costs	$0
Estimated total present value cost	$620,000,000
Estimated construction time frame	10 years or more
Estimated time to achieve RAOs	15 years or more

2.9.2 Description of Remedy Components

The following is a summary of remedy components as they apply to each alternative.

Treatment Technologies: None of the alternatives included treatment technologies.

Containment Components: Alternatives 1 through 4 have a containment component. The No Action alternative (Alternative 1) relies on the waste containment that was achieved when the landfill closed in 1970 and was converted into a park. Additional containment measures are included in Alternatives 3 and 4 consisting of clean soil barriers placed over the former landfill areas to prevent potential exposure to contaminants in surface soil.

Institutional Controls: Alternatives 2, 3, and 4 would employ the following institutional controls:

- Development and implementation of a Soil Management Plan that would include a routine maintenance and monitoring program and Site-specific health and safety requirements for future projects involving excavation (e.g., construction and/or utility projects requiring soil excavation/trenching)

- Prohibitions would be placed on residential and certain high-intensity recreational uses (e.g., organized sport and recreation/community activity and special event facilities) within certain areas of the Site
- The National Capital Parks – East would be responsible for implementing institutional controls at KPS. The District of Columbia would be responsible for implementing institutional controls at KPN.

Operation and Maintenance:

- Alternatives 2, 3, and 4 would include perimeter soil gas sampling for the first five years after implementation.
- Alternatives 3 and 4 would include clean soil barrier maintenance consisting of regrading and re-seeding. The projected barrier maintenance costs are based on a percentage of the capital cost of the barrier. Consistent with the current practice, mowing would continue for the recreational areas within KPN; therefore, no additional operational costs were projected for mowing. Alternative 5 would include tidal marsh maintenance (assumed to be approximately 5% of the tidal marsh restoration costs) and approximately 3,300 linear feet of living shoreline maintenance for five years after installation.

Monitoring: Alternatives 2, 3, and 4 would require similar monitoring requirements:

- Periodic (annual) inspection of the landfill cover and soil barrier conditions for evidence of erosion
- Five years of perimeter monitoring for the potential migration of landfill gas

2.9.3 Common Elements and Distinguishing Features of Each Alternative

The following is a summary of common elements and distinguishing features of each alternative:

- Action-specific ARARs do not apply to Alternatives 1 or 2. Similar ARARs apply to Alternatives 3, 4, and 5, including those related to noise (construction equipment and trucks); air quality (vehicle exhaust, dust); stormwater discharge quality; erosion, sedimentation, and stormwater; and water pollution control.
- Maintenance of existing landfill cover—Alternatives 1 through 4 would leave the existing landfill cover soils in place, providing a barrier preventing direct exposure to the buried waste, and land surface contours that generally promote runoff and limit potential ponding and infiltration.
- Removal of landfill waste and cover soil—Alternative 5 is the only alternative that includes removal and off-Site disposal of waste and cover soil.
- The quantity of untreated waste (an estimated 4.3 million cubic yards) is the same for all alternatives.
- The estimated time to reach remediation goals ranges from 1 to 2 years (Alternative 3) to 15+ years (Alternative 5). NPS anticipates it will take 1 to 2 years to achieve remediation goals with the selected alternative.
- Installation of clean soil barrier—Alternatives 3 and 4 include the installation of a 12-inch, clean soil barrier with revegetation. The barrier would consist of 6 inches of common fill material (e.g., clean

sand and gravel), and 6 inches of organic-rich topsoil that would support revegetation. Minor regrading would be required in the proposed barrier areas. The soil would be placed over an orange geotextile warning layer. The differences between these alternatives are that for Alternative 3, no barrier would be installed within KPS; the areal coverage of the barrier in KPN would be significantly less than for Alternative 4.

- Implementation of institutional controls—As described in Section 2.9.2, this applies to Alternatives 2, 3, and 4. No institutional controls would be included with Alternatives 1 and 5.
- The active measures included in Alternatives 3, 4, and 5 provide long-term reliability. The potential for failure lies primarily in the success of revegetation efforts, which could be managed initially through contractor warrantees. The area of revegetation for Alternative 3 is limited to areas that will likely be maintained by regular mowing, limiting the need to address invasive plants. The wide areas that would be revegetated as part of Alternatives 4 and 5 would include areas that will not be mowed and therefore could be more susceptible to the propagation of invasive plants, which could result in future remediation costs.

2.9.4 Expected Outcomes of Each Alternative

Alternatives 3 and 4 would eliminate impairments associated with contaminated surface soil. KPS would be opened for natural resource recreation use. KPN would be used for a combination of natural resource recreation/resource management, organized sports and recreation, and hosting community activities and special events.

Alternative 4 would significantly change the landscape at KPS and would erase about 20 years of habitat restoration and development; however, the existing habitat would eventually return. Alternative 5 would allow for a different type of recreational use (e.g., kayaking) but would focus on natural resource management. With Alternative 5, the existing upland habitat in KPS would be eliminated, giving way to tidal wetlands and living shoreline habitat.

Alternative 5 would take many years to implement and would include significant disruption of local communities with truck traffic, noise, and pollution from vehicle exhaust. Removal of the waste and cover soil would require disposal in other landfill facilities, which would have an indirect impact on natural resources by requiring development of off-Site landfill airspace to accommodate the excavated materials.

Shallow groundwater below the Site is not present in sufficient quantities to be considered a potential water supply resource. None of the cleanup alternatives affect groundwater use.

2.10 COMPARATIVE ANALYSIS OF ALTERNATIVES

The table below provides a summary of the assessment and evaluation of each of the alternatives to seven of the nine NCP criteria including the two threshold criteria of (1) overall protection of human health and the environment and (2) compliance with ARARs, and the five balancing criteria of (3) long-term effectiveness, (4) reduction of toxicity, mobility, or volume through treatment, (5) short-term effectiveness, (6) implementability, and (7) cost. The two threshold criteria must be met for an alternative to be selected. The evaluation of the alternatives against the five balancing criteria formed the basis for recommending an alternative for selection in the Proposed Plan. The two modifying criteria, state (in this case the District) and

community acceptance were evaluated after receiving public comments on the Proposed Plan. Public comments and NPS responses are included in the Responsiveness Summary (Appendix A). As noted in Section 2.14, the alternative recommended in the Proposed Plan was modified in response to comments from the District and members of the public. The comparative analysis of each criterion is provided in Sections 2.10.1 through 2.10.9.

Cells in the table below are shaded red (denoted as "(r)") if a threshold criterion is not met, orange (denoted as "(o)") when the alternative scores relatively low on a non-cost balancing criterion, and green (denoted as "(g)") when an alternative scores relatively high on a non-cost balancing criterion. Cost cells are shaded green if the alternative complies with section 300.430(f)(1)(ii)(D) of the NCP that indicates a selected remedy must be "cost-effective," which means that "its costs are proportional to its overall effectiveness" and orange if the alternative does not comply with this section of the NCP.

EVALUATION CRITERIA	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Threshold Criteria					
Overall protection of human health and the environment					
Compliance with ARARs					
Balancing Criteria					
Long-term effectiveness and permanence	Lowest (o)	Low (o)	Medium (g)	Medium (g)	Highest (g)
Reduction of toxicity, mobility, or volume through treatment	None Provided	None Provided	None Provided	None Provided	None Provided
Short-term effectiveness	Highest (g)	Highest (g)	Medium (g)	Low (o)	Lowest (o)
Implementability	Not Applicable	Medium (g)	Highest (g)	High (g)	Lowest (g)
Capital Cost: Present Value:	$0 $170,000 (g)	$86,000 $400,000 (g)	$6,400,000 $7,700,000 (g)	$15,000,000 $18,000,000 (g)	$610,000,000 $620,000,000 (o)

* The conclusions that Alternatives 4 and 5 are compliant with ARARs assumes that aggressive efforts would be undertaken and would be successful in returning the habitat at KPS to its current condition (Alternative 4) or to its pre-landfill condition (Alternative 5). Less aggressive or unsuccessful efforts to re-establish habitat following implementation of Alternatives 4 and 5 could result in the long-term impairment of park resources caused by the implementation of these alternatives. Under this scenario, Alternatives 4 and 5 would not attain the non-impairment ARAR.

2.10.1 Overall Protection of Human Health and the Environment

Alternative 1 would not meet the RAOs. It would not address the carcinogenic risk associated with surface soil contamination or the non-carcinogenic risk associated with lead in the surface (KPN only) or subsurface soil and buried waste, nor would it reduce or eliminate the risk associated with methane gas and potential UXOs. Because Alternative 1 does not meet this threshold criterion, it may not be selected.

Alternatives 2, 3, 4, and 5 meet the first three RAOs and are considered protective of human health and the environment. Alternatives 2 and 3 also meet the ARARs attainment RAO while Alternatives 4 and 5 could

meet this RAO if impairment or potential impairment of park resources caused by the implementation of these alternatives was successfully mitigated without undue delay.

2.10.2 Compliance with ARARs

The following subsections address each category of ARARs and to be considered (TBC) criteria. Tables 1 through 3 of the FS Addendum Report (VHB, 2020) includes a listing of ARARs and TBC criteria.

2.10.2.1 Chemical-Specific ARARs and TBCs

Alternative 1 would not meet the EPA Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities (EPA, 2005), which is not an ARAR, but is to be considered. Additional monitoring is needed to confirm compliance with the RCRA Subtitle D methane requirements (42 U.S.C. §§ 6941 et seq. and 40 C.F.R. §§ 258.23 and 258.61), which establish permissible limits of methane concentrations in structures on landfills and in soil gas at the property boundary. NPS requires additional monitoring and institutional controls to:

- Confirm prior investigation findings that show there is no unacceptable risk associated with methane migration toward the Site perimeter
- Identify precautions to be taken prior to excavation activities that could potentially encounter methane gas or unexploded ordnances

Because of the institutional controls proposed for the Site, Alternatives 2 through 4 are considered compliant with chemical-specific ARARs and TBCs for methane. The complete removal of contamination included as Alternative 5 would also address the chemical-specific ARARs and TBCs, without the need for institutional controls.

2.10.2.2 Location-Specific ARARs and TBCs

Alternatives 1 and 2 fail to meet the non-impairment requirement of the Organic Act, as amended, 54 U.S.C. § 100101(a), and the General Authorities Act, as amended, 54 U.S.C. § 100101(b), because of the residual long-term human health exposure risk from PCBs, PAHs, lead, and arsenic in surface soil, and buried lead, methane, and potential for UXO in the subsurface. To meet acceptable exposure risk levels, Alternative 2 would need to prohibit or restrict future uses that are authorized (and, in some cases, required) under the Anacostia Park enabling legislation, the Anacostia Park Management Plan (NPS 2017), and the 2004 legislation directing transfer of administrative jurisdiction over KPN to the District (Pub. L. No. 108-335, § 344, 118 Stat. 1322, 1350 (2004)). Alternatives 1 and 2 may not be selected because they do not meet ARARs (i.e., a threshold criterion).

The clean fill barrier proposed under Alternative 3 would allow the park to be used in accordance with its intended use as defined in the Management Plan and legislation referenced above. Alternative 4 would eliminate most of the existing wildlife habitat at KPS, which would impose adverse impacts on the park and could be considered an impairment of the park's intended use (i.e., provide wildlife habitat and natural resources recreational opportunities). Reestablishing the existing aesthetics and wildlife habitat, which is necessary to enable the intended purpose of the park and is highly valued by the community, would take significantly longer than implementing the Selected Remedy. Alternative 5 would impose even more severe

impacts to the park, wildlife habitat and the surrounding community for decades before pre-landfill conditions were established. The severity and duration of the impacts associated with implementing Alternatives 4 and 5 could potentially result in a failure to attain the non-impairment ARAR.

2.10.2.3 Action-Specific ARARs and TBCs

Action-specific ARARs and TBCs do not apply to Alternatives 1 and 2 because no physical actions are included in these alternatives.

With proper planning, design, and implementation, action-specific ARARs and TBCs associated with earthwork could be met for Alternatives 3, 4, and 5 with a manageable level of effort. Action-specific ARARs would primarily be District requirements related to:

- Noise (construction equipment and trucks)
- Air quality (vehicle exhaust, dust)
- Stormwater discharge quality
- Erosion, sedimentation and storm water
- Water pollution control

(Table 3 of the FS Addendum Report includes specific references to the applicable requirements.) Imported fill and topsoil included in this alternative would require due diligence to identify the source and potential presence of contaminants and testing to confirm that no contaminants are present in the fill at concentrations that exceed the remediation goals and other relevant clean fill specifications. NPS would define Site-specific revegetation requirements as part of the remedial design. Because of the scope of Alternative 5, action-specific ARARs would be significantly more challenging to meet than for Alternatives 3 and 4, particularly during work conducted in the Site areas adjacent to Watts Branch, the Anacostia River, and Kenilworth Marsh.

2.10.3 Long-Term Effectiveness and Permanence

As noted, Alternative 1 fails to meet the RAOs to protect human health from carcinogenic and non-carcinogenic risks and from physical risks associated with methane gas and UXOs. Therefore, this alternative does not provide adequate long-term effectiveness or permanence.

The proposed response actions defined in Alternatives 2, 3 and 4 would reduce the residual risk of exposure to acceptable levels, consistent with the RAOs. Institutional controls can be established through the Superintendent's Compendium, a site management plan with protocols for intrusive activities, the Declaration of Covenants effectuating the transfer of administrative jurisdiction to the District and required five-year reviews to evaluate the performance of the remedy to ensure it remains protective of human health and the environment. With appropriate controls, the active measures associated with Alternatives 3 and 4 would be stable, provided that healthy vegetation is maintained to prevent erosion and potential exposure of buried waste.

Alternative 5 – removal of the landfill waste and contaminated soil cover – represents the most effective and permanent remedy as it would eliminate residual exposure risks associated with the buried waste and cover

soil. No institutional controls would be necessary after full implementation, which would include a period of monitoring to confirm that re-vegetation objectives are met.

2.10.4 Reduction of Toxicity, Mobility, or Volume Through Treatment

The criteria listed under this category relate to ex situ and in situ treatment alternatives. No such alternatives are under consideration; therefore, these criteria did not factor into the comparison of alternatives.

2.10.5 Short-Term Effectiveness

Existing Site conditions are stable and the exposure risk, while unacceptable to NPS in perpetuity, is acceptable in the short term. Alternatives 1 and 2 meet the short-term effectiveness criterion of protection of the local community during remedial actions, protection of workers during remedial actions, protection against environmental impacts of remedial action activities, and time until RAOs are achieved.

Measures would need to be taken to implement Alternative 3 consistent with the action-specific ARARs noted above to protect the local community and workers from unacceptable exposure (i.e., noise, dust, and truck traffic). Similarly, measures would be taken to protect against environmental impacts such as dust or sediment migration into surface water or damage to wetlands. Nevertheless, the short-term effectiveness criteria could be met.

Although measures can be taken to protect the local community and workers during the remedial actions, Alternatives 4 and 5 would temporarily destroy existing habitat within KPS that is highly valued by NPS and the community. Alternative 5 would have an even greater potential for impacts to (1) the surrounding natural resources that would be affected by the extensive Site work performed in areas adjacent to surface waters and wetlands and (2) the surrounding community affected by the extended construction period and associated truck traffic, noise, dust, and vehicle and equipment exhaust.

2.10.6 Implementability

The implementability criterion considers factors such as ability to construct and operate the technology associated with each alternative; reliability of the technology; ease of undertaking additional remedial actions if necessary; monitorability; administrative feasibility, or coordination with other agencies; availability and capacity of treatment and disposal facilities; availability of personnel, equipment, and materials; and availability of technology. These factors are not applicable to Alternative 1.

Institutional controls included as part of Alternative 2 (i.e., notations in the Superintendent’s compendium and site management plan or requirements in the Declaration of Covenants) can be readily drafted and adopted. A limited level of staff awareness training would also be required.

Alternatives 3 and 4 proposed placement of a clean fill cap and establishing vegetation, which would require standard and readily available construction techniques. As with Alternative 2, institutional controls can be readily implemented. Capping and revegetation is a reliable measure that is applied to closed landfills and other sites with surface soil contamination and can be visually monitored for erosion or a lack of sufficient or

acceptable vegetation. Clean fill requires effort to identify and secure but is typically available from local sources.

Although Alternative 5 could be implemented with the right planning and resources, it would cause significant disruptions and create more logistical challenges than Alternatives 3 and 4. Obtaining the high level of funding required for this alternative could be an impediment to implementing Alternative 5.

2.10.7 Cost

As demonstrated by the colored shading in the detailed analysis of alternatives summary table included in Section 2.10, Alternative 3 meets the threshold criteria and strikes the best balance among the remaining criteria at the lowest cost. Alternative 5 does not comply with CERCLA sections 121(a) and 121(b)(1) or section 300.430(f)(1)(ii)(D) of the NCP that indicates a selected remedy must be "cost-effective," which means that "its costs are proportional to its overall effectiveness."

2.10.8 Community Acceptance

After considering input from the community, NPS chose the Selected Remedy which will allow the continued use and expansion of Kenilworth Park resources that are important to the community including open space for recreation, access to the Anacostia River, and preservation of natural areas that sustain wildlife habitat.

Multiple commenters expressed a preference for Alternative 5 (complete landfill removal and shoreline stabilization with an estimated cost of $610 million), or various hybrid combinations of Alternative 5 and the Selected Remedy (removal of landfill waste from only a portion of the Site and selective placement of clean soil barriers and institutional controls). As noted in prior sections, Alternative 5 would be protective of human health and the environment and could comply with ARARs, provided that aggressive efforts were undertaken that successfully returned lost habitat at KPS to its current condition following implementation of the remedy. Alternative 5 also ranked the highest for long-term effectiveness and permanence. However, Alternative 5 ranked lowest on short-term effectiveness and implementability based on the extensive disruption to the park resource and surrounding community and the time required to attain the RAOs (15 years or more). With a projected capital cost that is approximately one hundred times the estimated cost of the Selected Remedy, Alternative 5 is not cost-effective (i.e., the added cost is not proportional to the effectiveness of attaining RAOs).

A remedy that consists of a hybrid of Alternative 5 and the Selected Remedy would also not rank as high as the Selected Remedy. The hybrid approach would score lower than Alternative 5 on the long-term effectiveness and permanence criterion because institutional controls would be required for the portions of the landfill that remain in place. A hybrid approach would also score lower than the Selected Remedy on short-term effectiveness and implementability criteria for the same reasons as Alternative 5. Finally, the cost of a hybrid alternative would be significantly greater than the Selected Remedy and would not achieve an overall greater effectiveness proportional to its significantly greater cost.

2.10.9 District of Columbia Acceptance

The District of Columbia concurs with the Selected Remedy. On July 12, 2022, NPS received a letter from Tommy Wells, DOEE Director, which indicated the following:

> *"The Department of Energy and Environment ("DOEE"), on behalf of the District of Columbia, concurs with the National Park Service's ("NPS") Record of Decision ("ROD") for the Kenilworth Park Landfill ("KPL") for OU1 (surface and subsurface soils) and OU2 (groundwater beneath OU1). DOEE does not concur with the ROD to the extent NPS declined to investigate Anacostia River sediments…"* (DOEE 2022).

The DOEE July 12, 2022 letter further stated that DOEE's concurrence is subject to the condition that additional sampling be completed during the remedial design phase as identified in DOEE's February 15, 2021 Proposed Plan comment letter (see Attachment 24 to Appendix A). NPS agrees that these investigations may provide further insight into Site conditions and that they can be completed during the remedial design phase. NPS considers the outcome of additional investigation likely to confirm the current conceptual site model of environmental conditions. However, if those investigations indicate that hazardous substances from the landfill would continue to pose unacceptable risks to human health or the environment even after implementation of the Selected Remedy, NPS can select additional response actions by amending this ROD or issuing an Explanation of Significant Differences (ESD).

As documented in the Administrative Record, NPS worked collaboratively with the District to obtain input and concurrence on multiple phases of the RI/FS. Notably, NPS received a letter dated August 20, 2019 from DOEE indicating DOEE "*has reviewed the National Park Service Kenilworth Park Landfill Final Remedial Investigation Addendum Report (June 2019) and associated appendices and concurs with the conclusions of the report*"; the issue regarding further investigation of Anacostia River sediments was not included in DOEE comments received during the RI/FS process.

Contrary to DOEE's statement, NPS investigated Anacostia River sediments as well as sediments from Kenilworth Marsh, Watts Branch, and the Unnamed Tributary to Watts Branch as part of the PA/SI and the RI (E&E, 2000; E&E, 2002; E&E, 2007a; E&E, 2008). As documented in the 2012 FS (JCO 2012), NPS concluded that there are multiple significant, undifferentiated upstream sources of contaminants to surface water that impact sediment quality adjacent to the KPL Site and that KPL was not a significant source of contaminants to adjacent surface waters. For this reason, NPS did not expand the KPL site boundary beyond the limits of the landfill.

DOEE completed supplemental investigations of the river sediments adjacent to KPL as part of the ARSP, and issued an interim ROD on September 30, 2020 that addresses sediment contamination adjacent to KPN as an early action area(RW-HS-456c). Any additional response action that is necessary to achieve the river-wide cleanup goals for the ARSP will be selected in a future ROD or RODs issued by DOEE.

2.11 PRINCIPAL THREAT WASTES

The NCP establishes an expectation that the lead agency will use treatment to address "principal threat wastes" if they exist. Principal threat wastes are source materials considered to be highly toxic or highly mobile and (1) cannot be reliably contained or (2) would present significant risk to human health or the environment should exposure occur. Source materials are those that include or contain hazardous substances,

pollutants, or contaminants that act as a reservoir for migration of contamination to groundwater, surface water, or air or act as a source for direct exposure. Non-principal threat wastes (i.e., low-level threat wastes) are those source materials that generally can be reliably contained and would present only a low risk in the event of release. Based on those definitions and the determinations made in the RI and associated human health and ecological risk assessments, soil and waste materials for the Site are not considered to be source materials constituting principal threat wastes.

2.12 SELECTED REMEDY

2.12.1 Summary of the Rationale for the Selected Remedy

Based on the Proposed Plan and Administrative Record for the Site, this ROD presents Alternative 3 (Selective Placement of Clean Fill Barriers and Institutional Controls) as the Selected Remedy for the Site. NPS selected this alternative because it will achieve substantial risk reduction using a containment strategy focused on the areas with greatest potential exposure risks, supplemented with institutional controls. This combination of response actions is expected to allow the Site to be used as intended, while reducing risk sooner and at a lower cost than the other alternatives.

The selected alternative meets the threshold criteria and provides the best balance of tradeoffs among the other alternatives with respect to the balancing and modifying criteria. The selected remedy will satisfy the following statutory requirements of CERCLA §121(b):

- Protect human health and the environment
- Comply with ARARs
- Be cost-effective
- Use permanent solutions to the extent practicable

2.12.2 Description of the Selected Remedy

To eliminate unacceptable risk to Site visitors and workers under the anticipated future land-use scenario, the Selected Remedy (Alternative 3) would involve the placement of clean soil barriers in areas of the Site reserved for organized sport and recreation and community activities and special events. The barriers would consist of orange geotextile fabric, overlain by 12 inches of clean soil (i.e., 6 inches of common fill and 6 inches of topsoil). The orange fabric would serve as a warning to alert future excavation workers of the presence of contaminated soil and buried waste below the fabric.

For feasibility-level cost estimating purposes, NPS assumed soil barriers would be installed over approximately 50 acres of KPN, as shown on Figure 5 (Selected Remedy). Official trails such as the ART would be paved with asphalt or covered with clean gravel.

Approximately 11 acres of new fill was imported to the Site in 2006 and 2007 and placed in the area of the track and tennis courts. The fill was placed after NPS had completed the surface soil sampling in that area as part of the RI activities; no sampling or laboratory analysis of the new fill was completed. For feasibility-level cost estimating, NPS assumed the new fill is clean, and therefore, no engineered control/barrier is

required in that area. Confirmatory soil sampling of the new fill area will be conducted as a pre-remedial design investigation to confirm the quality of imported soil meets the remediation goals.

As part of this alternative, institutional controls will be implemented to:

- Maintain the new and existing engineering controls in good condition
- Prevent exposure to remaining subsurface hazards (e.g., contaminated soil, buried waste, UXO, or explosive landfill gas) that may be encountered during completion of excavation activities
- Limit future land use (i.e., prohibit high-intensity, high-frequency non-residential uses in uncapped areas and prohibit residential uses anywhere on the Site)
- Monitor for potential erosion (e.g., along the river and stream banks) to confirm the landfill cover material is maintaining a barrier that prevents exposure of buried waste

Controls include the development and implementation of a site management plan, including a routine Site maintenance program and Site-specific health and safety requirements for excavation activities below or outside the soil barrier. Institutional controls would be recorded in the NACE Superintendent's Compendium and applicable management documents (for KPS), Declaration of Covenants (for KPN), and/or procedures to be identified during remedial design. Prohibitions on high-intensity, high-frequency recreational uses would be limited to uncapped areas on the Site.

The Selected Remedy includes methane monitoring at the Site boundary to confirm previous findings that landfill gas (methane) is not migrating off-Site through the subsurface at levels that would exceed the chemical specific RCRA Subtitle D Methane ARAR, which establishes permissible methane concentrations in structures on landfills and soil gas at the property boundary. For estimating feasibility-level costs, NPS assumed a monitoring network of 15 soil gas probes installed and sampled annually for up to five years. If results from these events confirm previous observations, NPS would discontinue the monitoring program and decommission the soil gas probes at the end of the five-year monitoring period. If methane monitoring conducted outside the landfill perimeter identifies concentrations significantly above the landfill perimeter concentrations measured during the RI (e.g., 25% of the LEL), an additional landfill gas migration assessment (e.g., installing and sampling soil gas monitoring probes beyond the initial perimeter probes) would be required and developed as part of the remedial design.

The Selected Remedy will include remedial assessment and reporting associated with five-year reviews as generally required under CERCLA when contamination remains on Site above levels that permit unlimited use and unrestricted exposure.

2.12.3 Summary of the Selected Remedy Costs

As noted in the Description of Alternatives (Section 2.9), the estimated capital cost for the selected alternative is $6,400,000. The estimated operation and maintenance (O&M) cost would range from $60,000 to $35,000 per year for 30 years (lower costs projected after 5 years). Periodic costs are projected at $50,000 for year 5, reduced to $30,000 for years 10, 15, 20, 25, and 30. The projected present value cost is $7,700,000. A breakdown of the assumptions for developing the feasibility-level cost estimates for the Selected Alternative is provided in Table 8.

2.12.4 Expected Outcomes of the Selected Remedy

Implementation of the Selected Remedy will eliminate unacceptable risks to human health and will prevent impairments to park resources and values associated with contaminated surface soil. KPS would be opened for natural resource recreation use. KPN would be used for a combination of activities related to natural resource recreation and resource management, organized sports and recreation, and hosting community activities and special events.

2.13 STATUTORY DETERMINATIONS

Under CERCLA Section 121 and the NCP, NPS must select a remedy that is (1) protective of human health and the environment, (2) complies with or appropriately waives ARARs, (3) is cost-effective, and (4) uses permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. The NCP includes a preference for remedies that include treatment that permanently and significantly reduces hazardous waste toxicity, mobility, and volume as a principal element. The following sections discuss how the Selected Remedy meets these statutory and regulatory requirements.

2.13.1 Protection of Human Health and the Environment

The Selected Remedy will reduce potential risk exposure to human health (visitors and workers) through installation of a clean soil barrier in areas of high-intensity and high-frequency use and establishment of institutional controls. The institutional controls will include the identification of protective measures to be taken in the event excavation is proposed within the former landfill areas. The institutional controls will restrict certain higher-intensity land uses without additional protective measures (e.g., establishment of picnic areas or playgrounds within KPS, or residential development within the Site limits). The Selected Remedy will reduce potential carcinogenic risk levels to below 1E-6 and potential BLLs to less than 5 µg/dL. No target organ hazard indices were greater than 1; therefore, no unacceptable risk from non-carcinogenic COCs were identified. In addition, no unacceptable ecological exposure risks were identified. Implementation of the Selected Remedy will not pose unacceptable short-term risks or cross-media impacts.

2.13.2 Compliance with ARARs

ARARs are determined based on the requirements that are applicable or relevant and appropriate to the distinctive set of circumstances and actions considered for this Site. The NCP requires that ARARs be attained during implementation and at completion of the remedial action, unless a waiver is justified. The Selected Remedy does not require any ARAR waivers to be invoked. Federal and state ARARs for the Site are summarized in Tables 7a, 7b, and 7c. Below is a summary of how the Selected Remedy will comply with key ARARs.

- Because the selected alternative will not limit the intended future use of the park, the Selected Remedy would be compliant with the NPS mandate to ensure (1) the non-impairment of national park resources for the enjoyment of future generations and (2) the non-derogation of park values and purposes established by the NPS Organic Act of 1916, as amended (54 U.S.C. § 100101(a)) and the General Authorities Act, as amended (54 U.S.C. § 100101(b)).

- The soil fill barrier will not be placed within the 500-year flood zone and will therefore comply with District of Columbia Flood Hazard Control (D.C. Code §§ 6-501 to 6-504, 20 DCMR § 3105).
- The Selected Remedy will not affect the requirements of legislation directing transfer of administrative jurisdiction over KPN (Pub. L. No. 108-335, § 344, 118 Stat. 1322, 1350 (2004)).
- The methane monitoring component of the Selected Remedy will confirm compliance with RCRA, Subtitle D methane requirements (42 U.S.C. §§ 6941 et seq., 40 C.F.R. §§ 258.23 and 258.61).
- Implementation of the Selected Remedy will comply with the District of Columbia Noise Control Act (20 DCMR §§ 2701, 2704, 20 DCMR § 2802).
- Implementation of the Selected Remedy will comply with the District of Columbia Air Pollution Control Act, Air Quality Regulations (D.C. Code § 8-101.05, 20 DCMR §§ 600, 603, 605-06, 699); Engine Idling (D.C. Code § 8-101.05, 20 DCMR § 900); Vehicle Exhaust Emissions (D.C. Code § 8-101.05, 20 DCMR § 901); and Odorous or Other Nuisance Air Pollutants (D.C. Code § 8-101.05, 20 DCMR § 903).
- Implementation of the Selected Remedy will comply with the Clean Water Act Stormwater Program (33 U.S.C. § 1342(p), 40 C.F.R. § 122.26, 2022 NPDES Construction General Permit).
- Implementation of the Selected Remedy will comply with the District of Columbia Soil Erosion and Sedimentation Control Act and Stormwater Regulations (21 DCMR §§ 524, 543).
- Implementation of the Selected Remedy will comply with RCRA, Subtitle D Solid Waste Landfill Closure and Post Closure Requirements (42 U.S.C. §§ 6944-6945, 40 C.F.R. §§ 258.60(a)(3), 258.60(b)(2), 258.61(a)(1), and 258.61(a)(3)).

2.13.3 Cost Effectiveness

Under the NCP, cost-effectiveness is defined as follows: “A remedy shall be cost effective if its costs are proportional to its overall effectiveness” [NCP 300.430(f)(1)(ii)(D)]. Cost effectiveness is determined by evaluating the overall effectiveness of the Selected Remedy and comparing that effectiveness to the overall costs. Overall effectiveness is evaluated by examining how the remedy meets three criteria: (1) long-term effectiveness and permanence, (2) reduction in toxicity, mobility, and volume through treatment, and (3) short-term effectiveness. Overall effectiveness of the remedial alternatives was compared to costs to determine cost-effectiveness.

The costs of the Selected Remedy are proportional to its overall effectiveness; therefore, it is considered to be cost-effective as required under section 121 of CERCLA and section 300.430(f)(1)(ii)(D) of the NCP.

2.13.4 Utilization of Permanent Solutions and Alternative Treatment (or Resource Recovery) Technologies to the Maximum Extent Practicable

NPS determined that the Selected Remedy represents the maximum extent to which permanent solutions and treatment technologies can be used in a practicable manner at the Site. There are no alternative treatment technologies available to effectively remove the types of hazardous substances present in the buried waste and surface soil. The only potentially applicable treatment technology includes in situ stabilization-

solidification (e.g., mixing soil or waste with Portland cement or clay), which NPS determined to be impractical considering the relatively low concentrations of contaminants, low potential for contaminant migration, and large volume of waste and soil that would require treatment. The Selected Remedy provides a permanent remedy (containment) with relatively simple and easily implemented maintenance requirements.

2.13.5 Preference for Treatment as a Principal Element

Treatment addressing contaminated soil is not a component of the Selected Remedy and thus does not satisfy the statutory preference for treatment as a principal element. Toxicity and volume of COCs are not reduced under the Selected Remedy. Consistent with the EPA Presumptive Remedy for CERCLA Municipal Landfill Sites, in situ and ex situ treatment technologies were not considered because of effectiveness (short- and long-term) and implementability issues. NPS has determined that the contaminated soil medium addressed by the Selected Remedy does not constitute principal threat waste and is amenable to the primary remedy approach of containment.

2.13.6 Five-Year Review Requirements

Because the Selected Remedy would result in hazardous substances, pollutants, or contaminants remaining on the Site at concentrations that do not allow for unlimited use and unrestricted exposure, five-year reviews will be conducted at the Site. NPS will conduct a review no less frequently than every five years after initiation of the remedy to ensure it is or will be protective of human health and the environment.

2.14 DOCUMENTATION OF SIGNIFICANT CHANGES FROM PREFERRED ALTERNATIVE OF PROPOSED PLAN

Initial input from the District Department of Parks and Recreation indicated that as much of KPN as possible would be developed for organized sports and recreation, community activities, and special events. Therefore, the Preferred Alternative in the Proposed Plan (NPS, 2020) included a clean soil barrier over as much of the developable area within KPN as was considered feasible. During the public comment period, the District identified a tentative plan to complete tidal wetlands restoration between the currently mapped 100-year and 500-year flood zone boundaries. The Preferred Alternative included placement of the clean soil barrier in the area of existing playing fields that are located between the 100-year and 500-year flood boundaries. NPS updated the Selected Alternative to exclude installation of the clean soil barrier within the area mapped as being within the 500-year flood zone. The District also identified an area for future wetland creation within an upland area of KPN; NPS modified the limits of the proposed clean soil barrier in that area as well. These revised assumptions reduce the total cost of the remedy and remain equally protective of visitors and workers. Therefore, the detailed analysis of alternatives is unchanged.

The future land use at KPN is uncertain and will be determined by the District in accordance with the requirements of the transfer legislation. Accordingly, to ensure that hazardous substances in surface soils do not pose unacceptable risks to human health or the environment, the selected remedy prohibits any high-frequency, high-intensity uses on any portions of KPN where surface soils exceed the PRGs until those areas are covered with a clean soil barrier in accordance with the Selected Remedy. To that end, the documents effecting the transfer of administrative jurisdiction over KPN from NPS to the District must include

institutional controls (*e.g.*, land use prohibitions) to prevent such high-frequency and high-intensity use (e.g., organized sports) unless and until the District covers those areas with a clean soil barrier. Any future restoration or other earth-disturbing activities must be conducted in accordance with all applicable laws and in a manner that is protective of human health and the environment.

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TABLES

TABLE 1a
KPN Summary of Chemicals of Concern and Exposure Point Concentrations in Surface Soil/Sediment
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future				
Medium:	Surface Soil/Sediment				
Exposure Medium:	Surface Soil/Sediment				
Exposure Point:	On-Site				
Chemical of Concern	**Concentration Detected (mg/kg)**		**Frequency of Detection**	**EPC (mg/kg)**	**Statistical Measure**
	Minimum	**Maximum**			
PAHs					
Benz(a)anthracene	0.063	8.81	45/47	1.35	95% UCL
Benzo(a)pyrene	0.053	6.78	45/47	1.13	95% UCL
Benzo(b)fluoranthene	0.13	5.23	45/47	0.732	95% UCL
Benzo(k)fluoranthene	0.032	5.2	30/47	0.912	95% UCL
Dibenzo(a,h) anthracene	0.033	0.709	18/47	0.62	95% UCL
Indeno(1,2,3-c,d) pyrene	0.039	1.27	34/47	0.54	95% UCL
Pesticides					
Aldrin	0.0023	0.015	6/47	-	-
Dieldrin	0.007	0.82	46/61	0.234	95% UCL
PCBs					
Aroclor 1254	0.0227	6.98	57/61	1.33	95% UCL
Aroclor 1260	0.013	2.68	45/61	0.76	95% UCL
Metals/Metalloids					
Aluminum	1510	15600	46/46	7940	95% UCL
Arsenic	1.02	8.5	55/61	4.03	95% UCL
Cobalt	3.75	24.2	46/46	-	-
Copper	11.7	537	46/46	185	95% UCL
Iron	8740	42400	46/46	20900	95% UCL
Lead	22.8	407	46/46	160	95% UCL
Manganese	62.3	632	46/46	316	95% UCL
Mercury	0.0422	9.45	42/46	6.14	95% UCL
Silver	0.456	102	33/46	66.7	95% UCL
Thallium	0.77	2.52	18/46	2.52	Max
Vanadium	13	74.4	46/46	42.8	95% UCL

TABLE 1b
KPN Summary of Chemicals of Concern and Exposure Point Concentrations in Subsurface Soil
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future				
Medium:	Subsurface Soil				
Exposure Medium:	Subsurface Soil				
Exposure Point:	On-Site				
Chemical of Concern	**Concentration Detected (mg/kg)**		**Frequency of Detection**	**EPC (mg/kg)**	**Statistical Measure**
	Minimum	**Maximum**			
Lead	0.043	4.2	13/15	641	-

TABLE 1c
KPS Summary of Chemicals of Concern and Exposure Point Concentrations in Surface Soil/Sediment
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future					
Medium:	Surface/Sediment Soil					
Exposure Medium:	Surface Soil					
Exposure Point:	On-Site					
Chemical of Concern	**Concentration Detected (mg/kg)**		**Frequency of Detection (replicates)**	**Frequency of Detection (Decision Units)**	**EPC (mg/kg)**	**Statistical Measure**
	Minimum	**Maximum**				
1-Methylnaphthalene	0.0104	2.13	132/132	44/44	-	-
2-Methylnaphthalene	0.0206	3.19	132/132	44/44	-	-
Acenaphthene	0.00952	5.68	132/132	44/44	-	-
Acenaphthylene	0.0144	0.803	130/132	44/44	-	-
Anthracene	0.0198	11.7	132/132	44/44	-	-
Benzo(g,h,i)perylene	0.0684	5.01	132/132	44/44	-	-
Chrysene	0.144	19.3	132/132	44/44	-	-
Fluoranthene	0.188	52.8	132/132	44/44	-	-
Fluorene	0.00758	10.7	130/132	44/44	-	-
Phenanthrene	0.0722	53.1	132/132	44/44	-	-
Pyrene	0.213	45.8	132/132	44/44	-	-
Benzo(b)fluoranthene	0.221	26.3	132/132	44/44	2.36	Arithmetic Mean UCL
Benzo(a)anthracene	0.135	19.3	132/132	44/44	1.68	Arithmetic Mean UCL
Benzo(a)pyrene	0.134	16.7	132/132	44/44	1.46	Arithmetic Mean UCL
Benzo(k)fluoranthene	0.0837	11.2	132/132	44/44	0.869	Arithmetic Mean UCL
Indeno(1,2,3-cd)pyrene	0.0679	5.21	130/132	44/44	0.489	Arithmetic Mean UCL
Naphthalene	0.0192	4.61	132/132	44/44	0.183	Arithmetic Mean UCL
Dibenzo(a,h)anthracene	0.0137	0.617	116/132	36/44	0.118	Arithmetic Mean UCL
Aroclor 1254	0.0302	1.5	12/132	7/44	0.39	Arithmetic Mean UCL
Aroclor 1260	0.0265	1.91	103/132	37/44	0.409	Arithmetic Mean UCL
Arsenic	2.76	7.94	132/132	44/44	4.55	Arithmetic Mean UCL
Aluminum	7450	14500	132/132	44/44	10000	Arithmetic Mean UCL
Antimony	0.441	4.01	23/132	12/44	0.705	Arithmetic Mean UCL

TABLE 1c
KPS Summary of Chemicals of Concern and Exposure Point Concentrations in Surface Soil/Sediment
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future					
Medium:	Surface/Sediment Soil					
Exposure Medium:	Surface Soil					
Exposure Point:	On-Site					
Chemical of Concern	**Concentration Detected (mg/kg)**		**Frequency of Detection (replicates)**	**Frequency of Detection (Decision Units)**	**EPC (mg/kg)**	**Statistical Measure**
	Minimum	**Maximum**				
Barium	59.4	433	132/132	44/44	-	-
Beryllium	0.442	0.73	132/132	44/44	-	-
Cadmium	0.13	5.02	132/132	44/44	-	-
Calcium	2330	14500	132/132	44/44	-	-
Chromium	22.7	226	132/132	44/44	-	-
Cobalt	5.69	17.2	132/132	44/44	11	Arithmetic Mean UCL
Copper	13	1150	132/132	44/44	129	Arithmetic Mean UCL
Iron	13000	27200	132/132	44/44	17900	Arithmetic Mean UCL
Lead	16.3	828	132/132	44/44	121	Arithmetic Mean UCL
Magnesium	1430	12200	132/132	44/44	-	-
Manganese	163	524	132/132	44/44	263	Arithmetic Mean UCL
Mercury	0.0566	8.56	132/132	44/44	1.18	Arithmetic Mean UCL
Nickel	23.6	170	132/132	44/44	46.3	Arithmetic Mean UCL
Potassium	653	2020	132/132	44/44	-	-
Selenium	0.284	1.26	103/132	43/44	-	-
Silver	0.127	49.2	100/132	35/44	9.59	Arithmetic Mean UCL
Sodium	24.6	308	102/132	34/44	-	-
Thallium	0.305	0.708	96/132	32/44	0.463	Arithmetic Mean UCL
Vanadium	28.7	78.3	132/132	44/44	44.2	Arithmetic Mean UCL
Zinc	64.9	593	132/132	44/44	-	-

TABLE 1d
KPS Summary of Chemicals of Concern and Exposure Point Concentrations in Subsurface Soil
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future				
Medium:	Subsurface Soil				
Exposure Medium:	Subsurface Soil				
Exposure Point:	On-Site				
Chemical of Concern	**Concentration Detected (mg/kg)**		**Frequency of Detection**	**EPC (mg/kg)**	**Statistical Measure**
	Minimum	**Maximum**			
Lead	2.8	10500	44/44	484	95% UCL-T

TABLE 2a
KPN Oral/Dermal Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Pathway: Oral/ Dermal						
Chemical of Potential Concern	**Oral Cancer Slope Factor $(mg/kg\text{-}day)^{-1}$**	**GI Absorption Factor**	**Adjusted Dermal Cancer Slope Factor [(1)] $(mg/kg\text{-}day)^{-1}$**	**Weight of Evidence/Cancer Guideline Description**	**Source**	**Date[(2)]**
Metals/Metalloids						
Aluminum	NA	1.00E-02	NA	N/A	N/A	N/A
Antimony	N/A	1.50E-01	N/A	N/A	N/A	N/A
Arsenic	1.50E+00	1.00E+00	1.50E+00	A	IRIS	5/3/2006
Cadmium	N/A	2.50E-02	N/A	B1	IRIS	5/3/2006
Copper	N/A	N/A	N/A	D	IRIS	5/3/2006
Iron	N/A	1.00E-02	N/A	N/A	N/A	N/A
Lead	N/A	1.00E+00	N/A	B2	IRIS	5/3/2006
Manganese	N/A	4.00E-02	N/A	D	IRIS	5/3/2006
Mercury, soluble salts	N/A	7.00E-02	N/A	C	IRIS	5/3/2006
Nickel, soluble salts	N/A	4.00E-02	N/A	N/A	N/A	N/A
Silver	N/A	4.00E-02	N/A	D	IRIS	5/3/2006
Thallium	N/A	1.00E+00	N/A	D	IRIS	5/3/2006
Vanadium	N/A	2.60E-02	N/A	N/A	N/A	N/A
Zinc	N/A	1.00E+00	N/A	N/A	IRIS	5/3/2006
PCBs						
Aroclor 1242	2.00E+00	1.00E+00	2.00E+00	B2	IRIS	5/3/2006
Aroclor 1248	2.00E+00	1.00E+00	2.00E+00	B2	IRIS	5/3/2006
Aroclor 1254	2.00E+00	1.00E+00	2.00E+00	B2	IRIS	5/3/2006
Aroclor 1260	2.00E+00	1.00E+00	2.00E+00	B2	IRIS	5/3/2006
Pesticides						
Dieldrin	1.60E+01	1.00E+00	1.60E+01	B2	IRIS	5/3/2006
gamma-Chlordane	3.50E-01	1.00E+00	3.50E-01	B2	IRIS	5/3/2006
SVOCs						
Benz[a]anthracene	7.30E-01	1.00E+00	7.30E-01	B2	NCEA	7/1/1993
Benzo[a]pyrene	7.30E+00	1.00E+00	7.30E+00	B2	IRIS	5/3/2006
Benzo[b]fluoranthene	7.30E-01	1.00E+00	7.30E-01	B2	NCEA	7/1/1993
Benzo[k]fluoranthene	7.30E-02	1.00E+00	7.30E-02	B2	NCEA	7/1/1993

TABLE 2a
KPN Oral/Dermal Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Chemical of Potential Concern	Oral Cancer Slope Factor $(mg/kg\text{-}day)^{-1}$	GI Absorption Factor	Adjusted Dermal Cancer Slope Factor [(1)] $(mg/kg\text{-}day)^{-1}$	Weight of Evidence/Cancer Guideline Description	Source	Date[(2)]
Dibenz[a,h]anthracene	7.30E+00	1.00E+00	7.30E+00	B2	NCEA	7/1/1993
Indeno[1,2,3-cd]pyrene	7.30E-01	1.00E+00	7.30E-01	B2	NCEA	7/1/1993

IRIS = Integrated Risk Information System

HEAST = Health Effects Assessment Summary Tables

NCEA = National Center for Environmental Assessment

NA = Not Applicable or Not Available

SF = Slope Factor

(1) GI Absorption Factor applied to Oral Slope Factor to calculate Dermal Slope Factor

(2) For IRS Values, the date IRIS was searched

For HEAST values, the date of HEAST

For NCEA values, the date of article provided by NCEA

EPA Group:

A-Human Carcinogen

B1-Probable human carcinogen-indicates that limited human data are available.

B2-Probable human carcinogen-indicates sufficient evidence in animals and inadequate or no evidence in humans

C-Possible human carcinogen

D-Not classifiable as a human carcinogen

E-Evidence of noncarcinogenicity

Weight of Evidence:

Known/Likely

Cannot be Determined

Not Likely

TABLE 2b
KPN Inhalation Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Chemical of Potential Concern	Unit Risk ($\mu g/m^3$)	Adjustment[(1)]	Inhalation Cancer Slope Factor $(mg/kg\text{-}day)^{-1}$	Weight of Evidence/Cancer Guideline Description	Source	Date[(2)]
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A
Antimony	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	4.30E-03	3500	15	A	IRIS	5/3/2006
Cadmium	1.80E-03	3500	6.3	B1	IRIS	5/3/2006
Copper	N/A	N/A	N/A	D	IRIS	5/3/2006
Iron	N/A	N/A	N/A	N/A	N/A	N/A
Lead	N/A	N/A	N/A	B2	IRIS	5/3/2006
Manganese	N/A	N/A	N/A	D	IRIS	5/3/2006
Mercury, soluble salts	N/A	N/A	N/A	C	IRIS	5/3/2006
Nickel, soluble salts	N/A	N/A	N/A	N/A	N/A	N/A
Silver	N/A	N/A	N/A	D	IRIS	5/3/2006
Thallium	N/A	N/A	N/A	D	IRIS	5/3/2006
Vanadium	N/A	N/A	N/A	N/A	N/A	N/A
Zinc	N/A	N/A	N/A	N/A	IRIS	5/3/2006
Aroclor 1242	N/A	N/A	2	B2	IRIS (oral)	5/3/2006
Aroclor 1248	N/A	N/A	2	B2	IRIS (oral)	5/3/2006
Aroclor 1254	N/A	N/A	2	B2	IRIS (oral)	5/3/2006
Aroclor 1260	N/A	N/A	2	B2	IRIS (oral)	5/3/2006
Dieldrin	4.60E-03	3500	16	B2	IRIS	5/3/2006
gamma-Chlordane	1.00E-04	3500	0.35	B2	IRIS	5/3/2006
Benz[a]anthracene	N/A	N/A	0.73	B2	NCEA (oral)	10/1/2004
Benzo[a]pyrene	N/A	N/A	7.3	B2	IRIS (oral)	10/1/2004

TABLE 2b
KPN Inhalation Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Pathway: Inhalation						
Chemical of Potential Concern	Unit Risk ($\mu g/m^3$)	Adjustment(1)	Inhalation Cancer Slope Factor $(mg/kg\text{-}day)^{-1}$	Weight of Evidence/Cancer Guideline Description	Source	Date(2)
Benzo[b]fluoranthene	N/A	N/A	0.73	B2	NCEA (oral)	10/1/2004
Benzo[k]fluoranthene	N/A	N/A	0.073	B2	NCEA (oral)	10/1/2004
Dibenz[a,h]anthracene	N/A	N/A	7.3	B2	NCEA (oral)	10/1/2004
Indeno[1,2,3-cd]pyrene	N/A	N/A	0.73	B2	NCEA (oral)	10/1/2004

IRIS = Integrated Risk Information System
HEAST = Health Effects Assessment Summary Tables
NCEA = National Center for Environmental Assessment
NA = Not Applicable or Not Available
SF = Slope Factor

Weight of Evidence:
Known/Likely
Cannot be Determined
Not Likely

(1) Adjustment factor applied to Unit Risk to calculate Inhalation Slope Factor = 70kg x $1/20m^3$/day x 1000ug/mg
(2) For IRS Values, the date IRIS was searched
For HEAST values, the date of HEAST
For NCEA values, the date of article provided by NCEA

EPA Group:
A-Human Carcinogen
B1-Probable human carcinogen-indicates that limited human data are available.
B2-Probable human carcinogen-indicates sufficient evidence in animals and inadequate or no evidence in humans
C-Possible human carcinogen
D-Not classifiable as a human carcinogen
E-Evidence of noncarcinogenicity

TABLE 2c
KPS Oral/Dermal Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Chemical of Concern	Oral Cancer Slope Factor $(mg/kg\text{-}day)^{-1}$	Oral Absorption Efficiency for Dermal[(1)]	Adjusted Dermal Cancer Slope Factor [(2)] $(mg/kg\text{-}day)^{-1}$	Weight of Evidence/Cancer Guideline Description	Source[(3)]	Date
Aluminum	-	1.00E+00	-	Inadequate Evidence	-	-
Antimony	-	1.50E-01	-	Not Assessed	-	-
Arsenic	1.50E+00	1.00E+00	1.50E+00	A	IRIS	4/3/2018
Cadmium	-	2.50E-02	-	B1	IRIS	4/3/2018
Cobalt	-	1.00E+00	-	Likely	PPRTV	2008
Copper	-	1.00E+00	-	D	IRIS	4/3/2018
Iron	-	1.00E+00	-	Inadequate Evidence	-	-
Lead**	-	1.00E+00	-	B2	IRIS	4/3/2018
Manganese (Non-Diet)	-	4.00E-02	-	D	IRIS	4/3/2018
Mercury (Mercuric Chloride)	-	1.00E+00	-	C	IRIS	4/3/2018
Nickel (Soluble Salts)	-	4.00E-02	-	Inadequate Evidence	-	-
Silver	-	4.00E-02	-	D	IRIS	4/3/2018
Thallium (Soluble Salts)	-	1.00E+00	-	Inadequate Evidence	-	-
Vanadium	-	1.00E+00	-	Inadequate Evidence	-	-
Zinc	-	1.00E+00	-	D	IRIS	4/3/2018
Aroclor 1242	2.00E+00	1.00E+00	2.00E+00	B2	IRIS	4/3/2018
Aroclor 1248	2.00E+00	1.00E+00	2.00E+00	B2	IRIS	4/3/2018
Aroclor 1254	2.00E+00	1.00E+00	2.00E+00	B2	IRIS	4/3/2018
Aroclor 1260	2.00E+00	1.00E+00	2.00E+00	B2	IRIS	4/3/2018
Benzo(a)anthracene	1.00E-01	1.00E+00	1.00E-01	Known***	USEPA*	4/3/2018
Benzo(a)pyrene	1.00E+00	1.00E+00	1.00E+00	Known***	IRIS	4/3/2018
Benzo(b)fluoranthene	1.00E-01	1.00E+00	1.00E-01	Known***	USEPA*	4/3/2018
Benzo(k)fluoranthene	1.00E-02	1.00E+00	1.00E-02	Known***	USEPA*	4/3/2018
Dibenz(a,h)anthracene	1.00E+00	1.00E+00	1.00E+00	Known***	USEPA*	4/3/2018
Indeno(1,2,3-cd)pyrene	1.00E-01	1.00E+00	1.00E-01	Known***	USEPA*	4/3/2018

TABLE 2c
KPS Oral/Dermal Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Pathway: Oral/ Dermal						
Chemical of Concern	**Oral Cancer Slope Factor $(mg/kg\text{-}day)^{-1}$**	**Oral Absorption Efficiency for Dermal(1)**	**Adjusted Dermal Cancer Slope Factor (2) $(mg/kg\text{-}day)^{-1}$**	**Weight of Evidence/Cancer Guideline Description**	**Source(3)**	**Date**
Naphthalene	-	1.00E+00	-	C	IRIS	4/3/2018
Pesticides						
Dieldrin	1.60E+01	1.00E+00	1.60E+01	B2	IRIS	4/3/2018
gamme-Chlordane	3.50E-01	1.00E+00	3.50E-01	B2	IRIS	4/3/2018

(1) The oral absorption efficiency for dermal was retrieved from USEPA's Regional Screening Levels – Generic Tables. November 2018

(2) Absorbed cancer slope factor for dermal was calculated by dividing the oral cancer slope factor by the oral absorption efficiency value (EPA RAGS – Part E, 2004)

(3) IRIS = Integrated Risk Information System. 2019. IRIS Final Assessments

PPRTV = Professional Peer Reviewed Toxicity Values for Superfund

* = Toxic equivalency factors (TEF) applied to the cancer slope factor (CSF) for benzo(a)pyrene to derive CSF for other PAHs.

TEFs from USEPA. Provisional Guidance for Quantitative Risk Assessment of PAHs. 1993. EPA/600/R-93/C89

Cancer Description (USEPA 1986)

A = Human Carcinogen

B1 = Probable human carcinogen

B2 = Probable human carcinogen, sufficient evidence in animals and inadequate or no evidence in humans

C = Possible human carcinogen

D = Not classifiable as to human carcinogenicity

**= Lead risks were evaluated through EPA's Integrated Exposure Uptake Biokinetic Model and Adult Lead Model

***= Cancer risk for constituents identified as having a mutagenic mode of action (MOA) is calculated by applying an age-dependent adjustment factor (ADAF) for childhood exposures from birth through 15 years. These ADAFs are summarized below (EPA 2005). COPCs with a mutagenic MOA include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo (k) fluoranthene, dibenzo(a,h) anthracene, and indeno (1,2,3-cd)pyrene

The ADAFs are as follows:

Year	ADAF
0-2	10
2 < 16	3
≥ 16	1

TABLE 2d
KPS Inhalation Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Chemical of Concern	Unit Risk $(\mu g/m3)^{-1}$	Weight of Evidence/Cancer Guideline Description	Source	Date
Arsenic	4.30E-03	A	IRIS	4/3/2018
Aluminum	-	-	-	-
Antimony	-	-	-	-
Cadmium	1.80E-03	B1	IRIS	4/3/2018
Cobalt	9.00E-03	Likely	PPRTV	1992
Copper	-	D	-	-
Iron	-	-	Not Assessed	-
Lead**	-	B2	IRIS	4/3/2018
Manganese (Diet)	-	D	IRIS	4/3/2018
Manganese (Non-Diet)	-	D	IRIS	4/3/2018
Mercury	-	D	IRIS	4/3/2018
Nickel (Soluble Salts)	2.60E-04	Known	CAL EPA	7/20/2017
Silver	-	D	-	4/3/2018
Thallium (Soluble Salts)	-	Inadequate Evidence	-	-
Vanadium	-	-	-	-
Zinc	-	Inadequate Evidence	-	-
Aroclor 1242	5.70E-04	B2	IRIS	4/3/2018
Aroclor	5.70E-04	B2	IRIS	4/3/2018
Aroclor 1254	5.70E-04	B2	IRIS	4/3/2018
Aroclor 1260	5.70E-04	B2	IRIS	4/3/2018
Benzo(a)anthracene	6.00E-05	Known**	USEPA*	4/3/2018
Benzo(a)pyrene	6.00E-04	Known**	IRIS	4/3/2018
Benzo(b)fluoranthene	6.00E-05	Known**	USEPA*	4/3/2018
Benzo(k)fluoranthene	6.00E-06	Known**	USEPA*	4/3/2018
Dibenz(a,h)anthracene	6.00E-04	Known**	USEPA*	4/3/2018
Indeno(1,2,3-cd)pyrene	6.00E-05	Known**	USEPA*	4/3/2018

TABLE 2d
KPS Inhalation Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Pathway: Inhalation				
Chemical of Concern	**Unit Risk $(\mu g/m3)^{-1}$**	**Weight of Evidence/Cancer Guideline Description**	**Source**	**Date**
Naphthalene	3.40E-05	Known**	CAL EPA	2000
Pesticides				
Dieldrin	4.60E-03	B2	IRIS	4/3/2018
gamme-Chlordane	1.00E-04	B2	IRIS	4/3/2018

IRIS = Integrated Risk Information System. 2019. IRS Final Assessments

CAL EPA = California Environmental Protection Agency. Office of Environmental Health Hazard Assessment (OEHAA) Chemical Database.

* = Toxic equivalency factors (TEF) applied to the cancer slope factor (CSF) for benzo(a)pyrene to derive CSF for other PAHs.

TEFs from USEPA. Provisional Guidance for Quantitative Risk Assessment of PAHs. 1993. EPA/600/R-93/C89

Cancer Description (USEPA 1986)

A = Human Carcinogen

B1 = Probable human carcinogen

B2 = Probable human carcinogen, sufficient evidence in animals and inadequate or no evidence in humans

C = Possible human carcinogen

D = Not classifiable as to human carcinogenicity

**= Lead risks were evaluated through EPA's Integrated Exposure Uptake Biokinetic Model and Adult Lead Model

***= Cancer risk for constituents identified as having a mutagenic mode of action (MOA) is calculated by applying an age-dependent adjustment factor (ADAF) for childhood exposures from birth through 15 years. These ADAFs are summarized below (EPA 2005). COPCs with a mutagenic MOA include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo (k) fluoranthene, dibenzo(a,h) anthracene, and indeno (1,2,3-cd)pyrene

TABLE 3a
KPN Oral/Dermal Non-Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Chemical of Concern	Chronic/ Subchronic	Oral RfD Value (mg/kg-day)	GI Absorption Factor[1]	Adjusted Dermal RfD[2] (mg/kg-day)	Primary Target Organ	Combined Uncertainty/ Modifying Factors	Sources of RfD: Target Organ	Dates of RfD Target Organ[3]
Aluminum	Chronic	1.00E+00	0.01	1.00E-02	Offspring, nervous system	100	NCEA	6/20/1994
	Subchronic	1.00E+00	0.01	1.00E-02	Offspring nervous system	100	NCEA (chronic)	6/20/1994
Antimony	Chronic	4.00E-04	0.15	6.00E-05	Whole body, blood	1000	IRIS	5/3/2006
	Subchronic	4.00E-04	0.15	6.00E-05	Whole body, blood	1000	HEAST	7/1/1997
Arsenic	Chronic	3.00E-04	1	3.00E-04	Skin	3	IRIS	5/3/2006
	Subchronic	3.00E-04	1	3.00E-04	Skin	3	HEAST	7/1/1997
Cadmium	Chronic	1.00E-03	0.025	2.50E-05	Kidneys	10	IRIS	5/3/2006
	Subchronic	1.00E-03	0.025	2.50E-05	Kidneys	10	IRIS (chronic)	5/3/2006
Copper	Chronic	3.70E-02	N/A	N/A	GI system	1	HEAST	7/1/1997
	Subchronic	3.70E-02	N/A	N/A	GI system	1	HEAST	7/1/1997
Iron	Chronic	3.00E-01	0.01	3.00E-03	Various organs	1	NCEA	1/5/1999
	Subchronic	3.00E-01	0.01	3.00E-03	Various organs	1	NCEA (chronic)	1/5/1999
Lead	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	Chronic	1.40E-01	0.04	5.60E-03	Central nervous system	1	IRIS	5/3/2006
	Subchronic	1.40E-01	0.04	5.60E-03	Central nervous system	1	HEAST	7/1/1997
Mercury, soluble salts	Chronic	3.00E-04	0.07	2.10E-05	Immune system	1000	IRIS (4)	5/3/2006
	Subchronic	3.00E-04	0.07	2.10E-05	Immune system	1000	HEAST (4)	7/1/1997
Nickel, soluble salts	Chronic	2.00E-02	0.04	8.00E-04	Whole body, organs	300	IRIS	5/3/2006
	Subchronic	2.00E-02	0.04	8.00E-04	Whole body, major organs	300	HEAST	3/31/1993
Silver	Chronic	5.00E-03	0.04	2.00E-04	Skin	3	IRIS	5/3/2006
	Subchronic	5.00E-03	0.04	2.00E-04	Skin	3	HEAST	7/1/1997
Thallium	Chronic	7.00E-05	1	7.00E-05	Liver, blood	3000	IRIS (5)	5/3/2006
	Subchronic	7.00E-04	1	7.00E-04	Liver, blood, hair	300	HEAST (5)	7/1/1997
Vanadium	Chronic	1.00E-03	0.026	2.60E-05	None reported	NA	Reg 3	4/7/2006
	Subchronic	1.00E-03	0.026	2.60E-05	None reported	NA	Reg 3 (oral)	4/7/2006
Zinc	Chronic	3.00E-01	1	3.00E-01	Blood	3	IRIS	5/3/2006
	Subchronic	3.00E-01	1	3.00E-01	Blood	3	HEAST	7/1/1997
Aroclor 1242	Chronic	N/A	1	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	1	N/A	N/A	N/A	N/A	N/A
Aroclor 1248	Chronic	N/A	1	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	1	N/A	N/A	N/A	N/A	N/A
Aroclor 1254	Chronic	2.00E-05	1	2.00E-05	Immune system, various	300	IRIS	5/3/2006
	Subchronic	5.00E-05	1	5.00E-05	Immune system	100	HEAST	7/1/1997
Aroclor 1260	Chronic	N/A	1	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	1	N/A	N/A	N/A	N/A	N/A

TABLE 3a
KPN Oral/Dermal Non-Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Chemical of Concern	Chronic/ Subchronic	Oral RfD Value (mg/kg-day)	GI Absorption Factor[1]	Adjusted Dermal RfD[2] (mg/kg-day)	Primary Target Organ	Combined Uncertainty/ Modifying Factors	Sources of RfD: Target Organ	Dates of RfD Target Organ[3]
Dieldrin	Chronic	5.00E-05	1	5.00E-05	Liver	100	IRIS	5/3/2006
	Subchronic	5.00E-05	1	5.00E-05	Liver	100	HEAST	7/1/1997
gamma-Chlordane	Chronic	5.00E-04	1	5.00E-04	Liver	300	IRIS (6)	5/3/2006
	Subchronic	6.00E-05	1	6.00E-05	Liver	1000	HEAST (6)	7/1/1997
Benz[a]anthracene	Chronic	N/A	1	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	1	N/A	N/A	N/A	N/A	N/A
Benzo[a]pyrene	Chronic	N/A	1	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	1	N/A	N/A	N/A	N/A	N/A
Benzo[b]fluoranthene	Chronic	N/A	1	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	1	N/A	N/A	N/A	N/A	N/A
Benzo[k]fluoranthene	Chronic	N/A	1	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	1	N/A	N/A	N/A	N/A	N/A
Dibenz[a,h]anthracene	Chronic	N/A	1	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	1	N/A	N/A	N/A	N/A	N/A
Indeno[1,2,3-cd]pyrene	Chronic	N/A	1	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	1	N/A	N/A	N/A	N/A	N/A

IRIS = Integrated Risk Information System
HEAST = Health Effects Assessment Summary Tables
NCEA = National Center for Environmental Assessment
Reg3 = EPA Region 3 Risk Based Concentration (RBC) Table
NA = Not Applicable or Not Available
SF = Slope Factor
RfC = Reference Concentration
RfD = Reference dose

(1) Refer to Risk Assessment Guidance for Superfund, Part E (EPA 2004).
(2) Dermal RfD = Oral RfD x Oral-to-dermal adjustment factor
(3) For IRIS values, the date IRIS was searched.
For HEAST values, the date of HEAST.
For NCEA values, the date of the article provided by NCEA
For Reg 3, the date of the RBC Table
(4) RfD of mercuric chloride used for mercury
(5) RfD of thallium chloride, adjusted for molecular weight, used for thallium
(6) RfD of technical chlordane used for gamma-chlordane

TABLE 3b
KPN Inhalation Non-Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Chemical of Potential Concern	Chronic/ Subchronic	Inhalation RfC Value (mg/m^3)	Adjusted Inhalation RfD[(1)] (mg/kg-day)	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD Target Organ[(2)]
Aluminum	Chronic	5.00E-03	1.40E-03	Nervous system	300	NCEA	8/13/1999
	Subchronic	5.00E-02	1.40E-02	Nervous system	30	NCEA(10xchronic)	8/13/1999
Antimony	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium	Chronic	N/A	5.70E-05	Kidneys	10	Reg 3	4/7/2006
	Subchronic	N/A	5.70E-05	Kidneys	10	Reg 3 (chronic)	4/7/2006
Copper	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Iron	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Lead	NA	N/A	N/A	N/A	N/A	N/A	N/A
Manganese	Chronic	5.00E-05	1.40E-05	Nervous system	1000	IRIS	5/3/2006
	Subchronic	5.00E-04	1.40E-04	Nervous system	100	IRIS (10 x chronic)	5/3/2006
Mercury, soluble salts	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Nickel, soluble salts	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Silver	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Thallium	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Zinc	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1242	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1248	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1254	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Aroclor 1260	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A

TABLE 3b
KPN Inhalation Non-Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Chemical of Potential Concern	Chronic/ Subchronic	Inhalation RfC Value (mg/m^3)	Adjusted Inhalation RfD[(1)] (mg/kg-day)	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ	Dates of RfD Target Organ[(2)]
gamma-Chlordane	Chronic	7.00E-04	2.00E-04	Liver	300	IRIS	5/3/2006
	Subchronic	7.00E-04	2.00E-04	Liver	300	IRIS (chronic)	5/3/2006
Benz[a]anthracene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Benzo[a]pyrene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Benzo[b]fluoranthene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Benzo[k]fluoranthene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Dibenz[a,h]anthracene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A
Indeno[1,2,3-cd]pyrene	Chronic	N/A	N/A	N/A	N/A	N/A	N/A
	Subchronic	N/A	N/A	N/A	N/A	N/A	N/A

IRIS = Integrated Risk Information System
HEAST = Health Effects Assessment Summary Tables
NCEA = National Center for Environmental Assessment
Reg3 = EPA Region 3 Risk Based Concentration (RBC) Table
NA = Not Applicable or Not Available
SF = Slope Factor
RfC = Reference Concentration
RfD = Reference dose

(1) Inhalation RfD = (RfC x 20 m^3/day) / 70 kg
(2) For IRIS values, the date IRIS was searched.
For HEAST values, the date of HEAST
For NCEA values, the date of the article provided by NCEA
For Reg3 values, the date of the RBC Table

TABLE 3c
KPS Oral/Dermal Non-Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Chemical of Concern	Chronic/ Subchronic	Oral RfD Value (mg/kg-day)	Absorption Efficiency for Dermal[1]	Adjusted Dermal RfD[2] (mg/kg-day)	Primary Target Organ	Combined Uncertainty/ Modifying Factors	Sources of RfD: Target Organ[3]	Dates of RfD Target Organ
Aluminum	Chronic	1.00E+00	1.00E+00	1.00E+00	Nervous System	1.00E+02	PPRTV	1989, 1995
Antimony (Metallic)	Chronic	4.00E-04	1.50E-01	6.00E-05	Blood / Whole Body	1.00E+03	IRIS	4/3/2018
Arsenic	Chronic	3.00E-04	1.00E+00	3.00E-04	Cardiovascular / Skin	3.00E+00	IRIS	4/3/2018
Cadmium (Diet)	Chronic	1.00E-03	2.50E-02	2.50E-05	Renal	1.00E+01	IRIS	4/3/2018
Cobalt	Chronic	3.00E-04	1.00E+00	3.00E-04	Thyroid	3.00E+03	PPRTV	1956
Copper	Chronic	4.00E-02	1.00E+00	4.00E-02	Gastrointestinal	Unknown	HEAST	1987
Iron	Chronic	7.00E-01	1.00E+00	7.00E-01	Gastrointestinal	2.00E+00	PPRTV	1994
Lead*	Chronic	-	-	-	Nervous System	Unknown	IRIS	4/3/2018
Manganese (Non-Diet)	Chronic	2.40E-02	4.00E-02	9.60E-04	Nervous System	1.00E+00	IRIS	4/3/2018
Mercury (Mercuric Chloride)	Chronic	3.00E-04	7.00E-02	2.10E-05	Immune / Nervous / Urinary	1.00E+03	IRIS	4/3/2018
Nickel (Soluble Salts)	Chronic	2.00E-02	4.00E-02	8.00E-04	Whole Body	3.00E+02	IRIS	4/3/2018
Silver	Chronic	5.00E-03	4.00E-02	2.00E-04	Skin	3.00E+00	IRIS	4/3/2018
Thallium (Soluble Salts)	Chronic	1.00E-05	1.00E+00	1.00E-05	Skin	3.00E+03	PPRTV	1984 , 1990
Vanadium **	Chronic	5.00E-03	2.60E-02	1.30E-04	Skin	1.00E+02	EPA RSL	4/3/2018
Zinc	Chronic	3.00E-01	1.00E+00	3.00E-01	Blood / Immune	3.00E+00	IRIS	4/3/2018
Aroclor 1242***	Chronic	2.00E-05	1.00E+00	2.00E-05	Skin / Immune / Ocular	300	IRIS	4/3/2018
Aroclor 1248***	Chronic	2.00E-05	1.00E+00	2.00E-05	Skin / Immune / Ocular	300	IRIS	4/3/2018
Aroclor 1254	Chronic	2.00E-05	1.00E+00	2.00E-05	Skin / Immune / Ocular	300	IRIS	4/3/2018
Aroclor 1260***	Chronic	2.00E-05	1.00E+00	2.00E-05	Skin / Immune / Ocular	300	IRIS	4/3/2018
Benzo(a)anthracene	Chronic	-	-	-	-	-	-	-
Benzo(a)pyrene	Chronic	3.00E-04	1.00E+00	3.00E-04	Developmental	3.00E+02	IRIS	4/3/2018
Benzo(b)fluoranthene	Chronic	-	-	-	-	-	-	-
Benzo(k)fluoranthene	Chronic	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	Chronic	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	Chronic	-	-	-	-	-	-	-
Naphthalene	Chronic	2.00E-02	1.00E+00	2.00E-02	Whole Body	3.00E+03	IRIS	4/3/2018
Dieldrin	Chronic	5.00E-05	1.00E+00	5.00E-05	Cardiovascular / Skin	1.00E+02	IRIS	4/3/2018
gamma-Chlordane	Chronic	5.00E-04	1.00E+00	5.00E-04	Liver	3.00E+02	IRIS	4/3/2018

(1) The Oral absorption efficiency for dermal was retrieved from EPA Risk Assessment Guidance for Superfund (RAGS) : Part E, 2004

(2) The Absorbed RfD fro dermal is calculated by multiplying the oral RfD by the oral absorption efficiency value (EPA RAGS : Part E, 2004).

(3) IRIS = Integrated Risk Information System. 2019. IRIS Final Assessments Search, https://cfpub.epa.gov/ncea/iris2/atoz.cfm.

PPRTV = PPRTV = Professional Peer Reviewed Toxicity Values for Superfund. https://hhpprtv.ornl.gov/quickview/pprtv.php#pprtv_roc.

HEAST = Health Effects Assessment Summary Tables for Superfund. https://epa-heast.ornl.gov/.

TABLE 3c
KPS Oral/Dermal Non-Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

EPA RSL = Environmental Protecion Agency Regional Screening Level. https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables.

* Lead risks were evaluated through EPA's Integrated Exposure Uptake Biokinetic Model and Adult Lead Model.

** Derived based on vanadium pentoxide.

*** Toxicity values for Aroclor 1254 used.

TABLE 3d
KPS Inhalation Non-Cancer Toxicity Data Summary
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Chemical of Concern	Chronic/ Subchronic	Inhalation RfC Value (mg/m^3)	Primary Target Organ	Combined Uncertainty/ Modifying Factors	Sources of RfD: Target Organ	Dates of RfD Target Organ
Aluminum	Chronic	5.00E-03	Nervous System	300	PPRTV	4/3/2018
Antimony (Metallic)	Chronic	2.00E-04	Respiratory	300	IRIS	4/3/2018
Arsenic	Chronic	1.50E-05	Developmental / Cardiovascular / Nervous / Respiratory	30	Cal EPA	1999, 2003, 2004
Cadmium (Diet)	Chronic	1.00E-05	Renal	10	ATSDR	2012
Cobalt	Chronic	6.00E-06	Respiratory	300	IRIS	4/3/2018
Copper	-	-	-	-	-	-
Iron	-	-	-	-	-	-
Lead*	-	-	-	-	-	-
Manganese (Non-Diet)	Chronic	5.00E-05	Nervous System	1000	IRIS	4/3/2018
Mercury (Mercuric Chloride)	Chronic	3.00E-04	Nervous System	30	IRIS	4/3/2018
Nickel (Soluble Salts)	Chronic	9.00E-05	Respiratory	30	ATSDR	2012
Silver	-	-	-	-	-	-
Thallium (Soluble Salts)	-	-	-	-	-	-
Vanadium **	Chronic	1.00E-04	Respiratory	30	ATSDR	2012
Zinc	-	-	-	-	-	-
Aroclor 1242***	-	-	-	-	-	-
Aroclor 1248***	-	-	-	-	-	-
Aroclor 1254	-	-	-	-	-	-
Aroclor 1260***	-	-	-	-	-	-
Benzo(a)anthracene	-	-	-	-	-	-
Benzo(a)pyrene	Chronic	0.000002	Developmental	3000	IRIS	43193
Benzo(b)fluoranthene	-	-	-	-	-	-
Benzo(k)fluoranthene	-	-	-	-	-	-
Dibenz(a,h)anthracene	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-
Naphthalene	Chronic	3.00E-03	Nervous / Respiratory	3000	IRIS	4/3/2018
Dieldrin	-	-	-	-	-	-
gamma-Chlordane	Chronic	0.0007	Liver	1000	IRIS	4/3/2018

(1) IRIS = Integrated Risk Information System. 2019. IRIS Final Assessments Search. https://cfpub.epa.gov/ncea/iris2/atoz.cfm.
PPRTV = Professional Peer Reviewed Toxicity Values for Superfund. https://hhpprtv.ornl.gov/quickview/pprtv.php#pprtv_roc.
ATSDR = Agency for Toxic Substances & Disease Registry. Minimal Risk Levels (MRLs) for Hazardous Substances. June 2017. https://www.atsdr.cdc.gov/mrls/mrllist.asp#16tag
CAL EPA = California Environmental Protection Agency. Chronic Reference Exposure Level (REL). OEHAA 2008, Technical Supporting Document for Noncancer RELs Appendix D1.

TABLE 4a
KPN Risk Characterization of Carcinogens to Child/Adult Site Visitor
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future
Receptor Population:	Site Visitor
Receptor Age	Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface soil/ Sediment	Surface soil/ Sediment	On Site (KPN)	Aluminum	NA	NA	NA	0.00E+00
			Antimony	NA	NA	NA	0.00E+00
			Arsenic	4.73E-06	3.00E-09	4.48E-07	5.18E-06
			Cadmium	NA	1.11E-09	NA	1.11E-09
			Copper	NA	NA	NA	0.00E+00
			Iron	NA	NA	NA	0.00E+00
			Lead	NA	NA	NA	0.00E+00
			Manganese	NA	NA	NA	0.00E+00
			Mercury, soluble salts	NA	NA	NA	0.00E+00
			Nickel, soluble salts	NA	NA	NA	0.00E+00
			Silver	NA	NA	NA	0.00E+00
			Thallium	NA	NA	NA	0.00E+00
			Vanadium	NA	NA	NA	0.00E+00
			Zinc	NA	NA	NA	0.00E+00
			Aroclor 1242	1.01E-07	6.37E-12	4.45E-08	1.46E-07
			Aroclor 1248	3.62E-07	2.29E-11	1.60E-07	5.22E-07
			Aroclor 1254	2.08E-06	1.32E-10	9.20E-07	3.00E-06
			Aroclor 1260	1.19E-06	7.53E-11	5.26E-07	1.72E-06
			Dieldrin	2.93E-06	1.85E-10	9.25E-07	3.86E-06
			gamma-Chlordane	5.53E-08	3.50E-12	6.99E-09	6.23E-08
			Benz(a)anthracene	7.71E-07	4.88E-11	3.17E-07	1.09E-06
			Benzo(a)pyrene	6.46E-06	4.09E-10	2.65E-06	9.11E-06
			Benzo(b)fluoranthene	4.18E-07	2.65E-11	1.72E-07	5.90E-07
			Benzo(k)fluoranthene	5.21E-08	3.30E-12	2.14E-08	7.35E-08
			Dibenz(a,h)anthracene	3.54E-06	2.24E-10	1.45E-06	4.99E-06
			Indeno(1,2,3-cd)pyrene	3.09E-07	1.95E-11	1.27E-07	4.36E-07
						Total Risk Across All Exposure	**3.08E-05**

TABLE 4b
KPS Risk Characterization of Carcinogens to Child/Adult Site Visitor
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future
Receptor Population:	Site Visitor
Receptor Age	Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	On-Site (KPS)	Aluminum	--	--	--	--
			Antimony	--	--	--	--
			Arsenic	2.90E-06	4.00E-07	8.30E-07	4.20E-06
			Cobalt	--	2.00E-06	--	2.00E-06
			Copper	--	--	--	--
			Iron	--	--	--	
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Mercury	--	--	--	--
			Nickel	--	2.40E-07	--	2.40E-07
			Silver	--	--	--	--
			Thallium	--	--	--	--
			Vanadium	--	--	--	--
			Aroclor 1254	5.60E-07	1.80E-06	4.40E-07	2.80E-06
			Aroclor 1260	5.90E-07	1.20E-06	4.60E-07	2.30E-06
			Benz(a)anthracene	4.00E-07	1.70E-09	2.70E-07	6.70E-07
			Benzo(a)pyrene	3.50E-06	1.90E-10	2.40E-06	5.80E-06
			Benzo(b)fluoranthene	5.60E-07	3.00E-11	3.80E-07	9.40E-07
			Benzo(k)fluoranthene	2.10E-08	1.10E-12	1.40E-08	3.50E-08
			Dibenzo(a,h)anthracene	2.80E-07	1.50E-11	1.90E-07	4.70E-07
			Indeno(1,2,3-cd)pyrene	1.20E-07	6.20E-12	8.00E-08	2.00E-07
			Naphthalene	--	9.20E-07	--	9.20E-07
						Surface Soil Total Risk	2.10E-05

TABLE 4c
KPS Risk Characterization of Carcinogens to Adult Utility/Construction Worker
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Future
Receptor Population:	Utility/Construction Worker
Receptor Age	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil, Sediment, and Subsurface Soil	Surface Soil, Sediment, and Subsurface Soil	On-Site (KPS)	Aluminum	-	-	-	-
			Antimony	-	-	-	-
			Arsenic	1.20E-07	2.30E-08	2.30E-08	1.66E-07
			Barium	-	-	-	-
			Cadmium	-	6.90E-09	-	6.90E-09
			Copper	-	-	-	-
			Iron	-	-	-	-
			Lead*	-	-	-	-
			Manganese	-	-	-	-
			Mercury, soluble salts	-	-	-	-
			Nickel, soluble salts	-	-	-	-
			Selenium	-	-	-	-
			Silver	-	-	-	-
			Thallium	-	-	-	-
			Vanadium	-	-	-	-
			Zinc	-	-	-	-
			Aroclor 1242	5.70E-09	1.10E-10	5.00E-09	1.08E-08
			Aroclor 1254	6.50E-09	1.30E-10	5.60E-09	1.22E-08
			Aroclor 1260	4.60E-09	8.80E-11	4.00E-09	8.69E-09
			Benz[a]anthracene	7.30E-09	1.40E-10	5.90E-09	1.33E-08
			Benzo(a)pyrene	7.80E-08	1.50E-09	6.30E-08	1.43E-07
			Benzo[b]fluoranthene	7.90E-09	1.50E-10	6.30E-09	1.44E-08
			Benzo[k]fluoranthene	7.00E-10	1.30E-11	5.60E-10	1.27E-09
			Chrysene	8.40E-11	1.60E-12	6.70E-11	1.53E-10
			Dibenz[a,h]anthracene	3.50E-08	6.80E-10	2.80E-08	6.37E-08
			Indeno[1,2,3-cd]pyrene	4.50E-09	8.60E-11	3.60E-09	8.19E-09
Surface Soil, Sediment, and Subsurface Soil Total Risk							**4.48E-07**

TABLE 4d
KPS Risk Characterization of Carcinogens to Adult Park Worker
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future
Receptor Population:	Park Worker
Receptor Age	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Concern	Non-Carcinogenic Hazard Quotient			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	On-Site (KPS)	Aluminum	-	-	-	-
			Antimony	-	-	-	-
			Arsenic	5.60E-07	4.20E-09	2.40E-07	8.10E-07
			Cobalt	-	2.10E-08	-	2.10E-08
			Copper	-	-	-	-
			Iron	-	-	-	-
			Lead	-	-	-	-
			Manganese	-	-	-	-
			Mercury	-	-	-	-
			Nickel	-	2.60E-09	-	2.60E-09
			Silver	-	-	-	-
			Thallium	-	-	-	-
			Vanadium	-	-	-	-
			Aroclor 1254	1.10E-07	1.90E-08	1.30E-07	2.50E-07
			Aroclor 1260	1.10E-07	1.30E-08	1.30E-07	2.60E-07
			Benz(a)anthracene	2.30E-08	1.70E-09	2.50E-08	5.00E-08
			Benzo(a)pyrene	2.00E-07	1.90E-10	2.20E-07	4.20E-07
			Benzo(b)fluoranthene	3.20E-08	3.10E-11	3.60E-08	6.80E-08
			Benzo(k)fluoranthene	1.20E-09	1.10E-12	1.30E-09	2.50E-09
			Dibenzo(a,h)anthracene	1.60E-08	1..5E-14	1..8E-08	3.40E-08
			Indeno(1,2,3-cd)pyrene	6.70E-09	6.40E-12	7.40E-09	1.40E-08
			Naphthalene	-	9.80E-09	-	9.80E-09
						Surface Soil Hazard Index Total	**1.90E-06**

TABLE 5a
KPN Risk Characterization of Non-Carcinogens to Adult Site Visitor
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future
Receptor Population:	Site Visitor
Receptor Age	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Concern	Primary Target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil/ Sediment	Surface Soil/ Sediment	On Site (KPN)	Aluminum	Offspring, nervous system	5.44E-03	4.28E-04	2.17E-02	2.76E-02
			Antimony	Whole body, blood	1.54E-02	-	4.10E-03	1.95E-02
			Arsenic	Skin	9.20E-03	-	1.10E-03	1.03E-02
			Cadmium	Kidneys	2.43E-03	4.80E-06	3.88E-04	2.82E-03
			Copper	GI system	3.42E-03	-	-	3.42E-03
			Iron	Various organs	4.67E-02	-	1.90E-01	2.37E-01
			Lead	-	-	-	-	0.00E+00
			Manganese	Central nervous system	1.55E-03	1.70E-03	1.54E-03	4.79E-03
			Mercury, soluble salts	Immune System	1.40E-02	-	7.99E-03	2.20E-02
			Nickel, soluble salts	Whole body, organs	9.15E-04	-	9.13E-04	1.83E-03
			Silver	Skin	9.14E-03	-	9.11E-03	1.83E-02
			Thallium	Liver, blood	2.47E-02	-	9.84E-04	2.57E-02
			Vanadium	None reported	2.93E-02	-	4.50E-02	7.43E-02
			Zinc	Blood	9.29E-04	-	3.71E-05	9.66E-04
			Aroclor 1242	-	-	-	-	0.00E+00
			Aroclor 1248	-	-	-	-	0.00E+00
			Aroclor 1254	Immune system, various	4.55E-02	-	2.54E-02	7.09E-02
			Aroclor 1260	-	-	-	-	0.00E+00
			Dieldrin	Liver	3.21E-03	-	1.28E-03	4.49E-03
			gamma-Chlordane	Liver	2.77E-04	7.78E-08	4.42E-05	3.21E-04
			Benz(a)anthracene	-	-	-	-	0.00E+00
			Benzo(a)pyrene	-	-	-	-	0.00E+00
			Benzo(b)fluoranthene	-	-	-	-	0.00E+00
			Benzo(k)fluoranthene	-	-	-	-	0.00E+00
			Dibenz(a,h)anthracene	-	-	-	-	0.00E+00
			Indeno(1,2,3-cd) pyrene	-	-	-	-	0.00E+00
				Total Hazard Index Across All Exposure Routes =				5.25E-01
				Total [Whole Body] HI =				0.021
				Total [Blood] HI =				0.046
				Total [Skin] HI =				0.01
				Total [Gastrointestinal system] HI =				0.003
				Total [Nervous system] HI =				0.03
				Total [Liver] HI =				0.03
				Total [Kidney] HI =				0.003
				Total [Offspring] HI =				0.027
				Total [Immune system] HI =				0.09
				Total [Unspecified Organs] HI =				0.38

TABLE 5b
KPN Risk Characterization of Non-Carcinogens to Child Site Visitor
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future
Receptor Population:	Site Visitor
Receptor Age	Child

Medium	Exposure Medium	Exposure Point	Chemical of Concern	Primary Target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil/ Sediment	Surface Soil/ Sediment	On Site (KPN)	Aluminum	Offspring, nervous system	5.07E-02	1.50E-04	1.42E-01	1.93E-01
			Antimony	Whole body, blood	1.44E-01	-	2.69E-02	1.71E-01
			Arsenic	Skin	8.59E-02	-	7.21E-03	9.31E-02
			Cadmium	Kidneys	2.27E-02	1.68E-05	2.54E-03	2.53E-02
			Copper	GI system	3.19E-02	-	-	3.19E-02
			Iron	Various organs	4.44E-02	-	1.24E+00	1.28E+00
			Lead	-	-	-	-	0.00E+00
			Manganese	Central nervous system	1.44E-02	5.97E-03	1.01E-02	3.05E-02
			Mercury, soluble salts	Immune System	1.31E-01	-	5.23E-02	1.83E-01
			Nickel, soluble salts	Whole body, organs	8.54E-03	-	5.98E-03	1.45E-02
			Silver	Skin	8.53E-02	-	5.97E-02	1.45E-01
			Thallium	Liver, blood	2.30E-02	-	6.44E-04	2.36E-02
			Vanadium	None reported	2.73E-01	-	2.95E-01	5.68E-01
			Zinc	Blood	8.67E-03	-	2.43E-04	8.91E-03
			Aroclor 1242	-	-	-	-	0.00E+00
			Aroclor 1248	-	-	-	-	0.00E+00
			Aroclor 1254	Immune system, various	1.70E-01	-	6.67E-02	2.37E-01
			Aroclor 1260	-	-	-	-	0.00E+00
			Dieldrin	Liver	2.99E-02	-	8.38E-03	3.83E-02
			gamma-Chlordane	Liver	2.15E-02	2.72E-07	2.41E-03	2.39E-02
			Benz(a)anthracene	-	-	-	-	0.00E+00
			Benzo(a)pyrene	-	-	-	-	0.00E+00
			Benzo(b)fluoranthene	-	-	-	-	0.00E+00
			Benzo(k)fluoranthene	-	-	-	-	0.00E+00
			Dibenz(a,h)anthracene	-	-	-	-	0.00E+00
			Indeno(1,2,3-cd) pyrene	-	-	-	-	0.00E+00
				Total Hazard Index Across All Exposure Routes =				3.47E+00
				Total [Whole Body] HI =				0.185
				Total [Blood] HI =				0.203
				Total [Skin] HI =				0.093
				Total [Gastrointestinal system] HI =				0.032
				Total [Nervous system] HI =				0.22
				Total [Liver] HI =				0.086
				Total [Kidney] HI =				0.025
				Total [Offspring] HI =				0.193
				Total [Immune system] HI =				0.42
				Total [Unspecified Organs] HI =				2.51

TABLE 5c
KPN Risk Characterization of Non-Carcinogens to Adult Utility/Construction Worker
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Future
Receptor Population:	Utility/Construction Worker
Receptor Age	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Concern	Primary Target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil/ Sediment	Surface Soil/ Sediment	On Site (KPN)	Aluminum	Offspring, nervous system	2.77E-02	2.06E-04	8.30E-02	1.11E-01
			Antimony	Whole body, blood	1.23E-01	-	2.46E-02	1.48E-01
			Arsenic	Skin	4.67E-02	-	4.28E-03	5.10E-02
			Cadmium	Kidneys	1.26E-02	2.35E-05	1.51E-03	1.41E-02
			Copper	GI system	2.06E-02	-	-	2.06E-02
			Iron	Various organs	4.39E-01	-	1.32E+00	1.76E+00
			Lead	-	-	-	-	0.00E+00
			Manganese	Central nervous system	1.17E-02	1.22E-03	8.80E-03	2.17E-02
			Mercury, soluble salts	Immune System	4.71E-02	-	2.02E-02	6.73E-02
			Nickel, soluble salts	Whole body, organs	9.80E-03	-	7.35E-03	1.72E-02
			Silver	Skin	1.74E-02	-	1.31E-02	3.05E-02
			Thallium	Liver, blood	2.54E-02	-	7.61E-04	2.62E-02
			Vanadium	None reported	1.29E-01	-	1.49E-01	2.78E-01
			Zinc	Blood	1.07E-02	-	3.21E-04	1.10E-02
			Aroclor 1242	-	-	-	-	0.00E+00
			Aroclor 1248	-	-	-	-	0.00E+00
			Aroclor 1254	Immune system, various	1.33E-01	-	5.59E-02	1.89E-01
			Aroclor 1260	-	-	-	-	0.00E+00
			Dieldrin	Liver	1.33E-02	-	4.00E-03	1.73E-02
			gamma-Chlordane	Liver	7.46E-03	2.39E-07	8.96E-04	8.36E-03
			Benz(a)anthracene	-	-	-	-	0.00E+00
			Benzo(a)pyrene	-	-	-	-	0.00E+00
			Benzo(b)fluoranthene	-	-	-	-	0.00E+00
			Benzo(k)fluoranthene	-	-	-	-	0.00E+00
			Dibenz(a,h)anthracene	-	-	-	-	0.00E+00
			Indeno(1,2,3-cd) pyrene	-	-	-	-	0.00E+00
							Total Hazard Index Across All Exposure Routes =	2.77E+00
							Total [Whole Body] HI =	0.165
							Total [Blood] HI =	0.185
							Total [Skin] HI =	0.052
							Total [Gastrointestinal system] HI =	0.021
							Total [Nervous system] HI =	0.13
							Total [Liver] HI =	0.052
							Total [Kidney] HI =	0.014
							Total [Offspring] HI =	0.111
							Total [Immune system] HI =	0.26
							Total [Unspecified Organs] HI =	2.24

TABLE 5d
KPS Risk Characterization of Non-Carcinogens to Child/Adult Site Visitor
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future
Receptor Population:	Site Visitor
Receptor Age	Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Concern	Primary Target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	On-site (KPS)	Aluminum		6.40E-02	4.70E-04	--	6.50E-02
			Antimony		1.10E-02	8.30E-07	--	1.10E-02
			Arsenic		0.058	7.20E-05	1.40E-02	7.20E-02
			Cobalt		2.30E-01	4.30E-04	--	2.30E-01
			Copper		2.10E-02	--	--	2.10E-02
			Iron		1.60E-01	--	--	1.60E-01
			Lead		--	--	--	--
			Manganese		7.00E-02	1.20E-03	--	7.10E-02
			Mercury		2.50E-02	9.00E-03	--	3.40E-02
			Nickel		1.50E-02	1.20E-04	--	1.50E-02
			Silver		1.20E-02	--	--	1.20E-02
			Thallium		3.00E-01	--	--	3.00E-01
			Vanadium		5.70E-02	1.00E-04	--	5.70E-02
			Aroclor 1254		1.20E-01	--	8.30E-02	2.10E-01
			Aroclor 1260		1.30E-01	--	8.70E-02	2.20E-01
			Benz(a)anthracene		--	--	--	--
			Benzo(a)pyrene		3.10E-02	1.70E-04	1.90E-02	5.10E-02
			Benzo(b)fluoranthene		--	--	--	--
			Benzo(k)fluoranthene		--	--	--	--
			Dibenzo(a,h)anthracene		--	--	--	--
			Indeno(1,2,3-cd)pyrene		--	--	--	--
			Naphthalene		5.80E-05	1.00E-04	3.60E-05	2.00E-04
							Surface Soil Hazard Index Total	**1.50E+00**

TABLE 5e
KPS Risk Characterization of Non-Carcinogens to Adult Park Worker
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Current/Future
Receptor Population:	Park Worker
Receptor Age	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Concern	Primary Target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	On-Site (KPS)	Aluminum	Nervous System	3.90E-03	1.20E-03	--	5.10E-03
			Antimony	Blood / Whole Body	6.80E-04	2.10E-06	--	6.80E-04
			Arsenic	Cardiovascular / Skin	3.50E-03	1.80E-04	1.50E-03	5.20E-03
			Cobalt	Thyroid / Respiratory	1.40E-02	1.10E-03	--	1.50E-02
			Copper	Gastrointestinal	1.20E-03	--	--	1.20E-03
			Iron	Gastrointestinal	9.90E-03	--	--	9.90E-03
			Lead	Nervous System	--	--	--	--
			Manganese	Nervous System	4.20E-03	3.20E-03	--	7.40E-03
			Mercury	Immune / Nervous / Urinary	1.50E-03	2.30E-02	--	2.50E-02
			Nickel	Whole Body / Respiratory	8.90E-04	3.10E-04	--	1.20E-03
			Silver	Skin	7.40E-04	--	--	7.40E-04
			Thallium	Skin	1.80E-02	--	--	1.80E-02
			Vanadium	Skin / Respiratory	3.40E-03	2.70E-04	--	3.70E-03
			Aroclor 1254	Skin / Immune / Ocular	7.50E-03	--	8.90E-03	1.60E-02
			Aroclor 1260	Skin / Immune / Ocular	7.90E-03	--	9.30E-03	1.70E-02
			Benz(a)anthracene	-	--	--	--	--
			Benzo(a)pyrene	Developmental	1.90E-03	4.40E-04	2.10E-03	4.40E-03
			Benzo(b)fluoranthene	-	--	--	--	--
			Benzo(k)fluoranthene	-	--	--	--	--
			Dibenzo(a,h)anthracene	-	--	--	--	--
			Indeno(1,2,3-cd)pyrene	-	--	--	--	--
			Naphthalene	Whole Body	3.50E-06	2.70E-04	3.90E-06	2.80E-04
							Surface Soil Hazard Index Total	**1.30E-01**

TABLE 5f
KPS Risk Characterization of Non-Carcinogens to Adult Utility/Construction Worker
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Scenario Timeframe:	Future
Receptor Population:	Utility/Construction Worker
Receptor Age	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Concern	Primary Target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil Sediment	Surface Soil Sediment	On Site (KPS)	Aluminum	Offspring, nervous system	4.90E-02	6.60E-02	3.00E-03	1.18E-01
			Antimony	Whole body, blood	1.20E-01	-	4.90E-03	1.25E-01
			Arsenic	Skin	1.10E-01	-	2.00E-02	1.30E-01
			Barium	Cardiovascular System, kidney	5.90E-03	1.60E-01	5.30E-04	1.66E-01
			Cadmium	Kidneys	2.30E-02	7.80E-03	5.70E-04	3.14E-02
			Copper	GI System	4.30E-02	-	-	4.30E-02
			Iron	Various Organs	8.00E-01	-	4.90E-02	8.49E-01
			Lead		-	-	-	0.00E+00
			Manganese	Central Nervous System	1.90E-02	3.50E-01	2.90E-03	3.72E-01
			Mercury, soluble salts	Immune System	1.3E.02	-	1.10E-03	1.10E-03
			Nickel, soluble salts	Whole body, organs	1.20E-03	-	1.90E-03	3.10E-03
			Selenium	Whole body	2.30E-03	-	1.40E-05	2.31E-03
			Silver	Skin	5.00E-03	-	7.80E-04	5.78E-03
			Thallium	Liver, Blood	8.00E-03	-	4.90E-05	8.05E-03
			Vanadium	None reported	3.10E-01	-	7.50E-02	3.85E-01
			Zinc	Blood	1.60E-02	-	9.80E-05	1.61E-02
			Aroclor 1242	-	-	-	-	0.00E+00
			Aroclor 1254	Immune System	2.60E-02	-	2.30E-02	4.90E-02
			Aroclor 1260	-	-	-	-	0.00E+00
			Benz(a)anthracene	-	-	-	-	0.00E+00
			Benzo(a)pyrene	-	-	-	-	0.00E+00
			Benzo(b)fluoranthene	-	-	-	-	0.00E+00
			Benzo(k)fluoranthene	-	-	-	-	0.00E+00
			Chrysene	-	-	-	-	0.00E+00
			Dibenz(a,h)anthracene	-	-	-	-	0.00E+00
			Indeno(1,2,3-cd) pyrene	-	-	-	-	0.00E+00
							Total Hazard Index Across All Exposure Routes	2.31E+00
							Total [Whole Body] HI =	0.14
							Total [Blood] HI =	0.15
							Total [Cardiovascular System] HI =	0.01
							Total [Skin] HI =	0.14
							Total [Gastrointestinal system] HI =	0.04
							Total [Nervous system] HI =	0.49
							Total [Liver] HI =	0.01
							Total [Kidney] HI =	0.04
							Total [Offspring] HI =	0.22
							Total [Immune system] HI =	0.06
							Total [Unspecified Organs] HI =	0.9

TABLE 6
Preliminary Remediation Goals (PRGs)
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

Analyte			
Benzo(a)anthracene	6.7	11	45
Benzo(a)pyrene	0.67	1.1	4.5
Benzo(b)fluoranthene	6.7	11	45
Benzo(k)fluoranthene	--	--	--
Dibenzo(a,h)anthracene	0.67	1.1	4.5
Benzo(a)pyrene Equivalent	0.67	1.1	4.5
Aldrin	0.21	0.26	1.0
Dieldrin	0.14	0.24	0.95
Aroclor 1254	1.0	1.8	7.2
Aroclor 1260	1.0	1.8	7.2
Aluminum	430000	490000	2000000
Antimony	180	200	790
Arsenic	3.2	4.5	18
Cobalt	130	150	590
Copper	18000	20000	79000
Iron	310000	350000	1400000
Lead	153	295	295
Manganese	10000	12000	47000
Silver	2200	2500	9900
Thallium	4.4	4.9	20
Vanadium	2200	2500	9900
Mercury	130	150	590

Notes:
1) All values are expressed in miligrams per kilogram (mg/kg)
2) NA indicates the given analyte was not a COPC in the given park area, and therefore no EPC was calculated for it.
3) Exposure Point Concentrations (EPC) for KPN represent the lower value of either the 95% UCL or maximum detection (calculated from the RI, PA/SI, and DCSEC Investigation data).
4) Exposure Point Concentrations (EPC) for KPS are the arithmetic mean concentration of the UCLs calculated for each individual SU.
5) Benzo(a)pyrene equivalent values were calculated using the following Toxicity Equivalency Factors (TEFs)

Benzo(a)anthracene - 0.1
Benzo(a)pyrene - 1
Benzo(b)fluoranthene - 0.1
Benzo(k)fluoranthene - 0.01
Dibenzo(a,h)anthracene - 1

TABLE 7a
Location-Specific Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Feasibility Study Addendum Report
Kenilworth Park Landfill Site, Washington, D.C.

Standard, Requirement, Criteria, or Limitation	Citation	Requirement Description	Potentially Applicable, Relevant and Appropriate, or To Be Considered
NPS mandate to ensure the non-impairment of national park resources for the enjoyment of future generations and the non-derogation of park values and purposes.	NPS Organic Act of 1916, as amended, 54 U.S.C. § 100101(a) General Authorities Act, as amended 54 U.S.C. § 100101(b)	The NPS Organic Act provides that "[t]he Secretary, acting through the Director of the National Park Service, shall promote and regulate the use of the National Park System by means and measures that conform to the fundamental purpose of the System units, which purpose is to conserve the scenery, natural and historic objects, and wild life in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The General Authorities Act further provides that "the protection, management, and administration of the System units shall be conducted in light of the high public value and integrity of the System and shall not be exercised in derogation of the values and purposes for which the System units have been established."	**Applicable** to all Site activities that could potentially result in an impairment of the park's resources or values as described in the enabling legislation and management planning documents for the park
NPS management policy on implementation of the non-impairment mandate	2006 NPS Management Policies (MP), § 1.4	**NPS MP § 1.4.5** provides in part that "[t]he impairment that is prohibited by the Organic Act and the General Authorities Act is an impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts. . . . An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is: necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; or key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or identified in the park's general management plan or other relevant NPS planning documents as being of significance. . . . An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated." **NPS MP § 1.4.3** further explains that "[t]he fundamental purpose of all parks also includes providing for the enjoyment of park resources and values by the people of the United States. The enjoyment that is contemplated by the statute is broad; it is the enjoyment of all the people of the United States and includes enjoyment both by people who visit parks and by those who appreciate them from afar. It also includes deriving benefit (including scientific knowledge) and inspiration from parks . . . ." **NPS MP § 1.4.6** describes the "park resources and values" subject to non-impairment. **NPS MP § 1.4.7** provides that "[b]efore approving a proposed action that could lead to an impairment of park resources and values, an NPS decision-maker must consider the impacts of the proposed action and determine, in writing, that the activity will not lead to an impairment of park resources and values. If there would be an impairment, the action must not be approved."	**TBC** for guidance on the implementation of the non-impairment mandate as set forth in the NPS Organic Act
Anacostia Park enabling legislation	Act of August 31, 1918, chapter 164, 40 Stat. 918, 951. An Act providing for a comprehensive development of the park and playground system of the National Capital, as amended, Pub. L. No. 68-202, 43 Stat. 463 (1924), as amended Capper-Crampton Act, Pub. L. No. 71-284, 46 Stat. 482 (1930), as amended	The 1918 statute established Anacostia Park (which includes the Site). The 1924 statute was enacted to "preserve the flow of water in Rock Creek, to prevent pollution of Rock Creek and the Potomac and Anacostia Rivers, to preserve forests and natural scenery in and about Washington, and to provide for the comprehensive, systematic, and continuous development of the park, parkway, and playground system of the National Capital" and to acquire lands for the development of that system (of which the Site is a part). The Capper-Crampton Act expressly provided for the extension of the Anacostia Park system up the valley of the Anacostia River.	**Applicable** to remedial activities in Anacostia Park These statutes provide a framework for determining what is required to attain the Organic Act non-impairment requirement

TABLE 7a
Location-Specific Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Feasibility Study Addendum Report
Kenilworth Park Landfill Site, Washington, D.C.

Standard, Requirement, Criteria, or Limitation	Citation	Requirement Description	Potentially Applicable, Relevant and Appropriate, or To Be Considered
District of Columbia Water Quality Standards for Wetlands	21 DCMR § 1103.2	These regulations require, subject to certain exceptions, that wetlands with rooted vascular aquatic vegetation be protected from significant adverse hydrologic modifications, excessive sedimentation, deposition of toxic substances in toxic amounts, nutrient imbalances, and other adverse anthropogenic impacts.	**Applicable** to remedial activities that would have significant adverse effects on the type of wetlands covered by the regulations
District of Columbia Wetlands Regulations	21 DCMR Chapters 25 & 26	In accordance with the Clean Water Act Section 404/401 and the District Wetland and Stream Regulations, all wetlands and streams within the project are required to be delineated. A jurisdictional determination with the U.S. Army Corps of Engineers will be necessary. Both federal and District wetland regulations require avoidance and minimization of permanent wetland and stream impacts, and mitigation will be required for any unavoidable impacts.	**Applicable** to remedial activities that would have significant adverse effects on the type of wetlands covered by the regulations
Federal Floodplain Management Orders	Executive Order No. 11988 NPS Director's Order No. 77-2 [exp. 2007]	These orders require consideration of impacts to areas within the 100-year floodplain in order to reduce flood loss risks, minimize flood impacts on human health, safety, and welfare, and preserve and/or restore floodplain values.	**TBC** for remedial actions conducted within the 100-year floodplain
District of Columbia Flood Hazard Control	D.C. Code §§ 6-501 to 6-504 20 DCMR § 3105	This statute and its implementing regulations regulate the placement of fill, grading, excavation, and other disturbances within the defined flood hazard area and the floodplains of rivers and streams.	**Applicable** to remedial activities conducted within defined special flood hazard areas
Migratory Bird Treaty Act (MBTA)	16 U.S.C. §§ 703 et seq., as amended by Pub. L. No. 116-9, 133 Stat. 580 (2019)	This statute prohibits the unauthorized taking of migratory birds.	**Applicable** to remedial activities that could affect migratory birds
Responsibilities of Federal Agencies to Protect Migratory Birds	Executive Order No. 13186	This order directs executive departments and agencies to take certain actions to further implement the MBTA, including supporting the conservation intent of the migratory bird conventions by integrating bird conservation principles, measures, and practices into agency activities and by avoiding or minimizing, to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions.	**TBC** in implementing the remedy in a manner that minimizes impacts to migratory birds and related resources
Legislation Directing Transfer of Administrative Jurisdiction over Kenilworth Park North (KPN)	Pub. L. No. 108-335, § 344 118 Stat. 1322, 1350 (2004)	This legislation directed the United States to transfer administrative jurisdiction over, but not title to, KPN to the District of Columbia and imposed limitations on the future use of the property.	**Applicable** to the future use assumptions used to design and implement the remedy
National Park Resource Protection, Public Use, and Recreation	36 C.F.R. §§ 2.1(a), 2.2(a)(1), 2.12(a), 2.14(a), 2.31(a)(3), 2.31(a)(5)	These regulations authorize and prohibit certain activities by third parties within units of the National Park System.	**Relevant and appropriate** to remedial activities conducted within any unit of the National Park System
National Park Area Nuisance	36 C.F.R. § 5.13	This regulation prohibits the creation or maintenance of a nuisance upon any federally owned land within a park area or any privately owned land in a park area under the exclusive legislative jurisdiction of the United States.	**Relevant and appropriate** to remedial activities that could constitute a nuisance

TABLE 7a
Location-Specific Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Feasibility Study Addendum Report
Kenilworth Park Landfill Site, Washington, D.C.

Standard, Requirement, Criteria, or Limitation	Citation	Requirement Description	Potentially Applicable, Relevant and Appropriate, or To Be Considered
Anacostia Park General Management Plan and Environmental Assessment (February 2017)	Available at: [Anacostia Park Management Plan/Environmental Assessment]	The General Management Plan for the Park is the primary guidance document for managing the Park for the next fifteen to twenty years. It identifies the preferred vision for the future of the Park and provides the framework for decision-making regarding the management of the Park's natural and cultural resources.	**TBC** in designing and implementing the remedy The General Management Plan for Anacostia Park provides a framework for determining what is required to attain the Organic Act non-impairment requirement.
NPS Foundation Document, National Capital Parks – East (September 2016)	Available at: [Foundation Document Overview]	The Foundation Document for National Capital Parks – East (NACE) provides a foundation for the planning and management of the Park in light of its purposes, significance, fundamental resources and values, other important resources and values, and interpretive themes.	**TBC** in designing and implementing the remedy The Foundation Document provides a framework for determining what is required to attain the Organic Act non-impairment requirement.
National Capital Parks – East, Superintendent's Compendium	Available at: [Superintendent's Compendium] (note that the link is an overview, rather than the entire document, which is not readily available online)	The Superintendent's Compendium establishes regulatory provisions for the proper management, protection, and government and public use of National Capital Parks – East.	**TBC** in designing and implementing the remedy The Superintendent's Compendium provides a framework for determining what is required to attain the Organic Act non-impairment requirement.
Environmental Assessment, Anacostia Riverwalk Trail Section 3 Realignment Anacostia Park (December 2011)	Available at: [Anacostia Riverwalk Trail Section 3 Realignment]	This document describes the selected alignment for the Anacostia Riverwalk Trail, including Design Section 3 (between Benning Road in Washington, D.C. and Bladensburg Trail in Maryland).	**TBC** in designing and implementing the remedy
Office of the Federal Executive, Guidance for Presidential Memorandum on Environmentally and Economically Beneficial Landscape Practices on Federal Landscaped Grounds	60 Fed. Reg. 40837 (August 10, 1955)	This guidance provides a framework for the use of environmentally and economically beneficial landscape practices on managed federal lands and federally funded projects.	**TBC** in designing and implementing the remedy
Chesapeake 2000 Agreement	Chesapeake 2000 Agreement and Chesapeake Executive Council Directives available at: [Chesapeake 2000]	This agreement, to which the United States is a party, establishes goals and directives for the protection and restoration of the Chesapeake Bay watershed, including vital habitat protection and restoration, water quality protection and restoration, and stewardship and community engagement.	**TBC** in designing and implementing the remedy

TABLE 7a
Location-Specific Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Feasibility Study Addendum Report
Kenilworth Park Landfill Site, Washington, D.C.

Standard, Requirement, Criteria, or Limitation	Citation	Requirement Description	Potentially Applicable, Relevant and Appropriate, or To Be Considered
Comprehensive Plan Environmental Protection Element	10-A DCMR § 604	The Environmental Protection Element addresses the protection, restoration, and management of the District's land, air, water, energy, and biologic resources. The Element provides policies and actions on issues such as drinking water safety, the restoration of our tree canopy, energy conservation, air quality, watershed protection, pollution prevention and waste management, and the remediation of contaminated sites. More specifically, section E-1.2 "Protecting Rivers, Wetlands, and Riparian Areas" outlines policies pertaining to: river conservation; waterfront habitat restoration; retention of environmentally sensitive areas as open space; identification, protection, and restoration of wetlands; and wetland buffers.	**TBC** in designing and implementing the remedy
NPS Policies Concerning Climate Change	NPS Policy Memorandum (PM) 15-01, "Addressing Climate Change and Natural Hazards" (Jan. 20, 2015) and accompanying Level 3 Handbook PM 12-02, "Applying NPS Management Policies in the Context of Climate Change" (March 6, 2012) https://www.nps.gov/policy/PolMemos/PM_12-02.htm PM 14-02, "Climate Change and Stewardship of Cultural Resources" http://www.nps.gov/policy/PolMemos/PM-14-02.htm 2006 NPS MP § 9.1.1.5 https://www.nps.gov/orgs/1548/upload/ManagementPolicies2006.pdf	NPS Policy Memorandum (PM) 15-01 and its accompanying Handbook provide guidance on the design of facilities in national parks to incorporate impacts of climate change and natural hazards.PM 15-01 is the third "policy pillar" of the Service-wide climate change response, joining NPS PM 12-02 addressing the implications of climate change on the guiding principles of NPS natural resource management, and NPS PM 14-02 providing guidance on the stewardship of cultural resources in relation to climate change. PM 15-01 specifically references NPS MP Section 9.1.1.5, which directs NPS to "strive to site facilities where they will not be damaged or destroyed by natural physical processes," and also discusses siting considerations in areas where dynamic natural processes cannot be avoided.	**TBC** in designing and implementing the remedy
District of Columbia Harbor Regulations, Throwing or Depositing Matter in the Potomac River	D.C. Code § 22-4402	This statute prohibits the deposit of any stone, gravel, sand, ballast, dirt, oyster shells, or ashes in the water in any part of the Potomac River or its tributaries in the District of Columbia, or on the shores of the Potomac River below the high water mark. The statute also prohibits the deposit of "any filth of any kind whatsoever" in the river or its tributaries.	**Applicable** to site remediation activities on the shores of the Anacostia River

TABLE 7b
Chemical-Specific Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Feasibility Study Addendum Report
Kenilworth Park Landfill Site, Washington, D.C.

Standard, Requirement, Criteria, or Limitation	Citation	Requirement Description	Potentially Applicable, Relevant and Appropriate, or To Be Considered
National Park Service Protocol for the Selection and Use of Ecological Screening Values for Non-Radiological Analytes	NPS	This guidance addresses the selection of ecological screening values for surface water and sediment.	**TBC** in pre-design sampling and analysis
Resource Conservation and Recovery Act, Subtitle D Methane Requirements	42 U.S.C. §§ 6941 et seq. 40 C.F.R. §§ 258.23 and 258.61	RCRA Subtitle D and its implementing regulations establish permissible limits of methane concentrations in structures on landfills and in soil gas at the property boundary.	**Relevant and appropriate** for assessment and remediation of methane
U.S. EPA Guidance for Evaluating Landfill Gas Emissions from Closed or Abandoned Facilities	EPA-600/R05/123a (September 2005)	This document provides guidance for evaluating inhalation risks to off-site receptors as well as the hazards of both on-site and off-site methane explosions and landfill fires.	**TBC** for evaluation and remediation of landfill gasses
District of Columbia Water Quality Standards for Surface Water	D.C. Code §§ 8-103.02, 8-103.06 21 DCMR §§ 1101-06, 1108	The water quality standards established under section 303(c) the federal Clean Water Act and section 5 of the Water Pollution Control Act of 1984 cover various classes of surface waters and include draft total maximum daily loads (TMDLs) for oil and grease, organics, and metals in the Anacostia River.	**Applicable** to remedial activities that could affect surface water on the Site

TABLE 7c
Action-Specific Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Feasibility Study Addendum Report
Kenilworth Park Landfill Site, Washington, D.C.

Standard, Requirement, Criteria, or Limitation	Citation	Requirement Description	Potentially Applicable, Relevant and Appropriate, or To Be Considered
District of Columbia Noise Control Act	20 DCMR §§ 2701, 2704 20 DCMR § 2802	The statute and regulations establish maximum permissible sound levels for time of day and zoning locations.	**Applicable** to remediation activities that generate noise
District of Columbia Air Pollution Control Act, Air Quality Regulations	D.C. Code § 8-101.05 20 DCMR §§ 600, 603, 605-06, 699	This statute and its implementing regulations establish requirements for sources of particulate air pollution, including fugitive dust and visible emissions.	**Applicable** to remediation activities that generate particulate air pollution
District of Columbia Air Pollution Control Act, Engine Idling	D.C. Code § 8-101.05 20 DCMR § 900	This statute and its implementing regulations provide that a vehicle that is parked, stopped, or standing shall not idle for more than three minutes.	**Applicable** to remediation activities that involve the use of trucks on the Site (e.g., for importation of clean soil)
District of Columbia Air Pollution Control Act, Vehicle Exhaust Emissions	D.C. Code § 8-101.05 20 DCMR § 901	This statute and its implementing regulations provide that the engine, power, and exhaust mechanism of each motor vehicle must be equipped, adjusted, and operated to prevent the escape of a trail of visible fumes or smoke for more than ten consecutive seconds.	**Applicable** to remediation activities that involve the use of trucks on the Site (e.g., for importation of clean soil)
District of Columbia Air Pollution Control Act, Odorous or Other Nuisance Air Pollutants	D.C. Code § 8-101.05 20 DCMR § 903	This statute and its implementing regulations provide that any emission into the atmosphere of odorous or other air pollutants from any source in any quantity and of any characteristic and duration, which is or is likely to be injurious to the public health or welfare, or which interferes with the reasonable enjoyment of life and property, is prohibited.	**Applicable** to remediation activities that result in the generation and emission of air pollutants that could constitute a nuisance
Clean Water Act Stormwater Program	33 U.S.C. § 1342(p) 40 C.F.R. § 122.26 2017 NPDES Construction General Permit	The Clean Water Act stormwater program regulates the discharge of stormwater from industrial and construction activities and require the implementation of best management practices such as the use of stormwater fencing and other measures to prevent the discharge of stormwater to surface waters. The *substantive* requirements of the most recent National Pollutant Discharge Elimination System (NPDES) Construction General Permit (2017) would apply to any remedial activities that are subject to the stormwater program.	**Applicable** to discharges of stormwater to surface waters from remediation activities that involve soil disturbance of one acre or more **Relevant and appropriate** to discharges of stormwater to surface waters bodies from remedial action involving soil disturbance of less than one acre
District of Columbia Soil Erosion and Sedimentation Control Act and Stormwater Regulations	21 DCMR §§ 524, 543	These regulations impose requirements on the discharge of stormwater from land-disturbing activities on sites located in the Anacostia Waterfront Development Zone, as well as erosion and sediment control associated with those activities.	**Applicable** to remediation activities that result in land disturbance
District of Columbia Water Pollution Control Act of 1984	D.C. Code §§ 8-103.02, 8-103.06	These sections of the statute prohibit the discharge of a pollutant into District waters (including groundwater) unless the discharge is permitted and meets certain standards.	**Applicable** to remediation activities that result in the discharge of pollutants into surface waters
District of Columbia Well Construction, Maintenance, and Abandonment Standards	D.C. Code § 8-103.13a 21 DCMR §§ 1809-26, 1827-28, 1830-31	These regulations ensure that the construction, use, maintenance, and abandonment of wells is undertaken in a manner that protects public health and the environment.	**Applicable** to the construction, use, maintenance, or abandonment of monitoring wells

TABLE 7c
Action-Specific Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Criteria
Feasibility Study Addendum Report
Kenilworth Park Landfill Site, Washington, D.C.

Standard, Requirement, Criteria, or Limitation	Citation	Requirement Description	Potentially Applicable, Relevant and Appropriate, or To Be Considered
Resource Conservation and Recovery Act, Subtitle D Solid Waste Landfill Closure and Post-Closure Requirements	42 U.S.C. §§ 6944-6945 40 C.F.R. §§ 258.60(a)(3), 258.60(b)(2), 258.61(a)(1), and 258.61(a)(3)	These regulations establish closure requirements, including a final cover system designed to minimize erosion, as well as post-closure care requirements, such as maintenance of the cover and monitoring groundwater.	**Relevant and appropriate** for portions of the Site that present unacceptable risks to human health or the environment related to direct exposure to hazardous substances
District of Columbia Hazardous Waste Management Regulations	20 DCMR Chapter § 4202	The District's Hazardous Waste Management Regulations incorporate most of the requirements of RCRA Subtitle C by reference. This section of the regulations provides additional requirements that, among other things, prohibit the disposal of any hazardous waste or any mixture of hazardous waste and another constituent into or on any land or water in the District of Columbia. It also provides that hazardous waste management units that are unable to achieve clean closure shall be considered to be landfills and subject to the closure and post-closure requirements for landfills as specified in the federal RCRA regulations applicable to the unit in question.	**Relevant and appropriate** for remedial action that leaves hazardous wastes on-site

TABLE 8
Detailed Cost Assumptions for Selected Alternative
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

CAPITAL COSTS	Qty	Unit	Unit Cost	Ext. Cost	Comments
Construction Services					
Contractor mobilization / demobilization					
Small equipment	2	Ea	$320	$639	Means 01 54 36.50 1300
Medium equipment	4	Ea	$888	$3,554	Means 01 54 36.50 1400
Large equipment	4	Ea	$3,088	$12,352	Means 01 54 36.50 1600
Site facilities					
Office trailer, rental	6	Mo	$295	$1,768	Means 01 52 13.20 0350
Temporary electrical service	1	Ea	$1,327	$1,327	Means 01 51 13.50 0040
Site security & control					
Site security service	4380	Hr	$30	$130,508	Means 01 56 32.50 0020
Silt fencing / erosion control	5000	LF	$2.04	$10,185	Means 31 25 14.16 1000
Silt fencing maintenance	12	Mo	$1,018	$12,222	Means 31 25 14.16 1100
Dust & traffic control	100	Day	$1,111	$111,059	Means 31 23 23.20 2500
H&S / decontamination	6	Mo	$5,000	$30,000	Engineers estimate, based on experience.
Selective site demolition					
Pavement removal, bituminous	10,434	SY	$6.23	$65,008	Means 02 41 13.17 5010
Pavement removal, concrete up to 6"	2,988	SY	$17	$50,667	Means 02 41 13.17 5200
Small building demolition	3	Ea	$4,171	$12,514	Means 02 41 16.13 1000
Waste transportion / hauling	1,627	LCY	$13	$21,857	Means 31 23 23.20 4714
Waste disposal as ADC at Subtitle D facility	3,091	Ton	$32	$98,909	Engineers estimate, based on experience.
Site preparation					
Rough grading, small area	4	Ea	$1,652	$6,609	Means 31 22 13.20 0220
Rough grading, medium area	1	Ea	$2,492	$2,492	Means 31 22 13.20 0250
Rough grading, large area	2	Ea	$5,553	$11,106	Means 31 22 13.20 0280
Confirmatory ISM soil sampling	11	acre	$2,500	$28,002	Engineers estimate, based on experience.
Barrier installation					
Demarcation layer, woven geotextile	242,590	SY	$1.54	$373,241	Means 31 32 19.16 1500
Backfill transportion / hauling	101,079	LCY	$5.58	$564,024	Means 31 23 23.20 4108
Backfill, common earth	40,432	BCY	$22	$871,773	Means 31 23 23.15 4070; assumes 6-inch thickness
Backfill, topsoil	40,432	BCY	$31	$1,248,519	Means 31 23 23.15 7070; assumes 6-inch thickness
Rough grading, large area	22	Ea	$5,553	$121,238	Means 31 22 13.20 0280
Backfill compaction	80,863	ECY	$1.05	$84,987	Means 31 23 23.23 5600
Hydro seeding, with fertilizer	266,849	SY	$0.88	$234,196	Means 32 92 19.13 1000; assumes 110% of barrier area

TABLE 8
Detailed Cost Assumptions for Selected Alternative
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Kenilworth Park Landfill Site, Washington, D.C.

CAPITAL COSTS	Qty	Unit	Unit Cost	Ext. Cost	Comments
Trail / access road resurfacing	2,838	SY	$4.75	$13,467	Means 32 11 23.23 0050
Site restoration					
Driveway repaving	28,000	SF	$2.87	$80,396	Means 32 12 16.14 0020
Asphalt transportion / hauling	519	CY	$13	$6,967	Means 31 23 23.20 4108
Parking area replacement	13,867	SY	$4.75	$65,807	Means 32 11 23.23 0050
Soil gas implant installation	15	ea	$1,500	$22,500	Engineers estimate, based on experience.
Institutional controls / site management plan	1	LS	$25,000	$25,000	Engineers estimate, based on experience.
			Subtotal, Construction Services:	$4,322,891	
Scope Contingency	1	LS	$648,434	$648,434	Assume 15% of Construction Services subtotal (EPA, 2000).
Bid Contingency	1	LS	$432,289	$432,289	Assume 10% of Construction Services subtotal (EPA, 2000).
			Subtotal, Construction Services including Contingencies:	**$5,403,614**	
Professional/Technical Services					
Project Management	1	LS	$270,180.71	$270,181	Project Managment cost estimated based on CERCLA guidance (EPA, 2000, Exhibit 5-8).
Remedial Design	1	LS	$432,289.14	$432,289	Remedial Design cost estimated based on CERCLA guidance (EPA, 2000, Exhibit 5-8).
Construction Management	1	LS	$324,216.86	$324,217	Construction Managment cost estimated based on CERCLA guidance (EPA, 2000, Exhibit 5-8).
			Subtotal, Professional/Technical Services:	**$1,026,687**	
			TOTAL, Capital Costs:	**$6,430,301**	
ANNUAL O&M COSTS	**Qty**	**Unit**	**Unit Cost**	**Ext. Cost**	**Comments**
Soil barrier maintenance, KPN	1	LS	$35,543	$35,543	Assume 10% of grading & reseeding capital costs.
Soil gas monitoring event	1	LS	$25,000	$25,000	Engineers estimate, based on experience.
			TOTAL, Annual O&M Costs:	**$60,543**	

TABLE 8
Detailed Cost Assumptions for Selected Alternative
Record of Decision
Kenilworth Park Landfill Site, Washington, D.C.

PERIODIC COSTS	Qty	Unit	Unit Cost	Ext. Cost	Comments
Soil gas implant decommissioning	1	LS	$20,000	$20,000	Engineers estimate, based on experience.
Five year review (FYR)	1	LS	$30,000	$30,000	Engineers estimate, based on experience.
PRESENT VALUE ANALYSIS	**Year**	**Discount Factor**	**Total Cost**	**Present Value**	**Comments**
Capital Cost	0	1.000	$6,430,301	$6,430,301	
Annual O&M Cost	1-30	28.217	$35,543	$1,002,920	Soil barrier maintenance, KPN
Annual O&M Cost	1-5	4.941	$25,000	$123,514	Soil gas monitoring event
Periodic Cost	5	0.980	$50,000	$49,012	Five year review (FYR); Soil gas implant decommissioning
Periodic Cost	10	0.961	$30,000	$28,826	Five year review (FYR)
Periodic Cost	15	0.942	$30,000	$28,256	Five year review (FYR)
Periodic Cost	20	0.923	$30,000	$27,698	Five year review (FYR)
Periodic Cost	25	0.905	$30,000	$27,151	Five year review (FYR)
Periodic Cost	30	0.887	$30,000	$26,614	Five year review (FYR)
TOTAL, Present Value of Alternative:				**$7,744,292**	

References:
1. "Means" indicates unit cost for noted section item from "2018 Site Work & Landscape Costs Book with RSMeans Data", Gordian, 2017.
2. U.S. Environmental Proction Agency (EPA), 2000. "A Guide to Developing and Documenting Cost Estimates during the Feasibility Study", EPA 540-R-00-002 / OSWER 9355.0-75, July 2000.
3. Consistent with the November 2019 update of Appendix C of the Office of Management and Budget (OMB) Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analyses of Federal Programs (OMB Circular A-94) and EPA, 2000, a discount factor of 0.4% has been used for the present value analysis.

FIGURES

FIGURE 1

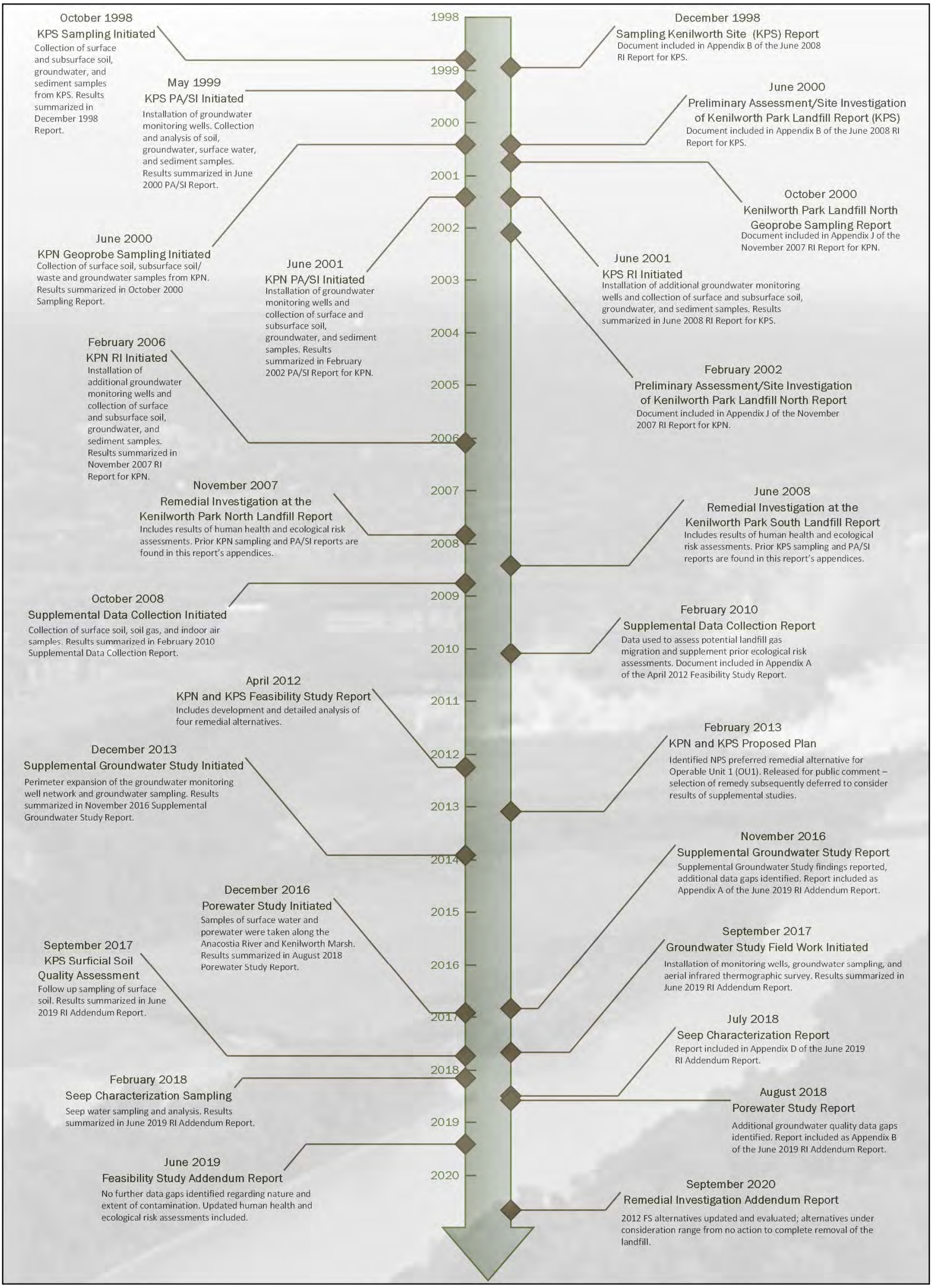
Landfill Boundary

Record of Decision
Kenilworth Park Landfill Site

Washington, D.C.

Site Area Map

FIGURE 2

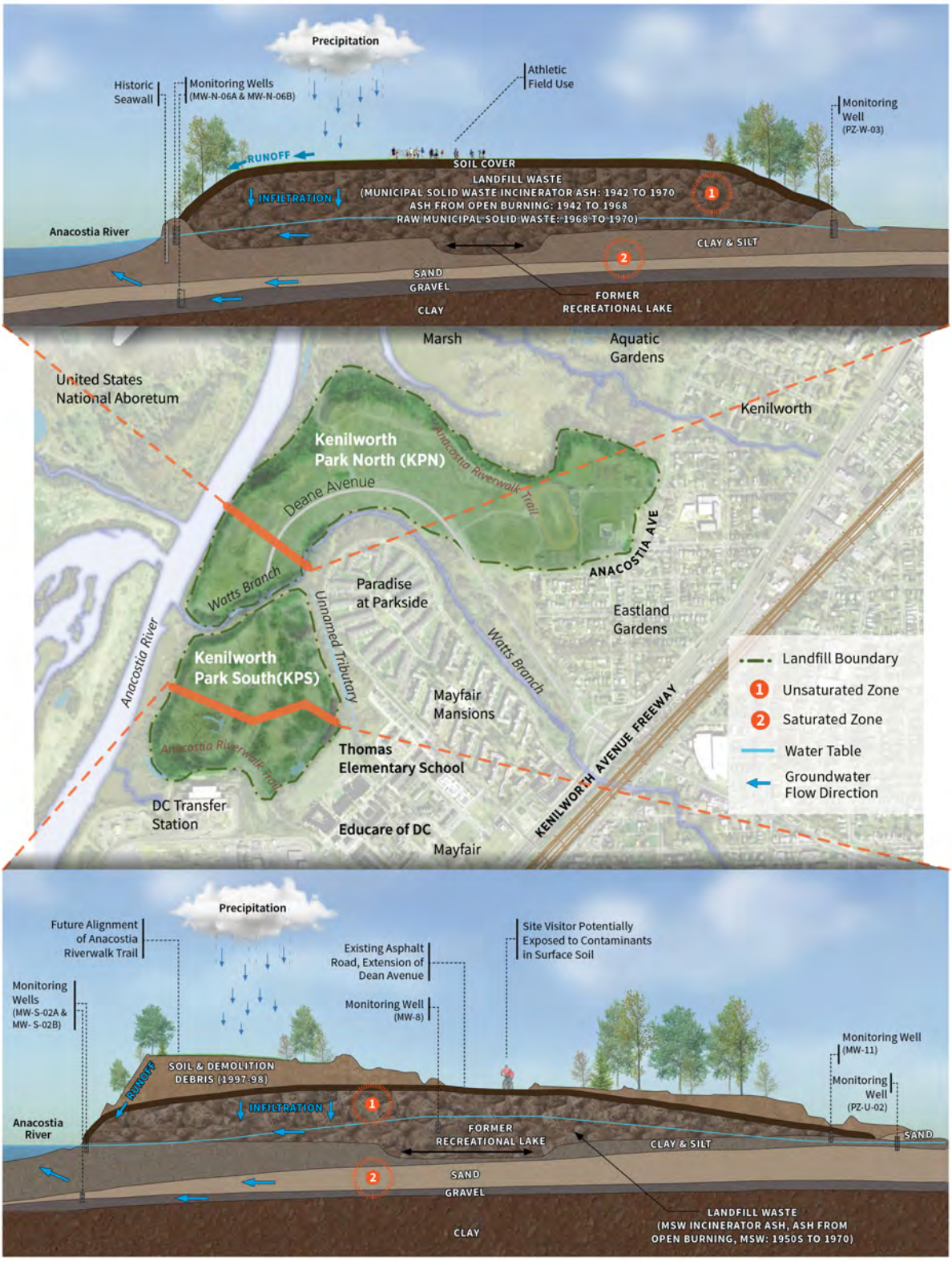


Notes:

KPN	Kenilworth Park North
KPS	Kenilworth Park South
PA	Preliminary Assessment
RI	Remedial Investigation
SI	Site Investigation

Record of Decision
Kenilworth Park Landfill Site | Washington D.C.

Site Investigations History

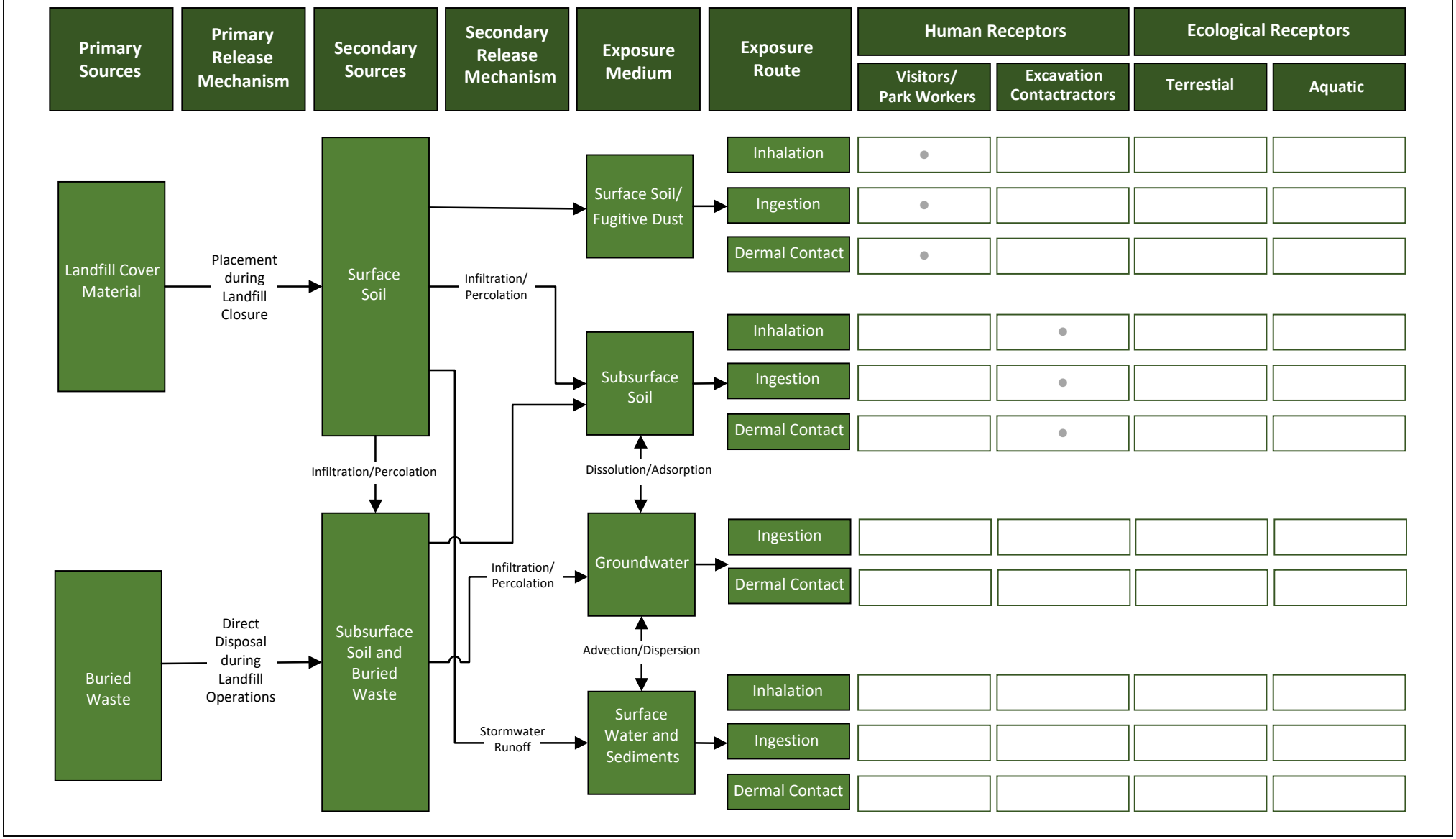


Record of Decision
Kenilworth Park Landfill Site

Washington, D.C.

Graphic Conceptual Site Model

FIGURE 4



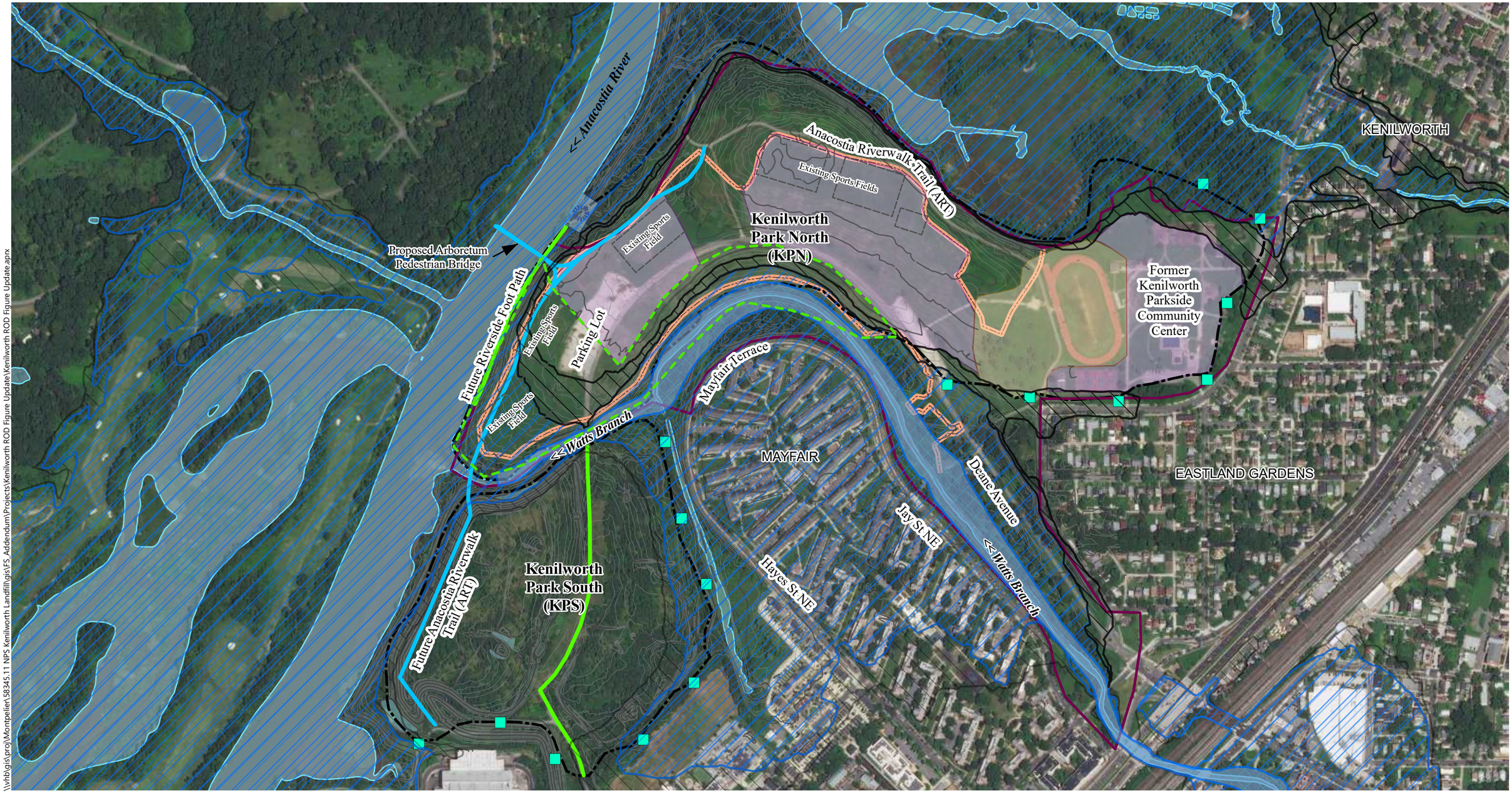
Notes:

→ **Potential Transport or Exposure Pathway**

● **Complete (Current and/or Future) Exposure Pathway**

Record of Decision
Kenilworth Park Landfill Site | Washington, D.C.

Risk Assessment Pathways



\\vhb\gis\proj\Montpelier\58345.11 NPS Kenilworth Landfill\gis\FS_Addendum\Projects\Kenilworth ROD Figure Update\Kenilworth ROD Figure Update.aprx

0 250 500 1000 Feet

- Future Alignment of Anacostia Riverwalk Trail
- Resource Management Boundary
- Transfer Boundary
- 5 ft Contour (USACE 2000)
- 1 ft Contour (USACE 2000)
- Stream Channel
- KPN and KPS Landfill Boundaries
- Water Access/Boat Launch
- 1% Annual Chance Flood Hazard (FEMA)
- 0.2% Annual Chance Flood Hazard (FEMA)
- Regulatory Floodway (FEMA)
- Proposed Wetland Restoration (DOEE)

Key Elements Of Remedial Alternative 3

- Confirmatory Soil Sampling (Recent Fill Area)
- Access Road/Trail Resurfacing
- Confirmatory Soil Vapor Monitoring Location (actual locations may differ)
- Proposed Clean Soil Barrier

Notes:
1. The approximate future alignments of the ART were copied from the December 2011 Environmental Assessment, Anacostia Riverwalk Trail, Section 3 Realignment.

Record of Decision
Kenilworth Park Landfill Site

Washington, D.C.

Source Info: Aerial imagery from ESRI and DC GIS (2017);
DOEE - Department of Energy and the Environment (2022);
NPS - National Park Service (2022);
FEMA Flood Hazard Areas (2010).

Boundaries are approximate and subject to change.

Selected Remedy

APPENDIX A: RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY
KENILWORTH PARK LANDFILL SITE
NATIONAL CAPITAL PARKS—EAST
NATIONAL PARK SERVICE
WASHINGTON, D.C.

July 2022

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LIST OF ATTACHMENTS

Attachment No.	Commentor	Organization
1	Joel Merriman	DC Audubon Society, Anacostia Riverkeeper, City Wildlife, DC Environmental Network, Friends of Kenilworth Aquatic Gardens, Friends of Lower Beaverdam Creek, Friends of Quincy Run Watershed, and the DC Chapter of Surfrider Foundation
2	Marian Dombroski	Anacostia Watershed Community Advisory Committee
3	Dennis Chestnut	Private Citizen
4	Andy McGeoch	Private Citizen
5	Anne Lewis	City Wildlife, Inc.
6	Kirby Vining	Committee of 100 on the Federal City
7	Michael Godec	Capitol Riverside Youth Sports Park (CRYSP) DC
8	Patricia Jackman	Private Citizen
9	Dana McCoskey	Private Citizen
10	Kurt R. Schwarz, Gail Mackiernan	Maryland Ornithological Society, Montgomery Bird Club
11	Nate Graham	Private Citizen
12	Elizabeth Curwen	Friends of Kenilworth Aquatic Gardens
13	Will Handsfield	Private Citizen
14	Tammy D. Sanford	Potomac Electric Power Company (Pepco)
15	Simeon Hahn	National Oceanic and Atmospheric Administration (NOAA)

LIST OF ATTACHMENTS

Attachment No.	Commentor	Organization
16	Adam Kron, Joel Merriman	DC Audubon Society
17	Anna LaCombe, Ankita Mandelia	Sierra Club
18	Stacia Turner	Clean Water Action/Clean Water Fund and Anacostia Park and Community Collaborative (APACC)
19	Trey Sherard, Marian Dombroski	Anacostia Watershed Community Advisory Committee
20	Trey Sherard	Anacostia Riverkeeper
21	Radha Neelakantan	Private Citizen
22	Frances Raskin	Private Citizen
23	Kirsten Gresk	Private Citizen
24	Tommy Wells	District of Columbia Department of Energy and Environment (DOEE)
25	Ray Montero	DOEE
26	Stacia Turner	APACC

LIST OF ABBREVIATIONS AND ACRONYMS

ANC	Advisory Neighborhood Commission
APACC	Anacostia Park and Community Collaborative
AR	Administrative Record
ARAR	Applicable or Relevant and Appropriate Requirement
ARSP	Anacostia River Sediment Project
AWCAC	Anacostia Watershed Community Advisory Committee
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIP	Community Involvement Plan
CRYSP	Capitol Riverside Youth Sports Park
District	District of Columbia
DOEE	Department of Energy and Environment
DPR	District Department of Parks and Recreation
EPA	U.S. Environmental Protection Agency
FS	Feasibility Study
HI	Hazard Index
KPL	Kenilworth Park Landfill
KPN	Kenilworth Park North
KPS	Kenilworth Park South
NACE	National Capital Parks – East
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
PA/SI	Preliminary Assessment/Site Inspection
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
Pepco	Potomac Electric Power Company
Q&A	Question and Answer
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SVOC	Semivolatile Organic Compound
VOC	Volatile Organic Compound

1.0 OVERVIEW

The National Park Service (NPS) is the lead agency for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response activities at the Kenilworth Park Landfill (KPL) Site (Site). On November 12, 2020, NPS released the Proposed Plan for Cleanup of the Kenilworth Park Landfill Site (NPS 2020b), which provided details on NPS's Preferred Alternative to clean up the Site. The date of the public release of the Proposed Plan began a 120-day public comment period, which ended on March 12, 2021. In consultation with the District of Columbia's (District) Department of Energy and Environment (DOEE), acting as the support agency, and after reviewing and considering comments and input submitted during the public comment period, NPS identified a modified version of Alternative 3, Selective Placement of Clean Fill Barriers and Institutional Controls, as the Selected Remedy for the KPL Site. This remedy is detailed in the Kenilworth Park Landfill Record of Decision (ROD) (NPS, 2022).

This Responsiveness Summary provides NPS responses to comments and input received from the public on the Proposed Plan for Cleanup of the Kenilworth Park Landfill Site (NPS, 2020b) and on the supporting documents included in the Site's Administrative Record (AR). This section provides an overview of Site information and the Selected Remedy for the Site.

1.1 SITE DESCRIPTION

The KPL Site covers 130 acres and is located in the northeast quadrant of the District, within the Kenilworth Park and Aquatic Gardens portions of Anacostia Park, a unit of the national park system managed by National Capital Parks-East (NACE). The Site is divided into two areas: Kenilworth Park Landfill North (KPN) and Kenilworth Park Landfill South (KPS). KPN and KPS are separated by Watts Branch, a tributary of the Anacostia River.

KPN currently contains athletic fields, which the public actively uses for recreation. KPS is undeveloped and zoned for Natural Resource Recreation, which includes more passive recreational activities like bird watching, walking, running, and biking. Key geographic features surrounding the Site are shown on the Site Map (Figure 1) and include:

- Anacostia River, which flows along the western boundary of KPN and KPS
- Kenilworth Marsh and Kenilworth Aquatic Gardens to the north of KPN
- Watts Branch, a stream that flows in a westerly direction between KPN and KPS
- An unnamed tributary to Watts Branch (Unnamed Tributary) that runs along the eastern boundary of KPS and flows into Watts Branch

1.2 NATURE AND EXTENT OF CONTAMINATION

Buried waste at the Site contains CERCLA hazardous substances, including lead, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and dioxins and furans. Soil used to cover the landfill contains lead, arsenic, PCBs, dieldrin (a pesticide), and PAHs. In a few areas, groundwater was found to contain relatively low concentrations of volatile organic compounds (VOCs), PAHs, dioxins and furans, and metals. Based on the results of human health and ecological risk assessments documented in the 2012 Feasibility Study and the 2019 Remedial Investigation (RI) Addendum report (JCO, 2012; JCO 2019a), NPS determined the following:

- Groundwater underlying the Site does not pose an unacceptable risk to human health or the environment
- Contaminants found in surface soil used to cover the landfill after closure pose a potentially unacceptable human health risk under certain high-intensity and high-frequency exposure scenarios (e.g., playing contact sports on the athletic fields)
- Lead in subsurface soil and buried waste and the potential presence of unexploded ordnances and methane gas pose a potentially unacceptable human health risk to excavation workers
- Contaminants found in soil or buried waste do not pose an unacceptable risk to ecological receptors

1.3 PREFERRED ALTERNATIVE

In the Proposed Plan (NPS 2020b), NPS identified Alternative 3, Selective Placement of Clean Fill Barriers and Institutional Controls, as the Preferred Alternative. NPS recommended this alternative because it will eliminate unacceptable risks in areas with the greatest potential for exposure risks when those areas are supplemented with institutional controls. After evaluation of the possible alternatives, NPS determined the Preferred Alternative would allow the Site to be used as intended, while reducing risk sooner, with fewer adverse impacts on the park, and at a lower cost than the other alternatives. Further details regarding the process NPS followed to make this determination, and the information evaluated that led to NPS choosing Alternative 3 as the Preferred Alternative are provided in Section 3.0 of this Responsiveness Summary.

1.4 LEVEL OF COMMUNITY SUPPORT FOR THE PREFERRED ALTERNATIVE

NPS received comments on the Proposed Plan from a broad range of stakeholders including private citizens, governmental and non-governmental agencies, and private companies (listed in Table 1). Many commentors supported Alternative 3 or a modified version of Alternative 3, which combined elements of Alternative 3 (selective placement of clean fill barriers and institutional controls for KPS) and Alternative 5 (excavation of landfill waste in the western portion of KPN along the Anacostia River and Watts Branch to allow for restoration of wetlands). Sections 3.4.4 and 3.4.5 below explain why NPS did not include a modified version of Alternative 3 that included elements of Alternative 5 in the formal evaluation of alternatives. Examples of comments received related to community support for the Preferred Alternative are provided below:

- *"I live in River Terrace in NE DC and am excited to see that Kenilworth Park will be cleaned up. I think Alternative 3 makes the most sense." (private citizen)*

- *"I am supportive of the NPS preferred alternative 3 at this time. My priority is to maintain and improve access to Kenilworth Park for trail users." (private citizen)*

- *"After a review of the available options, I firmly support Alternative 3. It has the best combination of protection of public health, feasibility, and short timeframe." (private citizen)*

- *"Thank you very much for the information. I support your team's recommendation of option three and the continued use of the area for sports and recreational use." (private citizen)*

- *"Of the proposed alternatives, the NPS selection of Alternative 3 seems to provide the best balance of protecting park users and the environment, without a massive (and expensive) engineering project." (Maryland Ornithological Society and its local chapter, the Montgomery Bird Club)*

- *"I write in support of NPS's plan to proceed with 'Option 3' for the cleanup of the Kenilworth Park former landfill site. The addition of a 1ft soil barrier will provide added protection from contaminants for site visitors, at a reasonable cost and with minimal disruption to the surrounding community (compared to proposed alternatives). I have enjoyed Kenilworth Park as a nearby Ward 6 neighbor for over a decade - my regular use of the facilities include runs and bike rides on the Anacostia River trail, visiting Kenilworth Gardens, elementary school track club practices at the public track facilities, and some memorable sightings of river birds, turtles, wild turkey, and deer. I can't wait for the trail connector to be erected between the park and the Arboretum! I hope NPS continues to preserve and maintain this site for me and others to enjoy." (private citizen)*

1.5 CHANGES TO THE PREFERRED ALTERNATIVE

NPS considered all comments received during the public comment period and determined that modifying the Preferred Alternative was appropriate to address comments received from DOEE (Attachment 24). These modifications also addressed comments related to the request for restoration of wetlands along Watts Branch and the Anacostia River and maintenance of the meadow habitat within KPN. The principal modification to the Preferred Alternative was to reduce the areal extent of the proposed clean soil barrier by approximately 13 acres to limit the extent of that barrier near the confluence of Watts Branch and the Anacostia River and to reserve approximately 3 acres of meadow habitat within KPN (shown on Figure 2). This modification eliminates placement of the soil barrier on areas within the mapped 500-year flood zone and areas designated by DOEE as intended future tidal wetlands restoration or meadow preservation areas. This modified version of the Preferred Alternative still meets the threshold criteria, provides the best balance of cost and effectiveness, and allows the District the flexibility to further refine future land use plans for KPN.

2.0 BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

To help guide NPS and encourage community involvement, NPS completed an Environmental Justice Analysis as part of the updated Community Involvement Plan (CIP) (NPS, 2020a). The analysis was performed using the U.S. Environmental Protection Agency's (EPA) Environmental Justice Screening and Mapping Tool, Version 2016 (EPA, 2016). The study focused on the area surrounding the Site, which is predominantly within the District's Ward 7. For the analysis, NPS assumed that the demographic information available for Ward 7 is representative of the study area. This section summarizes community profile information and engagement activities related to the KPL Site.

2.1 COMMUNITY PROFILE

The Environmental Justice Analysis formed the basis of NPS's understanding of potential issues and concerns of the community surrounding the Site, and informed decisions on how best to encourage community participation in the remediation of the Site. The findings from this analysis are summarized below:

- Within the study area, 86% of the population was listed as non-white (EPA, 2016)
- Within Ward 7, which is considered representative of the community surrounding the Site, the population is 95% Black and non-Hispanic, 2.7% Hispanic, and 0.3% Asian (NeighborhoodInfo DC, 2016).
- Approximately 2% of the population within the study area is linguistically isolated, or non-English speaking (OpinionWorks, 2012).
- The population within the study area with less than a high school education was 17% (EPA, 2016).
- In 2016, the unemployment rate in Ward 7 was 20% (NeighborhoodInfo DC, 2016).
- Within the study area 40% of the population was identified as low income (EPA, 2016).

Based on these findings, NPS concluded that an environmental justice community does exist in the area around the Site, and that extra effort was needed to inform and engage the community regarding the CERCLA investigation's findings and proposed cleanup activities. Given the limited Spanish-speaking population in the community surrounding the Site, English is an appropriate language for communications. Communication and engagement requirements are consistent with CERCLA's implementing regulations, the National Oil and Hazardous Substances Pollution Contingency Plan (commonly referred to as the NCP). The NCP requires NPS to make publicly available in the AR file all documents used to make cleanup decisions for the Site and to conduct accessible public meetings to discuss environmental conditions at the Site and proposed cleanup actions (EPA 1990).

2.2 COMMUNITY INVOLVEMENT ACTIVITY SUMMARY

NPS first published a Community Involvement Plan (CIP) in 2008 (NPS, 2008). The CIP, prepared in accordance with CERCLA and the NCP, serves as a guide for NPS to engage and inform community members, environmental groups, government officials, the media, and other interested parties about the environmental investigation and cleanup activities at the Site. The CIP is considered a living document and has been updated twice since 2008. The CIP was updated in 2013 with the release of the first Proposed Cleanup Plan for the Site (NPS, 2013a; NPS, 2013b) and in September 2020 to coincide with the release of the 2020 Proposed Plan (NPS, 2020a; NPS 2020b).

NPS accepted public comments on the 2013 Proposed Plan from March 5 through May 6, 2013. This plan addressed only soil and buried waste because NPS determined groundwater below the Site required additional investigation. On April 11, 2013, NPS held a public meeting to explain this plan. Comments received during the meeting and the public comment period were added to the AR file. After considering public comments and further technical evaluation, NPS decided to delay selecting a remedy for soil and buried waste until additional groundwater investigations were completed.

NPS performed additional investigations at the Site from 2013 through 2017. NPS published community updates to inform the public of additional investigations completed for the Site. NPS also held an informational public meeting for community residents and other interested members of the public on October 17, 2018. The purpose of this meeting was to provide an update on the status of the Site and the investigations completed since the 2013 Proposed Plan was released.

NPS has been a regular and active participant in meetings of the Leadership Council for a Cleaner Anacostia River and in June 2018 presented interim findings of the additional investigations performed at the Site from 2013 through 2017. Outside the established comment periods or public meetings, NPS also responds to questions and concerns raised by the public or the media.

The 2020 Proposed Plan was released with the initial comment period set at 90 days (60 days longer than required). Notification of the public comment period was published in The Washington Times, The Washington Informer, and East of the River, in addition to being posted on NPS's KPL Site web page (https://www.nps.gov/anac/learn/management/kpls.htm). Upon request, the public comment period was extended by 30 days to end on March 12, 2021. Notification of the comment period extension was published in The Washington Times, The Washington Informer, and East of the River. On November 12, 2020, NPS posted a recorded presentation on the KPL Site webpage that summarized the RI and Feasibility Study (FS) Addenda (VHB, 2020) and described the evaluation of alternatives identified to clean up the Site. The recorded presentation also identified NPS's Preferred Alternative.

On November 18, 2020, NPS held a virtual public meeting, which included an introduction from NACE Superintendent Tara Morrison, followed by the prerecorded presentation referenced above, and a facilitated live question and answer (Q&A) session. Questions were submitted orally and in writing through the Webinar Q&A feature and answered live until the meeting ended. The questions and comments were recorded, and NPS provided written responses in a December 29, 2020, memorandum with the subject heading: "Interim Response to Public Comments Received on the Proposed Plan for Cleanup of the Kenilworth Park Landfill Site" (NPS, 2020c). A recording of the public meeting was posted on the KPL Site webpage on December 3, 2020 (https://www.nps.gov/anac/learn/management/kpls.htm).

NPS also presented the Proposed Plan at the virtual Leadership Council for a Cleaner Anacostia River meeting held on December 10, 2020 and accepted and responded to questions posed during the meeting. Questions submitted through the webinar chat feature were recorded, and responses were included in the above-referenced Interim Response to Public Comments memorandum (NPS, 2020c), along with questions and comments received through email. NPS prepared an addendum to the December 29, 2020, Interim Response to Public Comments memorandum, dated February 2, 2021, that provided NPS responses to questions and comments received through January 2021 and posted the updated memorandum on the KPL website (NPS, 2021a).

NPS supported efforts by Anacostia Park and Community Collaborative (APACC), a local community organization that posted information on its Facebook page intended to be less technical and more accessible to the public. On February 29, 2021, NPS received written comments and questions on the 2020 Proposed Plan from APACC. NPS participated in an APACC meeting on March 5, 2021 and responded to questions APACC gathered and previously submitted to NPS, as well as additional questions posed during the meeting. NPS prepared a Response to Comments Memorandum (NPS, 2021b) answering the previously submitted APACC questions and provided it to APACC leadership for distribution within the membership.

Table 1 summarizes NPS's public outreach activities associated with the KPL Site.

TABLE 1
PUBLIC OUTREACH SUMMARY

DATE	OUTREACH EVENT
November 18, 2020	NPS hosted a virtual public meeting to explain the Proposed Plan
December 2, 2020	NPS attended Anacostia Watershed Committee meeting to answer questions on the Proposed Plan
December 10, 2020	NPS presented at virtual Leadership Council for Cleaner Anacostia River meeting and answered questions on the Proposed Plan
January 12, 2021	NPS attended virtual Advisory Neighborhood Commission (ANC) 7D meeting to answer questions and accept input on the Proposed Plan
January 15, 2021	NPS presented at virtual APACC meeting and answered questions on the Proposed Plan
January 25, 2021	NPS attended virtual Deanwood Citizens Association meeting to answer questions and accept input on the Proposed Plan
March 5, 2021	NPS presented at virtual APACC meeting and answered questions submitted to NPS in advance on the Proposed Plan, as well as those posed during the meeting

NPS published eight Community Update fact sheets providing information on the status of the remedial investigation and feasibility study (RI/FS) activities since March 2011. Copies of the Community Update fact sheets are included in the AR file and are available on the NPS KPL webpage:

(https://www.nps.gov/anac/learn/management/kpls.htm). The publication dates of each fact sheet are listed below.

Publication Dates for Community Update Fact Sheets

- March 2011
- August 2013
- December 2013
- December 2016
- August 2017
- October 2018
- March 2020
- October 2020

3.0 SUMMARY OF COMMENT THEMES AND NPS RESPONSES

NPS identified five general recurring themes in the questions and comments received during the public comment period. These themes revolve around the following topics:

1. Environmental Justice
2. Site Impacts to Groundwater and Surface Water/Sediment
3. Human Health and Ecological Risk Assessments
4. Remedial Alternative Selection Process
5. NPS and DOEE Roles and Remediation Timeline

Provided below are a selection of representative example comments for each theme followed by NPS's general response. The attached Table 2 provides a summary of all comments NPS received during the public comment period and NPS's specific response for each comment. As indicated in Table 2, NPS drafted stand-alone memoranda in response to some of the longer and more detailed comment letters and emails. The longer email comments and letters are referenced in Table 2 as Attachments 1 through 26.

3.1 ENVIRONMENTAL JUSTICE

NPS received comments regarding community engagement activities and other concerns that fall within the theme of environmental justice. Representative questions and comments include the following:

- *"While it concerns me that my occasional recreation is at risk, I am more concerned about the residents of nearby communities. I am told that those residents may not have had enough voice in how the park will be used after remediation." (private citizen)*

- *"I am a resident nearby in Deanwood in Ward 7. I have two recommendations for the Kenilworth Park Landfill Site. 1) I agree that we should keep KPS as naturalistic as possible and complete the Anacostia River Trail cut through trail through this section.*
  2) My preference is that the KPN section should undergo complete landfill removal and

shoreline restoration. All contaminants should be removed. The land should also be transferred into a community land trust as part of the transfer to the DC government. The Community Land Trust should consist of a board of residents in the immediate impact area who should be able to prioritize future land use to their needs, given the history of environmental injustice they have been subjected to." (private citizen)

- *"[T]he National Parks System must listen to the voices of local communities that live near the park - for too long they have suffered the impacts of air pollution and should be front and center when developing the restoration plans." (private citizen)*
- *"The kids who play football and soccer in the park deserve a field that won't increase their chances of having cancer." (private citizen)*
- *"DC is still confronted with a lack of sufficient, safe, accessible, high-quality sports fields in DC, especially in the eastern and southern portions of our city." (Capital Riverside Youth Sports Park [CRYSP] DC)*
- *"This site could be used for multi purpose use where it benefits the community." (private citizen)*
- *"Our members are very interested in the future of Kenilworth Park Landfill. It impacts significantly the surrounding communities and the Anacostia River. All work should be done with the utmost care for the cleanliness and health of the river. This includes the water quality, water flow, and natural shorelines." (Cindy Cole, Washington Rowing School)*

NPS Response: As summarized above in Section 1.4, NPS's community outreach activities extended beyond the requirements of CERCLA and the NCP, which mandate a 30-day public comment period and one public meeting during the comment period. NPS extended the public comment period to 120 days to allow sufficient time for meaningful engagement of the local community and other stakeholders. In addition to extending the required public comment period, NPS's outreach was enhanced by attending local community meetings and supporting efforts by APACC, a local community organization that posted on its Facebook page information intended to be less technical and more accessible to the public.

NPS developed posters to provide easily understandable explanations for technical and CERCLA-specific aspects of the response action, such as the risk assessment process. NPS uploaded these posters onto the NPS KPL webpage to explain the CERCLA process, how risk is assessed under CERCLA, and the process NPS is required to follow to evaluate and choose a Preferred Alternative.

NPS posted on the webpage the recording of the public meeting to allow members of the public who were unable to participate in that meeting an opportunity to watch the presentation and hear the comments and questions asked and NPS's responses. To assist the community in understanding the NPS Preferred Alternative and allow meaningful dialogue, NPS provided the public two interim response-to-comments memoranda (released on December 31, 2020 and February 2, 2021, respectively). These interim response-to-comment memoranda were released before the end of the public comment period, allowing the community to consider NPS's responses and ask follow-up questions within the public comment period.

As described in the sections below, the Selected Remedy provides a reasonable balance of the various community and stakeholder preferences for uses of the Site including public recreational facilities, open space, and wildlife habitat. The Selected Remedy (1) addresses risk posed to human health by hazardous substances in Site surface soil to allow active recreational use of sports fields in KPN, (2) identifies institutional controls to protect workers from contaminants in subsurface soil and waste, (3) maintains valued wildlife habitat in KPS and KPN, and (4) allows the District to move forward with restoring wetlands along Watts Branch and the Anacostia River.

3.2 SITE IMPACTS ON GROUNDWATER AND SURFACE WATER

Multiple commentors requested additional information on the Site impacts to groundwater, surface water and sediment. These comments are summarized below.

3.2.1 Impacts to Groundwater

NPS received several comments asking about potential contaminated groundwater or leachate emanating from the Site. Representative questions and comments included:

- *"I'm looking back through the FS Addendum for information about how groundwater from the site moves contaminants … into the river and/or into Watts Branch, but I'm finding nothing …" (Trey Sherard, Anacostia Riverkeeper)*

- *"Groundwater quality investigations undertaken at the Site since 2013 … did not include PCB congener analyses, which are a contaminant of concern for the Anacostia River Sediment Project Interim Record of Decision (ROD) … To provide more robust evidence that KPN is not a source of actionable levels of PCBs via groundwater to the River, DOEE recommends installing passive samplers in select monitoring wells located along the Anacostia River, Watts Branch, and Kenilworth Marsh. The passive samplers should be analyzed for PCB congeners." (Tommy Wells, DOEE)*

- *"I just wanted to ask if there has been an assessment of contamination leaching … from the landfill into the river?" (private citizen)*

NPS Response: NPS evaluated the potential for contaminants to be leaching from the landfill into groundwater and then discharging to the Anacostia River, Kenilworth Marsh, Watts Branch, and the Unnamed Tributary. As documented in the 2019 RI Addendum Report (JCO, 2019a), NPS concluded that there are no unacceptable risks to human health or the environment from contaminants in groundwater and that no remediation of groundwater is required. These conclusions were based on the findings presented in the RI Reports for KPN and KPS published in 2007 (E&E, 2007) and 2008 (E&E, 2008), respectively, and on supplemental groundwater investigations completed between 2013 and 2017 that are documented in the 2019 RI Addendum Report.[1]

The groundwater investigations initiated in 2013 expanded the previously existing monitoring well network by installing 21 new monitoring wells in 11 previously established monitoring well locations.

[1] Note that the FS Addendum Report referenced in one of the quoted comments is a companion document to the RI Addendum Report, which includes documentation of the investigation and risk assessment activities.

NPS collected three rounds of groundwater samples from the 21 new and 11 previously existing monitoring wells (one round in 2014 and two rounds in 2017) and analyzed them for PCB Aroclors, pesticides, dioxins and furans, metals, and semi-volatile organic compounds (SVOCs), which include PAHs. Relatively few chemicals were detected above conservative screening concentrations and no PCB Aroclors were found above the laboratory detection levels.

In response to comments raised by members of the community, non-governmental organizations, and the District, and based on the significance of PCBs found in stream and river sediments near the Site, NPS agrees with DOEE that additional sampling and analysis of PCB congeners in groundwater will provide valuable information. As DOEE suggested in its comment letter (Attachment 24), additional groundwater sampling will be performed after the ROD is issued and during the remedial design phase as the findings will not change the need for, or design of, the clean soil barrier. The additional sampling will be conducted by DOEE.

3.2.2 Impacts to Surface Water/Sediment

NPS received several comments indicating concern with potential sediment impacts to the Anacostia River, Watts Branch, Unnamed Tributary, and Kenilworth Marsh. Representative questions/comments included:

- *"The proposed plan suggests that contamination in the tidal Anacostia River do not appear to be attributable to the Kenilworth site. Are there data that have been collected in Watts Branch that can be compared with Anacostia River data that informed this statement?" (private citizen)*

- *"Did the feasibility study and proposed plan consider the impacts on the river? Was Watts Branch considered its own receiving body of water for contaminants or was it considered only as a vehicle for contaminants entering the Anacostia River?" (Anna LaCombe, Sierra Club)*

- *"DOEE recommends collection and analyses of surface soils in areas that have not previously been tested to assure that the Preferred Alternative protects against PCB transport to the River via surface water runoff … PCBs should be tested for total congeners (not total Aroclors) …" (DOEE)*

- *"Nowhere does NPS consider what other possible source may account for these high concentrations of PCBs in the unnamed tributary of Watts Branch, which borders the eastern boundary of KPS approximately 0.3 miles upstream of the confluence of Watts Branch and the Anacostia River." (Potomac Electric Power Company [Pepco])*

- *Given the proximity to the Anacostia River, and the ongoing ARSP, did the NPS consider alternatives that would reduce or eliminate contaminant exposure in the river adjacent to the site?" (private citizen)*

NPS Response: The conditions of Watts Branch, Kenilworth Marsh, and the Unnamed Tributary were evaluated as part of the preliminary assessment (PA)/site inspection (SI) and RI activities documented in the 2007 and 2008 RI reports. Additional analysis of sediment data was included in the 2012 FS. The 2012 FS concluded there are multiple significant, undifferentiated upstream sources of contaminants to surface water that impact sediment quality adjacent to the KPL Site. NPS reviewed more recent results from sediment samples collected from Watts Branch as part of the Anacostia River Sediment Project

(ARSP), including the 2019 NPS Tributary Study (JCO, 2019b). NPS's Tributary Study confirmed that significantly higher concentrations of PCBs are present in sediment upstream and outside the potential influence of the KPL Site. NPS is pursuing additional assessment of sediment quality and the potential need for remedial measures in Watts Branch, the Unnamed Tributary, and Kenilworth Marsh separately from the CERCLA remedial action underway at the KPL Site.

During the RI Addendum, NPS's evaluation of potential impacts to surface water and sediment was focused on the assessment of groundwater quality and the potential impacts caused by contaminants in groundwater that discharges to surface water. Based on the groundwater investigation findings, NPS concluded there is no unacceptable risk in surface water or sediments caused by the migration of contaminants in groundwater.

As indicated in the RI and RI Addendum Reports, contaminants found in river and stream sediments, including PCBs, have also been found in samples collected from the landfill area (surface soil, subsurface soil, and buried waste). As noted in Section 3.2.1, DOEE recommends additional analysis of surface soil to evaluate the potential for contaminant migration via surface water runoff. NPS considers impacts from contaminant migration via surface water runoff to be unlikely because the contaminants of interest bind to soil and do not readily dissolve in water. The migration of these contaminants via surface runoff would require mobilization of surface soil and there is limited evidence of surface soil erosion at the Site. However, the testing recommended by DOEE will reduce some of the uncertainty about Site conditions and will improve the understanding of contaminant distribution and potential for mobilization by surface water runoff. The PCB congener analysis may also allow for a forensic comparison of PCBs in the landfill and cover soil to PCBs found in river and stream sediments. NPS and DOEE agree that this additional sampling to assess migration with storm water runoff will be completed after the ROD is issued and during the remedial design phase.

Based on historical information on former landfill operations at the Site, NPS believes it is possible for landfill contaminants to have entered surface water and sediment before the landfill was closed in 1970. Although the landfill cannot be ruled out as a source of the sediment contamination, evidence indicates that other (more significant) sources of PCBs and other contaminants exist upstream of KPL including the Pepco Benning Road Facility and other undifferentiated sources located on Watts Branch.

For example, a 1988 Pepco document obtained from the Pepco Benning Road Facility AR file, describes soil sampling and analysis for PCBs in the Pepco RI "Target Area 7 – 1988 Parking Lot Cleanup Area," and indicates the area was "used previously as a storage area for off-line transformers" where there had been "instances of minor oil spills resulting from leaking equipment" (Pepco 1988). The 1988 document also indicated there was an exterior concrete pad in this area that was "used to prepare PCB capacitor banks for disposal." Soil sampling in the parking area and specifically around the concrete pad identified total PCB concentrations in soil as high as 140,000 micrograms per kilogram (µg/kg) – much higher than the concentrations of total PCB Aroclors found in surface soil at the KPL Site. A 2010 PCB Source Tracking Report for the Pepco Benning Road Facility identifies several storm water outfalls that drain the Parking Lot Cleanup Area and are tied to the municipal separate storm sewer system that ultimately discharges to the head of the Unnamed Tributary, upstream of KPS (Mactec, 2010).

In addition, total PCB concentrations (measured as congeners) were detected in sediment samples collected from multiple locations within Watts Branch upstream and outside the potential influence of

the KPL Site, as indicated in the 2019 Tributary Sediment Sampling Study Report (JCO, 2019b). The highest total PCB congener concentration in that study was detected in a sample from Watts Branch located approximately 2 miles upstream of the KPL Site.

Contaminant sources to the Anacostia River sediments are well documented and will be addressed as part of the ARSP. Section 3.4.3 below includes more detail about the selection of site boundaries for the ARSP and KPL. Watts Branch, the Unnamed Tributary, and Kenilworth Marsh are not part of the KPL Site cleanup due to significant potential sources of contaminants not associated with KPL. NPS expects to conduct additional sampling to assess sediment contamination in (1) the Unnamed Tributary and (2) the downstream segment of Watts Branch that is under NPS jurisdiction to determine whether additional CERCLA response actions are necessary. NPS believes additional assessment is also appropriate for Kenilworth Marsh and will coordinate with other agencies to identify next steps.

3.3 HUMAN HEATH AND ECOLOGICAL RISK ASSESSMENTS

Several commentors requested clarification and had questions on the potential exposure risk to people and wildlife posed by the Site. Representative questions and comments included:

- *"Please explain the difference between "unacceptable" and "acceptable" risk. Does this differ for those of us who live here and use the park daily?" (private citizen)*
- *"If I understood correctly, currently building on either KPS or KPN would cause an unacceptable exposure risk to workers. After the soil cap is in place would building on the site be possible without these risks?" (private citizen)*
- *"We feel it imperative that the public understand how the selected clean-up remedy will address future public health concerns that arise from aging landfill sites" (APACC)*
- *"I am not a biologist, but has NPS studied the effects of the polluted soil on animal and plant health?" (private citizen)*

NPS Response: Human health risk assessments require separate evaluations for carcinogenic (cancer causing) and non-carcinogenic risk. Acceptable non-carcinogenic (including chronic and short-term, or "acute," risk) is established by what is known as the "hazard index" (HI). The HI is a ratio of the potential exposure to a substance (e.g., a concentration in media such as soil) and the level (or concentration) at which no adverse effects are expected from exposure to that substance. NPS established an HI of 1.0 as the acceptable target non-carcinogenic risk (i.e., the level at which no adverse effect is anticipated).

Under the NCP (the implementing regulations for CERCLA), "acceptable" long-term cancer risk can range from one excess cancer in an exposed population of ten thousand (1E-04) to one in one million (1E-06). As part of the FS, NPS adopted the most conservative target cancer risk level of one in one million (1E-06). The acceptable risk level for cancer is based on the frequency and intensity of exposure. Therefore, the cleanup levels established for the Site are based on the activity likely to be undertaken. Walking along established trails daily is a different "exposure scenario" from playing contact sports on an athletic field. The exposure scenarios are summarized in ROD Section 2.8.1 and described in more detail in the 2020 FS Addendum Report (VHB, 2020).

Risk to workers posed by subsurface soil and buried waste is unacceptable only if no protective measures are taken. The Selected Remedy includes "institutional controls," which will include administrative requirements to implement precautions before and during any proposed excavation activities to protect worker safety and address this risk. Future installation of utilities or construction of structures on the Site will be possible if protective measures are taken in the design and construction. Specific plans that must be followed during any soil-disturbing activity will be developed during the remedial design phase of the CERCLA response.

NPS also assessed risk posed by soil contaminants to ecological receptors. The ecological risk assessments included exposure pathways to wildlife (including birds) through consumption of food (e.g., earthworms and subterranean invertebrates). The environmental risk assessments concluded there is no unacceptable ecological risk to birds and other wildlife. Final conclusions of the ecological risk to wildlife are documented in the 2012 FS report (JCO, 2012).

3.4 REMEDIAL ALTERNATIVE SELECTION

NPS received multiple comments and questions related to the remedial alternative evaluation and selection process. Although the feedback may overlap in some areas, the comments were categorized into the following six general themes:

1. The purpose of CERCLA and NPS response action
2. Future land use and habitat restoration
3. Site boundaries
4. Evaluation of remedial alternatives
5. Partial landfill removal
6. Institutional controls

NPS responses to each of the six general comment themes related to the remedial alternative evaluation and selection process are provided in the subsections below.

3.4.1 Purpose of CERCLA Response Action

Some of the comments NPS received indicated a misunderstanding of the purpose of a CERCLA response action and the process NPS follows when exercising its delegated response authority. Representative questions/comments included:

- *"I did not see an alternative in the options presented that was truly visionary or would address the particular nuances of the site's current opportunities or longer-term potential to increase the ecological value and ensure equity." (private citizen)*

- *"There are different ecosystem services associated with different parts of the site. In particular, the riparian area of the site alongside the Anacostia has and could have significant value for habitat, recreation and flood management. Did the evaluation of site remediation options consider ecosystem service value in development of the five options?" (private citizen)*

- *"Cost of Alt 5 is characterized as "non cost balancing". Please explain this term. The evaluation analysis diminishes the value of wetlands. Given all the benefits, please explain how this determination was made. DOEE, which requires "no net loss and eventual net gain of wetlands", will inherit management of the park. Many agencies (EPA, USFWS etc.) offer financial support for wetland restoration. FEMA considers it an effective flood control measure. Clearly wetlands are very valuable to other agencies." (private citizen)*

NPS Response: Section 104(a) of CERCLA vests the President with legal authority to respond to releases and threatened releases of hazardous substances when necessary to protect public health or welfare or the environment. The President has delegated that response authority to the Secretary of the Interior for releases of hazardous substances on land under the jurisdiction, custody, or control of the Department of the Interior, and the Secretary has re-delegated that authority to NPS for releases on land under its management, including the KPL Site.

NPS undertakes response actions at contaminated sites under Section 104(a) of CERCLA to protect the public health and welfare and the environment. Once NPS determines that a remedial action is warranted to address these objectives, it develops a range of remedial alternatives that must be evaluated in accordance with the nine criteria described in Section 300.430(e)(9)(iii) of the NCP. Most importantly, a remedial alternative must be protective of human health and the environment and must comply with all applicable or relevant and appropriate requirements (ARARs). In addition, to be selected as the final remedy, an alternative must be cost-effective, which means that its costs are proportional to its overall effectiveness (outlined in Sections 121(a) and 121(b)(1) of CERCLA and Section 300.430(f)(1)(ii)(D) of the NCP). NPS must follow this process in selecting a remedial action and must base its selection decision on the criteria described in CERCLA and the NCP (see also Section 3.4.4).

3.4.2 Future Land Use and Habitat Restoration

NPS received a significant number of comments regarding future land use of the Site. Many commentors expressed a desire for specific habitat restoration or maintenance, predominately related to restoration of wetlands along Watts Branch and the Anacostia River and maintaining meadow habitat on KPN. The vast majority of commentors indicated support of NPS's plan to leave KPS area undisturbed to protect the current condition, which represents important habitat for birds and other wildlife and increased opportunities for bird-watching. Representative questions/comments included:

- *"Did the team consider restoration of wetlands in limited areas adjacent to Anacostia river and Watts branch?" (private citizen)*

- *"I want to urge NPS to keep in consideration the vital bird habitat in Kenilworth Park. The "no-mow" meadows, for example, are a vital habitat for birds, both common and rare for the area" (private citizen).*

- *"We would like to see functioning wetlands restored along the river and inland, which will have many benefits directly tied to the restoration of the landfill site as well as contributing to long-term adaptation and resilience against flooding." (private citizen)*

- *"It would be great if this could be a multi purpose use for a couple of restaurants, grocery store, parking area, an activity center for youth 6-17, a day care center where a program could be implemented where elderly residents can volunteer." (private citizen)*

- *"I am writing to strongly encourage NPS to protect and/or ensure the restoration of the meadows, fields, and shallow pools of Kenilworth Park North and South and also to emphasize that the concerns of the birdwatching community be taken into account as part of the planning process. Birding is a cherished activity for many in DC as a free, accessible, and fulfilling pastime, and I hope that NPS will consider the important ramifications for birds and the birding community as it proceeds in this planning process" (private citizens)*
- *"In planning for this work, we urge NPS to be mindful of the potential for enhanced wildlife habitat throughout the study area, but particularly in areas of KPN close to Watts Branch, the river, and the marsh. Concentrating recreational activities in the eastern area of KPN, adjacent to Anacostia Road, will provide safe and easy access to these facilities for the community and allow restoration of habitat in the most environmentally sensitive areas. In these areas, permanent construction features, utility infrastructure, easements, institutional controls, and other components of the remediation project should not preclude the possibility of habitat restoration, including wetlands and possible grade changes." (Anne Lewis, City Wildlife, Inc.)*

NPS Response: The reasonably anticipated future use of a site must be considered at multiple points in the CERCLA process (e.g., risk assessment, the development of alternatives, remedy selection, etc.). However, that future use is not determined as part of the CERCLA process; instead, the lead agency must evaluate how the site is likely to be used in the future given anticipated future land ownership, current uses, and legal requirements that may apply to the particular site. In some cases, the future use of a contaminated site is dictated by law. In most cases, however, the reasonably anticipated future use is established by adopting informed assumptions based on the available information.

In the case of the KPL Site, the future use of KPS is controlled by the Anacostia Park Management Plan Environmental Assessment (Management Plan) (NPS, 2017), which requires that KPS be devoted to natural resources recreation and be maintained in its natural state for passive recreational uses (e.g., birdwatching, walking, running, and cycling on Anacostia Riverwalk Trail). For that reason, the assessment of risks and the development of remedial alternatives for KPS have been based on that future use.

The future use of KPN is prescribed, in broad strokes, by Congress, which has directed NPS to transfer administrative jurisdiction over KPN to the District. The transfer legislation, which has been identified as an ARAR for the Site, provides that the District must use the property "only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." Within those broad constraints, however, the future use of KPN will be determined by the District, not NPS.

Prior to NPS's development and evaluation of remedial alternatives, the District Department of Parks and Recreation (DPR), on behalf of the District, informed NPS that, at the time, it planned to use KPN to provide active recreational opportunities to the public (e.g., sports fields). Although those plans were preliminary and conceptual in nature, they provided sufficient guidance to allow NPS to assume that the future use of KPN would involve high-frequency and high-intensity recreational uses and complete

feasibility study level evaluation of alternatives to address the risks associated with such uses. The District has since informed NPS that it will lead a community engagement process to develop final plans for the future recreational land use of the Site.

During evaluation of Alternative 3, NPS assumed that most of KPN would be covered with a clean soil barrier except for buffer areas (i.e., areas preserved in their natural condition between the park and surrounding surface water bodies). This assumption was made to provide the District flexibility in determining its future use of the Site and to allow for a conservative estimate of costs for purposes of comparison with the other alternatives. However, nothing in the Preferred Alternative requires that the entire area be capped, and adjustments to the size of the capped area can be made during the remedial design to accommodate other land uses such as restored wetlands or meadows.

DOEE identified preliminary proposed areas of wetland and meadow habitat as part of its comments on the Proposed Plan (Attachment 24). This plan, which is supported by DPR, includes areas reserved for future tidal wetlands restoration and meadow habitat. DOEE recommended removing the proposed clean soil barrier from areas where the District intends to restore tidal wetlands and preserve meadow habitat. As shown on Figure 2, NPS incorporated DOEE's recommendations into the Selected Remedy. Further modifications to the clean soil barrier limits can be made during the remedial design phase of the CERCLA response to accommodate the District's final land use plans for KPN.

The District has informed NPS this planning will begin later this year. The District's point of contact for the KPN land use planning is provided below:

Nick Kushner, AICP
Community Planner
Capital Projects, Planning and Design

DC Department of Parks and Recreation
1275 First St NE | Washington, DC 20002
P: 202.391.9188 | E: nick.kushner@dc.gov

3.4.3 Site Boundary

NPS received comments asking why the KPL Site did not extend into the Anacostia River. Representative questions and comments included:

- *"The Park Service has improperly excluded the sediments in the adjacent surface waters in delineating the KPL 'site' addressed by the RI/FS and Proposed Plan." (Pepco)*
- *"What if any responsibility does NPS have for remediation of contaminated sediment adjacent to Kenilworth Park? On one of the ARSP documents this area is identified as a hot spot." (Marian Dombroski, Anacostia Watershed Community Advisory Committee [AWCAC])*

NPS Response: The boundaries of the KPL Site and areas included in the ARSP were established to avoid the possibility that the same area would be subject to overlapping and potentially inconsistent investigations and response actions. Any hazardous substances KPL contributed to the river in the past will be addressed in the cleanup of the Anacostia sediments in accordance with a separate ROD or RODs issued for the ARSP. For instance, the "hot spot" mentioned in the comment above was identified

as an "early action area" in the interim ROD for the ARSP and will be remediated by the District as a part of the ARSP.

3.4.4 Evaluation of Remedial Alternatives

NPS received comments requesting clarifications on the process NPS followed for developing and evaluating remedial alternatives. Representative questions and comments included:

- *"Cost of Alt 5 is characterized as 'non cost balancing'. Please explain this term." (Marian Dombroski, AWCAC)*
- *"Please explain how none of the alternatives meet the criterion to reduce toxicity, mobility, etc." (Trey Sherard, Anacostia Riverkeeper)*
- *"How did NPS evaluate potential remedies for vulnerabilities to climate change, and how did this factor into the evaluation of each alternative?"(*Anna LaCombe and Ankita Mandelia, *Sierra Club)*

NPS Response: The development and evaluation of remedial alternatives was conducted in accordance with the CERCLA long-term remedial action framework as outlined in the NCP. As part of the remedial action process, an RI/FS was performed to characterize the nature and extent of contamination and evaluate which combination of removal, treatment, and engineering control remedial alternatives should be used to eliminate unacceptable risks posed by the release or threatened release of hazardous substances (as stated in NCP Section 300.430).

NPS is required to evaluate remedial alternatives against the nine criteria described in Section 300.430(e)(9)(iii) of the NCP (see summary table in Section 2.10 of the ROD and a more detailed Table 7 of the 2020 Feasibility Study Addendum report). For purposes of evaluating possible alternatives (Section 300.430(f)(1)(i)), those nine criteria are divided into three categories: threshold criteria (criteria one and two), balancing criteria (three through seven), and modifying criteria (eight and nine).

The threshold criteria 1) protection of human health and the environment and 2) compliance with ARARs, must be met for an alternative to be selected. Balancing criteria, 3) long-term effectiveness and permanence; 4) reduction in toxicity, mobility, or volume through treatment; 5) short-term effectiveness; 6) implementability; and 7) cost, formed the basis for recommending an alternative for selection in the Proposed Plan. Modifying criteria, 8) state/District acceptance and 9) community acceptance, were evaluated after receiving public comments on the Proposed Plan. As noted in Section 2.14 of the ROD, the Selected Remedy is a modification of the alternative recommended in the Proposed Plan made in response to comments from the District and members of the public.

Cost is one of the five "balancing criteria"; the other four are referred to as "non-cost balancing criteria." To be selected as the final remedy, an alternative must be cost-effective, which means that its costs are proportional to its overall effectiveness (CERCLA Sections 121(a) and 121(b)(1), and Section 300.430(f)(1)(ii)(D) of the NCP).

Cost Balancing: The Preferred Alternative uses engineering control options (i.e., capping) combined with institutional controls to protect public health and welfare and the environment. As part of the FS, NPS evaluated several alternatives including removal of all landfill waste and cover soil (Alternative 5). While Alternative 5 would provide better long-term protection and permanence than any of the other

alternatives, Alternative 3 satisfies the two threshold criteria at a much lower cost. Because the capital costs of Alternative 5 are approximately 100 times higher than the Preferred Alternative, Alternative 5 was determined to not be cost effective.

Some commentors noted the possible economic benefits of restoring tidal wetlands and improving flood resiliency. NPS considered the economic benefits of the various alternatives in evaluating them under the NCP criteria but concluded that Alternative 3 provided the best balance of tradeoffs viewed in light of those criteria.

Reduction of Toxicity, Mobility or Volume through Treatment: CERCLA and the NCP outline a statutory preference for the reduction of toxicity, mobility, or volume of "Principal Threat Wastes" through treatment when such actions are practicable. Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained, or would present a significant risk to human health or the environment should exposure occur (EPA, 1991). NPS identified no principal threat wastes at the Site; therefore, the reduction of toxicity, mobility, or volume through treatment is unnecessary.

For additional context, EPA established presumptive remedy guidance for cleanup of municipal landfills like KPL (EPA, 1993). EPA's presumptive remedy guidance acknowledges the general impracticability of treatment at landfill sites due to of the volume and heterogeneity of the waste. The presumptive remedy for municipal landfills is containment of the waste with additional measures as needed to address identified risks, such as the presence of contaminants in surface soil.

Climate Change Considerations: NPS considered climate change in accordance with Climate Change Policy PM 12-02 (NPS, 2012) and NPS Management Policies 2006 §1.4.66 (NPS, 2006) to assess the impacts of climate change on the effectiveness of the Selected Remedy. Impacts include the effect of increased incidences of flooding and erosion on the long-term effectiveness of the Selected Remedy and the potential for hazardous substances left on the Site to migrate into the environment in the future. The consideration of climate change is consistent with the objectives of the January 2021 Executive Order 14008, "Tackling the Climate Crisis at Home and Abroad." (Federal Register, 2021).

Specifically, NPS considered the following components of the Selected Remedy: 1) location of the clean soil barrier; and 2) soil erosion. The clean soil barrier will be placed outside of the 500-year floodplain and no lower than approximately 15 feet above mean sea level; therefore, the remedy is not anticipated to be subject to flooding or storm surges. NPS included a requirement to monitor for soil erosion as a component of the institutional controls (described in Section 3.4.6). The frequency of this monitoring will be detailed in the Institutional Control Plan to be prepared during the remedial design phase. Higher intensity weather events brought on by climate change will also need to be factored into stormwater management design associated with redevelopment of the park by the District. Those considerations will also be factored into the remedial design. As detailed in Section 3.2.2, NPS agreed to DOEE's proposed additional surface soil investigation to be completed during the remedial design phase. The potential impacts of climate change to mobilize surface soil via stormwater will be considered with the findings of this investigation to determine whether additional remedial actions are required.

The District has indicated it intends to restore tidal wetlands within the 500-year floodplain at KPN along the Anacostia River and Watts Branch. The Selected Remedy has been modified to accommodate

that anticipated future use, and NPS expects the District's tidal wetland restoration activities would improve flood resiliency in the area of Kenilworth Park.

3.4.5 Partial Landfill Removal

NPS received multiple comments requesting evaluation of an alternative that removes landfill waste and restores wetlands in the western portion of KPN (not the entire former landfill as was evaluated under Alternative 5). Representative questions and comments included:

- *"We request that a sixth alternative be added that (1) excavates contaminants and restores wetlands in the western portion of KPN, west of the running track; (2) caps lands in KPN east of the track, and (3) leaves Kenilworth Park South as is. We are confident that this will strike the appropriate balance required by the applicable decision criteria." (Joel Merriman, on behalf of DC Audubon Society, Anacostia Riverkeeper, City Wildlife, DC Environmental Network, Friends of Kenilworth Aquatic Gardens, Friends of Lower Beaverdam Creek, Friends of Quincy Run Watershed, and the DC Chapter of Surfrider Foundation)*
- *"Before the Record of Decision is written, I'd like to see an alternative that clearly protects the river, potentially combining excavation of portions of Kenilworth Park North with clean fill cover of other portions." (private citizen)*

NPS Response: To be responsive to questions from the public, NPS estimated the costs associated with alternatives that removed waste from only KPN. Those proposals were not, however, formally incorporated into the FS Addendum for two reasons.

First, as explained above, the future use of KPN will be determined by the District, subject to the requirements of the transfer legislation. The request to consider excavation of the western portion of KPN and restore wetlands was not developed by or in coordination with the District government. Proposals to restore wetlands in the western portion of KPN need to be directed to the District agencies responsible for planning the future use of KPN. The District will complete the remedial design in parallel with a public engagement process led by the District to determine the development of its final land use plans for the Site.

Second, the proposed partial excavation of the landfill is not necessary to (1) protect public health or welfare or the environment from threats posed by hazardous substances or (2) comply with ARARs. Furthermore, excavation of waste is not necessary to accommodate the anticipated future use of KPN and would entail a significant increase in costs.

NPS's Selected Remedy (Figure 2) includes modifications based on the preliminary land use plans DOEE submitted to NPS, which include wetland restoration along Watts Branch and the Anacostia River and an area reserved for meadow habitat on KPN (Attachment 24). During the remedial design phase, additional modifications can be made to the clean soil barrier to accommodate the District's final plans for KPN. The clean soil barrier is required only in high-frequency, high-intensity land use areas such as athletic fields. If the District reserves additional areas of KPN for open space, or habitat restoration (i.e., not developed as athletic fields or public gathering areas), no clean soil barrier will be required in those areas.

3.4.6 Institutional Controls

NPS received comments that are related to the institutional controls that will be included in the Selected Remedy. Representative questions and comments included:

- *"I was wondering if preferred alternative 3 is chosen, how often and for how long will the site be monitored for potential erosion (e.g., along the river and stream banks)? And if there is erosion occurring, what are the plans to address this?" (private citizen)*
- *"We are observing the "silting-in" of the Anacostia River. With alternative 3, capping cover of soil in KPN and South, what will keep it from running off into the river? What is the plan to remediate this?" (private citizen)*
- *"Just want fill and drainage specs for the various areas of landfill to not be overlooked, or an afterthought." (private citizen)*

NPS Response: Institutional controls are administrative or legal instruments that reduce the potential for human exposure to contamination. Both CERCLA and the NCP support the use of institutional controls as part of remedial actions at sites, if necessary, to protect human health and the environment (CERCLA § 121(d); NCP § 300.430(a); EPA, 2000). To comply with the NPS Organic Act of 1916, NPS will adopt institutional controls only if they do not limit or impair the desired or required uses of the park. For example, NPS would not allow permanent fencing or restrictive signage as an alternative to removal or remediation (i.e., containment or treatment) of contamination if such restrictions adversely impacted or impaired the desired or required uses of the park.

The Selected Remedy uses institutional controls to restrict and/or manage future activities that might otherwise result in health risks or hazards. These restrictions prohibit future residential development over the former landfill areas and prohibit construction of higher intensity visitor use areas within KPS without the installation of clean fill barriers. The institutional controls will also prohibit high-intensity, high-frequency uses of uncapped areas of the Site. NPS determined the proposed institutional controls would not limit or impair the intended future use of the park.

Some of the institutional controls will include administrative requirements to implement precautions before and during any proposed excavation activities to protect worker and visitors and address risks from exposure to contaminants in subsurface soil/buried waste, the potential presence of unexploded ordnances, and explosive levels of methane gas. Installing utilities or constructing buildings to support the recreational uses of the park is possible if protective measures are taken in the planning, design, and construction.

NPS included monitoring for soil erosion as a component of the institutional controls in the Selected Remedy. Over time, it is likely that conditions in the streams and Site areas adjacent to the river may change (i.e., caused by higher intensity rainfall and higher flow velocities). The monitoring will allow mitigation measures to be taken if conditions are observed that threaten the successful containment of the landfill waste. The frequency and duration of monitoring for erosion and mitigation steps to address erosion will be established during the remedial design phase through the preparation and adoption of detailed site management plans. Because landfill waste is being contained in place, CERCLA requires NPS to review the remedy's protectiveness at least once every five years (Section 121(c) of CERCLA, 42 U.S.C. § 9621(c)), although NPS anticipates the monitoring plans developed during the remedial design phase will require more frequent inspections of the KPL Site.

As part of the Selected Remedy institutional controls, a visual warning fabric layer will be placed over contaminated soil and below the clean soil barrier to alert workers involved with future excavation that material below the warning layer may be contaminated. This type of warning layer is commonly used for similar capping projects. The material can be cut away for planting vegetation that requires root zones to penetrate more than the overlying 12 inches of clean soil fill, without compromising its purpose. The specifications of the warning layer will be identified as part of the remedial design.

An institutional control plan will be prepared during the remedial design phase. This plan will detail aspects of the institutional controls required for the Site and will be incorporated into soil management plans to include a routine maintenance and monitoring program, as well as site-specific health and safety requirements for future projects involving excavation (e.g., construction and/or utility projects requiring soil excavation/trenching).

3.5 NPS AND DOEE FUTURE ROLES AND RESPONSE ACTION SCHEDULE

Multiple comments and questions focused on NPS and DOEE future roles and responsibilities and the remediation schedule. Representative questions and comments included:

- *"It is crucial that NPS and District Government develop a collaborative and connected community planning effort, given the planned transfer of KPN to DC Government." (private citizen)*

- *"Can you clarify the timeline of the Record of Decision (ROD) being released, the transfer of jurisdiction and the remedial work being completed? Will the remedial work be overseen by NPS after jurisdiction has been transferred or would the district take over managing the remedial work?" (private citizen)*

- *"When the District assumes administrative control of North, which agencies will have that control? In particular, who will be responsible for the shoreline?" (Trey Sherard, Anacostia Riverkeeper)"*

NPS Response: NPS worked collaboratively with DOEE to complete RI/FS activities and consulted with DOEE on findings of the RIs and on development and evaluation of remedial alternatives during the FS. NPS also worked with the District's Department of Parks and Recreation (DPR) to collect information regarding future plans for KPN. DOEE and DPR supported NPS public meetings and other community outreach efforts.

After issuance of the ROD, the Site will move into the remedial design phase of the CERCLA response. In this phase, technical specifications and plans for the final Selected Remedy detailed in the ROD are developed. During the remedial design phase, the final boundaries for the clean soil barrier will be determined and will be based on the District's final land use plans for KPN.

The remedial action follows the remedial design phase and involves the actual construction or implementation phase of the Site cleanup. In the implementation phase of the CERCLA response, the Selected Remedy for the Site as described in the ROD will be constructed (i.e., placement of the clean soil barrier, etc.).

After issuance of the ROD, NPS will continue to oversee the CERCLA remedial action as the CERCLA lead agency. Although the specific future roles and responsibilities of District government and NPS will be outlined in a future agreement, NPS anticipates the District will be responsible for completing the remedial design and implementing the remedy, and NPS will oversee the District's work.

It is NPS's understanding that following the transfer to the District, DPR will have primary responsibility for managing KPN. NPS anticipates DPR would consult with DOEE regarding natural resource issues such as the shoreline or meadow management. Actual management roles and responsibilities for KPN will be determined by the District, not NPS.

4.0 REFERENCES

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No.	Commenter	Comment	NPS Response
1	Richard Strange	The gates at the south end of KPS were briefly padlocked shut last week. Are there future plans to close these gates? If so, when and for how long? Why is closure necessary as the proposed plan does not include any development of the KPS area?	The gates were closed because unauthorized vehicles were entering the park from the Anacostia Riverwalk Trail (ART), presenting safety concerns unrelated to contamination. KPS has been administratively closed for several years. NACE is currently reviewing the closure status and access considerations.
2	Trey Sherard, Anacostia Riverkeeper	Please explain how none of the alternatives meet the criterion to reduce toxicity, mobility, etc.	This criterion reflects the statutory preference for the reduction of toxicity, mobility, or volume *through treatment*. Remedial actions implemented to address site risks generally fall into one of two categories: (1) treatment; or (2) engineering control options, such as containment with use of institutional controls to supplement engineering controls as appropriate. Because of the volume and heterogeneity of waste in landfills, treatment of the buried waste is impractical. Treatment of the surface soils is similarly impractical due to the lack of a discrete, defined area or volume of contaminated soil. Because treatment is not practical, NPS focused on engineering control options (i.e., capping and removal). Because none of the remedial alternatives involved treatment technologies, this criterion had no effect on the comparison of alternatives.
3	Trey Sherard, Anacostia Riverkeeper	Alternative five's cost includes the return of both North and South to the original state, what would be the cost to do so only for North?	In response to this question, NPS developed a preliminary estimate of cost for an approach where KPS would be addressed as described under Alternative 3 and KPN would be addressed as described under Alternative 5. This approach considered full removal of the KPN landfill and revegetation as wetlands. This cost would be approximately $320 million.
4	Courtney Hinton	If the option with the soil covering over both KPN and KPS is chosen, will that mean the fields and track and KPN will be unusable? What is the timeline for that type of remediation?	The fenced-in track and athletic field were constructed on imported soil fill that was placed after the landfill cover and after much of the early investigation activities were completed. It is unlikely that the soil in this area (shaded tan and with a different cross hatch pattern on Figure 2 of the Responsiveness Summary) would need to be covered with additional soil. The District of Columbia (District) and NPS will consider and develop plans for remediation to ensure that the disruption to visitors during placement of the soil fill cover has as little impact to visitor use as possible.
5	Joel Merriman, DC Audubon Society	There are many reasons why wetlands should be restored at this property. There are also many reasons why the local community should have improved recreational amenities. The alternatives present an unfortunate all-or-nothing choice with regard to wetlands. Can a sixth alternative be developed that provides both wetlands and space for amenities?	Please refer to the Responsiveness Summary, Section 3.4.1 As the federal land manager and lead agency, NPS undertakes response actions at contaminated sites under Section 104(a) of CERCLA to protect the public health or welfare or the environment. NPS's assessment of the KPL Site concluded that hazardous substances in the Site's surface soil and waste pose unacceptable risk to human health (visitors involved in active recreation and workers). NPS developed and evaluated remedial alternatives to address this unacceptable risk. The lead agency must consider the reasonably anticipated future use of the Site as part of the development of possible alternatives to address this risk. The future use of Kenilworth Park South (KPS) is controlled by the Anacostia Park Management Plan (Management Plan). The Management Plan requires KPS be managed for natural resources recreation (i.e., that it be maintained in a natural state for passive recreational uses). Congress has directed NPS to transfer administrative jurisdiction over Kenilworth Park North (KPN) to the District. Once that transfer occurs, KPN will not be part of Anacostia Park and will not be subject to the Management Plan. The transfer legislation provides that KPN must be "used only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." Within those broad constraints, the future use of KPN will be determined by the District. Prior to NPS's evaluation of possible alternatives, the District informed NPS that it plans to use KPN to provide active recreational opportunities (e.g., sports fields). Although these plans were very preliminary and conceptual in nature, they provided sufficient information to allow NPS to complete feasibility study-level evaluation of possible alternatives to address the unacceptable risk posed to active recreational users of KPN. NPS understands the value in restoring wetlands along the Anacostia River and Watts Branch; however, restoring wetlands is not required to address risks posed by the release of hazardous substances at the Site or to attain applicable or relevant and appropriate requirements (ARARs). Restoration of wetlands may occur in response to a Natural Resources Damage Assessment (authorized under CERCLA), or through other programs, such as those proposed by the District (see below). In its comments on the Proposed Plan (see Responsiveness Summary, and Attachment 24), the District Department of Energy and Environment (DOEE) indicated that the District intends to restore tidal wetlands in an approximately 18-acre area of KPN along the Anacostia River and Watts Branch and preserve meadow habitat in approximately 3 acres. To accommodate the District's preliminary plans, NPS modified the preferred Alternative 3 to eliminate the clean soil barrier in areas where the District intends to restore wetlands and maintain meadow habitat (see Figure 2 of the Responsiveness Summary).

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No.	Commenter	Comment	NPS Response
			The District notified the National Park Service (NPS) that it intends to start the community engagement process to determine the future use of Kenilworth Park North (KPN) in 2022. NPS suggests community members provide feedback on the specific plans for KPN, including restoration of wetlands, by participating in the District's community engagement activities and providing their input through that process.
6	Joel Merriman, DC Audubon Society	Is this process subject to NEPA review?	No, CERCLA response actions are exempt from National Environmental Policy Act (NEPA) requirements; however, NEPA's purposes are achieved through compliance with the CERCLA process.
7	Jack Koczela	Can you put up a map on share screen and show the location of the proposed trail bridge from Kenilworth to the Arboretum?	Figure 4 from the Proposed Plan was displayed for the audience. The figure shows the proposed alignment of the Anacostia Riverwalk Trail (ART) as depicted in the 2011 ART Environmental Assessment and on conceptual design plans prepared by the District Department of Transportation.
8	Erin Garnaas-Holmes, Anacostia Watershed Urban Waters Partnership (UWP)	Would a simple boathouse-type facility on the shore of the river in KPN be possible in the future under Alternative 3 or 4?	There is no reason why a boathouse-type facility could not be constructed at KPN under Alternatives 3 or 4. Figures 4 and 5 in the Proposed Plan identify a "Water Access" location, which is outside the footprint of the landfill. Specific water access development plans for KPN will be determined by the District.
9	Marian Dombroski, Anacostia Watershed Community Advisory Committee	Site History - most of the social history of the site and surrounding neighborhoods was omitted from the report. Is this information deemed irrelevant to the project?	The purpose of the Proposed Plan is to explain NPS's Preferred Alternative to clean up the Site. Earlier documents prepared as part of the Remedial Investigation/Feasibility Study phase of the CERCLA process provide site history details. The Kenilworth Park Landfill (KPL) Site Community Involvement Plan includes details on the surrounding community and environmental justice analysis. These considerations are important to the project (see Responsiveness Summary, Section 3.1).
10	Marian Dombroski, Anacostia Watershed Community Advisory Committee	ART and Bridge - these elements are made to appear higher priority than the remediation. How was it determined that the specific configuration (of ART and Bridge) be given priority when there are other ways to configure this important link once the park remediation and design are established. The EA specifically states that the design of trail and bridge will conform to the requirements of the Kenilworth Park Landfill actions.	NPS will work with the District during construction of the ART and pedestrian bridge to ensure the work is completed in a manner that protects the environment and human health. Plans for expansion of the ART and bridge are underway; these elements are shown in the Selected Remedy figures. NPS worked with the District Department of Transportation to ensure the portion of the ART that has already been constructed over the landfill was completed in a manner that avoided disturbing buried waste. The ART was constructed approximately 2 feet above the surrounding land surface to integrate with an eventual soil barrier. By taking appropriate measures to protect workers and manage excavated waste to avoid spreading contamination, abutments for the Arboretum Bridge may be installed over the former landfill at any time. NPS does not consider development of either the ART or bridge to be higher priority than completion of the CERCLA response. The final alignment of the ART was selected after completion of an environmental assessment (EA) (December 2011), and plans were prepared in accordance with NEPA and after consideration of public comments received during the public scoping for the EA (February 3, 2011 – March 4, 2011) and on the EA document (December 20, 2011 – January 31, 2012). NPS's Selected Remedy does not impact construction of the ART across KPS.
11	Marian Dombroski, Anacostia Watershed Community Advisory Committee	The land use and maintenance proposed in Alts 1-4 render most of the site, located in an important river ecosystem, useless as habitat. Please explain how these alternatives protect the environment.	The purpose of a CERCLA response is to protect public health and welfare and the environment from releases or threatened releases of hazardous substances present at a site (See NPS response to Comment 5). NPS does not agree that Alternative 3 would render most of the Site useless as habitat. In fact, a key consideration for adopting Alternative 3 over Alternative 4 was that valued habitat within KPS will be preserved. The future use of KPN will be determined by the District. Selection and Implementation of Alternative 3 does not imply that additional measures to enhance habitat along Watts Branch and the Anacostia River could not be taken. Portions of the landfill adjacent to the River and Watts Branch could be excavated and revegetated to create more habitat and flood resiliency independent of the CERCLA response action. In fact, the DOEE's comments on the Proposed Plan included a preliminary land-use plan that sets land aside for future tidal wetlands restoration and meadow habitat (see Attachment 24). To address the District's comments, NPS modified the Proposed Plan to eliminate the clean soil barrier in areas where restoration may occur in the future.
12	Marian Dombroski, Anacostia Watershed Community Advisory Committee	Cost of Alt 5 is characterized as "non cost balancing". Please explain this term. The evaluation analysis diminishes the value of wetlands. Given all the benefits, please explain how this determination was made. DOEE, which requires "no net loss and eventual net gain of wetlands", will inherit management of the park. Many agencies (EPA, USFWS etc.) offer financial support for wetland restoration. FEMA considers it an effective flood control measure. Clearly wetlands are very valuable to other agencies.	As stated in response to Comment 11, the purpose of a CERCLA response is to protect the public health and welfare and the environment from releases or threatened releases of hazardous substances present at a site. Restoration of wetlands is not required to address risks posed by the release of hazardous substances at the Site or to attain ARARs. Remedial alternatives must be evaluated against the nine criteria described in Section 300.430(e)(9)(iii) of CERCLA's implementing regulations, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). For purposes of evaluating possible alternatives (see Section 300.430(f)(1)(i)), those nine criteria are divided into three categories: threshold criteria (criteria one and two), balancing criteria (three through seven), and modifying criteria (eight and nine). Cost is one of the five "balancing criteria"; the other four are referred to as "non-cost balancing criteria." Please see the poster NPS created and posted on the KPL webpage to further explain alternative evaluation: https://www.nps.gov/anac/learn/management/upload/06-Poster_FS-Criteria_Final-508compliant.pdf Although landfill removal (Alternative 5) does address risk to human health and the environment, it was deemed to be relatively ineffective (compared with other alternatives) on the non-cost-balancing criterion of short-term effectiveness because implementation of Alternative 5 would take significantly longer to complete than the other alternatives.

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			Alternative 5 also failed to meet the additional requirement of cost effectiveness set forth under CERCLA Section 121(a) and Section 300.430(f)(1)(ii)(D) of the NCP. Because Alternative 5 does not present any additional benefit in risk reduction over NPS's Preferred Alternative (Alternative 3), and the cost of landfill excavation, disposal, and revegetation is so much higher than the installation of a clean soil barrier, an alternative of partial landfill removal (remove waste only in KPN) would also fail to meet the cost-balancing criterion. There is no justification to select an alternative that reduces risk by full or partial removal of the landfill at far greater cost, over an alternative that also fully addresses risk at far less cost in far less time (NPS's Selected Remedy). CERCLA response actions are required to protect public health and welfare and the environment from the release or threatened release of CERCLA hazardous substances at the Site and comply with ARARs. The evaluation of costs is relative to the alternatives that meet the response action objectives. Please see response to Comment 5 regarding the District's plan for wetland restoration along Anacostia River and Watts Branch.
13	Marian Dombroski, Anacostia Watershed Community Advisory Committee	Was there consideration given to integrating park design and remediation? Rather than making the objective of Alt 5 removal of all landfill material, the objective could be to design a Wetland Park featuring water dependent activities, maximizing area of wetland creation while designing also for compatible land-based activities. This would make best use of site and financial resources.	Please see NPS responses to Comments 5 and 12 and refer to the Responsiveness Summary, Section 3.4.1.
14	Larry Martin	There are different ecosystem services associated with different parts of the site. In particular, the riparian area of the site alongside the Anacostia has and could have significant value for habitat, recreation and flood management. Did the evaluation of site remediation options consider ecosystem service value in development of the five options?	Please see NPS responses to Comments 5 and 12 and refer to the Responsiveness Summary, Section 3.4.1 The restoration of natural resources to provide additional ecosystem services, create habitat, provide recreational opportunities, or reduce flood risks is not the objective of a CERCLA response action. However, a remedy designed to address unacceptable risks from exposure to hazardous substances may incidentally provide such benefits. Since NPS published the Proposed Plan, the District provided a preliminary future land-use plan for KPN (see Attachment 24) that includes areas reserved for tidal wetlands restoration. The Selected Remedy described in the Record of Decision (ROD) and shown on Figure 2 of the Responsiveness Summary includes modifications NPS made to the limits of the clean soil barrier in consideration of the District's preliminary future land-use plans.
15	Ruth	Can you clarify what, if any, remediation is being done on Kenilworth south? There are many lovely fruit bearing trees and bushes, I can see kids, and adults, helping themselves to the fruit. I'm concerned if the soil isn't healthy then the fruit won't be either.	The future use of KPS is controlled by the 2017 Anacostia Park Management Plan (Management Plan). The Management Plan requires that KPS be managed for natural resources recreation (i.e., that it be maintained in a natural state for passive recreational uses). Under NPS's Selected Remedy, no vegetation will be removed from KPS. The contaminants of concern that drive potential human health risk at KPS are polycyclic aromatic hydrocarbons (PAHs). Exposure to PAHs by eating fruit from trees growing at KPS is not expected to be significant. In general, plant uptake of PAHs from soil is limited, because PAHs tend to strongly bind to organic matter in soil, thus rendering them unavailable for uptake by plants. In cases where plants may absorb PAHs from soil, this uptake is typically limited to the skins or outer layer of roots that are in direct contact with impacted soils. PAHs that are stored in the outer layer of the plant are not readily transferred to the interior of the plant to any appreciable degree. Thus, the potential for risk from eating fruit from trees at KPS is minimal.
16	Monte Edwards, Committee of 100	I understand that KPN consists of 80 acres and Alt 3 proposed to place a soil cap on 60 acres. Over time, athletic areas will likely be rearranged and years from now athletic events or other activities are likely to occur on these unprotected areas. What would be the extra cost to cover the entire site? Monte Edwards Committee of 100	The Selected Remedy includes placing a clean soil barrier in all areas of KPN that could potentially be developed for higher-frequency and intensity uses such as athletic fields. Natural buffer areas along the outer portions of KPN will be held in a natural undeveloped state as part of the transfer requirements, and, like KPS, will not require a barrier due to the anticipated lower frequency and intensity of use. The District had not delineated specific areas to be developed for higher-frequency and intensity uses, or the areas to be set aside as natural buffer zones; therefore, to provide a conservative estimate during the evaluation of different alternatives, NPS included all areas that could potentially be developed for active recreational use. NPS updated the Selected Remedy in response to the Proposed Plan comments provided by DOEE (see Attachment 24). These plans identified areas intended for future tidal wetlands restoration and preservation of meadow habitat. Figure 2 of the Responsiveness Summary shows the current configuration of the clean soil barrier. The District will have the opportunity to refine areas to be covered during the remedial design phase (phase that begins after the ROD is issued) based on the District's final land-use plan for KPN.

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17	Justin Lini	Did the team consider restoration of wetlands in limited areas adjacent to Anacostia river and Watts branch?	Please see NPS responses to Comments 5, 12, and 14, and refer to the Responsiveness Summary, Sections 3.4.1. and 3.4.2 Restoration of wetlands is not required to address risks posed by the release of hazardous substances at the Site or to comply with ARARs. As noted in the responses to other comments, the District identified areas of future tidal wetland restoration in its Proposed Plan comments (see Attachment 24) and NPS modified the limits of the clean soil barrier accordingly. The limits of the clean soil barrier shown on Figure 2 of the Responsiveness Summary are still conceptual in nature, and further modifications can be completed during the CERCLA remedial design phase, which begins after issuance of the ROD.
18	Anne M. Lewis	What considerations were given to wildlife habitat in the area, for instance, the American Woodcock, which breeds in this area and is a Species of Greatest Conservation Need?	Please see Attachment 16, which includes DC Audubon's comments and NPS responses to the Proposed Plan. During NPS's evaluation of possible alternatives, Alternative 3 received a more favorable short-term effectiveness rating relative to alternatives 4 and 5 because Alternative 3 would not destroy existing habitat located on KPS, and it could be implemented in less time (resulting in less disruption to the surrounding communities). The District will determine land-use plans for KPN. DOEE provided comments on the Proposed Plan (see Responsiveness Summary Attachment 24). These comments included a preliminary land-use plan that sets land aside for future tidal wetlands restoration and meadow habitat. The District has indicated to NPS that it plans to conduct public engagement activities in 2022 to obtain public input on the future uses of KPN; therefore, members of the public are encouraged to participate in the District's planning process and provide their input through that process. NPS evaluated the potential for risk to wildlife (including birds) posed by the KPL Site during the remedial investigation. The assessments included exposure pathways to wildlife (including birds) through consumption of food (e.g., earthworms and subterranean invertebrates). The ecological risk assessments concluded that hazardous substances at the Site pose no unacceptable risk to birds and other wildlife.
19	Marian Dombroski, Anacostia Watershed Community Advisory Committee	Will NPS remediation take place prior to transfer to DC?	Remediation is not anticipated to take place before KPN is transferred to the District.
20	Monte Edwards, Committee of 100	How much of the shoreline of the site has sea wall? What part of the shoreline does not have seawalls? What is the seawall made of? What is the condition of the seawall? If KPS is to be a natural resource area, why not reestablish wetlands along the shoreline? Monte Edwards Committee of 100	Approximately 1,700 feet of sea wall runs along the bank of the Anacostia River in the northern portion of KPN. There is no sea wall along approximately 2,200 feet of the southern portion of KPN or the entire length of KPS. The sea wall consists of a rip rap foundation with a trapezoidal stone masonry wall that terminates a few feet above mean highwater. Based on recent condition assessments, the sea wall next to KPN is in stable condition with no need for repairs. Re-establishing shoreline is not required to address risks posed by the release of hazardous substances at the Site or to comply with ARARs; however, such an activity might be possible under a different program. Note that the topography of KPS would likely limit the feasibility of re-establishing wetlands along the Anacostia River in this area. In its comments on the Proposed Plan (see Responsiveness Summary, Attachment 24), DOEE indicated that the District intends to restore tidal wetlands in an approximate 18-acre area of KPN along the Anacostia River and Watts Branch, and to preserve meadow habitat in approximately 3 acres. To accommodate the District's preliminary plans, NPS modified the Preferred Alternative (Alternative 3) to eliminate the clean soil barrier in areas where the District intends to restore wetlands and maintain meadow habitat (see Figure 2 of the Responsiveness Summary). The District notified NPS that it intends to start the community engagement process to determine future use of KPN in 2022. NPS suggests community members provide input on the specific plans for KPN, including restoration of wetlands, by participating in the District's community engagement activities and providing their input through that process.
21	Marian Dombroski, Anacostia Watershed Community Advisory Committee	We understand your responsibility under CERCLA. The concern for the community is that we are left with healthy land which can serve the community. These alternatives do not do that.	The Selected Remedy (modified version of NPS's Preferred Alternative, Alternative 3) addresses risk posed to human health by hazardous substances in Site surface soil, subsurface soil, and waste and allows the land to be used for its reasonably anticipated future use (i.e., passive and active recreational uses).
22	Trey Sherard, Anacostia Riverkeeper	To be clear, there is no requirement that the remedial action be all excavation, or all capping. Correct? In the context of CERCLA response, your remedial options table already certifies that the excavation of the site to return it to its original state, including wetlands, does meet the criterion to reduce risk.	Full removal of the landfill would eliminate the unacceptable human health risks identified through the remedial investigation and associated risk assessments. However, NPS ranked the preferred Alternative 3 (partial clean soil barrier) higher than Alternative 5 (full removal) based on short-term effectiveness and cost. In addition, Alternative 5 does not meet the cost-effectiveness requirement of Section 300.430(f)(ii)(D). NPS's Selected Remedy (modified version of Alternative 3) does not limit the District's future ability to use KPN by reducing areas that may be developed into sports fields. The cost associated with excavating and disposing of landfill waste is significantly higher than placing a clean soil barrier within areas that will be used for organized sports and recreation with no additional reduction in risk. To be selected among equally effective and legally compliant alternatives as the final remedy, the selected remedy must be cost effective, which means that its costs are proportional to its overall effectiveness

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			(see Section 300.430(f)(1)(ii)(D) of the NCP). The hybrid approach (excavating the western portion of KPN while capping the areas to be devoted to sports fields on the eastern portion of the Site) would not meet that requirement. See Responsiveness Summary, Section 3.4.4.
23	Trey Sherard, Anacostia Riverkeeper	Your preferred alternative already treats North different from South, why didn't you treat excavation in a similar manner?	NPS's Preferred Alternative and Selected Remedy (modified version of Alternative 3) do not apply one remedy to KPN and a different remedy to KPS. Instead, the same remedy (i.e., placement of a clean soil barrier over all surfaces that pose an unacceptable risk to human health or the environment) is applied to the entire Site. Because of the differences in the future uses envisioned for KPS and KPN, the application of the remedy results in only one of those areas being capped. In contrast, the uniform application of Alternative 5 (excavation of all landfill waste) across the entire Site results in both KPN and KPS being excavated.
24	Max Richman	For the estimated costs of the abatement, would that be borne by the National Park Service or by DC Government after the transfer of KPN?	Cost-sharing discussions between the District and the United States are ongoing.
25	Brent Peterson	Can you clarify the timeline of the Record of Decision (ROD) being released, the transfer of jurisdiction and the remedial work being completed? My understanding so far is that the jurisdiction would transfer after the ROD but before the remedial work. Will the remedial work be overseen by NPS after jurisdiction has been transferred or would the district take over managing the remedial work?	The transfer of administrative jurisdiction for KPN is expected to occur shortly after issuance of the ROD. The remedial design phase will begin after issuance of the ROD. This phase will include development of the detailed engineering plans to implement the remediation. After completion of the remedial design phase, the implementation, or construction phase, of the response action will begin. NPS will continue to oversee the CERCLA remedial action as the federal lead agency. Although the specific future roles and responsibilities of the District government and NPS are being negotiated and will be outlined in a future agreement, it is anticipated that the District will complete the remedial design and implement the remedy under NPS oversight (See Responsiveness Summary, Section 3.5)
26	Patrice Linehan	A recent development in Virginia used barges instead of trucks. Could option #5 work with less disruption to the community if an alternative to truck traffic is used? I agree with others that pursuing option #5 is a worthwhile effort.	Using barges rather than trucks would not significantly change the analysis or the factors used to select the Preferred Alternative. The use of barges could increase the absolute and relative cost of Alternative 5 as that approach would require additional loading, unloading, and hauling above and beyond that which would be required for trucking and would not result in additional reduction of risk to recreational users.
27	Marian Dombroski, Anacostia Watershed Community Advisory Committee	How has NPS determined the presumed future use?	The future use of KPS is controlled by the Anacostia Park Management Plan (Management Plan). This plan requires KPS be managed for natural resources recreation (i.e., maintained in a natural state for passive recreational uses such as birdwatching or walking on the ART). Congress directed NPS to transfer administrative jurisdiction over KPN to the District. Once that transfer occurs, KPN will not be part of Anacostia Park and will not be subject to the Management Plan. The transfer legislation provides that KPN must be "used only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." Within those broad constraints, the future use of KPN will be determined by the District. Prior to NPS's evaluation of possible alternatives, the District informed NPS that it planned to use KPN to provide active recreational opportunities (e.g., sports fields). Although these plans were very preliminary and conceptual in nature, they provided sufficient information to allow NPS to complete feasibility study level evaluation of possible alternatives to address the unacceptable risk posed to active recreational users of KPN. DOEE provided NPS a preliminary future land-use plan as part of its comments on the Proposed Plan (see Attachment 24). This plan includes areas reserved for future tidal wetlands restoration and meadow habitat. NPS modified the limits of the clean soil barrier as shown on Figure 2 of the Responsiveness Summary to accommodate the District's preliminary plans for KPN.
28	Junel Jeffrey	Following the comment period, looking at an actual timeline and considering that option 3 is accepted, when would the 1–2-year plan begin? When would this project take place?	The timeframe of one to two years was an estimate to complete the implementation (remedial action construction phase) of Alternative 3. The actual implementation of the Selected Remedy is completed during the remedial action phase of the CERCLA process and begins after the remedial design phase, which is the phase of the CERCLA response action when the detailed engineering plans are prepared. The remedial design phase will begin after issuance of the ROD. The timeline to fully implement the remedy is uncertain; however, for the Selected Remedy (modified version of Alternative 3) the timeline could reasonably fall within the range of five to ten years. This would include preparing the remedial design (engineering plans) and conducting the Site work (i.e., actual placement of the clean soil barrier). *See Responsiveness Summary, Section 3.5, for more information.*
29	Anne M. Lewis	Is woodland going to be removed, and if so, where, and how will the disturbed land be treated?	Under the Selected Remedy, wooded areas located within KPS will remain, and natural buffer areas along the outer portions of KPN will be held in a natural undeveloped state as part of the transfer requirements of KPN. Alternatives 4 and 5 would have required significant removal of existing woodlands from KPS.

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No.	Commenter	Comment	NPS Response
30	Junel Jeffrey	Please explain the difference between “unacceptable” and “acceptable” risk. Does this differ for those of us who live here and use the park daily?	The NCP, the regulations that implement CERCLA, considers “acceptable” long-term cancer risk to range from one in ten thousand (1E-04) to one in one million (1E-06). As part of the feasibility study, NPS adopted a target cancer risk level of one in one million (1E-06 or one excess cancer in an exposed population of one million). Acceptable short-term or “acute” risk is established by what is known as the “hazard index” (HI). The HI is a ratio of the potential exposure to a substance (e.g., a concentration in media such as soil) and the level (or concentration) at which no adverse effects are expected from exposure to that substance. NPS adopted an HI of 1.0 as the acceptable target short-term risk (i.e., the level at which no adverse effect is anticipated). The acceptable risk level for cancer is based on the frequency and intensity of exposure. Therefore, the variable risk and cleanup levels are based on the activity likely to be undertaken. Walking along established trails on a daily basis is a different “exposure scenario” from playing contact sports on an athletic field. The exposure scenarios are described in the 2020 Feasibility Study Addendum Report. NPS has prepared a poster that provides further explanation on how risk is evaluated during the CERCLA process. This poster is entitled “What is Risk Assessment” and is posted under the “Want to Know More” section of the webpage: Kenilworth Park: What is Risk Assessment? (nps.gov)
31	Max Richman	What additional outreach activities will the NPS be taking to connect with communities in Kenilworth, Paradise, Mayfair Mansions, and Eastland Gardens? It’s important they are engaged, and their feedback is sought and recorded.	NPS agreed that it is important to engage and seek feedback from the communities surrounding the KPL Site on the NPS Proposed Plan; therefore, NPS participated in six community and neighborhood meetings after the official Public Meeting (see Table 1 of the Responsiveness Summary). NPS has also consulted with members of the Anacostia Park and Community Collaborative (APACC) to help in its community outreach efforts. APACC is a network of organizations committed to maximizing the value of public spaces along the Anacostia River to residents of Wards 7 and 8 in the District. APACC created a webpage and Facebook page specifically targeted to nearby residents to provide information and accept input on NPS’s Proposed Cleanup Plan. NPS considered all community input received before selecting the remedy detailed in the ROD. The Selected Remedy is a version of preferred Alternative 3 that NPS modified to address community input on the Proposed Plan. See Responsiveness Summary, Sections 2.0 and 3.1, for more information.
32	Ravi Damera	Thanks for the presentation. Given the proximity to the Anacostia River, and the ongoing ARSP, did the NPS consider alternatives that would reduce or eliminate contaminant exposure in the river adjacent to the site?	The 2019 Remedial Investigation (RI) Addendum concluded there are no unacceptable risks to aquatic habitats associated with ongoing contaminant migration from the landfill. This conclusion is based on groundwater investigation findings documented in the RI Addendum report. In comments provided on the Proposed Plan (see Attachment 24), DOEE recommended additional assessment of the potential stormwater migration pathways from the landfill that NPS has agreed can be included as an investigation to be completed during the remedial design phase of the CERCLA response. The remedial design phase will begin after issuance of the ROD. Please refer to the Responsiveness Summary, Section 3.2.2, for additional information.
33	Marian Dombroski, Anacostia Watershed Community Advisory Committee	If the shoreline is not naturalized or graded, there can be no access for boating	Any grading or naturalization needed to accommodate boat access can be completed independently of this response action. NPS’s Selected Remedy would not preclude those activities in the future. NPS would ensure any future grading work would be completed in a manner that protects the environment and human health (workers). By taking appropriate measures to protect workers and manage excavated waste to avoid spreading contamination, future work to construct water access points may be completed. Specific plans outlining requirements for future construction work within the Site boundaries will be developed during the remedial design phase.
34	Pat J.	We are observing the "silting-in" of the Anacostia River. With alternative 3, capping cover of soil in KPN and South, what will keep it from running off into the river? What is the plan to remediate this?	The remedial design for the clean soil barrier would require stormwater protection measures in accordance with applicable laws and regulations. These requirements would be incorporated into the remedial design to prevent sediment contamination from newly placed soil. These areas would be vegetated to provide long-term stability. Also, the clean soil barrier is proposed inside an existing natural buffer, so the new soil barrier would not extend to the banks of the Anacostia River or Watts Branch. As part of the long-term monitoring for this Site, periodic inspections (minimum of every five years) would be required to ensure the clean soil barrier remains stable, is not eroding into adjacent surface waters, and is continuing to protect recreational users as expected.
35	Jim Foster, Anacostia Watershed Society	Is the cost of the selected alternative to be shared with the District?	Cost-sharing discussions between the United States and the District are ongoing.
36	Tonya Johnson	How will the construction affect the Anacostia River trail access?	The existing Anacostia Riverwalk Trail located along the northern portion of KPN is located outside the areas currently designated to receive a clean fill barrier; therefore, access is not expected to be impacted during the cleanup.
37	Trey Sherard, Anacostia Riverkeeper	When the District assumes administrative control of North, which agencies will have that control? In particular, who will be responsible for the shoreline?	It is NPS’s understanding that following the transfer to the District, the Department of Parks and Recreation (DPR) will have primary responsibility for managing KPN. It is anticipated that DPR would consult with DOEE regarding natural resource issues such as the shoreline. Actual management roles and responsibilities for KPN will be determined by the District, not NPS.

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No.	Commenter	Comment	NPS Response
38	Max Richman	What (if anything) is preventing DC government from developing its plan for Kenilworth North at the same time as this process so they can be coordinated, as per Trey's point about making efficient use of dollars (federal and local)?	There is nothing preventing the District government from developing its plan for KPN at the same time as the CERCLA process proceeds. The District has indicated to NPS that it plans on conducting public engagement activities to determine the future uses of KPN in 2022. The next phase of the CERCLA process is preparation of the remedial design. During the remedial design, the specific construction plans and specifications will be prepared. These plans will need to accommodate the District's plans for KPN. DOEE provided a preliminary land-use plan to NPS in its comments on the Proposed Plan. This plan includes areas set aside for future tidal wetlands restoration and meadow habitat. To address the District's comments, and as shown on Figure 2 of the Responsiveness Summary, NPS modified the Proposed Plan to eliminate the clean soil barrier in areas where restoration may occur in the future.
39	Monte Edwards, Committee of 100	You have already talked about realignment of the Riverwalk trail that I assume would involve DDOT during the design phase. Do you plan to incorporate others, such as DOEE, who would likely advocate for some form of their Living Shoreline draft plan in terms of wetlands or sills to replace deteriorated seawalls? Monte Edwards Committee of 100	Realignment of the Anacostia Riverwalk Trail (ART) is not part of the CERCLA response action. The alignment of the existing ART within KPN will remain as constructed in 2015. The alignments of future trail segments within KPN and KPS are proceeding independent of the CERCLA response action. DDOT is managing the construction phase of the ART and consults with NPS to ensure the trail construction is completed in a manner that protects worker health and mitigates possible hazards encountered during construction. Since releasing the Proposed Plan, the District provided NPS a preliminary future land-use plan for KPN (see Attachment 24). This plan reserves areas for future tidal wetland restoration and meadow habitat. NPS modified the limits of the proposed clean soil barrier accordingly. NPS anticipates the District will refine plans for development of wetlands during the remedial design phase of the project.
40	Zandra and Dennis Chestnut	What is proposed to be done with the former community center site?	The future of the former community center site and related facilities (building foundation, swimming pool, basketball and tennis courts) will be determined by the District during redevelopment planning.
41	Erika Gutierrez	If I understood correctly, currently building on either KPS or KPN would cause an unacceptable exposure risk to workers. After the soil cap is in place would building on the site be possible without these risks?	Risk posed to workers is unacceptable only if no protective measures are taken. Part of the remedy includes "institutional controls," which will include administrative requirements to implement precautions before and during any proposed excavation activities to protect worker safety and address this risk. Installing utilities or constructing buildings over the Site is possible if protective measures are taken in the design and construction. Specific plans that must be followed during any soil-disturbing activity will be developed during the remedial design phase of the CERCLA response. NPS will provide oversight of any excavation activities to ensure appropriate protective measures are taken.
42	Marian Dombroski, Anacostia Watershed Community Advisory Committee	When uses change it is not just a matter of applying more fill. Any changes will require significant regrading as long as contaminated material remains below.	The Preferred Alternative was selected based on the District's current plan to develop KPN for active recreational opportunities (e.g., sports fields). Specific areas to be covered will be delineated as part of the remedial design phase of the project and will be based on the District's specific development plans for KPN. As part of the institutional controls put in place to manage the site, there will be limitations on future land use and precautions will be required to protect worker safety during construction and excavation activities.
43	Peter Vonloewe	Thank you for this presentation. I'm curious about the Kenilworth site and its influence on the Anacostia River. The proposed plan suggests that contamination in the tidal Anacostia River do not appear to be attributable to the Kenilworth site. Are there data that have been collected in Watts Branch that can be compared with Anacostia River data that informed this statement? Thank you.	NPS collected sediment samples from Watts Branch and the Unnamed Tributary to Watts Branch during the preliminary assessment/site inspection and remedial investigation phases of the project. NPS also reviewed results reported from sediment samples collected from Watts Branch as part of the Anacostia River Sediment Project (ARSP) and a related tributary study. The results reveal contaminants, including polychlorinated biphenyls (PCBs), are present in sediment next to the KPL Site but also in areas upstream of the Site and at higher concentrations. Based on review of available data, NPS concluded that the KPL Site is not a current, ongoing source of contamination to adjacent surface waters including Watts Branch or the Anacostia River. Although existing data do not indicate that the KPL Site is a current significant source of contamination to adjacent surface waters, the District recommended additional sampling in its Proposed Plan comment letter (see Attachment 24) to confirm that contaminants from surface soil are not migrating into surface water via stormwater runoff. The District proposed that sampling be completed during the remedial design phase as the findings will not affect the Selected Remedy. NPS has agreed to this recommendation. NPS is considering, in consultation with other regulatory agencies, establishing a site that encompasses the Unnamed Tributary and the downstream portion of Watts Branch. These areas are currently under NPS jurisdiction and subject to NPS CERCLA authority. NPS has initiated planning for a remedial investigation (RI) to assess sediment contamination in these water bodies.

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44	Trey Sherard, Anacostia Riverkeeper	I'm looking back through the FS Addendum for information about how groundwater from the site moves contaminants and/or contaminated sediment into the river and/or into Watts Branch, but I'm finding nothing. Does NPS persist in its assertion that there is no migration of contamination from the site to the river or to Watts Branch?	Information regarding the potential migration of contaminants in groundwater is provided in the 2019 Remedial Investigation (RI) Addendum report, which is referenced in the 2020 Feasibility Study (FS) Addendum. The RI/FS documents are intended to be complementary; the FS builds on the data and conclusions of the RI. The RI Addendum report concluded that there are no unacceptable risks associated with contaminants in groundwater migrating to the Anacostia River, Kenilworth Marsh, or Watts Branch. In its comments on the Proposed Plan, DOEE recommended the collection of additional surface soil samples in areas adjacent to water bodies to confirm there is no significant overland runoff pathway for contaminant migration. Given the lack of significant erosion, NPS considers this pathway unlikely to cause an unacceptable exposure risk; however, NPS agreed that additional sampling during the remedial design phase of the CERCLA response would provide additional data to reduce uncertainty regarding the potential for surface soil contaminants to be impacting adjacent surface waters. The findings of the additional investigation would not change the configuration of the clean soil barrier (Selected Remedy). If the planned sampling were to indicate that additional measures are needed, those measures would be in addition to the proposed clean soil barrier. To the extent additional remedial measures are necessary, they would be selected through an explanation of significant differences (ESD) or a ROD amendment.
45	Marian Dombroski, Anacostia Watershed Community Advisory Committee	NICK Kushner - would you mind supplying your contact info?	Nick Kushner, AICP Community Planner Capital Projects, Planning and Design DC Department of Parks and Recreation 1250 U St. NW | Washington, DC 20009 P: 202.391.9188 |E: nick.kushner@dc.gov
46	Anne LaCombe	This might be covered in the addendum report but I was wondering if preferred alternative 3 is chosen, how often and for how long will the site be monitored for potential erosion (e.g., along the river and stream banks)? And if there is erosion occurring, what are the plans to address this?	NPS's Selected Remedy would not involve earthwork along the river and stream banks; therefore, erosion in these areas associated with installation of the clean soil barrier is unlikely. Nevertheless, NPS included monitoring for erosion as a component of the institutional controls. The frequency and duration of monitoring for erosion and mitigation steps to address erosion will be established and outlined as part of the remedial design phase and will be detailed in plans prepared as part of the remedial design. In addition, because waste will remain at the Site, CERCLA requires that NPS conduct long-term monitoring of the Site, which will include periodic inspections (minimum of every five years) to ensure the clean soil barrier remains stable, is not eroding into adjacent surface waters, and is continuing to protect recreational users as expected.
47	Marian Dombroski, Anacostia Watershed Community Advisory Committee	Barges were used in the construction of the ART - as far north as NY Ave	Using barges rather than trucks would not significantly change the analysis or the factors used to select the Preferred Alternative. The use of barges could increase the absolute and relative cost of Alternative 5 as that approach would require additional loading, unloading, and hauling above and beyond that which would be required for trucking and would not reduce risk to recreational users.
48	Trey Sherard, Anacostia Riverkeeper	Barges are already in use for other projects along the river so that is a very worthwhile question.	See response to Comment 47.
49	Artilie Wright	Good Afternoon, Was there a recording of the Wednesday meeting and materials I can share with my constituents? I am the ANC of Parkside which abuts NPS land adjacent to the Anacostia River and was not aware of the event until after it ended.	A recording of the virtual meeting and transcript has been posted on the KPL webpage: www.nps.gov/anac/learn/management/kpls.htm
50	Ben Grillot	Donna: I live in River Terrace in NE DC and am excited to see that Kenilworth Park will be cleaned up. I think Alternative 3 makes the most sense. However, I would like to advocate for the inclusion of a car-top canoe / kayak launch near the site of the proposed footbridge to the Arboretum. As an avid kayaker, there aren't nearly enough spots to easily (and safely) launch between Bladensburg Waterfront Park and the Anacostia boat ramp. I already use the make-shift launch in Kenilworth Park, but it would be very nice to have something more formal in the final plans. Let me know if you have any questions or would like to discuss! Thanks,	Congress directed NPS to transfer administrative jurisdiction over KPN to the District; therefore, the District will determine the configuration of future park facilities. The water access location shown on Figure 2 of the Responsiveness Summary (Selected Remedy) shows the water access location that was included on a conceptual design plan prepared by the District Department of Transportation for the Arboretum Bridge across the Anacostia River. The Selected Remedy will allow for the type of boat launch you have described.

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No.	Commenter	Comment	NPS Response
		Ben Grillot 3445 Clay Street NE	
51	Dave Helms	I am a regional bicycle advocate and very interested in the Anacostia River Trail access. I unfortunately missed the public meeting concerning the NPS Kenilworth Park Landfill Site project. Recently, Jersey barriers have been placed in the trail access at the terminus of Deane Ave at Watts Branch Creek. This trail is a moderately traveled spur from the ART as a bypass for Mayfair District / Parkside Apartments (where the surface route is often filled with debris and glass making this route dangerous). Could you please advise me of the trail bypass closure (trail users would like the barriers to have a 3 ft opening for continued pedestrian and bicyclist access)? Also, I'm very interested in the trails proposed for Alternative 3. Can you share greater detail than available on the Alternative PDF map posted from the meeting? P.S. I am supportive of the NPS preferred alternative 3 at this time. My priority is to maintain and improve access to Kenilworth Park for trail users.	The placement of the jersey barriers, at the terminus of Deane Avenue at Watts Branch, and the gate located along the Anacostia River Trail (ART) to the south, was originally placed because of the unsafe physical conditions (uneven terrain and construction debris), which resulted in the administrative closure of the area. Over the years, the jersey barriers have been inadvertently moved and gate re-opened without park approval. This has led to vehicles accessing the Site, which have created additional safety concerns. NPS recently repositioned the jersey barriers and re-locked the gate to remedy the issue. NPS is currently reviewing the administrative closure and access to the area for visitor use. At this time, the only trail planned for development across KPS is the continuation of the ART. The trail alignment shown on Figure 2 of the Responsiveness Summary was taken from the 2011 Environmental Assessment, Anacostia Riverwalk Trail Section 3 Realignment, Anacostia Park. NPS has not yet determined the future of the road that runs north to south across KPS and is also shown on Figure 2. The road may be removed, or it may remain; NPS will make that decision outside of the CERCLA process.
52	Marian Dombroski, Anacostia Watershed Community Advisory Committee	What if any responsibility does NPS have for remediation of contaminated sediment adjacent to Kenilworth Park? On one of the ARSP documents this area is identified as a hot spot. As you know, many members of the general public followed the ARSP with great interest. While the DOEE has done an exceptional job making their plans available and comprehensible to the public, many members of the gp are completely in the dark about activities and plans of the other PRPs (PEPCO, WASH GAS, NPS, etc.). It would be very helpful to gain a full picture of activities around Kenilworth Landfill, especially now while the Feasibility Report and Proposed Plan for Remedial are out for public comment.	The RI Addendum concluded that the KPL Site is not an ongoing source of contaminants to river sediments, at least not at concentrations that create unacceptable risks to human health or the environment. The KPL Site—in contrast to the Washington Gas East Station Site, the Washington Navy Yard, and the Pepco Benning Road Site—does not include any portion of the Anacostia River. If the sediments adjacent to the KPL Site need to be remediated, that will be done as part of the ARSP remediation. To the extent there are allegations that the KPL Site contributed hazardous substances to the river in the past, those allegations would be addressed in the context of allocation discussions among the potentially responsible parties for the ARSP. NPS will not be remediating contaminated river sediments as part of the Kenilworth response action. The boundaries of the KPL Site were drawn to ensure that the KPL Site and the ARSP Site were mutually exclusive. In other words, the KPL Site boundaries were designed to avoid the possibility that the same area would be subject to overlapping and potentially inconsistent investigations and response actions. Because other contaminated sites along the river include portions of the adjacent riverbed, those sites were essentially carved out of the ARSP and will not be addressed as a part of that response action. Instead, the sediments adjacent to those sites are being investigated in accordance with the legal agreements in place for those sites and will be remediated, if necessary, in accordance with separate RODs issued for those sites.
53	John Ausema	I wanted to comment on the remediation plan that was recently published. I am not sure if I will be able to attend the meeting, but there are a couple of questions that I have and that I am hoping can be answered for me as well as for the public. (1) It sounds like the preferred alternative would include placing topsoil on the Anacostia Trail as well as the fields. Is this correct? If so, what is the likely timeline for this work, and how long would the trail be "offline"? (2) Does the plan impact the planned bridge over the river to the Arboretum in any way?; (3) Can the planned segment of the Anacostia Trail across Kenilworth Park South be constructed before the remediation work is done at KPN, so that trail users would have an alternate route while the work is being done? Thanks.	1. The clean soil barrier included in the Selected Remedy will not cover the ART. The fill placed during construction of the trail and the asphalt surface provide a barrier between visitors and the underlying soil. The 12-inch clean soil barrier placed over areas of KPN will butt up against the trail, which was designed to be approximately 2 feet above the surrounding ground surface. There is no plan to take the trail offline during the construction phase of the Selected Remedy. 2. During construction of the Arboretum pedestrian bridge, hazards such as methane gas and possible unexploded ordnances must be considered and mitigated. Also, if contaminated soil or waste is disturbed during construction of the bridge, this soil/waste must be properly managed. Finally, the bridge design must consider the raised ground surface elevation associated with the future clean soil barrier to be placed over KPN. The construction of the Arboretum pedestrian bridge can proceed independently of the remediation of the Site as long as precautions such as those identified above are considered and addressed. 3. The construction of the ART across KPS is moving forward and is proceeding independently of the cleanup project.

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No.	Commenter	Comment	NPS Response
54	Marija S. Ozolins	I am opposed to the plan to develop Kenilworth Park. As a community member who enjoys the park on a weekly basis, I request that the land be preserved for wildlife. It is one of the only true wilderness areas easily accessible in DC, and as it hosts breeding woodcocks, Northern Harriers, spring peepers, Kestrels, and many other species of wildlife. Looking out over the meadow in the morning and hearing the birdsongs brings a smile to my face. I have also seen children enjoying the sights and sounds of a wild place they may not otherwise have access to in the city. Thank you for your consideration.	Thank you for your comment. One of the benefits NPS considered for Alternative 3 is the fact that this alternative requires no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas. In its comments on the Proposed Plan, DOEE provided preliminary plans for KPN that identified areas to be reserved for meadow habitat (see Attachment 24). Because Congress directed NPS to transfer KPN to the District, the District will determine the future land use at KPN subject to the conditions included in the transfer legislation.
55	Shannon Hall	This is such a wonderfully rich natural environment and hosts many native species. Please preserve it.	Thank you for your comment, NPS's Selected Remedy will preserve KPS. In the District's preliminary plans for KPN, areas are reserved for meadow habitat. Because Congress directed NPS to transfer KPN to the District, the District will determine the future land use at KPN subject to the conditions included in the transfer legislation. The District will be conducting future community engagement activities in 2022 to gather public input on the future use of KPN, and NPS recommends participating in these activities to ensure your desires for KPN are considered.
56	Siraaj M. Hasan, Advisory Neighborhood Commissioner District 7D02	I am the advisory neighborhood commissioner. One of the commissioners for the area. I just wanted to see if you could restate what the timelines were on potential decisions being made for the proposed alternatives part one, part two for the alternatives that have been proposed, what is the breakout between the responsibilities for who is paying for those different courses of action. The federal government versus DC government. Is that also driving what alternatives or accidents and or plans are being made?	NPS's Selected Remedy is described in the KPL Site ROD. The Site now moves into the remedial design phase. This phase is expected to take approximately two years. After completion of the remedial design phase, the remedial action phase will begin. During this phase, the actual work of implementing the chosen remedy for the Site will be completed (i.e., placement of the clean soil barrier). The implementation of the Selected Remedy is expected to take one to two years after selection of a contractor. The timeline for full implementation of the Selected Remedy is uncertain but could reasonably fall within the range of five to ten years. Cost-sharing discussions between the United States and the District are ongoing. The source of funding for the response action is not a factor that was considered in selecting the Preferred Alternative.
57	Scott Safford	Hi! I am a DC resident and a frequent user of the KPN area as an avid birder. As you may know, Kenilworth Park is one of the best spots for birding and wildlife viewing in the city, and frequently used for that purpose. More birds have been seen there than anywhere else in the city this year (https://ebird.org/region/US-DC/hotspots?yr=cur), and almost 250 species have been reported from there (https://ebird.org/region/US-DC/hotspots?yr=all). The lists include the Aquatic Gardens also, but the Park is the more heavily-birded area -- it has hosted a large number of extremely uncommon DC species in the last few years, including a DC-first Loggerhead Shrike, multiple Nelson's Sparrows, etc. It is also the best or only place in DC for Meadowlarks, Blue Grosbeak, and others. It is a critical habitat for many nesting birds: the recently-started MD/DC breeding bird count has unofficially (so far) tallied ~60 species as Probable or Confirmed breeding in the KP/KAG parks, which is tied for the most of any DC hotspot (with Theodore Roosevelt Island), and 20% more than anywhere else. These stats and others have been pulled from the eBird database (I'm into data analytics by trade). If there are other numbers of interest, please feel free to request anything from me. After reading through the proposal, it occurred to me that a modification of Alternative 3 might be of interest to the community. I rarely see anyone using the playing fields (except occasionally the one by the back parking lot). I would propose giving over more of the mowed-grass area to un-mowed field. That should lower the cost, because the un-mowed areas don't need to be capped with additional soil, and expand the area useful to wildlife. Potentially, the savings could be moved into a wetland renewal project on site along the Anacostia. At any rate, I and the DC birding community are heavy users of the KP site. We love it and dearly hope that these alterations don't have any adverse long-term effects on the wildlife that lives and breeds there.	NPS's Selected Remedy would not impact existing habitat located on KPS. This was one of the benefits NPS considered during the evaluation of possible alternatives. KPS is designated in the Anacostia Park Management Plan as a natural resource recreation zone. The only planned development within KPS is the construction of the Anacostia Riverwalk Trail (ART). Your comment about expanding areas within KPN to un-mowed meadows is noted; however, because Congress directed NPS to transfer administrative jurisdiction over KPN to the District, future plans for KPN will be determined by the District. After the Proposed Plan was released, the District provided NPS a preliminary future land-use plan for KPN (see Attachment 24). This plan reserves areas for future tidal wetland restoration and meadow habitat. The District will be conducting future community engagement activities in 2022 to gather public input on the future use of KPN, and NPS recommends participating in these activities to ensure your desires for KPN are considered.

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No.	Commenter	Comment	NPS Response
		Thank you!	
58	Marian Dombroski, Anacostia Watershed Community Advisory Committee	One of the reports mentions that remediation methods will accommodate future use. With all the investment in returning the river to swimmable and fishable, it is curious that water dependent activities have not been accommodated. Further, the possibility of accommodating these activities in the future will be prevented by the implementation of this and associated plans. Condition of Watts Branch and continuing degradation of river due to disconnection of the river from the flood plain have not been addressed.	NPS does not believe implementation of the Selected Remedy will impede the District's ability to provide future access to the River. The clean soil barrier will protect areas of the park where visitors could encounter surface soil at a relatively high frequency and at a relatively high intensity (e.g., during routine sports team practices and games). The Selected Remedy will not prevent the District from developing other areas of KPN for other uses or maintenance of natural resources. DOEE provided a preliminary future land-use plan to NPS as part of its comments on the Proposed Plan (see Attachment 24). This land-use plan includes areas preserved for future tidal wetlands restoration along the Anacostia River and Watts Branch and meadow habitat on KPN. The conditions of Watts Branch, Kenilworth Marsh, and the Unnamed Tributary to Watts Branch were evaluated as part of the original preliminary assessment/site investigation (PA/SI) for KPS and the remedial investigation (RI) of KPN. Additional analysis of sediment data collected as part of the PA/SI and RI activities was included in support of the 2012 feasibility study. Available data indicate there are likely multiple significant undifferentiated upstream sources of contaminants to the surface waters that impact sediment quality adjacent to the Site; therefore, NPS is considering additional assessment and evaluation of these surface water bodies separate from the implementation of the KPL Site response action.

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59	Simeon Hahn National Oceanic and Atmospheric Administration (NOAA)	Were other migration pathways to the river other than groundwater, including soil pathways (soil runoff) to the River and/or direct placement of landfill material into the River? Were PCBs detected in sediments adjacent to South or North? clarification: were other pathways evaluated. including the historical pathways; Does NPS consider Kenilworth a source (historical source) of PCBs to the Anacostia?	PCBs are present in River sediment adjacent to both KPN and KPS. The distribution of PCBs in sediment in these areas does not indicate significantly higher concentrations of contaminants from the landfill, and there is no evidence that contaminants are currently migrating from the KPL Site; however, historical contributions from KPL cannot be ruled out. Additional sampling and forensic analysis of PCBs in the landfill may inform whether and to what degree the landfill was a historical source of PCBs in the river sediment. PCB concentrations are also higher in zones of sediment deposition (zones where the current slows down and solids settle out); therefore, PCBs in river sediment near KPL may also be attributable to other sources. In its comments on the Proposed Plan, DOEE recommended additional surface soil sampling in the areas adjacent to the water bodies to confirm there is not a significant overland runoff pathway for contaminant migration. Given the lack of significant erosion, NPS considers this pathway unlikely to cause an unacceptable exposure risk; however, NPS has agreed that additional sampling and analysis to be completed during the remedial design phase would increase confidence that this is not a significant pathway. The findings of the additional investigation would not change the configuration of the proposed clean soil barrier. If the planned sampling were to indicate that additional measures are needed, those measures would be in addition to the proposed clean soil barrier. To the extent additional remedial measures are necessary, they would be selected through an explanation of significant differences (ESD) or a ROD amendment.
60	Marian Dombroski, Anacostia Watershed Community Advisory Committee	Existing conditions at KPS appear to support current and future use. It makes sense that KPS remain in current condition. However, Alternative 5 is applied to KPN would accommodate a wider range of activities. Can this alternative be developed? Was it previously considered?	An approach where KPS remains in its current condition (Alternative 3) and KPN is returned to tidal wetlands (Alternative 5) was considered and presented at the Leadership Council meeting on December 10, 2020 where this question was posed. As noted in the response to Comment 3, the approximate cost of this hybrid concept was projected to be approximately $320 million, compared with approximately $6.4 million for the Selected Remedy. From the perspective of addressing risk associated with the release of hazardous substances, pollutants or contaminants, the alternatives are equally effective at addressing the unacceptable risks posed by contaminants in surface soil to recreational users involved in higher-frequency and intensity activities such as playing sports on athletic fields. Both alternatives also comply with ARARs. Therefore, NPS chose not to consider a hybrid alternative further as the increased cost would not yield a more effective remedy. To be selected among equally effective and legally compliant alternatives as the final remedy, the selected remedy must be cost effective, which means that its costs are proportional to its overall effectiveness (see Section 300.430(f)(1)(ii)(D) of the NCP).
61	Marian Dombroski, Anacostia Watershed Community Advisory Committee	Location of the proposed Anacostia River trail precludes naturalization of shoreline, restoration of Watts Branch and installation of wetlands. Has there been any thought given to modifying location of trail?	The alignment of the ART was selected after completion of an environmental assessment (EA) (December 2011), prepared in accordance with NEPA and after consideration of public comments received during the public scoping for the EA (February 3 - March 4, 2011) and on the EA document (December 20, 2011 - January 31, 2012). The alignment of the ART was included to show the reasonably anticipated future land use at KPS; the alignment was not determined as a part of the CERCLA response action.
62	Marian Dombroski, Anacostia Watershed Community Advisory Committee	To be able to install wetlands, the District would be left holding the bag for removal of landfill material.	NPS selected the Preferred Alternative in accordance with the criteria described in CERCLA's implementing regulations, the NCP. Installing wetlands is not required to address risks associated with the release of hazardous substances at the Site or to comply with ARARs. Restoration of wetlands may occur in response to a Natural Resources Damage Assessment (authorized under CERCLA), or through other programs. Selection of the Preferred Alternative has no bearing on how future restoration of wetlands could be funded.
63	Marian Dombroski, Anacostia Watershed Community Advisory Committee	The definition of "short term" and long term are relative. Ten years is a very short time even in comparison to the time between close of the Landfill and the present.	The criterion of short-term effectiveness is related to risks posed to workers, members of the surrounding community, and the environment during remedy implementation. In general, remedial alternatives that take longer to implement will rank lower on this criterion than alternatives that can be implemented over a shorter period. The term is unrelated to the period of time between the landfill closure and the present.
64	Fred Pickney	Was sampling done in Watts Branch or unnamed stream?	Sampling in Watts Branch and the Unnamed Tributary to Watts Branch was performed as part of the preliminary assessment/site investigation (PA/SI) for KPS and the remedial investigation (RI) for KPN. An analysis of sediment data was summarized in the 2012 Feasibility Study Report and at that time NPS concluded, "the data do not indicate an overall impact from the Site on surface water or sediment in the adjacent surface water bodies (Anacostia River, Watts Branch, and Kenilworth Marsh)." Nevertheless, contaminants that are present in the landfill are also present in Watts Branch and the Unnamed Tributary. Although there are multiple sources of contaminants in these surface water features, including stormwater discharges, the potential for contaminants at the Site to have migrated into these surface water bodies in the past cannot be ruled out. NPS is considering, in consultation with other regulatory agencies, establishing a site that encompasses the Unnamed Tributary and the downstream portion of Watts Branch. These areas are currently under NPS jurisdiction and subject to NPS CERCLA authority. NPS has initiated a remedial investigation (RI to assess sediment contamination in these water bodies.
65	Trey Sherard, Anacostia Riverkeeper	I'll be interested to see Donna's responses to Fred as well. Relatedly, was Watts Branch treated as a receiving body of water itself, or only as a vehicle to the Anacostia?	*See response to Comment 64.*

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No.	Commenter	Comment	NPS Response
66	Trey Sherard, Anacostia Riverkeeper	I am happy to wait for a written response, but I do remain curious about how DOEE, DPR, and any other District agencies will interact in the cleanup, transition, and then ongoing management	It is NPS's understanding that following transfer to the District, the Department of Parks and Recreation (DPR) will have primary responsibility for managing KPN. It is anticipated that DPR would consult with DOEE regarding natural resource issues such as the shoreline. Actual management roles and responsibilities for KPN will be determined by the District, not NPS. NPS expects that DOEE will be responsible for remedial design and remedial action, subject to NPS oversight, but that is the subject of ongoing discussions between the United States and the District.
67	Trey Sherard, Anacostia Riverkeeper	Is NPS prohibited from considering efforts beyond the bare minimum? "Not authorized" left me a bit unclear on the actual bounds on the agency	NPS undertakes response actions at contaminated sites under Section 104(a) of CERCLA to protect the public health or welfare or the environment. Once NPS determines that a response action is warranted, it develops a range of remedial alternatives that must be evaluated in accordance with the nine criteria described in Section 300.430(e)(9)(iii) of the NCP. Most importantly, a remedial alternative must be protective of human health and the environment and must comply with all ARARs. In addition, to be selected as the final remedy, an alternative must be cost effective, which means that its costs are proportional to its overall effectiveness (see Section 300.430(f)(1)(ii)(D) of the NCP). NPS must follow this process in selecting a remedy and must base its selection decision on the criteria described in CERCLA and the NCP.
68	Trey Sherard, Anacostia Riverkeeper	We need to do everything we can to eliminate the inefficiencies inherent in keeping these stages of this project heavily silo'd. Not only that the District only begins management after the cleanup, but also that CERCLA and NRDA are held apart. That is not required, and we should fix it now while we can benefit by doing so.	NPS agrees with the need to limit inefficiencies to the extent practical. In some instances, restoration may occur through implementation of a remedy that is designed to address unacceptable risk to human health and the environment. As a practical matter, the NRDA process almost always comes after a remedy because an NRD claim is limited to residual damages to natural resources that remain after the remedy is implemented. For that reason, attempts to conduct a NRDA before a remedy is selected can create its own inefficiencies. Multiple comments have been focused on the restoration of tidal wetlands along Watts Branch and the Anacostia River. Although tidal wetlands restoration is not required to address risks associated with the release of hazardous substances at the Site or to comply with ARARs, NPS updated the Selected Remedy in response to the Proposed Plan comments provided by DOEE. DOEE's comments identified areas intended for future tidal wetlands restoration and preservation of meadow habitat. This change reduces the chance that measures taken during the response action will cause inefficiencies in a potential future restoration effort.
69	Stacia Turner	Can public be involved in talks between DPR and NPS for future use of Site?	Congress directed NPS to transfer administrative jurisdiction over KPN to the District; once the transfer occurs, NPS will not be directly involved in the planning process for future land use of KPN. The District notified NPS that it intends to start the community engagement process to determine future use of KPN in 2022. NPS suggests community members provide input on the specific plans for KPN by participating in the District's community engagement activities and provide their input through that process.

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No.	Commenter	Comment	NPS Response
70	Joel Merriman, on behalf of DC Audubon Society, Anacostia Riverkeeper, City Wildlife, DC Environmental Network, Friends of Kenilworth Aquatic Gardens, Friends of Lower Beaverdam Creek, Friends of Quincy Run Watershed, and the DC Chapter of Surfrider Foundation	*The comment below is text extracted from a letter submitted to NPS on behalf of DC Audubon Society, Anacostia Riverkeeper, City Wildlife, DC Environmental Network, Friends of Kenilworth Aquatic Gardens, Friends of Lower Beaverdam Creek, Friends of Quincy Run Watershed, and the DC Chapter of Surfrider Foundation.* *The entire letter is included as Attachment 1 to this memorandum.* We are writing to request that the National Park Service (NPS) provide a sixth alternative for remediation at the Kenilworth Park Landfill Site. We have reviewed the September 2020 Feasibility Study Addendum Report, and while we appreciate the considerable effort and analysis that went into preparation of this document, we find that the alternatives do not adequately cover the full range of reasonable remediation options. Below we provide a recommendation for a sixth option. Excavation of contaminants and restoring wetlands is the most effective, permanent solution at this property, and wetlands provide many valuable ecosystem services. For this reason, we expect some stakeholders to support Alternative 5. However, excavation and restoration is only considered in that alternative, and presents an all-or-nothing scenario, which we believe leaves the options incomplete. We request that a sixth alternative be added that (1) excavates contaminants and restores wetlands in the western portion of KPN, west of the running track; (2) caps lands in KPN east of the track, and (3) leaves Kenilworth Park South as is. We are confident that this will strike the appropriate balance required by the applicable decision criteria. Ultimately, we wish to see the highest and best use of Kenilworth Park, and are grateful that NPS is prioritizing remediation of this important property. Thank you for considering our request.	In response to Comment 3, NPS developed a preliminary estimate of cost for a scenario where KPS would be addressed as described under Alternative 3 and KPN would be addressed as described under Alternative 5. This approach considered full removal of KPN landfill and revegetation as wetlands. This cost would be approximately $320 million. The alternate approach suggested in this comment would involve removal and revegetation of approximately 75% of KPN and would result in a cost of about $240 million. These costs are very high-level and are not intended for construction estimating purposes. See Responsiveness Summary, Section 3.4.4. NPS included Alternative 5 in the Feasibility Study because it would eliminate risk posed to recreational users and future workers by completely removing the landfill (and complete removal is a standard alternative to evaluate for landfill sites); however, it would do so at significantly greater cost than the other alternatives and would also limit the District's intended future use of the Site. NPS is required to evaluate remedial alternatives in accordance with the nine criteria described in Section 300.430(e)(9)(iii) of the NCP). To be selected as the final remedy, an alternative must also be cost effective, which means that its costs are proportional to its overall effectiveness (see Section 300.430(f)(1)(ii)(D) of the NCP). The approaches suggested in many comments where only portions of KPN are removed would add significant costs without improving the overall effectiveness of the remedy. With respect to the NCP criteria for long-term effectiveness and permanence, partial landfill removal would be less effective than full removal as it would require maintaining institutional controls similar to the Selected Remedy. The Selected Remedy can be adapted in the remedial design phase to accommodate a different configuration of land use. The clean soil cap is only required in high-frequency, high-intensity land use areas such as athletic fields. As noted in prior comments, the District provided a preliminary future land-use plan in its Proposed Plan comments (see Attachment 24) that includes areas preserved for future tidal wetlands restoration and meadow habitat. The District would impose land use restrictions to disallow high-frequency, high-intensity use of areas intended for future tidal wetland restoration; therefore, the Selected Remedy described in the ROD modified the limits of the clean soil fill accordingly. NPS cannot indirectly – and unilaterally – impose a specific future use of KPN on the District through the CERCLA process. To provide input on the specific plans for KPN, members of the public are encouraged to participate in the District's planning process, which the District intends to begin in 2022, and provide their input through that process.
71	Anna LaCombe, Sierra Club	Did the feasibility study and proposed plan consider the impacts on the river? Was Watts Branch considered its own receiving body of water for contaminants or was it considered only as a vehicle for contaminants entering the Anacostia River? As I was reviewing the memorandum to the administrative record, I had two questions about the response to the following question found on page five: Q: Alternative five's cost includes the return of both North and South to the original state, what would be the cost to do so only for North? A: In response to this question, NPS developed a preliminary estimate of cost for a hybrid alternative where Kenilworth Park South would be addressed as described under Alternative 3 and KPN would be addressed as described under Alternative 5. The hybrid considered full removal of the KPN landfill and revegetation as wetlands. This cost would be approximately $320 million. Based on this response, it would seem that the $320,000,000 estimate is based off of the area outlined in alternative 5, which is larger than the footprint of alternative 3. 2) I was wondering how much it would cost and approximately how long it would take to excavate the contaminated soil of the area that matched the footprint of alternative 3 (while leaving Kenilworth Park South untouched as proposed in alternative 3)? 3) Is it possible for an additional alternative (similar to the one proposed above) to become a part of the public record so that it could be considered along with alternatives 1-5?	Impacts to the River are being addressed as part of the Anacostia River Sediment Project, which is separate from the KPL Site. Yes, Watts Branch was considered a receiving body when considering the surface water migration pathway, and sediment samples were collected from Watts Branch during early investigation activities at Kenilworth Park Landfill. The area designated for a potential soil barrier in Alternative 3 was based on an estimate of the largest area within KPN that could be developed for higher-frequency and intensity uses such as athletic fields, which is less than the entire landfill footprint. The area selected assumes that a portion of KPN would be reserved as natural buffer and would not be developed. Therefore, the area within KPN to be remediated in Alternative 3 is smaller than the area that would be completely removed under Alternative 5. The removal scenario that was suggested during the public meeting included full removal of the landfill at KPN. Other commenters have requested NPS estimate costs of a partial landfill removal at KPN. NPS provided a high-level cost estimate for these scenarios in the Interim Response to Comments. However, for the reasons explained in Section 3.4.4 of the Responsiveness Summary, NPS did not consider a sixth alternative.

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72	Thomas Olmstead	I have a question about the "FEASIBILITY STUDY ADDENDUM REPORT *FINAL* Kenilworth Park Landfill Site Anacostia Park Washington, D.C.". In the last pages of this document, cost estimates are provided. In TABLE B.5 Cost Estimate for Alternative 5: Landfill Removal Shoreline Stabilization, two estimates are provided for the disposal of 2,906,428 tons of waste. The first estimate as ADC at Subtitle D facility at $32 a ton is $93,005,693 based on engineers estimate, based on experience; assumes 50% of material excavated. The second estimate as non-hazardous waste at Subtitle D facility at $80 a ton is $232,514,232 based on engineers estimate, based on experience; assumes 50% of material excavated. The second estimate is used in the subtotals and totals for the overall cost of Alternative 5. Why isn't the first estimate of $32 a ton used in the subtotals and totals for the overall cost of Alternative 5?	As part of Alternative 5, NPS estimated that 4,305,819 cubic yards (or 5,812,856 tons) of soil and waste will need to be excavated, loaded onto trucks, and transported for off-Site disposal (i.e., landfill). To estimate fees associated with final disposal, NPS assumed that 50% (or 2,906,428 tons) of the material would be disposed as waste at a non-hazardous landfill (Resource Conservation and Recovery Act [RCRA] Subtitle D facility). This material may include the historical ash and other debris in the north and south landfills. The disposal cost (tipping fee) for this material was estimated to be $80 per ton, based on comparisons with similar excavation and removal activities. Considering that much of the material to be removed is soil with low concentrations of chemical contaminants, NPS assumed that the rest of the excavated material (an additional 2,906,428 tons) could be reused at another landfill as “alternate daily cover” (ADC) material. Because of its beneficial reuse, disposal fees associated with ADC material are usually less than standard tipping fees. In this case, NPS assumed a unit cost of $32 per ton for material to be used as ADC at another landfill. There is no way to definitively estimate the volume of soil vs the volume of waste, so these volume estimates are inherently uncertain. The total cost estimate for Alternative 5 included disposal fees for 2,906,428 tons of material consisting of waste that has no potential beneficial reuse at $80/ton, as well as 2,906,428 tons of material consisting of mostly soil that has a potential beneficial reuse as daily cover in a landfill at $32/ton. Both line items are included in the total estimated cost for this alternative. Note that the total cost estimated for Alternative 5 assumed that none of the soil or waste material would be considered “hazardous waste.” If any of the excavated material requires disposal in a facility permitted to handle hazardous waste (i.e., RCRA Subtitle C hazardous waste facility), the estimated hauling and disposal costs would significantly increase.
73	Trey Sherard, Anacostia Riverkeeper	I have a question about the hybrid plan you presented at the Leadership Council. Has it been brought over to the official NPS documents site yet? I checked last week and only found it referenced in the table of interim responses. I greatly appreciated your attention to that request of mine but if it's not being presented to the general public, I'm not sure how helpful it is for the comment process. Whether or not it has been presented more effectively on the NPS website, I am also interested in seeing your response to Audubon's letter sent to you by Joel, as his request refined that idea further to something closer to my original intention from the public meeting.	The hybrid alternative NPS presented at the December 10, 2020 Leadership Council meeting was developed to help make the point that adding a sixth alternative to the Feasibility Study would not change NPS’s decision to select the Preferred Alternative. Variations of this hybrid alternative that involve partial landfill removal would not score as highly as the Selected Remedy because the cost would be significantly higher without increasing the effectiveness of protecting public health or welfare or the environment or complying with ARARs. A formal response to the Audubon’s comment letter is included as Attachment 16.
74	Marian Dombroski, Anacostia Watershed Community Advisory Committee	*Ms. Marian Dombroski submitted a letter from Anacostia Watershed Community Advisory Committee providing a suggested land use configuration for KPN that would include landfill removal in the western portion of KPN, establishment of tidal wetlands along the Anacostia River and a portion of Watts Branch, undisturbed natural resources areas (KPS and western portions of KPN), and eastern areas reserved for community activities and special events/organized sports and recreation. A copy of the letter is included as Attachment 2.*	As noted in prior comments, Congress directed NPS to transfer administrative jurisdiction over KPN to the District; therefore, the District will determine the configuration of future park land use and facilities (refer to Responsiveness Summary, Section 3.4.2). NPS relied on input from the District to identify the intended future land use of KPN. Through the process of reviewing the Proposed Plan, the District’s vision for land use at KPN evolved, reducing the area previously identified for organized sports and recreation, and reserving areas for future tidal wetland restoration and preservation of meadow habitat. The Selected Remedy was adapted from the recommended Alternative 3 to account for the updated land use configuration the District identified in its comment letter (Attachment 24). NPS did not include tidal wetlands restoration as a component of the response action because it is not required to protect the public health or welfare or the environment or to meet ARARs. Instead, NPS reduced the area recommended for a clean soil barrier, removing the potential that the clean soil barrier would need to be removed later to accommodate the District’s restoration activities. The remedial design will provide the final boundaries for the clean soil barrier. To provide input on the specific plans for KPN, members of the public are encouraged to participate in the District’s planning process that will begin in 2022 and provide their input through that process.

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75	John Wilson	I and my family have often enjoyed walking in the Kenilworth Aquatic Gardens and kayaking on the Anacostia River. It is distressing how dirty it can be, and that we are warned about the risks of swimming. It is very distressing to learn of the severe pollution in the landfill. While it concerns me that my occasional recreation is at risk, I am more concerned about the residents of nearby communities. I am told that those residents may not have had enough voice in how the park will be used after remediation. I am also concerned about the extent of excavation, as I'm aware sometimes problems can emerge when excavation occurs that could have been avoided through covering and maintaining the site properly. I hope the NPS will work harder to engage the community, District government, and other relevant agencies to come up with the best possible solution.	NPS has conducted extensive investigations of the Site to determine the substances that are present and the risk they may pose to human health and the environment following the process outlined in CERCLA and CERCLA's implementing regulations, the NCP. Based on these investigations, NPS determined that the only unacceptable risk to human health or the environment posed by the KPL Site is the presence of certain contaminants in surface soil and a risk to workers exposed to subsurface soil and waste. The risk posed by surface soil is based on the potential to ingest (hand to mouth) contaminated soil when involved with activities at a relatively high frequency and intensity for an extended period (e.g., a visitor participating in organized sports such as soccer or football three or more times per week for several years). The risk of ingesting contaminated soil while participating in activities other than organized sports, such as walking on the trails, is considered negligible. To learn more about how NPS assessed risks associated with hazardous substances at this site, you can review the poster available at the following link: https://www.nps.gov/anac/learn/management/upload/04-Poster_RA_Final-508compliant.pdf The low levels of contaminants at the landfill should not interfere with enjoyment of the park. Although the risks are low, NPS has determined reduction of these risks is necessary for areas of KPN to be developed for active recreational uses or public gatherings. One common misconception reflected in public comments about NPS's Proposed Cleanup Plan was that the plan is being used to establish the future use of the park. The future use of KPS is defined in NPS's Anacostia Park Management Plan that was adopted in 2017. The future use of KPN will be determined by the District. To provide input on the specific plans for KPN, members of the public are encouraged to participate in the District's planning process, which will be initiated in 2022, and to provide their input through that process. All future activities completed at the Site, such as excavation, will be completed in accordance with specific plans that will be developed during the remedial design phase of the CERCLA process (this phase follows the issuance of the ROD). These specific, detailed plans will determine possible risk associated with each planned activity and outline specific mitigation steps required during completion of the activity to ensure workers, visitors, and the environment are fully protected.
76	Jenn Hatch	Thank you for the opportunity to comment on the proposed remediation plan for the Kenilworth Landfill Site. As a resident of Eastland Gardens, in the neighborhood surrounding the park, I believe this opportunity is a turning point, to repair previous environmental damage done to the park and the surrounding community. I believe the goal of this remediation should be to deliver a safe, healthy, vibrant community space that provides recreational opportunities, access to nature, wildlife habitat and natural system benefits, particularly in resilience to flooding and rising tides. To get there, I support a more full presentation and discussion of the hybrid alternative noted in the NPS response to previous comments -- where KPS is remediated as per Alt. 3 and KPN follows Alt. 5 -- but do feel that more details regarding this hybrid alternative are crucial in order to further discussion, before any final alternative is selected. Additionally, while NPS' purview is limited to CERCLA, it is crucial that NPS + District Government develop a collaborative and connected community planning effort, given the planned transfer of KPN to DC Government. This process should begin with the community's vision for this space, with decisions as to remediation plans, future recreational build-out, park services, etc., flowing from that vision. With a clearer goal in mind, I believe both community & government actors would be more able to evaluate the remediation proposals based on current state of the park + plans for future use/recreational build-out. Instead, the two-track process we see now is hard to navigate for residents, whose lives are and will continue to be impacted directly by these decisions. Surely one cohesive planning effort between government actors would yield a more cohesive product, maximize efficiency of planning efforts and project dollars, and demonstrate a community-centered planning process, which we all hope this is meant to be.	Please see NPS response to Comment 5 and Responsiveness Summary, Section 3.4.5. To provide input on the specific plans for KPN, members of the public are encouraged to participate in the District's planning process, which will begin in 2022, and provide their input through that process.
77	Jermie Cozart	My vote is for alternative #5 plan to be selected to cleanup Kenilworth Park Landfill.	Thank you for your comment. Please see Responsiveness Summary, Section 3.4.

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No.	Commenter	Comment	NPS Response
78	Meredith Daniel	I am writing to express my opinions for land use at the Kenilworth Park Landfill Site. I have been a resident of DC for 12 years and for the last 3 years have lived right down the way from the site, in River Terrace just by the Benning Road Bridge. I use the Anacostia River Trail often, wandering into Kenilworth Park via foot with my family and dog, or via bike. First let me say that I am VERY excited that NPS is taking on this project! It is so needed and the community is really excited about it. Northeast DC gets so little attention but has so many hidden gems that could be better maintained for community use, this being one of them. The amount of open space there is unbelievable and holds so much potential! I reviewed the alternatives in the proposal and wish to express my support for Alternative 5, Landfill Removal & Revegetation. Though this is of course the most costly of options in the short term, I believe it will reap the most benefits in the long run, including but not limited to: • Anacostia River cleanup efforts • advancing health equity in ward 7 – both in terms of eliminating chronic health conditions caused by the landfill toxicity, but also providing a clean safe green space for residents to exercise and enjoy • increasing desire to buy or rent property in the area • making way for future developments in the area • attracting more attention and visitorship to Kenilworth Aquatic Gardens Thank you for the time you have spent and continue to spend reviewing community comments. I look forward to watching this project unfold and hope that the ultimate plan will best represent the community-wide pulse.	Thank you for your comment. NPS included Alternative 5 in the FS because it would eliminate risk posed to recreational users and future workers by completely removing the landfill (and complete removal is a standard alternative to evaluate for landfill sites). However, it would do so at significantly greater cost than the other alternatives and would also limit the District's future use of the Site. NPS is required to evaluate remedial alternatives in accordance with the nine criteria described in Section 300.430(e)(9)(iii) of the NCP. To be selected as the final remedy, an alternative must also be cost effective, which means that its costs are proportional to its overall effectiveness (see Section 300.430(f)(1)(ii)(D) of the NCP). Alternative 5 does not meet this criterion.
79	Max Richman	I am a resident nearby in Deanwood in Ward 7. I have two recommendations for the Kenilworth Park Landfill Site. 1) I agree that we should keep KPS as naturalistic as possible and complete the Anacostia River Trail cut through trail through this section. 2) My preference is that the KPN section should undergo complete landfill removal and shoreline restoration. All contaminants should be removed. The land should also be transferred into a community land trust as part of the transfer to the DC government. The Community Land Trust should consist of a board of residents in the immediate impact area who should be able to prioritize future land use to their needs, given the history of environmental injustice they have been subjected to.	Thank you for your comment/suggestion. Please review Responsiveness Summary, Section 3.4.5, for a response to questions related to partial landfill removal. Congress directed NPS to transfer administrative jurisdiction of KPN to the District; therefore, the District will manage KPN in the future and will be responsible for establishing the future land use. NPS suggests community members provide input on the specific plans for KPN by participating in the District's planning process, which will begin in 2022, and provide their input through that process.
80	Andrew Breza	I am writing to comment on the Proposed Plan for Cleanup of the Kenilworth Park Landfill Site. I live near the site. My daughter is five months old and we like to go on walks through the affected area. I want a plan that can be finished in a reasonable timeframe and keep my daughter and me safe. After a review of the available options, I firmly support Alternative 3. It has the best combination of protection of public health, feasibility, and short timeframe. After dealing with a polluted former landfill for so long, the idea that the program goals could be achieved in two years sounds amazing.	Thank you for your comment. Please note the one-to-two-year timeline was an estimate to complete the implementation of Alternative 3. The implementation begins after the remedial design phase, which is the CERCLA phase when the detailed engineering drawings and plans are prepared. The remedial design phase will begin after issuance of the ROD. The timeline to fully implement the remedy is uncertain but for the Selected Remedy (modified version of Alternative 3) could reasonably fall within the range of five to ten years. This would include preparing the remedial design (engineering drawings and plans) and conducting the Site work (i.e., actual placement of the clean soil barrier).

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No.	Commenter	Comment	NPS Response
81	Dennis Chestnut	*Below text has been extracted from a letter received by NPS from Mr. Dennis Chestnut. Refer to Attachment 3 for entire letter.* I recommend that the National Park Service read, adhere to, and implement the Leave No Trace principles. These principles are flushed out in more detail and should be read in its entirety. These principles, if followed, can be the guiding principles we use going forwarded. I support the total removal of contaminated soil from Kenilworth Park-North, and replacing it with a cap of clean soil that is adequate for any future use including excavation that may be required related to that use, without the DC government being required to perform additional remediation. I also support the improvement of the natural resources of Kenilworth Park-North and Kenilworth Park-South, including restoring the natural edge of the river, installation of wetlands and other storm water management improvements, restoration and creation of natural habitat areas that respects wildlife, and improve that land to be able to serve the local residents, and accept and receive the many visitors that will come to this area. I support an additional option and support the AWCAC position.	Thank you for your comment. NPS did not develop or evaluate an alternative involving the removal of contaminated surface soil and placement with a cap of clean soil because the cost would be significantly higher than the Selected Alternative (placement of a clean soil barrier over high-frequency, high-intensity land use areas as shown on Figure 2 of the Responsiveness Summary) but would not significantly improve the effectiveness of the remedy. The United States and the District are in discussions regarding how to share the costs of the CERCLA response action.
82	Ankita Mandelia	I just wanted to ask if there has been an assessment of contamination leaching or running off from the landfill into the river? I haven't been able to find anything in the paperwork. Could you please point me to it?	The 2019 Remedial Investigation Addendum concluded that there is currently no unacceptable risk from contaminants is currently present at the landfill migrating to the Anacostia River via groundwater; therefore, consideration of measures to prevent impacts to the river were not necessary. If contaminated river sediments adjacent to the Site need to be remediated, remediation will be performed as part of the Anacostia River Sediment Project. The types of contaminants present at the Site (PCBs, PAHs, metals) bind to soil and are not carried with stormwater in dissolved form. If these contaminants were being washed into the nearby surface water, it would be in the form of soil erosion. There is limited evidence of soil erosion at the Site; however, DOEE's comments on the Proposed Plan recommended additional sampling and analysis to be performed during the remedial design phase to confirm this is not a pathway of concern. NPS has agreed to this recommendation. The findings of these additional investigations would not affect the selection of modified version of Alternative 3 as the Selected Remedy.
83	Diana Schoder	I am a resident of DC. As someone who exercises on the Anacostia River Trail and spends time at the Kenilworth Aquatic Gardens and the Anacostia River more generally, I am so glad that this site is being cleaned up. However, I am also concerned that the communities most immediately affected--in and around Kenilworth Park--have not had enough voice in how the park will be used and how it will get there through remediation of the damage from its days as a landfill. This is a major environmental justice issue for DC, and I would ask that you prioritize public input from the people most affected. Thank you!	Thank you for your comment. NPS agrees that engaging the local community and receiving their input was critical to the evaluation and selection of a remedy to clean up the Site. Therefore, as summarized in Section 2.2 of the Responsiveness Summary, NPS participated in multiple community and neighborhood meetings and outreach efforts. NPS also extended the public comment period well beyond the requirements under CERCLA and the NCP with the goal of engaging the local community and other interested members of the public in a meaningful way. In addition to extending the required public comment period, NPS's outreach was enhanced by providing the public interim responses to comments before the end of the comment period, allowing the community to consider NPS's responses and ask follow-up questions within the public comment period. The District, not NPS, will be determining the future use of KPN. The District has notified NPS that community engagement activities to gather public input on the future use of KPN will begin in 2022. Local community members will be given opportunities to participate in the District's planning process and are encouraged to provide their input through that process. With the transfer of administrative jurisdiction over KPN, the District is expected to implement the remedial design/remedial action phases subject to NPS oversight. NPS will be updating the Community Involvement Plan to identify opportunities for the community to understand and provide input on the remedial design and construction activities. Please also refer to the Responsiveness Summary, Section 3.1 - Environmental Justice.
84	Abigail Massel	I am a Ward 5 resident commenting on the proposed cleanup plan for Kenilworth Park Landfill Site in Ward 7. This is an environmental justice issue for DC and I am asking for a clean up that will give DC a swimmable and fishable Anacostia River.	Thank you for your comment.

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No.	Commenter	Comment	NPS Response
85	Abdullah Amin	I am a resident nearby in Benning and just read up all the history and proposed alternatives regarding KPS. I am glad to learn there has been much due diligence and careful consideration. This is honestly my first time doing something of this nature so I apologize in advance for informality. After reviewing the plans I would like to express my strong favor and support for alternative 4. I believe the difference in cost is marginal when considering the scale and added benefit to the surrounding citizens, wildlife, and ecosystem. It will also provide a more long lasting solution as the entire site would be receiving the same care... no stone left unturned. The East side of the Anacostia has long been the "dumping" ground for the Nation's capital. In its revival, it should receive nothing less than complete, thorough, and comprehensive solutions.	Thank you for your comment. Alternative 4 was not ranked as highly as the Selected Remedy (Alternative 3) for multiple reasons, including a significantly higher cost for a similar level of protection. While Alternative 4 would involve covering a larger area than the Selected Remedy (shown on Figure 2 of the Responsiveness Summary), it would require clearing all existing vegetation in the areas to be covered, significantly impacting the current natural habitat and making it less effective in the short term. Please refer to the Responsiveness Summary, Section 3.4, for additional information regarding how the alternatives were evaluated and the selection of the chosen remedy.
86	Marian Dombroski, Anacostia Watershed Community Advisory Committee	1. How does Resource Conservation and Recovery Act (RCRA) relate to CERCLA? 2. what improvements to the site, in terms of facilities (bathrooms, pavilions, paved areas, planting, depth of foundation) are possible on fill as specified in Alt 3?	The Resource Conservation and Recovery Act (RCRA) creates the framework for the proper management of hazardous and non-hazardous solid waste, including regulating the transport of hazardous waste. CERCLA provides a framework for the Federal Government to assess and respond to hazardous substances that have been released or have the potential to be released into the environment. The main difference between the two laws is that RCRA manages hazardous substances at facilities that are currently in use while CERCLA provides a framework for the federal government to respond to releases of hazardous substances from abandoned or non-operating Sites. At the KPL Site, aspects of RCRA have been identified as ARARs. Activities completed as part of the cleanup of the KPL Site must meet the applicable substantive requirements of RCRA, such as transportation of waste. Table 7 in the ROD provides a list of all ARARs identified for the Site, including details on the RCRA ARAR. The District will develop the final plans for KPN, and clean soil cover will not be required in areas where the District plans to build structures as the building will remove the risk posed by visitor contact with contaminated soil. Plans developed during the remedial design will include assessment of hazards and development of mitigation steps that must be taken to address hazards during future work at the Site including construction of structures.
87	Nikka Demesa	As someone who cares about ensuring safe recreational spaces in and around the district, I urge you to pick option number 5 for the clean-up of the Kenilworth Park Landfill Site. Removing waste materials and previously placed cover soils to restore wetland habitat will help ensure public safety while providing natural habitat for people and wildlife to enjoy. Wetlands along rivers absorb flood waters and will help protect the nearby communities from flooding. In tandem with restoration, recreational structures such as docks, trails, bridges, and more will also help provide local communities with access to nature. Additionally, the National Parks System must listen to the voices of local communities that live near the park - for too long they have suffered the impacts of air pollution and should be front and center when developing the restoration plans. Local communities have also expressed concern about gentrification of the area if new parks and nature areas are built. This is just another reason to support local voices when developing this restoration project. Please take into serious consideration their comments.	Thank you for your comment, Alternative 5 was deemed to be relatively ineffective (compared with other alternatives) on the non-cost balancing criterion of short-term effectiveness. In addition, that alternative failed to meet the additional requirement of cost effectiveness set forth in Section 300.430(f)(1)(ii)(D) of the NCP. In other words, its costs were not proportional to its overall effectiveness at protecting human health and the environment, complying with ARARs (i.e., laws and regulations), and long-term effectiveness and permanence. Please refer to the Responsiveness Summary, Section 3.1 – Environmental Justice, for additional information.
88	Becca Schendel	Good morning, I write in support of NPS's plan to proceed with "Option 3" for the cleanup of the Kenilworth Park former landfill site. The addition of a 1ft soil barrier will provide added protection from contaminants for site visitors, at a reasonable cost and with minimal disruption to the surrounding community (compared to proposed alternatives). I have enjoyed Kenilworth Park as a nearby Ward 6 neighbor for over a decade - my regular use of the facilities include runs and bike rides on the Anacostia River trail, visiting Kenilworth Gardens, elementary school track club practices at the public track facilities, and some memorable sightings of river birds, turtles, wild turkey, and deer. I can't wait for the trail connector to be erected between the park and the Arboretum! I hope NPS continues to preserve and maintain this site for me and others to enjoy.	Thank you for your comment.

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89	Richard Glaven	Can you short answer explain why the football field inside the track is not included in the "active recreational use" category along with the soccer fields? Thank you.	The football field inside the track is considered an area of active recreational use that includes organized league play and other recreational activities. This area is shaded with a different color on Figure 2 of the Responsiveness Summary to highlight the fact that it is an area of more recently-imported soil fill. The surface soil in this area is assumed not to contain contaminants similar to the soil used to cover the landfill just after closure. Additional assessment of soil quality in this area will be performed during the remedial design phase to confirm the assumption that it is not contaminated.
90	Sadie Dingfelder	Kenilworth Park is a rare oasis in the urban desert for birds of all kinds. I hope that the meadow and wetlands are preserved for wildlife.	Thank you for your comment. Under the Selected Remedy, KPS habitat will remain undisturbed. The District will determine future land use for KPN. The District provided NPS a preliminary land-use plan for KPN (see Attachment 24) that sets land aside for future tidal wetlands restoration and meadow habitat. In addition, there are natural resource buffer areas that will remain as part of KPN.
91	Janet Hume	I am a resident of the District of Columbia (DC) and frequent visitor to Kenilworth Park. My primary purpose for visiting the park is birding (also known as bird-watching) as the park is a unique space in DC for this recreational activity. The area is important bird habitat and many species can be found here that are found nowhere else in the District. Just in the last year, I've observed American pipits, bobolinks, and American tree sparrows in the fields of Kenilworth Park North. The dump at Kenilworth Park North was originally groomed as sports fields, and I understand the intention is to cap the fields with clean fill and regroom them for the same purpose. Consider this: in the short period of time that longer grass has been allowed to grow along just the edges of these fields, a diversity of native bird species have returned. Can you imagine what wildlife might return if the entire area was restored to long grass and ephemeral pools? I am writing to strongly encourage NPS to protect and/or ensure the restoration of the meadows, fields, and shallow pools of Kenilworth Park North and South and also to emphasize that the concerns of the birdwatching community be taken into account as part of the planning process. Birding is a cherished activity for many in DC as a free, accessible, and fulfilling pastime, and I hope that NPS will consider the important ramifications for birds and the birding community as it proceeds in this planning process.	Thank you for your comment. One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas. Please note, however, that the District will determine the future use of KPN. In its comments on the Proposed Plan (see Attachment 24), DOEE identified areas to be reserved for meadow habitat.
92	Andrew McGeoch	*Below text has been extracted from a letter received by NPS from Mr. Andy McGeoch. Refer to Attachment 4 for entire letter.* The dump at Kenilworth Park North was originally groomed as sports fields, and I understand the intention is to cap the fields with clean fill and regroom them for the same purpose. Consider this: in the short period of time that longer grass has been allowed to grow along just the edges of these fields, a diversity of native bird species have returned. Can you imagine what wildlife might return if the entire area was restored to long grass and ephemeral pools? I am writing to strongly encourage NPS to protect and/or ensure the restoration of the meadows, fields, and shallow pools of Kenilworth Park North and South and also to emphasize that the concerns of the birdwatching community be taken into account as part of the planning process. Birding is a cherished activity for many in DC as a free, accessible, and fulfilling pastime, and I hope that NPS will consider the important ramifications for birds and the birding community as it proceeds in this planning process.	Thank you for your comment. One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas. Please note, however, that the District will determine the future use of KPN. In its comments on the Proposed Plan (see Attachment 24), DOEE identified areas to be reserved for meadow habitat.

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No.	Commenter	Comment	NPS Response
93	Steve Syphax	My comments are in specific regard to managed meadow (or grassland) habitat at the site. I'm hoping that final site design in Alternative 3 incorporates the replacement/restoration of, at least the size of the existing meadow, and perhaps expanding meadows on south side of the center road (Deane Avenue). Recognizing my comment is somewhat a detail for the final design, I mention it now because it may be useful or necessary for proposed meadow zones to be identified in advance to allow for more, or different fill... or a modified fill mix, as opposed to other fill areas to ensure successful meadow establishment. Further, I'm hopeful that serious consideration be given to the actual timing of the massive fill operations such that it avoids critical bird nesting periods. It would be good to coordinate with your partners at DC DDOE--specifically, Dan Roush in the Wildlife Division--to determine critical ground-nesting bird nesting times. Mr. Roush will likely be current in knowing what, if any, species about which you need to be concerned (FYI: In years past, grasshopper sparrows were one of the ground-nesting species that utilized the Kenilworth Park meadows. Unusual for an inner city park!).	Thank you for your comment. One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas. Please note, however, that the District will determine the future use of KPN. In its comments on the Proposed Plan (see Attachment 24), DOEE identified areas to be reserved for meadow habitat. NPS will coordinate with DOEE to ensure that any impacts to nesting birds will be minimized during implementation of the remedy.
94	Dana Taylor	Hi It would be great if this could be a multi purpose use for a couple of restaurants, grocery store, parking area, an activity center for youth 6-17, a day care center where a program could be implemented where elderly residents can volunteer. A drop in shelter one for youth and for adults and families, and a training center for youth 17 and up program. This site could be used for multi purpose use where it benefits the community vs. Another liquor store.	Thank you for your comment. The District, not NPS, will determine the future land use of KPN. Congress passed a law requiring the transfer of KPN to the District. This legislation indicated the land is to be used for the provision of "public recreational facilities, open space, or public outdoor recreational opportunities." The future use of KPS is dictated by the Anacostia Park Management Plan, which requires that KPS be maintained in its current, natural condition. Please refer to the Responsiveness Summary, Section 3.4, for additional information.
95	Cindy Cole, Washington Rowing School	Thank you for the opportunity to submit comments on behalf of myself and my community of river users and enthusiasts. We are a community of youth and adult boaters who use the Anacostia River on a daily basis for recreation, relaxation, education, and fitness. The health benefits of a clean and healthy river accrue to not only us but also all communities along the river, residents who travel to enjoy the river and all creatures who make the river their home. Thank you for managing this important task of cleaning up our waterway. Our members are very interested in the future of Kenilworth Park Landfill. It impacts significantly the surrounding communities and the Anacostia River. All work should be done with the utmost care for the cleanliness and health of the river. This includes the water quality, water flow, and natural shorelines. We wholeheartedly support the decision to preserve the quality habitat in Kenilworth Park South and hope that the adjacent PEPCO Lagoon will be included in future restoration. Any work conducted in Kenilworth Park South must be undertaken with the lightest hand focusing on enhancement of existing habitat and without removal or further site disturbance. We support eventual removal of all landfill and overlying material in Kenilworth Park North as described in Alternative 5. Accomplishing complete removal of landfill material in phases over time will reduce disruption of Park functions and nuisance to the neighborhood. Including remediation with other phased site improvements will reduce cost. Employing institutional controls, as described in Alternative 2, in areas to be included in	Thank you for your comment. An approach where KPS remains in its current condition (Alternative 3) and KPN is returned to tidal wetlands (Alternative 5) was considered and presented at the Leadership Council meeting on December 10, 2020. As noted in the NPS response to Comment 3, the approximate cost of this hybrid concept was projected to be approximately $320 million, compared with approximately $6.4 million for the Selected Remedy. From the perspective of addressing risk associated with the release of hazardous substances, pollutants, or contaminants, the alternatives are equally effective. Therefore, NPS chose not to consider this alternative further as the increased cost would not yield a more effective remedy.

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No.	Commenter	Comment	NPS Response
		later phases of work will keep visitors safe and allow Park use to continue until all phases of work are complete. We need to do what is needed to ensure that the river is clean and healthy for all users in the future. Investment now in removal of all toxic material is our best choice to have a clean and healthy river and park.	
96	Joan Mashburn	I am a relatively new visitor to Kenilworth Park during this past year. The park is only 11 minutes from my house and I have introduced the paths, ponds and meadows to many friends. My primary purpose for visiting the park is to see and count birds, as the park is a unique space in the District of Columbia for this recreational activity. The area is important bird habitat, and many species can be found here that are found nowhere else in the District. Just in the last year, I observed a rare American Bittern and also rare Short-earned Owl near the fields of Kenilworth Park North. I am writing to strongly encourage NPS to protect and/or ensure the restoration of the meadows, fields, and shallow pools of Kenilworth Park North and South and to emphasize that the concerns of the birdwatching community be taken into account as part of the planning process. Birding is a cherished activity for many in DC as a free, accessible, and fulfilling pastime, and I hope that NPS will consider the important ramifications for birds and the birding community as it proceeds in this planning process. The dump at Kenilworth Park North was originally groomed as sports fields, and I understand the intention is to cap the fields with clean fill and regroom them for the same purpose. Consider this: in the short period of time that longer grass has been allowed to grow along just the edges of these fields, a diversity of native bird species have returned. Can you imagine what wildlife might return if the entire area was restored to long grass and ephemeral pools?	Thank you for your comment. One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas. Please note, however, that the District will determine the future use of KPN. In its comments on the Proposed Plan (see Attachment 24), DOEE identified areas to be reserved for meadow habitat.
97	Richard Glaven	Ms. Davies, Thank you very much for the information. I support your team's recommendation of option three and the continued use of the area for sports and recreational use.	Thank you for your comment.
98	Akiima Price	I am writing to request a 30-day extension on the public comment period for the Kenilworth Park Landfill proposed plan. Please confirm this is possible.	NPS initially provided a 90-day public comment period that began the day the Proposed Plan was released (November 12, 2020) and ended on February 10, 2021. A 30-day extension was granted and the public comment period end date became March 12, 2021.
99	James Rosenstock	In the clean up and restoration of Kenilworth Park landfill, a significant buffer of managed natural meadow should be included between existing wooded areas and recreational space, in the northern portion of Kenilworth North. Significant habitat (ground nesting birds, amphibians, etc.) exists there and should be retained as a natural buffer, in an area not ideal for recreational fields or construction.	Thank you for your comment. Implementation of the Selected Remedy will preserve the existing natural resource areas that will act as a buffer to protect wildlife habitats from the recreational fields or construction activity. In its comments on the Proposed Plan (see Attachment 24), DOEE identified additional areas to be reserved for meadow habitat. Please note that the District will determine the future use of KPN.
100	Steve Syphax	It's just that capping material may likely be different in active recreation areas like ballfields, than in landscaped/planted areas (including meadows). Drainage will likely differ too. No need to respond to this. Just want fill and drainage specs for the various areas of landfill to not be overlooked, or an afterthought.	Thank you for your comment. The impacts of importing fill soils will be considered as part of the remedial design, and specific plans will be developed to ensure drainage and water resources will be properly maintained following remedy implementation.

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No.	Commenter	Comment	NPS Response
101	Molly Herman	I would like to submit a comment for consideration regarding the proposed plan for Kenilworth Park (KP). As a birder, I frequent the park year-round. It offers wonderful wildlife viewing opportunities, particularly rare birds. The habitat as it is (meadow) attracts many bird species that you cannot find elsewhere in DC; thus KP is an important birding destination. I urge The National Park Service to protect and/or ensure the restoration of the meadows, fields, and shallow pools of Kenilworth Park North and South. This would protect the wildlife that relies on it for nesting or for migratory stops. KP is a treasure for birders from DC and further afield, and I hope you consider that sector of the population during your planning.	Thank you for your comment. One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas. Please note, however, that the District will determine the future use of KPN. In its comments on the Proposed Plan (see Attachment 24), DOEE identified areas to be reserved for meadow habitat.
102	Anne Lewis, City Wildlife, Inc.	*Below text has been extracted from a letter received by NPS from the City Wildlife Organization. Refer to Attachment 5 for the entire letter.* We have reviewed NPS's Proposed Plan for Cleanup of the Kenilworth Park Landfill Site and we support NPS's recommendation to remediate and restore areas contaminated with landfill in Kenilworth Park North (KPN) while not disturbing the valuable wildlife habitat that now exists in Kenilworth Park South (KPS). In planning for this work, we urge NPS to be mindful of the potential for enhanced wildlife habitat throughout the study area, but particularly in areas of KPN close to Watts Branch, the river, and the marsh. Concentrating recreational activities in the eastern area of KPN, adjacent to Anacostia Road, will provide safe and easy access to these facilities for the community and allow restoration of habitat in the most environmentally sensitive areas. In these areas, permanent construction features, utility infrastructure, easements, institutional controls, and other components of the remediation project should not preclude the possibility of habitat restoration, including wetlands and possible grade changes. In KPS, preservation and enhancement of the existing wildlife habitat can and should be achieved with minimal disruption and with efforts to improve conditions in Watts Branch. All new or upgraded trail surfaces should be pervious to reduce runoff and sedimentation.	Thank you for your comment. As indicated in the Responsiveness Summary, Section 3.4.2, future land use will be the responsibility of the District once administrative jurisdiction is transferred from NPS. In the conceptual land-use plan DOEE provided with its comments on the Proposed Plan (see Attachment 24), DOEE identified areas along Watts Branch and the Anacostia River that should not receive the clean soil barrier because the District intends to restore tidal wetlands in those areas. The DOEE land-use plan is generally consistent with your recommendations, keeping recreational activities in the upland areas and allowing the lower lying areas to serve as additional natural buffer. NPS used DOEE's updated input on future land use to modify the prior preferred alternative to the current Selected Remedy (see Figure 2 of the Responsiveness Summary).
103	Kirby Vining, Committee of 100 on the Federal City	*Refer to Attachment 6 from The Committee of 100 on the Federal City.*	*NPS prepared and sent a response letter to the Committee of 100 on the Federal City; the response letter is included in Attachment 6.*

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104	Denis Crean, WaveOne Open Water	I live in the District, Ward 3. As a stakeholder who cares about ensuring safe recreational spaces in and around the district, I urge you to pick option number 4 for the clean-up of the Kenilworth Park Landfill Site. Option 4 appears to ensure public safety by preventing waste materials from entering the Anacostia and creating the path to revitalize natural habitats and recreation potential for people and wildlife in which to live and flourish. In addition, Option 4 seems to provide latitude to create methods or plans that enable the District of Columbia to further implement use of the restored or renovated lands and convert them to specific community purposes. Some of that use must include: *Class A recreation human water contact. (swimming) *Recreation structures such as docks, trails, bridges and more for the local communities. *Sports fields, centers and other uses that specifically support the immediate community that has endured the harmful consequences of the neglect and destruction of this land over the decades. The National Parks System must listen to the voices of local communities that live near the park. Since 2009, we created healthy organized open water swims for more than 16,000 athletes in the Potomac River immediately south of the Wilson Bridge. Now we have the opportunity to restore and ensure similar conditions in the Anacostia River. Residents of the District of Columbia deserve the same safe opportunities to enjoy these natural resources.	Thank you for your comment. Alternative 4 was not ranked as highly as the Selected Remedy (Alternative 3) for multiple reasons, including a significantly higher cost for a similar level of protection. It also ranked lower in short-term effectiveness. Note that the purpose of the clean soil barrier is to protect visitors who frequently engage in high-intensity activities such as contact sports leagues; it is not required to "prevent waste materials from entering the Anacostia River." In its comments on the Proposed Plan, DOEE recommended the collection of additional surface soil samples in areas adjacent to water bodies to confirm there is no significant overland runoff pathway for contaminant migration. Given the lack of significant erosion, NPS considers this pathway unlikely to cause an unacceptable exposure risk; however, NPS agreed that additional sampling during the remedial design phase of the CERCLA response would provide additional data to reduce uncertainty regarding the potential for surface soil contaminants to be impacting adjacent surface waters. The findings of the additional investigation would not change the configuration of the clean soil barrier (Selected Remedy). If the planned sampling were to indicate that additional measures are needed, those measures would be in addition to the proposed clean soil barrier. To the extent additional remedial measures are necessary, they would be selected through an explanation of significant differences (ESD) or a ROD amendment.
105	Rachel Evangline Barham	I'm writing concerning the proposed plan for Kenilworth Park. Observing birds is my most cherished hobby. I cannot believe the number species of native birds that I've observed at Kenilworth Park, particularly in the areas around the sports fields where the grass has been allowed to grow tall. It is a sparrow paradise. The reason I'm writing is this: I beg of you and anyone working on this project to emphasize the importance of this tall-grass habitat in the process of restoring the area (both Kenilworth North and South). At the very least, I would like to see as much as there is now, but even more would be such a gift to birds - both the ones that choose to build their nests here and the migratory birds for which such habitat is critical as they stop in DC during their long journeys, especially since that sort of habitat is so rare in the entire DMV area. The inclusion of ephemeral pools (big puddles) would add even more incentive for birds. This would also be a gift to birdwatchers. In particular, many of us are making a big push to encourage and foster birding among people of color who have historically felt unwelcome. The proximity of Kenilworth Park to predominantly Black neighborhoods makes it an ideal spot for such community-building, since far-flung field trips are a major barrier for many people. Even a car trip to Rock Creek Park on a good day is forty minutes or more. I've seen two species of birds (American tree sparrows and vesper sparrows) at Kenilworth that were a first for me in DC, as well as others that are rare, and I know that other birders have seen even more (I myself am not an early riser and miss some of the ones that are active in the morning). Birds need all the help they can get. You've probably seen the studies showing that since 1970, North America has lost a quarter of its birds (this is one link: https://abcbirds.org/3-billion-birds/). That is basically my lifetime, and it keeps me up at night to think what is to come, with climate change and continued habitat destruction (which is often called "development" or "progress," but the birds don't care about that spin).	Thank you for your comment. Under the Selected Remedy, KPS habitat will remain undisturbed. The District will determine future land use for KPN. The District provided NPS a preliminary land-use plan for KPN (see Attachment 24) that sets land aside for future tidal wetlands restoration and meadow habitat. In addition, there are natural resource buffer areas that will remain as part of KPN.

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No.	Commenter	Comment	NPS Response
106	R. Austin	I write you today to provide comment on the National Park Service's ('NPS') Proposed Plan for Cleanup of the Kenilworth Park Landfill Site. I am a resident of the River Terrace neighborhood, adjacent to the south of the proposed remediation area and a regular user of the amazing Anacostia Park. On Page three of the plan it states: KPN currently contains athletic fields, which are actively used for recreation. KPS is currently undeveloped and not used for active recreation. While it may be true that the Kenilworth Park Landfill South geographic area may be undeveloped, it is absolutely a false statement to say that it is not actively used. As a member of the biking and jogging community in DC I can assure you people utilize the unofficial trail that connects the two areas. I have also on occasion seen people birdwatching along the paved trail. Page 7 of the report acknowledges these passive uses, should there not be some consistency in these references to KPS. It is also disappointing to see the NPS kick the proverbial can down the road. Rather than removing the contaminated waste, NPS is choosing a short-term solution to simply cap the soil. This so called solution will eventually require replacement. By the federal government's own acknowledgment by the Federal Remediation Technologies Roundtable.	Thank you for your comments. Although KPS is administratively closed to the public, NPS is aware the extension of Deane Avenue is a common route for walkers, runners, and cyclists. NPS is also aware of the birding community's use of this area. For the Feasibility Study Addendum, NPS considered "active recreation" as those high-intensity, high-frequency activities such as contact sports where visitors have more opportunity to come into direct contact with contaminants in surface soil. The clean soil barriers and institutional controls included in the Selected Remedy are not short-term solutions. As part of the long-term monitoring for this Site, periodic inspections (minimum of every five years) will be required to ensure the clean soil barrier remains stable, is not eroding into adjacent surface waters, and is continuing to protect visitors, park staff, and construction contractors as intended.
107	Seth Kaufman	I read the remediation plan and watched the video presentation. I cycle through the park along the Anacostia River Trail often, and I am a regular visitor to parkland along the river under NPS and other agencies' control. I had not been aware that Congress directed NPS to transfer control over the north end of the park to DC DPR, and I am anxious for my local government to make the area a great destination for residents. I was not aware of the environmental issues until I read the plan and watched the video presentation. I fully support remediating Kenilworth Park in a manner that allows the District to use the north end for active recreational purposes. Alternative 5 would be great in principle, but would be costly, may never be funded, and would have detrimental effects on the neighbors and users of the park for many years. Waiting for Alternative 5 to be funded would basically be the same as doing nothing. The kids who play football and soccer in the park deserve a field that won't increase their chances of having cancer. Alternative 3 is better than no action, but I would like NPS to consider all the benefits of Alternative 4. I understand that NPS wants it to be a refuge for animals and that NPS believes lighter use of the south end does not require the same level of remediation as the rougher uses of the north. If we want people to enjoy hiking and walking throughout the site, please remediate the south as well. We should remediate the south end eventually. Wouldn't it be more efficient to remediate both at the same time rather than doing them separately? I am not a biologist, but has NPS studied the effects of the polluted soil on animal and plant health? If NPS wants the south end to be a nature preserve, perhaps remediation of the south end would make it a more healthy environment for plant life and wildlife?	While Alternative 4 is a suitable option for Site-wide remediation, the response action would require the temporary destruction of wildlife habitat at KPS that is highly valued by NPS and the members of the community, such as bird-watchers. Alternative 3 involves clean soil barriers in areas of the Site reserved for higher-frequency and intensity uses such as athletic fields because of the higher-exposure risk in these areas. The Management Plan for Anacostia Park designated KPS for natural resource recreation, which envisions passive recreational activities that would not pose an unacceptable exposure risk to visitors involved with these activities. That designation does not allow the development of more active recreational facilities in KPS (e.g., sports fields, playgrounds, picnic areas, etc.). Therefore, placement of a clean soil barrier at KPS would not be necessary to accomplish overall protection of human health and the environment. Ecological risk assessments were performed as part of the remedial investigation, and the finding was that there is no unacceptable ecological risk.

TABLE 2
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No.	Commenter	Comment	NPS Response
108	Anne Corbet, sent on behalf of Michael Godec, Capitol Riverside Youth Sports Park (CRYSP) DC	*Below text has been extracted from a letter received by NPS from Capitol Riverside Youth Sports Park (CRYSP) DC Board of Directors. Refer to Attachment 7 for the entire letter.* CRYSP DC supports any alternative for remedial action at the KPN that achieves the Remedial Action Objectives (RAOs) for the site, meets the required threshold criteria, and achieves the best balance between environmental protection, public health, and cost. And, most importantly, we support an alternative that can achieve these objectives and begin to have the KPN site available for sports and recreational use within 1 to 2 years. While the Preferred Alternative proposed meets these objectives, in our opinion, other options can and should also be considered that also meet these objectives and best address the concerns of the multiple stakeholders in this process. In particular, we believe an alternative should be considered that: (1) excavates contaminants and restores wetlands in the western portion of KPN, west of the running track; (2) caps lands in Kenilworth Park North east of the track, and (3) leaves Kenilworth Park South as is. Most importantly, we strongly promote a plan for remedial action that does not leave any additional obligations for the District government to address after the transfer of the site from the federal to the district government. And since Congress has directed NPS to transfer administrative jurisdiction over the Kenilworth to DC "for the provision of public recreational facilities, open space, or public outdoor recreational opportunities" (PL 108-335 § 334), we anxiously await, and encourage the rapid pursuit of, the development of formal plans by the DC Department of Parks and Recreation (DPR) for the future use of the KPN site. We sincerely hope that CRYSP DC is considered a relevant stakeholder and is consulted in the development of these plans.	Thank you for your comments. As noted in prior responses, since the Proposed Plan was released, the District has outlined a preliminary land-use plan for KPN (see Attachment 24) that includes areas set aside for tidal wetlands restoration and meadow habitat, as well as the previously identified active recreational uses. NPS updated the limits of the proposed clean soil barrier as part of the Selected Remedy consistent with the District's input on its intended future restoration and preservation activities. Restoration of tidal wetlands is not required to address risks associated with the release of hazardous substances at the Site or to comply with ARARs; however, NPS updated the Selected Remedy (Figure 2 of the Responsiveness Summary) to remove the proposed clean soil barrier from areas the District intends to restore. This revision will avoid the need for removal of the barrier prior to restoration. Please note the one-to-two-year timeline was an estimate to complete the implementation of Alternative 3. The implementation begins after the remedial design phase, which is the CERCLA phase when the detailed engineering drawings and plans are prepared. The remedial design phase will begin after issuance of the ROD. The timeline to fully implement the remedy is uncertain but for the Selected Remedy (modified version of Alternative 3) could reasonably fall within the range of five to ten years. This would include preparing the remedial design (engineering drawings and plans) and conducting the Site work (i.e., actual placement of the clean soil barrier).
109	Patricia Jackman	*Below text has been extracted from a letter received by NPS from Mrs. Patricia Jackman. Refer to Attachment 8 for the entire letter.* I support the eventual removal of all landfill and overlying material in Kenilworth Park North only, as described in Alternative 5. This work can be phased as part of projects undertaken by the District to accommodate future park use. It is critical that remediation, restoration, recreation and access must be features of all this work. Planning and execution of the work along the eastern border of the Park adjacent to Anacostia Avenue should begin as soon as possible to meet community expectations. Kenilworth Park should be reestablished as a positive presence in the neighborhood as soon as possible. Removal of landfill material will contribute to reestablishment of grades which will allow reconnection of Watts Branch and the Anacostia River with their flood plain. Conducting the complete removal of landfill material in phases over time will reduce disruption of Park functions and impacts to the neighborhood. By concentrating work in discrete areas of the park this will allow material to be removed from the site at various locations. I support the decision to preserve the quality habitat in Kenilworth Park South which resulted from past remediation efforts. The removal of the PEPCO power plant was a huge accomplishment. I hope that the adjacent PEPCO Lagoon will be included in future restoration efforts reclaiming and reconnecting valuable habitat. Any work conducted in Kenilworth Park South should include stabilization of the existing trail and bridge in order to minimize the impact of human interaction on the natural environment while protecting the safety of park visitors.	Thank you for your comment. An approach where KPS remains in its current condition (Alternative 3) and KPN is returned to tidal wetlands (Alternative 5) was considered and presented at the Leadership Council meeting on December 10, 2020. As noted in the response to Comment 3, the approximate cost of this hybrid concept was projected to be approximately $320 million, compared with approximately $6.4 million for the Selected Remedy. From the perspective of addressing risk associated with the release of hazardous substances, pollutants, or contaminants, the alternatives are equally effective. Therefore, NPS chose not to consider this alternative further as the increased cost would not yield a more effective remedy.

TABLE 2
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No.	Commenter	Comment	NPS Response
110	Vincent Verweij	Thank you for the opportunity to provide these comments on the Feasibility Study Addendum Report for the Kenilworth Park Landfill Site. I appreciate the tremendous amount of time, data collection, and analysis that went into the preparation of this document. I believe the Kenilworth Park site to be of outsized importance in the District due to its ecological and social value. I appreciate that NPS is investing the time and resources necessary to eliminate risks to human health and the environment on this property, and to put it on a path toward its highest and best use. I conditionally support Alternative 3. My support for Alternative 3 is premised on the hope and understanding that the current ecological value of the property can be enhanced and maintained in perpetuity. The Park currently supports one of the largest contiguous areas of meadow in the District, a habitat that is considered a local priority, per the 2015 District of Columbia Wildlife Action Plan. Given this NPS property's historical setting as an extensive tidal wetland, I believe it is imperative that natural character be retained in its western portion (i.e., Kenilworth Park South and Kenilworth Park North roughly west of the running track), and recreational amenities be limited to the eastern portion. I would specifically envision a setting in which: (1) a minimum 300-foot-width native forested buffer would be created, as needed, and maintained along the Anacostia River and Kenilworth Marsh, (2) a native forest or meadow would be restored and maintained in the western portion of Kenilworth Park North, roughly west of the running track, allowing sufficient space for community recreational amenities in the eastern portion of this area, and (3) Kenilworth Park South would be maintained as a natural area. In order to maintain the above option, I request that no native trees be removed as part of the ultimate remediation action, and where trees are removed, they be replaced with native trees on an equal inch-to-inch calculation, on the site. Where soil is used to cap the site, a and that a clean soil medium matching or approximating the natural Anacostia floodplain soil should be used for any capping that is implemented. This will have the highest likelihood of restoring the ecosystem in the long run. Reforestation can be accomplished through reducing mowing and implementing invasive plant control, though some planting and seeding will likely be needed, beyond replacement, to recover the ecosystem. I wish to see the highest and best use of Kenilworth Park, and are grateful that NPS is prioritizing remediation of this important property. Thank you for considering my comments.	Thank you for your comments. As indicated in the Responsiveness Summary, Section 3.4.2 - Future Land Use, the District (not NPS) will determine the final configuration of land use at KPN. The District identified areas of future tidal wetland restoration and meadow habitat preservation in its Proposed Plan comments (see Attachment 24) that are similar to your recommendations. The limits of the clean soil barrier for the Selected Remedy, shown on Figure 2 of the Responsiveness Summary, are still conceptual in nature and further modifications can be integrated into the CERCLA remedial design phase, which begins after issuance of the ROD. The District has notified NPS that community engagement activities will begin in 2022 to gather public input on the future use of KPN. Local community members will be given opportunities to participate in the District's planning process and are encouraged to provide their input through that process.
111	Dana McCoskey	*Text below has been extracted from an email received by NPS from Dana McCoskey. Refer to Attachment 9 for the entire email.* Kenilworth Park provides immense ecological value in both birds and habitats along the river and has provided me with a wealth of recreation opportunities (e.g., bike riding, walking, bird watching) and spectacular views of nature. I did not see an alternative in the options presented that was truly visionary or would address the particular nuances of the site's current opportunities or longer-term potential to increase the ecological value and ensure equity. I urge NPS to consider a hybrid of parts of options 3 and 5 to provide the most benefits and consider the site-specific characteristics of the property. Ultimately I think working towards removing the contaminants and restoring wetlands in the riparian corridor would provide the longest term benefits to the people of DC. I think NPS should focus their efforts on removing as much of the contamination as possible in Kenilworth Park North and creating new wetlands west of the track, capping lands in Kenilworth Park North east of the track and beginning a gradual restoration of Kenilworth Park South habitat as meadows and edge woodlands that support woodcocks and other important birds." Without a hybrid solution, Alternative 3 appears to be the least worst option if agreements can be made between DC and NPS to improve the	Thank you for your comments. Please refer to the Responsiveness Summary, Section 3.4.1 - Purpose of CERCLA Response Action, and Section 3.4.5 - Partial Landfill Removal. NPS undertakes response actions at contaminated sites under Section 104(a) of CERCLA to protect the public health or welfare or the environment. Partial landfill removal, as suggested in this comment and others, would provide the same level of risk mitigation as the Selected Remedy but at a significantly higher cost. Therefore, partial landfill removal was not considered a viable alternative. NPS understands the value in restoring wetlands along the Anacostia River and Watts Branch; however, the restoration of wetlands is not required to address the risk posed by the release of hazardous substances at the Site or to meet ARARs. Restoration may occur as part of a Natural Resources Damage Assessment (authorized under CERCLA), or through other programs, such as those proposed by the District (see below). In its comments on the Proposed Plan (see Responsiveness Summary, Attachment 24), DOEE indicated that the District intends to restore tidal wetlands in an approximate 18-acre area of KPN along the Anacostia River and Watts Branch and preserve meadow habitat in approximately 3 acres. To accommodate the District's preliminary plans, NPS modified the preferred Alternative 3 to eliminate the clean soil barrier in areas where the District intends to restore wetlands and maintain meadow habitat (see Figure 2 of the Responsiveness Summary). One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas.

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No.	Commenter	Comment	NPS Response
		current ecological value of the property for nature and limit recreational facilities to the eastern parcels. It would be fitting to have a memorial for the lives lost and impacted by the pollution at this site.	
112	Kurt R. Schwarz and Gail Mackiernan, Maryland Ornithological Society/ Montgomery Bird Club.	*Refer to Attachment 10 for comments submitted from Maryland Ornithological Society/ Montgomery Bird Club.*	*See Attachment 10 for NPS response.*
113	Nate Graham	*Text below has been extracted from a letter received by NPS from Mr. Nate Graham. Refer to Attachment 11 for the entire letter.* Of the proposed alternatives, the NPS selection of Alternative 3 seems to provide the best balance of protecting park users and the environment, without a massive (and expensive) engineering project. There are however, some areas of concern to the birding community: • KPN has a number of well-established, "no-mow" meadows that contain a mix of native and non-native grasses, forbs, and shrubs. Meadow habitat is a rarity in DC, and in summer, these meadows support uncommon DC species such as American kestrel, grasshopper sparrow, and blue grosbeak. American woodcocks also display here in early spring, one of only a few places that they do so in the District, and may stay to breed. In addition, these meadows provide important winter habitat for other uncommon bird species, including merlin, Eastern meadowlark, savannah sparrow, and American tree sparrow. In migration, they are filled with American pipits, palm warblers, Wilson's snipe, and the occasional rarity like Nelson's sparrow. Regenerating “old field," scrub, and the park’s fringing marsh are also extremely important for birds. • Will the existing no-mow meadow areas be uprooted, with all vegetation removed, in order to cap with fill? This will cause a great deal of temporary (and probable permanent) loss of critical bird habitat. Even replanted, it will take years to recover. Or can the public areas, playing fields, etc. be remediated without disturbing these meadows? • How will the remediation affect the existing fringing shrub/vine habitat and the marsh? Ideally, this important habitat should not be disturbed. • KPN also has several small but important wetland/pools that attract shorebirds during migration. We feel these should be left undisturbed as much as possible •Finally, although KPS is not included in Alternative 3, this is also an important area for birds. Willow flycatcher, yellow-breasted chat, and yellow warbler all have bred here in the past. Are there any plans for modest improvements to this area (e.g., a paved path) that would allow safe access for birders?	The Selected Remedy does not dictate future land use of the Site. Future land use for KPS is controlled by the Anacostia Park Management Plan. The Management Plan requires KPS be managed for natural resources recreation (i.e., maintained in a natural state for passive recreational uses such as bird-watching). A key consideration for NPS selecting Alternative 3 over the other alternatives was that valued habitat within KPS will be preserved under this alternative. NPS assessed possible risk posed by “passive” recreational uses, such as bird-watching, during the Remedial Investigation (RI) phase of the CERCLA response action (documented in the 2019 RI Addendum Report). This assessment determined there was no unacceptable risk posed to visitors engaged in these activities within KPS; therefore, the development of paved trails is not necessary to protect visitors. The only future trail to be developed within KPS will be the continuation of the Anacostia Riverwalk Trail (ART) (see Figure 2 of the Responsiveness Summary for the future ART alignment). Congress directed NPS to transfer administrative jurisdiction of KPN to the District; therefore, the District will manage KPN in the future and will determine future land use. The District’s comments on NPS’s Proposed Plan for the KPL Site included a preliminary land-use plan for KPN (see Attachment 24). The District’s preliminary plan sets land aside for future tidal wetlands restoration along Watts Branch and the Anacostia River and meadow habitat. To accommodate the District’s preliminary plans, NPS modified the preferred Alternative 3 to eliminate the clean soil barrier in areas where the District intends to restore wetlands and maintain meadow habitat (see Figure 2 of the Responsiveness Summary). Because the District’s plans for KPN have not been finalized, the clean soil barrier boundaries NPS included for KPN in the Selected Remedy are conceptual in nature and will be adjusted based on the District’s final plans for KPN during the remedial design phase (the next phase of the CERCLA response process after issuance of the ROD). These adjustments could include changes or improvements to bird habitat and visitor access to allow participation in bird-watching activities at KPN. The District informed NPS that it plans to conduct public engagement activities in 2022 to obtain public input on the future uses of KPN; therefore, members of the public are encouraged to participate in the District’s planning process and provide their input through that process.
114	Elizabeth Curwen, Friends of Kenilworth Aquatic Gardens	*See Attachment 12 for letter from the Friends of Kenilworth Aquatic Gardens.*	*See Attachment 12 for NPS response.*

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No.	Commenter	Comment	NPS Response
115	Will Handsfield	*Mr. Handsfield's comments are related to future development and management of Kenilworth Park. Entire comment submitted via email provided in Attachment 13.*	Thank you for your input on future land use and park management. The future use of KPS is controlled by NPS's Anacostia Park Management Plan. This plan requires KPS to be managed for natural resources recreation (i.e., maintained in a natural state for passive recreational uses such as birdwatching, and walking on the ART). The only development planned for KPS is construction of the ART extension. As noted in the Responsiveness Summary, Section 3.4.2 - Future Land Use, the District (not NPS) will be determining the future land use of KPN. DOEE provided NPS a preliminary future land-use plan as part of its comments on the Proposed Plan (see Attachment 24). This plan includes areas reserved for future tidal wetlands restoration and meadow habitat. The District has notified NPS that community engagement activities to gather public input on the future use of KPN will begin in 2022. Local community members will be given opportunities to participate in the District's planning process and are encouraged to provide their input through that process.
116	Benjamin Proshek	I'd like to offer a comment on the NPS plans to remediate the Kenilworth Park landfill. I think it's great that NPS is taking steps towards addressing the pollution. However, I want to urge NPS to keep in consideration the vital bird habitat in Kenilworth Park. The "no-mow" meadows, for example, are a vital habitat for birds, both common and rare for the area. If the remediation were to include removing the vegetation to add clean soil on top, the recovery would take years, and in the meantime the damage to the breeding bird populations may well be permanent. And similarly for the shrubby/woody vegetation along the banks of the Anacostia.	Thank you for your comment. Because Congress directed NPS to transfer administrative jurisdiction over KPN to the District, future plans for KPN will be determined by the District. Since releasing the Proposed Plan, the District provided NPS a preliminary future land-use plan for KPN (see Attachment 24). This plan reserves areas for future tidal wetland restoration and meadow habitat. The District will be conducting future community engagement activities in 2022 to gather public input on the future use of KPN, and NPS recommends participating in those activities to ensure your desires for KPN are considered. Consistent with its designation in the Anacostia Park Management Plan, KPS will be maintained in its natural state.
117	Megan McDaniels	I hope this email finds you well. I am submitting a comment in support of option number 5 for the Kenilworth Park Landfill restoration project. I am urging the National Park Service to remove contaminated waste and soil and restore wetlands that can help keep the Anacostia River clean and habitable long term, and to also act on the needs and desires of adjacent residents and the broader D.C. community. The people who have been and continued to be harmed the most by the injustices of the Kenilworth Park Landfill should be centered in its restoration. Option 3, which the NPS has indicated interest in, is not sufficient or acceptable. Myself and many other D.C. residents want to see that the former landfill is excavated as much as possible near Watts Branch, Kenilworth Marsh, and the riverfront, with excavation of the land to the north, south, and west of the landfill as much as possible. We would like to see functioning wetlands restored along the river and inland, which will have many benefits directly tied to the restoration of the landfill site as well as contributing to long-term adaptation and resilience against flooding. We also want to ensure that recreational infrastructure is incorporated into this plan, especially with employment opportunities for people in surrounding neighborhoods, and with a plan to prevent any gentrification that may stem from these improvements.	Thank you for your comment. Please see response to Comment 5 and Responsiveness Summary, Section 3.4.

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No.	Commenter	Comment	NPS Response
118	Katie Hodge	I would like to provide comment on the redevelopment alternatives for the Kenilworth Park Landfill site. I am an active user of the park. Until the pandemic, I was at the park every weekend, and even now I average multiple trips per month. I use the park for birdwatching, looking for mushrooms, and generally to enjoy the river walk. Kenilworth Park is unique habitat in the District of Columbia. 246 different species of birds have been seen there, according to eBird, a site developed by the Cornell Lab of Ornithology to record the observations of bird watchers. The only spot with more species recorded is East Potomac Park/Haines Point where people benefit from seeing species that follow the Potomac River during migration. I suspect many people would be surprised to know that more species have been seen at this park than in Rock Creek Park. An important contributor is the variety of habitats and particularly the grassland areas in the park. In the western part of the Kenilworth Park Tract there is a dirt path between the road and the Anacostia River Trail, it is demarked at both ends by concrete barriers. On both sides there is meadow that is unmowed and then trees and shrubs as you move closer to the river This area is well-known to local birders for the variety of sparrows and grassland birds. You can also see them in the part of the river trail that goes from the track to the hook to follow the river on the trail. It's a very unique area and there are only a few other places like it in the city. The National Arboretum comes to mind and the dog run at Rock Creek Park. Of course, it will also be important to balance the needs and desires of the residents of the surrounding neighborhoods. I imagine there will be a desire for playing fields since the city is always short of them. I hope during the placement and distribution of fields that the uniqueness of the habitat in Kenilworth will be kept in mind. I hope that there will be strategies so that the park can serve a variety of recreational needs.	Thank you for your comment. One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas. Please note, however, that the District will determine the future use of KPN. In its comments on the Proposed Plan (see Attachment 24), DOEE identified areas to be reserved for meadow habitat.
119	Tammy D. Sanford Potomac Electric Power Company (Pepco)	*Comments submitted on behalf of PEPCO provided in Attachment 14.*	*NPS response to Pepco comments provided in Attachment 14.*
120	Simeon Hahn, NOAA	*National Oceanic and Atmospheric Administration (NOAA) comments provided in Attachment 15*	*Refer to Attachment 15 for NPS Response.*
121	Adam Kron and Joel Merriman, DC Audubon Society	*DC Audubon Society comments provided in Attachment 16.*	*Refer to Attachment 16 for NPS Response.*
122	Anna LaCombe and Ankita Mandelia, Sierra Club	*Sierra Club comments provided in Attachment 17.*	*Refer to Attachment 17 for NPS Response.*
123	Stacia Turner, Clean Water Action/Clean Water Fund and Anacostia Park and Community Collaborative (APACC)	*Clean Water Action (CWA) and Clean Water Fund (CWF) comments provided in Attachment 18.*	*Refer to Attachment 18 for NPS Response.*
124	Coetzee Pretorius	I'm a DC birder and a very regular visitor to Kenilworth Park. My primary purpose for visiting the park is for bird-watching, because the park is a unique space in the District of Columbia for this recreational activity. The area contains a combination of native and introduced grassland plants, and is the only open, grassy area of this size in DC. As such, it is very important bird habitat for migratory grassland birds that cannot be found anywhere else in the District. Just in the last year, I've observed the following uncommon	Thank you for your comment. One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas. Please note, however, that the District will determine the future use of KPN. In its comments on the Proposed Plan (see Attachment 24), DOEE identified areas to be reserved for meadow habitat.

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No.	Commenter	Comment	NPS Response
		birds: American pipits, Bobolinks, Horned Larks, American tree sparrows, Nelson's Sparrow, Vesper Sparrow, Meadowlarks, Woodcocks and Wilson Snipes in the fields of Kenilworth Park North. The dump at Kenilworth Park North was originally groomed as sports fields, and I understand the intention is to cap the fields with clean fill and regroom them for the same purpose. In the short period of time that longer grass has been allowed to grow along just the edges of these fields, a diversity of native bird species have returned. I'd urge the final plan to maintain or increase the amount of meadow habitat, no matter what option is chosen. I am writing to strongly encourage NPS to protect and/or ensure the restoration of the meadows, fields, and shallow pools and no-mow of Kenilworth Park North and South and also to emphasize that the concerns of the birdwatching community be taken into account as part of the planning process. Birding is a cherished activity for many in DC as a free, accessible, and fulfilling pastime, and I hope that NPS will consider the important ramifications for birds and the birding community as it proceeds in this planning process.	
125	Stacy Poplar	I'm concerned that the preferred solution for the Kenilworth Park Landfill site protects land visitors and workers but does not protect the Anacostia River. I understand this is the position of Anacostia Riverkeeper, and it appears to be correct to me reviewing the alternatives as a lay person. I live near the Anacostia River, am an avid kayaker and volunteer watershed steward. I care deeply about the goal to make it fishable & swimmable by 2025, and feel if you're spending $9 million or more dollars, we should expect it to protect aquatic life and humans using the river. Before the Record of Decision is written, I'd like to see an alternative that clearly protects the river, potentially combining excavation of portions of Kenilworth Park North with clean fill cover of other portions.	As indicated in the 2019 Remedial Investigation Addendum report, NPS identified no evidence that contaminants are currently migrating from the landfill to surface water. However, in its comments on the Proposed Plan, DOEE recommended additional sampling of surface soil near surface water bodies to confirm there is no contaminant migration to surface water with stormwater runoff. NPS agreed that additional sampling would be helpful during the remedial design phase. If a pathway for contaminant migration to surface water is identified, further response activities will be considered. See Responsiveness Summary, Section 3.2 for additional information.
126	Junel Jeffrey	Thanks very much for all of the contact you've had and information NPS has shared with the community about the Kenilworth Park Landfill Site Plan over the last several years and most recently since the November update. I feel that Alternative 4 is best for a number of environmental and usage reasons that will beat serve the community using the park.	Thank you for your comment. Alternative 4 was not ranked as highly as the Selected Remedy (Alternative 3) for multiple reasons, including a significantly higher cost for a similar level of protection. Please refer to the Responsiveness Summary, Section 3.4 for additional information regarding how the alternatives were evaluated and the selection of the chosen remedy.
127	Trey Sherard and Marian Dombroski, Anacostia Watershed Community Advisory Committee	*Anacostia Watershed Community Advisory Committee (AWCAC) comments provided in Attachment 19.*	*Refer to Attachment 19 for NPS response.*
128	Trey Sherard Anacostia Riverkeeper	*Below text has been extracted from a letter received by NPS from Anacostia Riverkeeper. Refer to Attachment 20 for full text.* Anacostia Riverkeeper supports a hybrid plan for Kenilworth Park North combining excavation of certain areas with clean fill cover of others. Specifically, we would like to see excavation and removal of landfill material and cover along the southern boundary along Watts Branch, the western boundary along the Anacostia River, and potentially portions of the northern boundary where wetland habitat connections could be made in the future to Kenilworth Marsh and the Kenilworth Aquatic Gardens. In this vein, we whole-heartedly support similar aspects of the plan presented to you by DOEE and shown in the March 5th APACC meeting. To that end, we support alternative 5 if restricted to only the alternatives presented in this proposed plan, but would happily support a hybrid alternative of 5 and 3 if it were provided. We certainly do not wish to	Thank you for your comments. Please refer to the Responsiveness Summary, Section 3.4.1 - Purpose of CERCLA Response Action, and Section 3.4.5 - Partial Landfill Removal. NPS undertakes response actions at contaminated sites under Section 104(a) of CERCLA to protect the public health or welfare or the environment. Once NPS determines that a response action is warranted, it develops a range of remedial alternatives that must be evaluated in accordance with the nine criteria described in Section 300.430(e)(9)(iii) of the NCP. Most importantly, a remedial alternative must be protective of human health and the environment and must comply with all ARARs. In addition, to be selected as the final remedy, an alternative must be cost effective, which means that its costs are proportional to its overall effectiveness (see Section 300.430(f)(1)(ii)(D) of the NCP). NPS must follow this process in selecting a remedy and must base its selection decision on the criteria described in CERCLA and the NCP. Partial landfill removal, as suggested in this comment and others, would provide the same level of risk mitigation as the Selected Remedy but at a significantly higher cost. Therefore, partial landfill removal was not considered a viable alternative. In its comments on the Proposed Plan (see Attachment 24), and as referenced in this comment, DOEE identified areas within the 500-year floodplain at KPN where the District intends to conduct tidal wetlands restoration outside of the CERCLA response action process. Following DOEE's recommendation, NPS revised the Selected Remedy (shown on Figure 2 of the Responsiveness Summary) to eliminate the proposed clean soil barrier in areas proposed for future tidal wetland

TABLE 2
Kenilworth Park Landfill Site
Public Comment - NPS Response Summary

No.	Commenter	Comment	NPS Response
		see the entirety of Kenilworth Park North excavated as that will be unnecessary for many recreational amenities, particularly if they are located at the eastern end closest to the neighborhoods. We trust that NPS, DOEE, and DPR will continue to work together as closely as promised on the remedial design and look forward to the important information about the various agencies' roles that will be laid out in the transfer agreement still pending. The remediation of the Kenilworth Landfill is shining opportunity to restore a site mired in environmental racism, and create a public amenity that meaningfully improves both the Anacostia River and the lives of the communities living, working, and playing there.	restoration. The clean soil barrier boundaries will be further refined based on the District's final plans for KPN during the remedial design phase of the CERCLA response. The District has notified NPS that community engagement activities to gather public input on the future use of KPN will begin in 2022. Local community members will be given opportunities to participate in the District's planning process and are encouraged to provide their input through that process.
129	Radha Neelakantan	*Below are excerpts from an email received from Radha Neelakantan. Refer to Attachment 21 for entire email.* KP has a number of well-established, "no-mow" meadows that contain a mix of native and non-native grasses, forbs and shrubs, a rarity in DC. In season, these meadows support uncommon DC species…For this reason, Kenilworth Park is one of the most birded areas of DC, with many birders visiting almost daily… Will the existing no-mow meadow areas be uprooted, with all vegetation removed, in order to cap with fill? This will cause a great deal of likely permanent loss of critical bird habitat. Even replanted, it will take years to recover. Can the remediation be done without disturbing the meadows? Ideally, the remediation will not disturb the existing fringing shrub/vine habitat and the marsh. KP North also has several small but important wetland/pools that attract shorebirds during migration. We feel these should be left undisturbed as much as possible.	Thank you for your comment. One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas. In its comments on the Proposed Plan (see Attachment 24), DOEE identified areas to be reserved for meadow habitat. As shown on Figure 2, NPS modified the area of proposed clean soil fill to exclude it from the meadow habitat area and from areas where the District intends to restore tidal wetlands. As indicated in the Responsiveness Summary, Section 3.5, the District will ultimately decide the distribution of land use, and it is anticipated that the District will complete the remedial design (subject to NPS oversight). The District has notified NPS that community engagement activities to gather public input on the future use of KPN will begin in 2022. Local community members will be given opportunities to participate in the District's planning process and are encouraged to provide their input through that process. The remedial design process will consider management (preservation or mitigation) of several small emergent wetlands identified across KPN as required by ARARs (i.e., laws and regulations).
130	Frances Raskin	*Below text has been extracted from a letter received from Frances Raskin. Refer to Attachment 22 for entire letter.* I understand that NPS intends to pursue alternative 3. While this is the best alternative in terms of cost and long-term benefits, one of my concerns about this alternative is that this plan appears to prioritize sports recreation over all other uses. There are many, many sports fields in Washington, DC and the surrounding areas. Conversely, there are very few natural areas for wildlife, birds, and people to enjoy. The other two natural areas are Rock Creek Park and Theodore Roosevelt Island, both of which are in northwest Washington. The citizens of northeast Washington also deserve a place to spend time in nature. Last year, many birders enjoyed watching two pairs of American Kestrels hunting in the fields in the southwestern section of Kenilworth Park North (where a large parking lot shows on the Alternative 3 map). In this area, the trees along the river are filled with migrating warblers and other neotropical migrants in the spring and early summer. This would be an excellent area to create a native meadow to support these Kestrels and the other birds that rely on the habitat that Kenilworth Park provides. This parking lot and "existing sports fields "are never used by anyone other than birders, and thus it would be an excellent area to restore to native plant species. Extending the riverwalk32 trail through the southwestern section of Kenilworth Park North would be detrimental to the migrating warblers and the American Kestrels. American Kestrel populations have declined 50 percent in 50 years. The installation of the paved bike trail through the northern corner of Kenilworth Park (the wooded area between the track and Kenilworth Aquatic Gardens) transformed an area that provided	Thank you for your comments. One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on KPS. There are also areas of KPN that will remain as natural resource buffer areas. Please note, however, that the District will determine the future use of KPN. In its comments on the Proposed Plan (see Attachment 24), DOEE identified areas to be reserved for meadow habitat. As shown on Figure 2, NPS modified the area of proposed clean soil fill to exclude it from the meadow habitat area and from areas where the District intends to restore tidal wetlands. As indicated in the Responsiveness Summary, Section 3.5, the District will ultimately decide the distribution of land use, and it is anticipated the District will complete the remedial design (subject to NPS oversight). The District has notified NPS that community engagement activities to gather public input on the future use of KPN will begin in 2022. Local community members will be given opportunities to participate in the District's planning process and are encouraged to provide their input through that process. Please also note that the Anacostia River Trail (ART) is not a component of the remediation. The alignment is as shown in the 2011 ART Environmental Assessment and on conceptual design plans prepared by the District Department of Transportation.

TABLE 2
Kenilworth Park Landfill Site
Public Comment - NPS Response Summary

No.	Commenter	Comment	NPS Response
		excellent habitat for neotropical migrants to a zone with few bird species due to the disturbances from the many bicyclists who speed through on the path. It would be a shame to see NPS again destroy a refuge for migrating birds in the southwestern area of Kenilworth Park North (along the Anacostia River) by extending the Anacostia Riverwalk Trail without limiting bicycle access. Many bicyclists fly by so fast (often riding two or three abreast) that they pose a hazard to birders and pedestrians.	
131	Kirsten Gresk	*Refer to Attachment 23 for comments submitted via email from Kirsten Gresk.*	*Refer to Attachment 23 for NPS response.*
132	Tommy Wells, District Department of Energy and Environment (DOEE)	*Refer to Attachment 24 for comments submitted by DOEE.*	*Refer to Attachment 24 for NPS response.*
133	Ray Montero, DOEE	*Refer to Attachment 25 for DOEE comments submitted on the Feasibility Study Addendum.*	*Refer to Attachment 25 for NPS response.*
134	Stacia Turner, Anacostia Park and Community Collaborative	*Refer to Attachment 26 for comments submitted by APACC.*	*Refer to Attachment 26 for NPS response.*

FIGURES

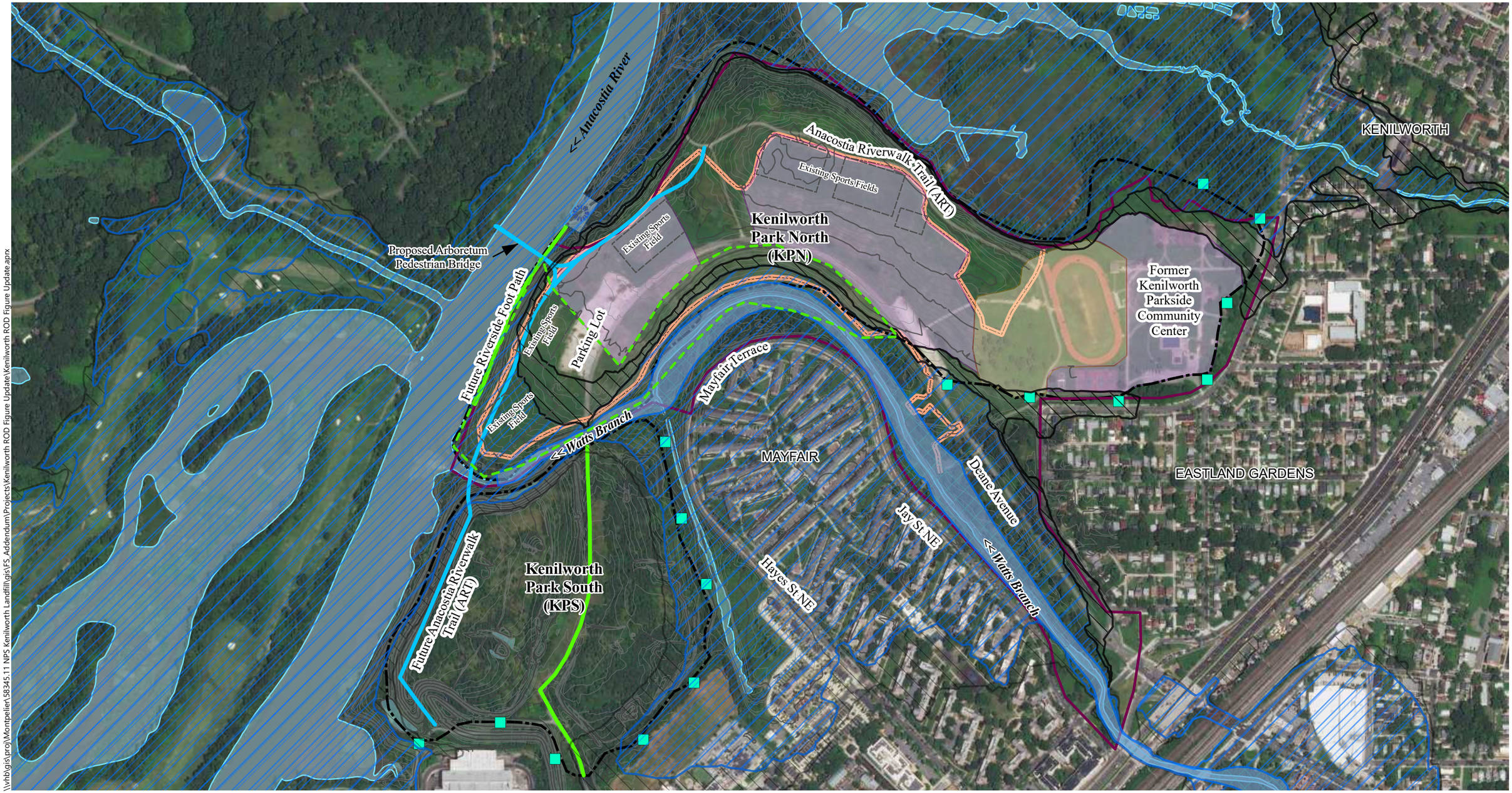
FIGURE 1

Landfill Boundary

Record of Decision
Kenilworth Park Landfill Site

Washington, D.C.

Site Area Map



0 250 500 1000 Feet

- Future Alignment of Anacostia Riverwalk Trail
- Resource Management Boundary
- Transfer Boundary
- 5 ft Contour (USACE 2000)
- 1 ft Contour (USACE 2000)
- Stream Channel
- KPN and KPS Landfill Boundaries
- Water Access/Boat Launch
- 1% Annual Chance Flood Hazard (FEMA)
- 0.2% Annual Chance Flood Hazard (FEMA)
- Regulatory Floodway (FEMA)
- Proposed Wetland Restoration (DOEE)

Key Elements Of Remedial Alternative 3

- Confirmatory Soil Sampling (Recent Fill Area)
- Access Road/Trail Resurfacing
- Confirmatory Soil Vapor Monitoring Location (actual locations may differ)
- Proposed Clean Soil Barrier

Notes:
1. The approximate future alignments of the ART were copied from the December 2011 Environmental Assessment, Anacostia Riverwalk Trail, Section 3 Realignment.

Record of Decision
Kenilworth Park Landfill Site

Washington, D.C.

Selected Remedy

Source Info: Aerial imagery from ESRI and DC GIS (2017);
DOEE - Department of Energy and the Environment (2022);
NPS - National Park Service (2022);
FEMA Flood Hazard Areas (2010).

Boundaries are approximate and subject to change.

\\vhb\gis\proj\Montpelier\58345.11 NPS Kenilworth Landfill\gis\FS_Addendum\Projects\Kenilworth ROD Figure Update\Kenilworth ROD Figure Update.aprx

ATTACHMENT 1

From: Joel Merriman <jmerr@hotmail.com>
Sent: Tuesday, January 5, 2021 8:52 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: Adam Kron <amkron@gmail.com>; Murray, Christopher <christopher.murray@marquette.edu>; Trey Sherard <trey@anacostiariverkeeper.org>; Anne Lewis <annelewisdc@gmail.com>; Chris Weiss <cweiss@dcenvironmentalnetwork.org>; Elizabeth Curwen <elizabeth.curwen@gmail.com>; Tina O'Connell <tina@fokag.org>; Justin Lini <jljlini@gmail.com>; Dan Smith <smithdc@comcast.net>; marian dombroski <mdombros@gmail.com>; Chair, D.C. Chapter of the Surfrider Foundation <chair@dc.surfrider.org>; Surfrider DC Secretary <secretary@dc.surfrider.org>; gretchen.mikeska <gretchen.mikeska@dc.gov>; Nick Kushner <Nick.Kushner@dc.gov>
Subject: [EXTERNAL] Kenilworth Landfill Site Remediation Options

Dear Ms. Davies,

On behalf of DC Audubon Society, Anacostia Riverkeeper, City Wildlife, DC Environmental Network, Friends of Kenilworth Aquatic Gardens, Friends of Lower Beaverdam Creek, Friends of Quincy Run Watershed, and the DC Chapter of Surfrider Foundation, I am writing to formally request the addition of a sixth remediation alternative at the Kenilworth Park Landfill Site for public consideration.

We appreciate the considerable time and effort that went into development of the five alternatives that have been presented. However, we find that the alternatives do not adequately cover the full range of reasonable remediation options. In the attached letter, we recommend a sixth alternative that we are confident will strike the appropriate balance required by the applicable decision criteria.

Ultimately, we wish to see the highest and best use of Kenilworth Park, and are grateful that NPS is prioritizing remediation of this important property. Thank you for considering our request. We look forward to hearing from you soon.

Best wishes,

Joel Merriman
Vice Chair, Conservation & Advocacy Committee
DC Audubon Society
703-883-7985

5 January 2021

Ms. Donna Davies
CERCLA Project Manager
National Park Service
1900 Anacostia Drive, SE
Washington, D.C. 20020

Re: Kenilworth Park Landfill Site Remediation Alternatives

Dear Ms. Davies,

We are writing to request that the National Park Service (NPS) provide a sixth alternative for remediation at the Kenilworth Park Landfill Site. We have reviewed the September 2020 Feasibility Study Addendum Report, and while we appreciate the considerable effort and analysis that went into preparation of this document, we find that the alternatives do not adequately cover the full range of reasonable remediation options. Below we provide a recommendation for a sixth option.

Excavation of contaminants and restoring wetlands is the most effective, permanent solution at this property, and wetlands provide many valuable ecosystem services. For this reason, we expect some stakeholders to support Alternative 5. However, excavation and restoration is only considered in that alternative, and presents an all-or-nothing scenario, which we believe leaves the options incomplete.

We request that a sixth alternative be added that (1) excavates contaminants and restores wetlands in the western portion of Kenilworth Park North, west of the running track; (2) caps lands in Kenilworth Park North east of the track, and (3) leaves Kenilworth Park South as is. We are confident that this will strike the appropriate balance required by the applicable decision criteria.

Ultimately, we wish to see the highest and best use of Kenilworth Park, and are grateful that NPS is prioritizing remediation of this important property. Thank you for considering our request.

Sincerely,

Adam Kron / Joel Merriman
Chair / Vice Chair, Conservation & Advocacy Committee
DC Audubon Society

Trey Sherard
Riverkeeper
Anacostia Riverkeeper

Anne Lewis
President
City Wildlife

Chris Weiss
Executive Director
DC Environmental Network

Elizabeth Curwen
Board Chair
Friends of Kenilworth Aquatic Gardens

Dan Smith
President
Friends of Lower Beaverdam Creek

Marian Dombroski
Director
Friends of Quincy Run Watershed

Charlotte Runzel
Board Chair
Surfrider Foundation, DC Chapter

Cc: Gretchen Mikeska (DOEE), Nick Kushner (DPR)

ATTACHMENT 2

From: marian dombroski <mdombros@gmail.com>
Sent: Tuesday, January 26, 2021 5:20 PM
To: Davies, Donna L <Donna_Davies@nps.gov>; Mcginty, Sean P <sean_mcginty@nps.gov>
Cc: Trey Sherard <trey@anacostiariverkeeper.org>; Dennis Chestnut <dchestnut.chestnut@gmail.com>; Anna LaCombe <annalacombe2@gmail.com>; David Paglin <dpaglin@aol.com>; Erin Castelli AWS <ecastelli@anacostiaws.org>; Joel Merriman <jmerr@hotmail.com>; Larry Martin <lmartindc@gmail.com>
Subject: [EXTERNAL] Kenilworth Park Landfill Feasibility Study and Proposed Plan Request for Additional Alternatives

Good afternoon Donna,
Attached please find our letter requesting additional alternative(s) for the Proposed Plan for Remediation of the Landfill at Kenilworth Park.
We thank you for all your help as we work through the extensive documentation and related information and look forward to your response.

Sincerely,
Marian Dombroski
(for the AWCAC Chairs)

--
Marian Dombroski, *RA, LEED AP*
301.775.1191

January 26, 2021

Donna Davies, CERCLA Project Manager
National Capital Parks - EAST
1900 Anacostia Drive, SE
Washington, DC 20020

RE: **Kenilworth Park Landfill Feasibility Study and Proposed Plan: Request for Additional Alternative**

Dear Ms. Davies,

On behalf of the Anacostia Watershed Community Advisory Committee (AWCAC) we thank you for your ongoing efforts to inform the public about this important undertaking. While we applaud the thorough site investigations and analysis representing work across almost two decades, we find the proposed alternatives do not align with the parameters set out in the two documents under review. In addition, the future use of the park has not been adequately defined or accommodated. Therefore we request that additional alternatives be developed in coordination with DOEE and DPR. In particular, a hybrid alternative between Alternative 3 and Alternative 5 should be developed, further refined from the first "Hybrid Alternative" we were very pleased to see presented at the December 2020 meeting of the Leadership Council for a Cleaner Anacostia River (LCCAR). Then these can be presented so that the public can provide meaningful review and comment. For instance, despite being presented to the LCCAR on December 10th, a map or otherwise engaging visual of that preliminary Hybrid Alternative is still nowhere to be found on the NPS website, the alternative is referred to only briefly in text in the initial interim response to comments. As a member of the public who had not attended the LCCAR meeting, I would have no idea how to visualize the hybrid alternative, nor how it compares to the others per the criteria.

We would like to offer an adapted scenario for management zones for future use of the parkland. This aspect of the investigation is frustrated by the lack of a masterplan for the site which will not be developed until the District assumes responsibility for Kenilworth Park North. However, even before a master plan is developed, the site can be organized into zones based on physical characteristics, proximity to the neighborhood and to the Anacostia River. On the following page is a diagram illustrating the three land use management zones defined in the report, here modified to reflect input from the community and the natural assets of the Park. It also recognizes the special character and status of Kenilworth Park-South. (see attached **Kenilworth Park Management Zones,** adapted from Figure 3 in the **Feasibility Study Addendum Report.**

Community Activities and Special Events: like in other parks, special events tend to inhabit all available space, therefore, this zone can be expected to overlap the others. Trails and walking paths should serve and be coordinated with this zone and designed with surfaces appropriate to the use.

Organized Sports and Recreation: this zone should be the most accessible to the adjacent neighborhoods. Locating facilities across from residential areas will give the community ownership and enhance safety. Trails and walking paths must be designed to serve this zone. This area must be compact and well defined - not spread across the site.

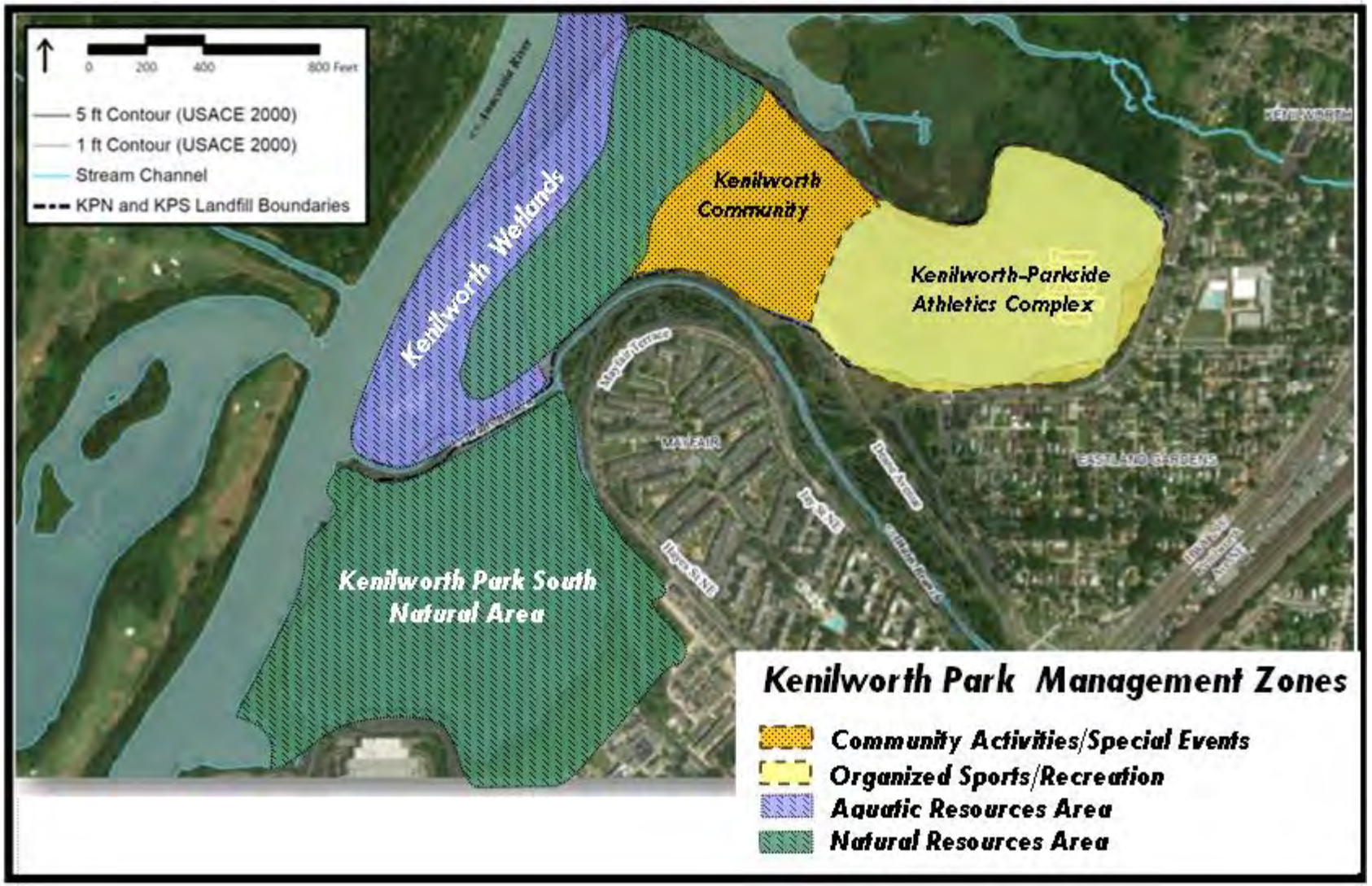
Natural Resources Area: KPS must remain undisturbed allowing only natural surface trails and use/maintenance of existing bridges. It can be expected that naturalization of Watts Branch may cause some disturbance. Meadow and wildlife areas in KPN must also be preserved or re-established as appropriate.

Remediation will be straight forward within this framework with methods appropriate to future use and physical characteristics of the site. Both selective extensive removal of landfill material will likely be required. This must accommodate shoreline stabilization and wetland restoration of the Aquatic Resources Area. Kenilworth Park South would remain outside the scope of remediation work. The future naturalization of Watts Branch must also be accommodated. We understand that the National Park Service prioritizes maximum use and enjoyment of parks as well as stewardship of natural resources within the CERCLA requirements. We request that an alternative be offered that will support park managers in achieving these goals. Thank you very much for your consideration. We look forward to hearing from you.

Sincerely,

AWCAC Chairs

Trey Sherard, Chair	trey@anacostiariverkeeper.org
David Paglin, Vice Chair	dpaglin@aol.com
Marian Dombroski, Vice Chair	mdombros@gmail.com
and	
Dennis Chestnut, Watt Branch Alliance	dchestnut.chestnut@gmail.com
Anacostia Riverkeeper	


0 200 400 800 Feet
5 ft Contour (USACE 2000)
1 ft Contour (USACE 2000)
Stream Channel
KPN and KPS Landfill Boundaries
Kenilworth Wetlands
Kenilworth Community
Kenilworth-Parkside Athletics Complex
Kenilworth Park South Natural Area
Kenilworth Park Management Zones
Community Activities/Special Events
Organized Sports/Recreation
Aquatic Resources Area
Natural Resources Area

ATTACHMENT 3

From: Davies, Donna L <Donna_Davies@nps.gov>
Sent: Friday, February 12, 2021 12:57 PM
To: Dennis Chestnut
Cc: Ordway, Jonathan; Rodriguez, Emily
Subject: Re: [EXTERNAL] Comments for Remediation of Kenilworth Landfill

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Good Afternoon Mr. Chestnut,

Thank you for your interest in the Kenilworth Park Landfill Site and taking the time to provide your input on NPS's Proposed Plan for remediation. Your comments have been recorded and will be considered during NPS's final selection of an alternative. The selection will be based on which alternative best meets the evaluation criteria outlined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) implementing regulations outlined in the National Contingency Plan (NCP). These evaluation criteria are described in NPS's Feasibility Study Addendum report and include community acceptance. NPS's chosen alternative will be explained and recorded in the Site's Record of Decision (ROD). The ROD is the next step in the CERCLA process and is expected to be issued in 2021.

The Proposed Plan public comment period began the day the plan was released (November 12, 2020) and will end on March 12, 2021. NPS prepared interim responses to comments and questions received from the public through January 2021. NPS prepared the comment responses to assist the public in understanding information NPS considered which led to selection of the preferred alternative 3, which is described in the Proposed Plan. These responses and additional information and documents related to the Site are available for download from the Kenilworth Park Landfill Site webpage. NPS will be accepting comments on the Proposed Plan or any other documents included in the Site's Administrative Record through March 12, 2021. A summary of NPS's final responses to all relevant public comments received during the comment period will be included with the Site's ROD.

I have also ensured your email is on the Kenilworth Park Landfill Site email notification list; therefore, you will receive future updates on the Site's status, including issuance of the ROD. These announcements will be sent from National Capital Parks – East (NACE) (not from my personal email). NACE is the unit of NPS that manages this area of Anacostia Park.

Please contact me or Sean P. McGinty, NACE's Public Information Officer with any additional questions or concerns.

Donna Davies
CERCLA Project Manager

484-663-1043

From: Dennis Chestnut <dchestnut.chestnut@gmail.com>
Sent: Friday, February 5, 2021 8:59 AM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] Comments for Remediation of Kenilworth Landfill

Ms. Davies,

Attached are comments for the remediation of Kenilworth Landfill.

Dennis Chestnut
dchestnut.chestnut@gmail.com
(202) 286-4970

Comments for Remediation of Kenilworth Landfill

Leave No Trace
Comments by Dennis Chestnut

I am a *life-long* resident of Ward 7, and more specifically the far-northeast section of Ward 7, which is within a mile of Kenilworth Park and the Anacostia River. I have lived and in this community for over 70 years and have seen this area transform in many ways over this time.

The Kenilworth Landfill was a major factor in this community in so many ways. For some, it was a source of needed resources that were acquired from the discarded items scavenged through by local residents. You see, the Kenilworth Landfill bordered the neighborhoods of Kenilworth Courts (public housing), Eastland Gardens, Mayfair Mansions, and Parkside (public housing). The residents of these communities were predominately Black and poor.

For all of these neighborhoods, including most neighborhoods that were within airflow of the landfill, the landfill delivered polluted air, and deposited soot from ash from the open burning of trash that occurred regularly at the landfill. For many of the youth and children, it was a place of discovery and recreation. Children navigated their way into the depths of the landfill and to the Anacostia River by way of Watts Branch, the largest tributary to the Anacostia River in DC that runs into and through the Kenilworth Landfill. As dangerous as it was, it was our playground! You see, east of the river neighborhoods in the 1950's and 60's did not receive the municipal investments such as recreation centers and swimming pools. They simply didn't exist. Please keep in mind, Washington, DC was under full federal control until December 24, 1973 when Congress enacted The District of Columbia Home Rule Act. The federal government, through the National Park Service (NPS), decided to totally disregard all of its principles regarding land use and water protection, **"Preserve and Protect" and "Leave No Trace".**

After many years of local advocacy and action to make changes at the landfill, it took the death of a young boy caused by the open burning that finally led to the closing of the landfill. The landfill was capped, and areas that would eventually become three nodes were created. The area closest to the Eastland Garden and Kenilworth Courts neighborhoods became the primary recreation area. Ball fields, a recreation center and swimming pool were built. This area is also close to the Kenilworth Aquatic Gardens, a NPS site. The southernmost area of the landfill remained the most open and more natural area, and has the easiest access to Watts Branch and the river.

The 1970's era cap of the landfill proved to be inadequate and not substantial for much use beyond open fields that were minimally wooded or landscaped. Toxins that leached into the waterways negatively impacted aquatic life and birds, and the minimal natural habitat negatively impacted local wildlife. We are now confronted with deciding what this vast area will be for the residents of the communities that border the site, the many visitors from throughout the region, wildlife that inhabit the area and are a major part of the ecology of this area, and the aquatic life are beginning to thrive again in what was one of the most polluted rivers in the country. Looking at what was done in the past and how it was done has led us to the place where we are, remediating a landfill that will be transferred to the government of the District of Columbia. This remediation must be adequate for all future use and not create a situation that would require the DC government to spend additional taxpayer dollars to do what should be done in this remediation of the Kenilworth Landfill.

The Groundwork Anacostia River DC Green Teams operated in east of the river neighborhoods and communities, and introduced hundreds of young people to the outdoors and building stewardship of their natural environment. Camping, natural resource management, water protection, and environmental stewardship were key parts of the Green Team program. The green team program was in partnership with the National Park Service and National Capital Parks-East in particular. The program participants worked with the Junior Ranger programs, Youth Conservation Corp program, and Urban Archeology Corp to name a few. They visited the major iconic national parks and conducted maintenance and stewardship in their local parks, including Kenilworth Park. These young people, our future generation, were taught the principles of LEAVE NO TRACE and PRESERVE AND PROTECT.

Each of us plays a vital role in protecting our national parks. As we spend time outdoors, in the natural world and in wilderness, it's important to be conscious of the effects our actions may have on plants, animals, other people, and even entire ecosystems. Following the Leave No Trace Seven Principles, summarized below, can help us minimize those impacts. They can be applied anywhere, at any time, while taking part in recreational activities.

- **Plan Ahead and Prepare**
- **Travel and Camp on Durable Surfaces**
- **Dispose of Waste Properly**
- **Leave What You Find**
- **Minimize Campfire Impacts**
- **Respect Wildlife**
- **Be Considerate of Other Visitors**

These principles were established by the Leave No Trace Center for Outdoor Ethics, and built on work by the US Forest Service, National Park Service, and Bureau of Land Management in the mid 1980s. This relationship continues today. The principles are based on and informed by scientific research in the fields of recreation ecology and human dimensions of natural resources.

I recommend that the National Park Service read, adhere to, and implement the Leave No Trace principles. These principles are flushed out in more detail and should be read in its entirety. These principles, if followed, can be the guiding principles we use going forwarded.

I support the total removal of contaminated soil from Kenilworth Park-North, and replacing it with a cap of clean soil that is adequate for any future use including excavation that may be required related to that use, without the DC government being required to perform additional remediation. I also support the improvement of the natural resources of Kenilworth Park-North and Kenilworth Park-South, including restoring the natural edge of the river, installation of wetlands and other storm water management improvements, restoration and creation of natural habitat areas that respects wildlife, and improve that land to be able to serve the local residents, and accept and receive the many visitors that will come to this area. I support an additional option and support the AWCAC position.

Respectfully,

Dennis Chestnut
dchestnut.chestnut@gmail.com
(202) 286-4970

ATTACHMENT 4

From: Davies, Donna L <Donna_Davies@nps.gov>
Sent: Friday, February 12, 2021 2:26 PM
To: Andrew McGeoch
Cc: Mcginty, Sean P; Ordway, Jonathan; Rodriguez, Emily
Subject: Re: [EXTERNAL] Attn: KPL Proposed Plan Public Comments

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon Mr. McGeoch,

Thank you for your interest in the Kenilworth Park Landfill Site and taking the time to provide your input on NPS's Proposed Plan for remediation. Your comments have been recorded and will be considered during NPS's final selection of an alternative. The selection will be based on which alternative best meets the evaluation criteria outlined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) implementing regulations outlined in the National Contingency Plan (NCP). These evaluation criteria are described in NPS's Feasibility Study Addendum report and include community acceptance. NPS's chosen alternative will be explained and recorded in the Site's Record of Decision (ROD). The ROD is the next step in the CERCLA process and is expected to be issued in 2021.

The Proposed Plan public comment period began the day the plan was released (November 12, 2020) and will end on March 12, 2021. NPS prepared interim responses to comments and questions received from the public through January 2021. NPS prepared the comment responses to assist the public in understanding information NPS considered which led to selection of the preferred alternative 3, which is described in the Proposed Plan. These responses and additional information and documents related to the Site are available for download from the Kenilworth Park Landfill Site webpage. NPS will be accepting comments on the Proposed Plan or any other documents included in the Site's Administrative Record through March 12, 2021. A summary of NPS's final responses to all relevant public comments received during the comment period will be included with the Site's ROD.

I have also ensured your email is on the Kenilworth Park Landfill Site email notification list; therefore, you will receive future updates on the Site's status, including issuance of the ROD. These announcements will be sent from National Capital Parks – East (NACE) (not from my personal email). NACE is the unit of NPS that manages this area of Anacostia Park.

Please contact me or Sean P. McGinty, NACE's Public Information Officer with any additional questions or concerns.

Donna Davies
CERCLA Project Manager

484-663-1043

From: Andrew McGeoch <andrewlmcgeoch@gmail.com>
Sent: Tuesday, February 9, 2021 9:33 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] Attn: KPL Proposed Plan Public Comments

Dear Ms. Davies,

Please find the attached comments related to the KPL Proposed Plan. If you need any further information, please don't hesitate to let me know.

Best,

Andy

--
Andy McGeoch
Pronouns: he/him/his
(614) 582-7995
andrewlmcgeoch@gmail.com

February 9, 2021

Donna Davies
VHB Metro DC, LLC
1001 G Street NW, Suite 1125
Washington, DC 20001
Attn: KPL Proposed Plan Public Comments

Dear Ms. Davies,

My name is Andy McGeoch and I am a resident of the District of Columbia (DC) and frequent visitor to Kenilworth Park. My primary purpose for visiting the park is birding (also known as bird-watching) as the park is a unique space in DC for this recreational activity. The area is important bird habitat and many species can be found here that are found nowhere else in the District. Just in the last year, I've observed American pipits, bobolinks, and American tree sparrows in the fields of Kenilworth Park North.

The dump at Kenilworth Park North was originally groomed as sports fields, and I understand the intention is to cap the fields with clean fill and regroom them for the same purpose. Consider this: in the short period of time that longer grass has been allowed to grow along just the edges of these fields, a diversity of native bird species have returned. Can you imagine what wildlife might return if the entire area was restored to long grass and ephemeral pools?

I am writing to strongly encourage NPS to protect and/or ensure the restoration of the meadows, fields, and shallow pools of Kenilworth Park North and South and also to emphasize that the concerns of the birdwatching community be taken into account as part of the planning process. Birding is a cherished activity for many in DC as a free, accessible, and fulfilling pastime, and I hope that NPS will consider the important ramifications for birds and the birding community as it proceeds in this planning process.

Sincerely,

Andy McGeoch

ATTACHMENT 5

From: Davies, Donna L <Donna_Davies@nps.gov>
Sent: Wednesday, February 17, 2021 1:01 PM
To: Anne Lewis
Cc: Mcginty, Sean P; Ordway, Jonathan; Rodriguez, Emily
Subject: Re: [EXTERNAL] City Wildlife Comments on Kenilworth Park Remediation Plan

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon Ms. Lewis,

Thank you for your interest in the Kenilworth Park Landfill Site and taking the time to provide your input on NPS's Proposed Plan for remediation and insightful recommendations that the future use of Kenilworth Park should balance habitat preservation with the community's needs for recreational amenities. As described in NPS Proposed Plan, Congress directed NPS transfer administration jurisdiction of Kenilworth Park North (KPN) to the District; therefore, I also encourage you to check the Department of Parks and Recreation (DPR) website for upcoming virtual meetings regarding future use of KPN. Participation in these meetings will provide a venue for your recommendations to be heard and considered by DPR.

Your comments have been recorded and will be considered during NPS's final selection of an alternative. The selection will be based on which alternative best meets the evaluation criteria outlined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) implementing regulations outlined in the National Contingency Plan (NCP). These evaluation criteria are described in NPS's Feasibility Study Addendum report and include community acceptance. NPS's chosen alternative will be explained and recorded in the Site's Record of Decision (ROD). The ROD is the next step in the CERCLA process and is expected to be issued in 2021.

The Proposed Plan public comment period began the day the plan was released (November 12, 2020) and will end on March 12, 2021. NPS prepared interim responses to comments and questions received from the public through January 2021. NPS prepared the comment responses to assist the public in understanding information NPS considered which led to selection of the preferred alternative 3, which is described in the Proposed Plan. These responses and additional information and documents related to the Site are available for download from the Kenilworth Park Landfill Site webpage. NPS will be accepting comments on the Proposed Plan or any other documents included in the Site's Administrative Record through March 12, 2021. A summary of NPS's final responses to all relevant public comments received during the comment period will be included with the Site's ROD.

I have also ensured your email is on the Kenilworth Park Landfill Site email notification list; therefore, you will receive future updates on the Site's status, including issuance of the ROD. These

announcements will be sent from National Capital Parks – East (NACE) (not from my personal email). NACE is the unit of NPS that manages this area of Anacostia Park.

Please contact me or Sean P. McGinty, NACE's Public Information Officer with any additional questions or concerns.

Donna Davies
CERCLA Project Manager
484-663-1043

From: Anne Lewis <anne.lewis@citywildlife.org>
Sent: Tuesday, February 16, 2021 5:10 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] City Wildlife Comments on Kenilworth Park Remediation Plan

Dear Ms. Davies,
Attached are City Wildlife's comments on NPS's proposed Kenilworth Park Remediation Plan. Thank you for the opportunity to provide comments on this important project.
Best wishes,
Anne Lewis
Anne Lewis, FAIA, President
City Wildlife, Inc.
www.citywildlife.org
(202) 333-4388

City Wildlife 15 Oglethorpe Street NW Washington DC 20011

February 16, 2021

Donna Davies, CERCLA Project Manager
National Capital Parks - EAST
1900 Anacostia Drive SE
Washington, DC 20020

Dear Ms. Davies,

City Wildlife is a non-profit organization whose goals are to protect native wildlife and to preserve and enhance wildlife habitat in the District of Columbia. Access to nature has been shown to be beneficial to the health and well-being of humans, and seeing an animal in the wild is one of the most rewarding experiences that nature offers to adults and children alike.

We also believe in balancing habitat preservation with the community's important needs for recreational amenities. Because Kenilworth Park is so large, we believe it is possible to achieve this balance even in this environmentally sensitive area, and we support these efforts.

We have reviewed NPS's *Proposed Plan for Cleanup of the Kenilworth Park Landfill Site* and we support NPS's recommendation to remediate and restore areas contaminated with landfill in Kenilworth Park North (KPN) while not disturbing the valuable wildlife habitat that now exists in Kenilworth Park South (KPS).

In planning for this work, we urge NPS to be mindful of the potential for enhanced wildlife habitat throughout the study area, but particularly in areas of KPN close to Watts Branch, the river, and the marsh. Concentrating recreational activities in the eastern area of KPN, adjacent to Anacostia Road, will provide safe and easy access to these facilities for the community and allow restoration of habitat in the most environmentally sensitive areas. In these areas, permanent construction features, utility infrastructure, easements, institutional controls, and other components of the remediation project should not preclude the possibility of habitat restoration, including wetlands and possible grade changes.

In KPS, preservation and enhancement of the existing wildlife habitat can and should be achieved with minimal disruption and with efforts to improve conditions in Watts Branch. All new or upgraded trail surfaces should be pervious to reduce runoff and sedimentation.

The remediation project in Kenilworth Park is an opportunity to provide not only valuable recreational amenities for the community, but also a foundation for habitat restoration that

could contribute substantially toward the District's sustainability goals. We appreciate the opportunity to comment on the Kenilworth Park remediation plans and look forward to working with NPS as these plans move forward.

Respectfully submitted,

Anne Lewis, FAIA
President
anne.lewis@citywildlife.org
www.citywildlife.org

ATTACHMENT 6

From: Kirby Vining <chair@committeeof100.net>
Sent: Monday, February 8, 2021 5:24 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: Gray, Vincent (Council) <vgray@dccouncil.us>; tommy.wells@dc.gov <tommy.wells@dc.gov>; Trueblood, Andrew (OP) <andrew.trueblood@dc.gov>; Morrison, Tara D <Tara_Morrison@nps.gov>; dpr@dc.gov <dpr@dc.gov>; May, Peter <Peter_May@nps.gov>; Stidham, Tammy <Tammy_Stidham@nps.gov>; nick.kushner@dc.gov <nick.kushner@dc.gov>
Subject: [EXTERNAL] C100 Comments Concerning Proposed Plan for Environmental Clean Up of Kenilworth Park -Kirby Vining

Donna Davies, Capital Parks-East,
CERCLA Project Manager
Kenilworth Park Proposed Plan

Dear Ms. Davies,
Attached are the commments of the Committee of 100 on the Federal City supporting the National Park Service Preferred Alternative (Alternative 3) for the environmental clean up of Kenilworth Park, subject to clarification about the extent of the containment proposed for Kenilworth Park North. Additionally, these comments propose two projects that should be undertaken but will not be funded by CERCLA.
If you have any questions about these comments, please contact Monte Edwards at monte.edwards@verizon.net.

Thank you, -Kirby Vining, Chair, Committee of 100 on the Federal City.

PS Attached please find a signed copy of this transmittal letter as well as our comments and an NPS July, 2020 response to our earlier comments.

http://committeeof100.net/

The Committee of 100 on the Federal City

February 8, 2021

Donna Davies, Capital Parks-East,

CERCLA Project Manager

Kenilworth Park Proposed Plan

Dear Ms. Davies,

Attached are the commments of the Committee of 100 on the Federal City supporting the National Park Service Preferred Alternative (Alternative 3) for the environmental clean up of Kenilworth Park, subject to clarification about the extent of the containment proposed for Kenilworth Park North. Additionally, these comments propose two projects that should be undertaken but will not be funded by CERCLA.

If you have any questions about these comments, please coontact Monte Edwards at monte.edwards@verizon.net.

Sincerely,

Kirby Vining, Chair

Cc:
Vincent C. Gray vgray@dccouncil.us
Tommy Wells tommy.wells@dc.gov
Andrew Trueblood andrew.trueblood@dc.gov
Tara_Morrison@nps.gov
Delano Hunter dpr@dc.gov
Peter_May@nps.gov
Tammy_Stidham@nps.gov
nick.kushner@dc.gov

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Washington, D.C. 20001
www.committeeof100.net
info@committeeof100.net

The Committee of 100
on the Federal City

Comments Concerning
Proposed Plan for Environmental Clean Up of Kenilworth Park

February 8 2021

The Committee of 100 on the Federal City submits these comments supporting the Proposed Plan for cleanup at the Kenilworth Park Landfill Site, located within Anacostia Park, a unit of National Capital Parks-East (NACE). The Kenilworth Park Landfill Site consists of Kenilworth Park North (KPN) and Kenilworth Park South (KPS):

> **KPN**. In 2004 Congress authorized transferring administrative jurisdiction over the 80-acre northern part of Kenilworth Park Landfill located north of Watts Branch to the District of Columbia to be "used only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities".[1] However, because of concerns about contamination of the soil, the site is being evaluated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also referred to as a Superfund Site. [2]
> **KPS.** The 50-acre southern part of Kenilworth Park will remain under NPS jurisdiction and will be maintained as undeveloped open space/conservation land. This would protect the existing wildlife habitat at KPS that is highly valued by NPS and the community. This would require no environmental clean-up treatment.

The Proposed Plan explains that the Preferred Alternative for remedial action at Kenilworth Park North will consist of covering existing surface soils with 12 inches of clean soil in areas reserved for organized sport, recreation and community activities. The Preferred Alternative is intended to be protective of human health and the environment, meet applicable or relevant and appropriate requirements (ARARs)[3], be cost effective, and be effective in the long term.

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[1] ***Public Law 108–335***—October18, 2004, *118 STAT. 1351 SEC. 344*. Transfer to the District of Columbia. Section 344(b).

[2] *Surficial Soil Quality Assessment - Report 3*, Appendix E, pages 2-3. June 2019
"Beginning in 1998 there were multiple, increasingly more detailed, investigations of the Site, which culminated in RI reports for KPN (E&E, 2007) and KPS (E&E, 2008)."

The Committee of 100 supports the Preferred Alternative.

It is Essential to Clean Up This Contamination

What is now the Kenilworth Park was once a dump - the former municipal solid waste landfill operated by the District of Columbia from 1942 until 1970. Trucks dumped garbage onto the banks of the Anacostia River, filling in the marshes and wetlands. The Kenilworth Park area was used for open burning of trash until 1968 when Kelvin Tyrone Mock, a seven-year old boy, was trapped and killed by the flames. NPS capped the landfill in the 1970s. Initially, soccer fields, football fields, and tennis courts were built on the 80-acre plot, Kenilworth Park North. The parkland and athletic facilities were needed to serve the communities of Mayfair and Parkside, economically disadvantaged areas largely isolated from the city by the river to the west, the now-abandoned Pepco generating station to the south and the six-lane Kenilworth Avenue to the east.

Kenilworth Park North continues to be used because there is no other parkland to serve children and families in this isolated east-of-the-river community.[4] In 2018, the District Department of Transportation regarded the contamination to be so significant that DDOT re-routed the Anacostia Riverwalk Trail around the site to avoid the contamination.[5] This proposed environmental remediation of Kenilworth Park will allow the Anacostia Riverwalk Trail to be relocated, adjacent to the river, and thereby enable the relocated Riverwalk Trail to be used for educational, and recreational purposes.[6]

Restoration of Kenilworth Park North will allow that area to be used for parkland and outdoor recreational activities as well as appropriate completion to the Anacostia Riverwalk Trail and will significantly benefit the local environment and the residents in

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[3] The 2004 transfer legislation would appear to be an applicable requirement, and thus a threshold ARAR; however, the Congressional legislation is not listed in Table 1 "Location-Specific Applicable or Relevant and Appropriate Requirements (ARARs)" or in Table 3 "Action-Specific Applicable or Relevant and Appropriate Requirements (ARARs)" of the September 2020 final *Feasibility Addendum Report.*

[4] *Anacostia Riverwalk* Section 3-Realignment Env Ass 2011, NPS, page 37: "Four of the five neighborhoods in the project area — Kenilworth, Mayfair, Eastland Gardens, and River Terrace — abut Kenilworth Park and have direct access to the park via local roads and Anacostia Avenue."

[5] The Anacostia Riverwalk Trail is generally located along the banks of the Anacostia except in order to avoid the contamination of Kenilworth Park North, it had to be re-routed through the residential areas of Mayfair/Parkside. *Id.* page 16.

[6] NPS 77-1, §5.7 states: *Compliance with the Executive Order 11990 Directive to "Enhance the Natural and Beneficial Values of Wetlands*"
Under most circumstances, NPS Management Policies do not support "enhancement" of wetland resources beyond natural levels. Therefore, for purposes of implementing E.O. 11990, the term "enhancement" refers to enhancing wetland values, where appropriate and practicable, by using wetlands for educational, recreational, scientific, and similar purposes that do not disrupt natural ecological functions.

this chronically underserved, isolated and largely forsaken area of the city:

In 1942 Kenilworth Park became the City dump.

Public housing was built here to accommodate families displaced by the Alley Dwelling authority in 1943, and again in the mid-1950s to house families displaced by urban renewal programs such as the "slum clearance" project in Southwest.

The area was then largely isolated from the rest of Anacostia with the construction of the six-lane Anacostia Avenue (now known as Kenilworth Avenue) that began in 1954.

The neighborhood Safeway was looted during the 1968 riots and did not reopen.[7]

Kenilworth Park is located in a community that has had to bear the negative effects of decades of bad environmental practices and continuing contamination issues. This community has been promised and deserves improved recreational amenities. It's time to clean up the contamination and allow Kenilworth Park North to be safely used for organized sports, recreation and community activities.

Being able to add KPN's 80 acres to DC's 931 acres of parkland[8] will result in an important and significant increase in DC's parkland.

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[7] In 1895 a real estate developer began a new suburb and wanted an elegant name for his development. His wife had just read Sir Walter Scott's *Kenilworth* set at Kenilworth Castle in England. Kenilworth development was built and the horse-drawn trolley line extended out H Street and Benning road and up what became Kenilworth Avenue to the new development. But the neighborhood deteriorated. In 1942 Kenilworth Park became the City dump and later an open burning site. In 1943, the Alley Dwelling Authority built public housing for the displaced families at Kenilworth. The neighborhoods adjacent to Kenilworth Park were built over what was a local horse-racing track after a Congressional anti-betting law effectively shut the race track down. The outline of its oval course still survives in the shape of the streets that surround the Mayfair Manor and Paradise-At-Parkside neighborhoods. In the mid-1950's, housing for families displaced by urban renewal programs such as the "slum clearance" project in Southwest were built here. The Kenilworth area was effectively isolated from the rest of Anacostia by the construction of the six-lane Kenilworth Avenue that began in 1954. The area deteriorated further and when the 1968 riots extended to Kenilworth, looters ransacked the neighborhood Safeway on Kenilworth Avenue, and it did not reopen. In 1971, a mayoral aide called the once-proud Kenilworth Courts "hell on earth." The landmark Congressional "*Housing and Community Development Act of 1987*" was applied to Kenilworth and on October 25, 1988, and with much political and media fanfare, a ceremony was held in Kenilworth and renovations began.

The above description is a summary from ***A DC Neighborhood* by *the Anacostia River – Kenilworth***. A 2006 booklet, funded by the Humanities Council of Washington, DC, with the sponsorship of Cultural Tourism DC, and in part by U.S. Department of the Interior, National Park Service Historic Preservation Fund grant funds, administered by the District of Columbia's Historic Preservation Office.

"From forest to farmland, white suburb to urban African-American community, rural road to commuter highway, city dump to riverside park, this is the story of the past of Kenilworth, full of life and change." (*Id,* page 29.)

[8] *DC Parks and Recreation Master Plan Vision Framework*, March 2014, page 28.

Identifying the Contamination

In late 1998, NPS began conducting environmental investigations at Kenilworth Park North (KPN) and Kenilworth Park South (KPS) to determine what risks the landfill might pose to human health or the environment. The preliminary assessments showed that buried waste contained hazardous substances, the 1970s soil-cap used to cover the landfill contains low-level harmful contaminants and the ground water contained low-level contaminants. Remedial Investigations were initiated in early 2006. The 2007/2008 Remedial Investigations identified potential visitor and site-worker exposure risks associated with contamination in surface soil and subsurface soil/buried waste. No exposure risks were identified in the ground water. [9] The 2013 plan proposed installation of a 24-inch thick soil cap over most of the area within KPN and KPS as the preferred remedial alternative, that would permit "active" recreational use (e.g., playing fields for organized sports where visitors have a higher likelihood of disturbing and coming into contact with site soils). Subsequently, NPS reevaluated future use of KPS and designated KPS as a "Natural Resources Recreation" area, designed to protect natural areas and provide passive recreational opportunities that result in relatively little likelihood of disturbing and coming into contact with soils (i.e., walking, jogging, cycling, and bird watching). The only recreational development currently envisioned for KPS is the planned extension of the Anacostia Riverwalk Trail, a paved walking and cycling trail that currently passes over the northern area of KPN.[10]

The 2019 *Remedial Investigation - Addendum Report* provided additional assessment to reduce uncertainty about the groundwater migration pathways and concluded that ground water discharge did not present a problem.[11] Having addressed the contamination problems in the soil and the fact that ground water migration did not present an environmental problem, NPS was able to prepare a Feasibility Study focused solely on addressing risks identified with KPN.

How to Clean Up the Contamination

The *Feasibility Study Addendum Report* (issued September 2020) included a risk management analysis, an updated assessment of ARARs/Criteria[12] to be considered and

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[9] *Proposed Plan for Cleanup of the Kenilworth Park Landfill Site,* November, 2020, Figure 2.

[10] *Remedial Investigation - Addendum Report*, June 2019, page 1. In 2016, DC Department of Transportation (DDOT) completed an extension of the asphalt-paved ART over a portion of KPN.

[11] *Id,* page 39: Chemicals in the groundwater discharge to the Anacostia River; however, with the exception of iron, the levels have not been shown to have the potential for causing unacceptable human or ecological risks in the River.

[12] ARARs/Criteria would appear to include the 2004 Congressional legislation, but the legislation is not included in Table 1 (Location-Specific) or Table 3 (Action-Specific) listing of Applicable

development of Remedial Action Objectives. The information in that Report formed the basis for the *Proposed Cleanup Plan for the Kenilworth Park Landfill Site* (issued November 12, 2020) that explains the preferred alternative proposed by NPS. The Preferred Alternative will achieve substantial risk reduction focused on areas with greatest potential exposure risk and allow Kenilworth Park to be used as intended for both active and passive recreational uses. The Committee of 100 generally agrees with the Preferred Alternative, but seeks certain clarification and proposes two next steps related to the environmental clean up, as explained in these comments.

To protect park users from the hazardous materials contained in the soil, the final *Feasibility Addendum Report* evaluated five general alternatives to address the contaminated soil and landfill waste:

1. No action;
2. Limited action;
3. Containment for KPN
4. Containment for KPN and KPS, and
5. Removal with off-site disposal

Under the *No Action* and the *Limited Action* alternatives, the contaminated soils and landfill waste would be left in place. The Limited Action alternative would impose prohibitions on recreational activities and other activities that might disturb the soil, together with a routine maintenance and monitoring program and other institutional controls that would not allow the park to serve its intended use.

The *Containment Alternative for KPN* would involve the placement of clean soil barriers in areas of the Site reserved for organized sport and recreation and community activities and special events. *Containment Alternative involving KPN and KPS* would include installation of a soil barrier to prevent human exposure to contaminated surface soils extending across the majority of both KPN and KPS.

Removal with off-site disposal Alternative involves removal and off-site disposal of all land fill waste materials and previously placed cover soils and re-establishment of the original grades and mudflats and wetlands habitat that existed before the development of the landfills trash site.[13]

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or Relevant and Appropriate Requirements that were taken into account in evaluating remedial alternatives. *Feasibility Study Addendum Report* (issued September 2020) .

[13] This alternative would require the removal of an estimated 4.3 million cubic yards (6.5 million tons) of waste, cover, and fill materials from the Site. Despite the documented presence of hazardous materials, "for feasibility-level cost estimating purposes, NPS assumes that the excavated material is non-hazardous and, therefore, could be disposed in a RCRA Subtitle D facility as either waste or alternate daily cover material. " *Feasibility Study Addendum Report*, page 21. Because the excavated soil contains hazardous material the actual cost of removal and finding a place to dispose of the contaminated soil would likely be much higher than estimated in the *Feasibility Study Addendum Report.*

Selection of Preferred Alternative

The Committee of 100 agrees that Alternatives 1 and 2 would not accomplish the needed environmental clean up and require no consideration.

In evaluating Alternatives 3, 4 and 5, we need to keep in mind the two very different uses proposed for KPN and KPS:

- For KPN, active recreational use with playing fields and community activities, which may disturb the soil and expose park users to the underlying hazardous materials.
- For KPS, passive recreational activities such as walking, cycling and bird watching that will result in little likelihood of disturbing and park users coming into contact with soil.

Alternative 3 To safely accommodate these two different uses, containment of contaminated soil is necessary to permit active recreational use of KPN and the passive use of KPS would not pose a risk of exposing the contaminated soil with no containment. Thus, NPS proposes Alternative 3 as the Preferred Alternative that accomplished these two different clean up approaches.

The Committee of 100 agrees, but seeks clarification about the extent of the containment proposed for KPN. KPN consists of 80 acres. Alternative 3 proposes to provide a soil cap that would cover and thereby contain the underlying contamination for only 60 acres.[14] What is the reason that 20 acres will not have the new soil cap? Does part of the 20 acres that will not receive the new soil cap soil consist of the 11 acres of "new fill" that was placed in 2006 and 2007?[15] The Proposed Alternative explains that clean soil barrier would be placed only in the areas where athletic fields are projected to be built[16], but over time, those will likely be rearranged, and years from now, athletic events or other activities are likely to occur on untreated portions of the park. At the November 18 Public Meeting, NPS explained that the unprotected 20 acres are floodplains and area that are unsuitable for recreation and are reserved for possible future development as wetlands. If, on the other hand, there is a possibility that any part of the untreated 20

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[14] Figure 10 of the. *Feasibility Study Addendum Report*, September 2020 shows where the new soil barrier will be placed, but the limits are not explained.

[15] Approximately 11 acres of "new fill" was imported to the Site in 2006 and 2007 and placed in the area of the track and tennis courts. The fill was placed after NPS had completed the surface soil sampling in that area as part of the RI activities; no sampling or laboratory analysis of the new fill was completed. For feasibility-level cost estimating, NPS assumes the new fill is clean; and therefore, no engineered control/barrier is required in that area. Confirmatory soil sampling of the new fill area is recommended to inform the remedial design. *Feasibility Study Addendum Report*, September 2020, page 20.

[16] *Id.*

might be used for recreation or community activities which may disturb the soil, those areas should receive the soil containment cap. With that reservation, the Committee of 100 endorses Alternative 3.

Alernative 4 A soil cap over most of both KPN and KPS would contain the contaminants at both locations, but the low level of contamination would not pose a risk to passive recreation that did not disturb the soil as is proposed for KPS. Alternative 4 would destroy most of the existing wildlife habitat at KPS. Thus providing a soil cap for containment at KPS would be disruptive and an unnecessary expense.

Alternative 5 This would require the complete removal of the former landfill and re-creation of the pre-landfill conditions. At the November 18 virtual public meeting there were comments strongly in favor of adopting Alternative 5: removal of all of the contaminated soil and restoration of the mud flats and marshes that existed before any dumping or trash burning occurred. Page 25 of the September 2020 *Feasibility Study Addendum R*eport states that "**Alternative 5** would comply with ARARs." The Committee of 100 disagrees. The 2004 transfer legislation is an applicable requirement, and thus should have been considered as a threshold ARAR.[17] Alternative 5 would preclude the use of KPN required under the Congressional transfer legislation "for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." (PL 108-335 § 334). Further, while Alternative 5 would remove the environmental contamination, it would jeopardize the transfer to DC because the site could not be used for "public recreational facilities" and "outdoor recreational opportunities" as required under the congressional legislation. If the NPS had treated the congressional legislation as a threshold ARAR, Alternative 5 would not have been presented as an option.

Next Steps

The purpose of this Plan is to provide overall protection of human health and the environment. The Committee of 100 agrees that the Proposed Alternative will accomplish that objective. However, related to the environmental clean up there are significant projects that should be undertaken but likely will not be funded by CERCLA. Reconfiguring the Anacostia Riverwalk is a project closely related to the environmental clean up that will likely be funded by DDOT. Other projects related to the environmental clean are the Anacostia Riverwalk bridge and the shoreline of Kenilworth Park. Both of these projects can be coordinated with on-going projects. To the extent additional funding is required, the recent Monsanto settlement will provide $30 million for these environmental clean up related projects and should be used for shoreline in

[17] The Congressional legislation is not listed in Table 1 "Location-Specific Applicable or Relevant and Appropriate Requirements (ARARs)" or in Table 3 "Action-Specific Applicable or Relevant and Appropriate Requirements (ARARs)" of the September 2020 final *Feasibility Addendum Rep*

mprovements.[18]

Anacostia Riverwalk Bridge.

Following the environmental clean up of Kenilworth Park, the Anacostia Riverwalk will be extended within KPN, adjacent to the Anacostia shoreline, and a new bridge will be constructed that will cross the River and tie into the trail network within the National Arboretum.[19] Consistent with encouraging active recreation both at KPN and on the river, the C100 recommends that the bridge be constructed with a dock or landing at water level to provide access for canoes, kayaks and other watercraft, as is provided at the bridge from Heritage Island to Kingman Island.

Shoreline Improvements.

The seawall along the Kenilworth Park shoreline is missing in places and in poor condition. The Committee of 100 wrote to NPS and recommended that the wetlands mitigation requirement (determined in the Long Bridge EIS proceeding) be applied to restoring the wetlands along the coastline of Kenilworth Park as part of the planned larger environmental restoration at Kenilworth Park. The NPS rejected the proposal in part, because:[20]

> Restoring the shoreline would require breaching the historic seawall in some places, which would constitute an adverse effect under the National Historic Preservation Act (Section 106). [21]

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[18] In section 3082 of Bill 23-760, the FY21 Budget Support Act, the Council directed the Monsanto settlement be applied as follows:

> (1) $7,339,659.91 to pay attorney's fees and costs to for legal services provided in the lawsuit;
> (2) $4,700,000 to OAG's Litigation Support Fund for use by the OAG;
> (3) $30,000,000 to DOEE's Clean Land Fund; and
> (4) $9,960,340.09 to the District's General Fund to be used in the approved Fiscal Year 2021 Budget and Financial Plan.

The $30M that goes to DOEE is to be used for the Clean Land Fund, D.C. Official Code § 8-633.08, and thus can be used for contaminated property cleanup assistance pursuant to § 8-637.04, other brownfield revitalization incentives established by this chapter, and other activities associated with the Mayor's cleanup of contaminated property. DC Code § 8–637.04. Contaminated property cleanup assistance sets out criteria that apply to both the Anacostia Sediments Program and the clean-up of Kenilworth Park

[19] "Current plans call for the Anacostia Riverwalk Trail to be extended within KPN with construction of a new bridge that will cross the River and tie into the trail network within the National Arboretum. DDOT and DOEE continue to work with NPS to address any potential environmental concerns related to this project". *Feasibility Study Addendum Report*, September 2020, pages 12-13.

[20] July 21, 2020 NPS letter, copy attached.

But, in that same letter, the NPS explained:

> Removing portions of the seawall to provide a more natural habitat can still be considered, however, it needs to be incorporated into the overall planning effort underway to remediate the area.

That is where we are now: "the overall planning effort … to remediate the area." DOEE's September 2018 *Living Shoreline Opportunities* was prepared to "Lower the reliance on bulkheads, seawalls, and other engineered flooding solutions, many of which are antiquated and in disrepair". That describes the shoreline of Kenilworth Park and needs to be a part of the planning effort. NPS has restored three wetland areas along the Anacostia [22] and all three projects required the placement of dredged sediment materials to increase elevations enough to support emergent vegetation. DOEE dredging operation along the Anacostia are planned for the near future and need to be coordinated with a plan to reestablish the wetlands along the Kenilworth Park shoreline.[23]

Conclusion

The Committee of 100 supports Alternative 3 and urges that the environmental clean up be accomplished and that Kenilworth Park North be transferred to DC as soon as possible and that thereafter, the National Park Service advise DOEE, DDOT and the DC Department of Parks and Recreation about the next steps that would restore the shoreline and provide for aquatic access at the new Riverwalk bridge

Respectfully submitted,

Monte Edwards, on behalf of
The Committee of 100 on the Federal City

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[21] The seawall is not a listed historic structure and why breaching the seawall would constitute an adverse effect is not understood.

[22] The three wetlands restoration projects were Kenilworth Marsh, reconstructed in 1993, Kingman Marsh, reconstructed in 2000, and the Fringe Wetlands. *Living Shoreline Opportunities,* September 2018, page 22.

[23] DOEE recently issued *Anacostia River Sediment Project -Interim Record of Decision*, September 30, 2020. Page 24 of that ROD identified 6 locations of environmental contamination, designated as early action areas (EAAs), within the Anacostia River for containment with selective dredging and disposal and three additional EAAs in the Kingman Lake area.

From: Davies, Donna L <Donna_Davies@nps.gov>
Sent: Tuesday, March 30, 2021 2:53 PM
To: Kirby Vining <chair@committeeof100.net>
Cc: Gray, Vincent (Council) <vgray@dccouncil.us>; tommy.wells@dc.gov <tommy.wells@dc.gov>; Trueblood, Andrew (OP) <andrew.trueblood@dc.gov>; Morrison, Tara D <Tara_Morrison@nps.gov>; dpr@dc.gov <dpr@dc.gov>; May, Peter <Peter_May@nps.gov>; Stidham, Tammy <Tammy_Stidham@nps.gov>; nick.kushner@dc.gov <nick.kushner@dc.gov>; Monte <monte.edwards@verizon.net>
Subject: Re: [EXTERNAL] C100 Comments Concerning Proposed Plan for Environmental Clean Up of Kenilworth Park - Kirby Vining

Good Afternoon Mr. Vining,

Attached are NPS's responses to the Kenilworth Park Landfill Site Proposed Plan comments you submitted February 8, 2021 on behalf of the Committee of 100.

Please let me know if you have any questions.

Thank you

Donna Davies
CERCLA Project Manager

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1- National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

IN REPLY REFER TO:

1.1.B (NCA-NACE)

March 30, 2021

VIA E-Mail

Mr. Kirby Vining
Chair, Committee of 100
945 G Street, N.W.
Washington, D.C. 20001

Dear Mr. Vining,

Thank you for the comments related to the National Park Service's (NPS) Proposed Plan for cleanup of the Kenilworth Park Landfill Site the Committee of 100 submitted on February 8, 2021. NPS especially appreciates the Committee's detailed study of the plan and supporting documents.

The letter posed a question to NPS requesting clarification for why NPS did not include 20 acres of Kenilworth Park North (KPN) in the Alternative 3 cost estimate. Prior to answering this specific question, it is important to reiterate the context within which NPS developed our cost estimates for the different alternatives evaluated to clean up the Site. As you are aware, Congress directed NPS to transfer administrative jurisdiction over KPN to the District of Columbia. The transfer legislation, which has been identified as an applicable or relevant and appropriate requirement (ARAR) for the Site, imposes some broad constraints on the future use of KPN.[1] Specifically, the property must be "used only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." Within those broad constraints, however, the future use of KPN will be determined by the District, not NPS.

Prior to NPS's evaluation of possible alternatives, the District informed NPS that it planned to use KPN to provide active recreational opportunities (e.g., sports fields). Although those plans were conceptual in nature, they provided sufficient information to allow NPS to develop high-level cost estimates for the different possible alternatives. These costs were based on

[1] Footnotes 3, 12, and 17 of your February 8, 2021 letter state that the transfer legislation was not identified as an ARAR for the Site, but the statute is included on page 3 of Table 1 (location-specific ARARs) in the FS Addendum report.

conservative estimates and assumed the District would develop all areas of KPN where this type of development would be possible.

NPS assumed 20 of the total 80 acres would not be developed by the District for active recreational uses and therefore would not require a clean soil cover. This assumption was based on physical characteristics of the Site, such as presence of steep slopes and other considerations that would make development of these 20 acres difficult. NPS also assumed that there would be buffer areas preserved in a natural state between developed and undeveloped areas of KPN. The estimated buffer areas account for part of the 20 acres. Additionally, as you noted in your February 8, 2021 comments letter, approximately 11 acres of clean fill was placed on the Site in 2006 and 2007. NPS assumed for cost estimating purposes that this fill is "clean" and, therefore, the 11 acres covered in 2006 and 2007 will not require an additional clean soil barrier.

It is important to understand that if NPS selects Alternative 3 as the final remedy for the Site, the assumptions made for cost estimating purposes are in no way intended to define areas that will actually be covered with clean soil during implementation of the remedy. The actual areas to be covered will be based on the District's final plans for the Site and results of sampling to further define areas requiring the cover and also to ensure the fill placed on the Site in 2006 and 2007 meet specifications to be considered "clean." The actual areas to be covered with a clean soil barrier will be defined in the engineering drawings prepared as part of the remedial design phase of the CERCLA process. This phase will begin after issuance of the Site's Record of Decision (ROD).

Also related to the question regarding the 20 acres you raised the following concern in your letter:

> *"If, on the other hand, there is a possibility that any part of the untreated 20 might be used for recreation or community activities which may disturb the soil, those areas should receive the soil containment cap."*

The Site's ROD is the legally binding and enforceable document that describes the final cleanup remedy chosen for the Site. If, after consideration of public comments received, NPS selects Alternative 3 as the final remedy, the components of the remedy, including technical parameters and institutional controls, will be defined in the ROD. In the case of Alternative 3, the technical parameters will specify that any areas to be developed for active recreation or community activities must be covered with a 12-inch clean soil barrier. The institutional controls included as part of Alternative 3 provide the mechanism to ensure any future development also adheres to the technical components of the selected remedy and achieves the remedial action objectives (RAO) including reduction in risk posed to active recreational users and participants of community activities. In other words, the ROD addresses the concern raised in your letter that areas the District would like to develop in the future for active recreation or community activities that were not part of the initial design will not be covered by a clean soil barrier. The institutional controls included as part of Alternative 3 will prohibit future development of any area of the Site unless the RAO of reducing risk is achieved. Under Alternative 3, this RAO is met through placement of a 12-inch soil barrier. Along with the technical parameters, the institutional controls will be fully defined in the Site's legally binding and enforceable ROD.

NPS would also like to provide a few clarifications and thoughts regarding points noted in the "Next Steps" portion of your letter:

Anacostia Riverwalk Trail and Bridge

You note that the Anacostia Riverwalk Trail (ART) extension and Anacostia Riverwalk Bridge construction will be completed "*Following the environmental clean up of Kenilworth Park*." NPS would like to clarify that both District Department of Transportation (DDOT) managed projects have been and will continue to move forward independent of the cleanup of Kenilworth Park. NPS regularly consults with DDOT to ensure both projects are completed in a manner that fully considers possible hazards associated with the work and outlines steps to be taken to mitigate these hazards to protect human health and the environment.

Shoreline Improvements

On June 18, 2020, the Committee of 100 provided comments on the May 21, 2020 Wetlands Statement of Findings (SOF) NPS prepared for the Long Bridge Project. These comments included recommendation that the wetlands mitigation requirement (determined in the Long Bridge EIS) be applied to restoring wetlands along the shoreline of Kenilworth Park as part of the planned larger environmental restoration of Kenilworth Park. As noted in NPS's July 21, 2020 response to these comments,

> *"restoring the shoreline in this area would require breaching the historic seawall in some places, which would constitute an adverse effect under the National Historic Preservation Act (Section 106). This would also require the NPS to provide some sort of mitigation for those adverse effects and would necessitate a fairly robust NEPA and Section 106 compliance. Areas where breaching the seawall would not be required are already fairly well vegetated and the amount of ecological lift you would receive in these areas would not be sufficient to count towards mitigation. Furthermore, any breaching of the seawall in these locations would likely penetrate the landfill cap. Removing portions of the seawall to provide a more natural habitat can still be considered, however, it needs to be incorporated into the overall planning effort underway to remediate the area."*

NPS further noted in the July 21, 2020 response letter that there were "*inherent difficulties of shoreline restoration in some areas adjacent to Kenilworth Park*" and that "*The funds being provided for these mitigations from the Long Bridge Project are best suited for Kenilworth Park and Aquatic Gardens. It would provide sufficient funding for over 10 acres of invasive plant species removal twice a year for the duration of the construction of the project. This is an efficient use of these funds with a high rate of success."*

As noted in the February 1, 2021, memorandum prepared by NPS to provide interim responses to comments on the Proposed Plan and posted on the Kenilworth Park Landfill webpage, NPS cannot take a response action at a contaminated site under section 104(a) of CERCLA unless there is an unacceptable risk to human health or the environment. At the Kenilworth Park Landfill Site, NPS determined Site soils pose an unacceptable long-term risk to visitors involved in active recreation or community activities. The remedy NPS selects for the Site will be chosen

based on the nine evaluation criteria described in section 300.430(e)(9)(iii) of the National Oil and Hazardous Substances Pollution Contingency Plan (CERCLA's implementing regulations, commonly referred to as the NCP). Although development of a living shoreline cannot be specifically considered as part of a CERCLA response action, NPS remains committed to working with DOEE to consider living shoreline opportunities as part of an overall planning effort for the Anacostia River including Kenilworth Park and Kenilworth Park North.

Thank you again for the thoughtful comments and please contact me with any additional questions.

Respectfully,

Donna Davies
Project Manager

cc: Vincent C. Gray
Tommy Wells
Andrew Trueblood
Tara Morrison
Monte Edwards
Peter May
Tammy Stidham
Nick Kushner
Jeffrey T. Johnson

ATTACHMENT 7

From: Davies, Donna L <Donna_Davies@nps.gov>
Sent: Tuesday, March 2, 2021 10:36 AM
To: Anne Corbett
Cc: Mike Godec; Dennis Chestnut; Julie Serfass; Kushner, Nick (DPR); Ordway, Jonathan; Rodriguez, Emily
Subject: Re: [EXTERNAL] KPL Proposed Plan Public Comments

Follow Up Flag: Follow up
Flag Status: Flagged

Good Morning Ms. Corbett,

Thank you for your interest in the Kenilworth Park Landfill Site and taking the time to provide your input on NPS's Proposed Plan for remediation. Your comments have been recorded and will be considered during NPS's final selection of an alternative. The selection will be based on which alternative best meets the evaluation criteria outlined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) implementing regulations outlined in the National Contingency Plan (NCP). These evaluation criteria are described in NPS's Feasibility Study Addendum report and include community acceptance. NPS's chosen alternative will be explained and recorded in the Site's Record of Decision (ROD). The ROD is the next step in the CERCLA process and is expected to be issued in 2021.

The Department of Parks and Recreation (DPR) and Department of Energy and Environment (DOEE) are working together to host a virtual meeting in March to discuss future use of Kenilworth Park North with the community. Nick Kushner from DPR is cc'd on this email and will send you a flyer that will provide details on this meeting.

The Proposed Plan public comment period began the day the plan was released (November 12, 2020) and will end on March 12, 2021. NPS prepared interim responses to comments and questions received from the public through January 2021. NPS prepared the comment responses to assist the public in understanding information NPS considered which led to selection of the preferred alternative 3, which is described in the Proposed Plan. These responses and additional information and documents related to the Site are available for download from the Kenilworth Park Landfill Site webpage. NPS will be accepting comments on the Proposed Plan or any other documents included in the Site's Administrative Record through March 12, 2021. A summary of NPS's final responses to all relevant public comments received during the comment period will be included with the Site's ROD.

I have also ensured your email is on the Kenilworth Park Landfill Site email notification list; therefore, you will receive future updates on the Site's status, including issuance of the ROD. These announcements will be sent from National Capital Parks – East (NACE) (not from my personal email). NACE is the unit of NPS that manages this area of Anacostia Park.

Please contact me or Sean P. McGinty, NACE's Public Information Officer with any additional questions or concerns.

Donna Davies
CERCLA Project Manager
484-663-1043

From: Anne Corbett <anne@cryspdc.org>
Sent: Monday, March 1, 2021 11:07 AM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: Mike Godec <mgodec@adv-res.com>; Dennis Chestnut <dchestnut.chestnut@gmail.com>; Julie Serfass <jgserf@gmail.com>
Subject: [EXTERNAL] KPL Proposed Plan Public Comments

Ms. Davies,

I have attached a statement of comments on the KPL Proposed Plan on behalf the Board of Directors of CRYSP DC. Can you confirm receipt?

Thanks in advance.

Stay well,

CRYSP DC
making space to play

March 1, 2021

Donna Davies, CERCLA Project Manager
National Capital Parks - EAST
1900 Anacostia Drive, SE
Washington, DC 20020

Re: Comments of Capitol Riverside Youth Sports Park ("CRYSP DC") on behalf of the CRYSP DC Board of Directors

Dear Ms. Davies:

Thank you for the opportunity to submit this statement on the Proposed Plan of the National Park Service (NPS) for the cleanup at the Kenilworth Park North (KPN) Landfill Site in Washington, D.C.

My name is Michael Godec. I am President of CRYSP DC, a parent of two children, and have been a resident of Ward 6 in the District of Columbia since 1985. The mission of CRYSP DC is to provide sports and recreation opportunities that bridge communities, especially for underserved youth. We are especially focused on encouraging connections between residents of Capitol Hill and Wards 7 and 8, making the benefits of sports and team participation available to as many residents as possible.

CRYSP DC began as a neighborhood-inspired vision for playing fields, walking/biking trails, an outdoor farmer's market pavilion, river access and other amenities in the north lots of the RFK Stadium complex. This vision addressed a key lack of field space for youth and adult sports programs in the nearby neighborhood. Based largely on our advocacy, The Fields at RFK Campus opened in May 2019. CRYSP DC made a bid to be the field operator and was awarded the contract.

CRYSP DC supports any alternative for remedial action at the KPN that achieves the Remedial Action Objectives (RAOs) for the site, meets the required threshold criteria, and achieves the best balance between environmental protection, public health, and cost. And, most importantly, we support an alternative that can achieve these objectives and begin to have the KPN site available for sports and recreational use within 1 to 2 years.

While the Preferred Alternative proposed meets these objectives, in our opinion, other options can and should also be considered that also meet these objectives and best address the concerns of the multiple stakeholders in this process. In particular, we believe an alternative should be considered that: (1) excavates contaminants and restores wetlands in the western portion of KPN, west of the running track; (2) caps lands in Kenilworth Park North east of the track, and (3) leaves Kenilworth Park South as is. Most importantly, we strongly promote a plan for remedial action that does not leave any additional obligations for the District government to address after the transfer of the site from the federal to the district government.

And since Congress has directed NPS to transfer administrative jurisdiction over the Kenilworth to DC "for the provision of public recreational facilities, open space, or public outdoor recreational opportunities" (PL 108-335 § 334), we anxiously await, and encourage the rapid pursuit of, the development of formal plans by the DC Department of Parks and Recreation (DPR) for the future use of the KPN site. We sincerely hope that CRYSP DC is considered a relevant stakeholder and is consulted in the development of these plans.

The number of DC children engaging in organized sports has exploded over the past decade, with the need for athletic fields that can accommodate the surging demand. Citywide, 10,000 kids are registered to play soccer; 3,400 are registered to play football; and thousands more are playing baseball, softball, lacrosse, ultimate Frisbee, field hockey and other outdoor sports. Yet many youth and families are still underserved. This is especially true for youth in the neighborhoods adjacent to the KPN site.

This lack of safe space for youth sports and recreation in DC, while becoming more acute, is not new. In 2010, The CapitalSpace initiative, a partnership of the National Capital Planning Commission, NPS, and the District[1], identified a particular lack of ball fields, recreational facilities, and open space in the Northeast quadrant of the city, leading to its recommendation, among other things, that DC "develop multi-use sports complexes that can accommodate a range of sports uses, but also include new athletic fields."

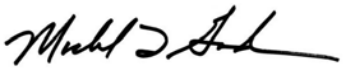
Our collective capacity to develop and operate sustainable facilities that are geographically and financially accessible to youth of all socio-economic backgrounds is critical to our mission of public service. Unfortunately, DC is still confronted with a lack of sufficient, safe, accessible, high-quality sports fields in DC, especially in the eastern

[1] https://www.ncpc.gov/plans/capitalspace/

and southern portions of our city. Addressing this issue is more important than ever given the crises over the past year. Outdoor sports and recreation can plan a key role in healing our country both socially and physically.

Thank you for the opportunity to provide this statement. Please feel free to reach out to our executive director, Anne Corbett (anne@cryspdc.org or (202) 494-7523) or me (mikeg@cryspdc.org or (703) 577-2083).

Sincerely,



Michael Godec
President

enclosure: CRYSP DC Board of Directors

CRYSP DC
making space to play

Board of Directors

Michael Godec ***President***
Advanced Resources International

Julie Serfass ***Vice President***
American Federation of Teachers

Charles Barnett ***Secretary***
DC State Little League

Thu Pham ***Treasurer***
Defenders of Wildlife

Anne Corbett ***Executive Director***
CRYSP DC

Sanju Misra ***General Counsel***
Misra Law PLLC

Alex Bearman
District Sports

Carlos Bronner
Jair Lynch Development Partners

Lisa Brooks
DC Public Schools

Dennis Chestnut
IDEA Public Charter School
Groundwork Anacostia River DC (retired)

Robert Coomber
US Environmental Protection Agency

Matt Doherty
The Trailhead Group

Spencer Dormitzer
Brentwood Arts Exchange

Claude Elliot
Quest-Act
National Football League (retired)

Anthony Francavilla
DC SCORES

Aiden Herron *Youth Member*
DC International PCS, Class of 2023

Larry Kaufer
Sports on the Hill

Elizabeth Patel
Federal Highway Administration

Amalia Proper *Youth Member*
BASIS DC, Class of 2021

Miranda Selover
National Association of Independent Schools

Jade Stone
National Real Estate Advisors

Ram Uppuluri
Committee on Housing and Neighborhood Revitalization
DC Council

ATTACHMENT 8

From: Pat & Stephen <jjshare@verizon.net>
Sent: Saturday, March 6, 2021 2:18 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] Comments - Remediation of Kenilworth Park Landfill: Feasibility Study Addendum Report and Proposed Plan

Donna_Davies@nps.gov
Donna Davies, CERCLA Project Manager
National Capital Parks - EAST
1900 Anacostia Drive, SE
Washington, DC 20020

Thank you for the opportunity to submit comments on the Remediation of the Kenilworth Park Landfill Feasibility Study, Report and Proposed Plan. As a rower with the Washington Rowing School located at Bladensburg Waterfront Park, I see the areas north of the Benning Road Bridge from a different perspective and have a strong and unique appreciation for the Anacostia River. I experience the unfortunate silt impacts from tributary and stormwater runoff causing sandbars and shoals. However, I also see the natural beauty and the exciting potential for recreational access to a scenic, urban, waterway. The remediation of the Kenilworth Park Landfill will be a positive next step in the restoration and reclamation of the Anacostia River.

The NPS' vision to restore and protect the quality and resiliency of the ecosystem while providing high quality naturalized spaces, is outlined in the Foundation Document Overview for Anacostia Park and Kenilworth Park and Aquatic Gardens. This will require re-establishment of the Kenilworth Marsh System and living shoreline, an effort which requires the collaboration among District Agencies, the National Park Service, the Environmental Protection Agency, and the Council of Governments. The National Park Service, along with these partners, has a unique opportunity to create a Riverfront Park beside the 2-mile free-flowing Kenilworth arm of the Anacostia River.

For Kenilworth Park, the coordination of remediation with restoration, recreation and access goals will determine how well and at what cost this work can be accomplished. The uplands should be prepared for recreational use for the adjacent communities while the riverfront must be returned to a thriving natural area where fishing, boating, wading and swimming can all be enjoyed. The necessary wetlands must be reestablished to support wildlife, clean the air and water, sequester carbon and enhance resiliency.

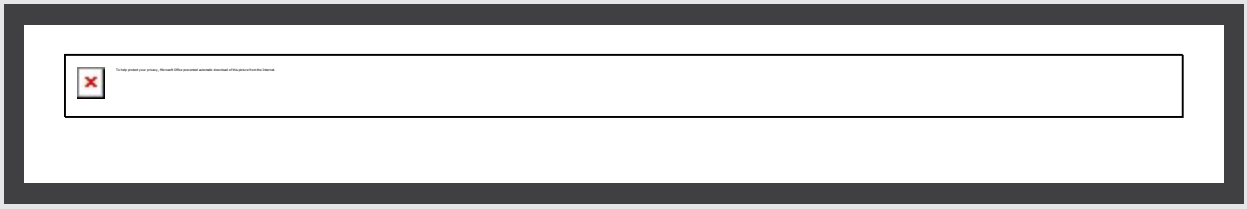
Specifically, I support the eventual removal of all landfill and overlying material in Kenilworth Park North only, as described in Alternative 5. This work can be phased as part of projects undertaken by the District to accommodate future park use. It is critical that remediation, restoration, recreation and access must be features of all this work. Planning and execution of the work along the eastern border of the Park adjacent to Anacostia Avenue should begin as soon as possible to meet community expectations. Kenilworth Park should be reestablished as a positive presence in the neighborhood as soon as possible. Removal of landfill material will contribute to reestablishment of grades which will allow reconnection of Watts Branch and the Anacostia River with their flood plain. Conducting the complete removal of landfill material in phases over time will reduce disruption of Park functions and impacts to the neighborhood. By concentrating work in discrete areas of the park this will allow material to be removed from the site at various locations.

I support the decision to preserve the quality habitat in Kenilworth Park South which resulted from past remediation efforts. The removal of the PEPCO power plant was a huge accomplishment. I hope that the adjacent PEPCO Lagoon will be included in future restoration efforts reclaiming and reconnecting valuable habitat. Any work conducted in Kenilworth Park South should include stabilization of the existing trail and bridge in order to minimize the impact of human interaction on the natural environment while protecting the safety of park visitors.

Thank you for your work and the careful remediation efforts to ensure the Anacostia River will have improved water quality while providing a scenic and ecofriendly experience for neighbors, naturalists and recreationists alike.

/s/
Patricia Jackman
5813 Lamont Drive
New Carrollton, MD 20784
jjshare@verizon.net

-----Original Message-----
From: National Capital Parks - East <nace_superintendent@nps.gov>
To: jjshare@verizon.net
Sent: Tue, Feb 9, 2021 8:25 am
Subject: Kenilworth Park Landfill Cleanup Stakeholder Update: 30-Day Extension to the Proposed Plan Public Comment Period



National Capital Parks-East

Greetings,

The National Park Service (NPS) is sending you this email to announce a 30-day extension to the Kenilworth Park Landfill Site Proposed Plan public comment period.

NPS initially provided a 90-day public comment period that began the day the Proposed Plan was released (November 12, 2020) and ended on February 10, 2021. On February 8, 2021, NPS received a request to extend the public comment period by 30 days. As required by the National Contingency Plan, NPS is extending the initial 90-day public comment period by 30 days; therefore, the new public comment period will end on March 12, 2021.

NPS will review comments received on the Proposed Plan and supporting documents (e.g., Remedial Investigation and Feasibility Study) as part of the cleanup selection process. As noted in our February 5, 2021 announcement, NPS prepared interim responses to comments received through January 2021 and posted the Interim Response to Public Comments on the Kenilworth Park Landfill Site webpage. If you are having issues accessing the documents linked above, please clear your web browser's cache and try again.

Extended Public Comment Period: The initial 90-day public comment period has been extended by 30 days and will end on March 12, 2021. A summary of NPS's responses to all significant public comments received during the comment period will be included with the Record of Decision.

Providing Your Comments: Comments on the proposed plan and the other documents contained in the Administrative Record File can still be submit to NPS in three ways:

Mail: VHB Metro DC, LLC
Attn: KPL Proposed Plan Public Comments
1001 G Street, N.W., Suite 1125
Washington, DC 20001

Email: Donna_Davies@nps.gov

Phone: (202) 359-3234 (leave a recorded voicemail message)

| NPS National Capital Parks East | 202 690 5185 | www.nps.gov/nace |

National Park Service, National Capital Parks-East,
1900 Anacostia Dr., Washington, DC 20020

ATTACHMENT 9

From: no-reply@nps.gov <no-reply@nps.gov>
Sent: Saturday, March 6, 2021 9:55 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] From NPS.gov: Kenilworth Remediation

Email submitted from: dana.mccoskey@gmail.com at /anac/learn/management/kpls.htm

Use dana.mccoskey@gmail.com to reply to this message

Category: Other

Mailing Address:
Dana
138 Thomas St NW
Washington, DC 20001
United States

March 6, 2021 Ms. Donna Davies CERCLA Project Manager National Park Service 1900 Anacostia Drive SE Washington, D.C. 20020 Re: Kenilworth Park Landfill Site Feasibility Study Addendum Report Dear Ms. Davies, I am writing to provide comments on the Feasibility Study Addendum Report for the Kenilworth Park Landfill Site. Kenilworth Park provides immense ecological value in both birds and habitats along the river and has provided me with a wealth of recreation opportunities (e.g., bike riding, walking, bird watching) and spectacular views of nature. I think it is great that NPS is working to reduce the risks to human health and the environment on this property left from the legacy pollution of the landfill. However, I did not see an alternative in the options presented that was truly visionary or would address the particular nuances of the site's current opportunities or longer-term potential to increase the ecological value and ensure equity. I urge NPS to consider a hybrid of parts of options 3 and 5 to provide the most benefits and consider the site-
wetlands in the riparian corridor would provide the longest term benefits to the people of DC. Therefore, I think NPS should focus their efforts on removing as much of the contamination as possible in Kenilworth Park North and creating new wetlands west of the track, capping lands in Kenilworth Park North east of the track, and beginning a gradual restoration of Kenilworth Park South habitat as meadows and edge woodlands that support woodcocks and other important birds. Without a hybrid solution, Alternative 3 appears to be the least worst option if agreements can be made between DC and NPS to improve the current ecological value of the property for nature and limit recreational facilities to the eastern parcels. Additionally, it would be fitting to have a memorial for the lives lost and impacted by the pollution at this site. Nearby, we already have an extensive amount of land designated for recreational use in the form of playing fields at the RFK property and in Anacostia Park. What we need more of and we cannot get back when it is gone, is nature. What I would like to see is a healthy forest or meadow filled with native plants and wildlife in the western portion of Kenilworth Park North, with a few small recreational amenities in the eastern portion of this area so that people have places to put boats in the water, take a break, play with kids, or fill up their bike tires. I would also like Kenilworth Park South to be maintained as a natural area. I think this area along the Anacostia from Kingman Island to the Arboretum is one of the most spectacular in the city for nature. I have entered data for the past three years into the Cornell Lab of Ornithology's eBird database, that show locations of woodcocks displaying in Kenilworth South as a volunteer bird walk trip leader with the DC Audubon Society. Seeing woodcocks flying up into the air at dusk is truly a sight to behold, especially in an urban setting that is also bike accessible. Further, restoration of the wetlands is an investment in our future, as it will provide us with protection from some of the worst impacts of climate change and enable DC to do it's part to provide a safeguard for species of conservation concern. On my first river trip into this area with the Anacostia River Keeper by boat, I was so impressed by the views from the water where without any built infrastructure I was inspired to take up local kayaking. In summary, this area is an absolute breath of fresh air and escape from a sometimes busy city life. It presents a major opportunity for people and nature, beyond what has been envisioned in the alternatives as written for the CERCLA feasibility study. Thank you in advance for your consideration of my comments and all the work you do for NPS. Sincerely, Dana McCoskey

ATTACHMENT 10

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1- National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

MEMORANDUM

TO: Administrative Record for the Kenilworth Park Landfill Site

FROM: Kenilworth Park Landfill Contaminated Site Team (CST):
Donna Davies, National Park Service (NPS) Project Manager
Jonathan Ordway, VHB (NPS Contractor)
Jeffrey Johnson, Department of the Interior (DOI) Legal Lead

DATE: July 15, 2022

CC: Shawn Mulligan, Lead, NPS Environmental Compliance and Cleanup Division

RE: Maryland Ornithological Society (MOS)/Montgomery Bird Club (MBC) Comments on the Kenilworth Park Landfill Site Proposed Plan

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The purpose of this memorandum is to convey responses to comments on the Kenilworth Park Landfill (KPL) Proposed Plan. This memo addresses the attached letter from the Maryland Ornithological Society (MOS) and its local chapter, the Montgomery Bird Club (MBC), submitted on March 7, 2021.

NPS notes the comments and recommendations made by MOS and MBC revolve around concerns regarding the potential impact that future remedial action may have on bird habitats currently located at Kenilworth Park. Specific comments and questions included:

- "Will the existing no-mow meadow areas be uprooted, with all vegetation removed, in order to cap with fill? This will cause a great deal of temporary (and probable permanent) loss of critical bird habitat. Even replanted, it will take years to recover. Or can the public areas, playing fields etc. be remediated without disturbing these meadows?"

- "How will the remediation affect the existing fringing shrub/vine habitat and the marsh? Ideally, this important habitat should not be disturbed."

- "KPN [Kenilworth Park North] also has several small but important wetland/pools that attract shorebirds during migration. We feel these should be left undisturbed as much as possible."

- "Are there any plans for modest improvements to this area (e.g., a paved path) that would allow safe access for birders?"

NPS Response:

The Selected Remedy does not dictate future land use of the Site. Future land use for Kenilworth Park South (KPS) is controlled by the Management Plan for Anacostia Park. The Management Plan requires KPS to be managed for natural resources recreation (i.e., maintained in a natural state for passive recreational uses, such as bird watching). A key consideration for NPS selecting Alternative 3 over the other proposed alternatives was that valued habitat within KPS will be preserved under this alternative.

NPS assessed the possible risk posed by "passive" recreational uses—such as bird watching—during the development of preliminary remedial goals as part of the feasibility study (FS) phase of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response action (documented in the 2020 FS Addendum Report). No remediation is required at KPS for low-frequency (approximately one, 1-hour visit per week, 10 months of the year over 26 years), low-intensity activities, such as bird watching. To address the frequency of visitation expected from residents of the neighborhoods who live near the park (approximately four, 2-hour visits per week, 10 months per year for 26 years), the Selected Remedy included a recommendation for either pavement or clean soil surfacing on formal trails. Off-trail exploration by birders is not expected to pose a health risk that would require mitigation, such as placement of a clean soil barrier or trail surfacing. According to the Management Plan, the only future trail to be developed within KPS will be the continuation of the Anacostia Riverwalk Trail (ART) (see Figure 2 of the Responsiveness Summary for the future ART alignment).

Congress directed NPS to transfer administrative jurisdiction of Kenilworth Park North (KPN) to the District of Columbia (District); therefore, the District will manage KPN in the future and will determine future land use. The District's comments on NPS's Proposed Plan for the Kenilworth Park Landfill Site included a preliminary land-use plan for KPN (see Attachment 24 to the Responsiveness Summary). The District's preliminary plan sets aside land for meadow habitat and for future tidal wetlands restoration along Watts Branch and the Anacostia River. To accommodate the District's preliminary plans, NPS modified the Preferred Alternative (Alternative 3) to eliminate the clean soil barrier in areas where the District intends to restore wetlands and maintain meadow habitat (see Figure 2 of the Responsiveness Summary).

Because the District's plans for KPN have not be finalized, the clean soil barrier boundaries that NPS included for KPN in the Selected Remedy are conceptual in nature and will be adjusted based on the District's final plans for KPN. These final plans for KPN will be developed during the remedial design phase (the next phase) of the CERCLA response process after issuance of the Record of Decision (ROD). These adjustments could include changes or improvements to birding habitat and visitor access to allow visitors to participate in bird-watching activities at KPN.

The District has indicated to NPS that it plans on conducting public engagement activities in 2022 to obtain public input on the future uses of KPN; therefore, members of the public are encouraged to participate in the District's planning process and provide their input through that process.

Attachment: March 7, 2021 MOS Letter

From: Gail B. Mackiernan <katahdinss@comcast.net>
Sent: Saturday, March 6, 2021 9:30 AM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] MPS/MBC Comments on Kenilworth Park remediation

Dear Ms. Davies,

I am submitting comments, attached as a PDF, on behalf of the Maryland Ornithological Society and its local chapter, the Montgomery Bird Club. I am a member of the MOS Conservation Committee and Chair of the MBC Conservation Committee.

The birding community is concerned that some of the remediation actions proposed could negatively impact this important and unique area, one of the two top birding sites in DC. Our concerns are laid out in the attached letter.

Personally, as a marine ecologist formerly with the Chesapeake Bay Program and Maryland Sea Grant, I also understand the issues of toxic exposure and leachate from the landfill site.

We hope that this environmental issue can be resolved with minimum impact on bird habitat, birds and the birding community.

If you have any questions, please feel free to contact me or Kurt Schwarz, our contact information is in the letter.

Best,
(Dr.) Gail Mackiernan
MOS/MBC

MARYLAND ORNITHOLOGICAL SOCIETY
&
MONTGOMERY BIRD CLUB

March 7, 2021

To: **Donna Davies ,** *NPS CERCLA Project Manager*

Re: Comments on Proposed Plan for the Cleanup of the Kenilworth Park Landfill Site, National Park Service, November 2020.

Dear Ms. Davies,

The Maryland Ornithological Society and its local Chapter, the Montgomery Bird Club, appreciate the opportunity to comment on the November 2020 Plan to address contamination at Kenilworth Park. MOS members are regular visitors to Kenilworth Park for birding, as it is a unique area in the region.

First, we agree that for public safety exposure to the various toxins in the former landfill site must be addressed. Further, leachate from the site contaminates groundwater, thus impacting the Anacostia River. Anything that reduces this non-point source of toxic pollution is a step in the right direction.

Second, of the proposed alternatives, the NPS selection of Alternative 3 seems to provide the best balance of protecting park users and the environment, without a massive (and expensive) engineering project.

There are however, some areas of concern to the birding community:

• KPN has a number of well-established, "no-mow" meadows that contain a mix of native and non-native grasses, forbs and shrubs. Meadow habitat is obviously a rarity in heavily developed DC. In season, these meadows support uncommon DC species such as American Kestrel, Grasshopper Sparrow and Blue Grosbeak. American Woodcocks also display here in early spring, and may stay to breed. In addition, these meadows provide important winter habitat for other uncommon bird species, including Merlin, Eastern Meadowlark, Savannah Sparrow and American Tree Sparrow. In migration, they are filled with American Pipits, Palm Warblers and the occasional rarity like Nelson's Sparrow. Regenerating “old field”, scrub and the Park’s fringing marsh are also extremely important for birds.

For this reason, Kenilworth Park is visited almost daily by birders from DC and adjacent Maryland and Virginia areas. In fact, Kenilworth Park and the adjacent Aquatic Gardens are the second most-visited eBird Hotspot in the District. [eBird hotspots are birding sites of special importance.] To date, almost 7000 eBird Checklists have been submitted for KP/KAG, and 246 species have been recorded there.

The ongoing Maryland/DC Breeding Bird Atlas Project (now in its second year) is also identifying species that breed in this important natural area. Data from just the Atlas Project's first year lists over 25 species confirmed or probable breeders in KP/KAG, including Wood Duck, Killdeer, Green Heron, Cliff Swallow, Marsh Wren and Swamp Sparrow.

Because KP is such a unique area, the birding community is naturally concerned with actions that could harm or even eliminate vital bird habitat. For example:

• Will the existing no-mow meadow areas be uprooted, with all vegetation removed, in order to cap with fill? This will cause a great deal of temporary (and probable permanent) loss of critical bird habitat. Even replanted, it will take years to recover. Or can the public areas, playing fields etc. be remediated without disturbing these meadows?

• How will the remediation affect the existing fringing shrub/vine habitat and the marsh? Ideally, this important habitat should not be disturbed.

• KPN also has several small but important wetland/pools that attract shorebirds during migration. We feel these should be left undisturbed as much as possible.

Finally, although KPS is not included in Alternative 3, this is also an important area for birds. Willow Flycatcher, Yellow-breasted Chat and Yellow Warbler all have bred here in the past and the ongoing Atlas project will provide more recent data on species occurrence. Are there any plans for modest improvements to this area (e.g. a paved path) that would allow safe access for birders?

In closing, because of the importance of KPN to birds as well as to birders, MOS would like to remain involved in review of plans as they go forward, to ensure the protection of Kenilworth Park's important living resources.

Sincerely,

Kurt R. Schwarz
Conservation Chair
Maryland Ornithological Society, www.mdbirds.org
410-461-1643
krschwa1@verizon.net

Gail Mackiernan
Conservation Chair.
Montgomery Bird Club, www.montgomerybirdclub.org
301-989-1828
katahdinss@comcast.net

ATTACHMENT 11

From: Nate Graham <nathanield.graham@gmail.com>
Sent: Sunday, March 7, 2021 5:48 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] Comments on Proposed Plan for the Cleanup of the Kenilworth Park Landfill Site, National Park Service, November 2020

Dear Ms. Davies,

I hope this email finds you well. As a resident of DC and an active birder, I appreciate the chance to comment on the plans regarding the cleanup at Kenilworth Park. Given that the park presents a unique habitat not found anywhere else in the city, it is difficult to overstate the importance of Kenilworth Park to the birds that breed and winter in DC as well as those that migrate through, and to the area's birding community -- particularly to the hundreds of birders that live in the District itself.

Of the proposed alternatives, the NPS selection of Alternative 3 seems to provide the best balance of protecting park users and the environment, without a massive (and expensive) engineering project.

There are however, some areas of concern to the birding community:

• KPN has a number of well-established, "no-mow" meadows that contain a mix of native and non-native grasses, forbs, and shrubs. Meadow habitat is a rarity in DC, and in summer, these meadows support uncommon DC species such as American kestrel, grasshopper sparrow, and blue grosbeak. American woodcocks also display here in early spring, one of only a few places that they do so in the District, and may stay to breed. In addition, these meadows provide important winter habitat for other uncommon bird species, including merlin, Eastern meadowlark, savannah sparrow, and American tree sparrow. In migration, they are filled with American pipits, palm warblers, Wilson's snipe, and the occasional rarity like Nelson's sparrow. Regenerating “old field," scrub, and the park’s fringing marsh are also extremely important for birds.

For this reason, Kenilworth Park is visited daily by DC birders like myself. In fact, Kenilworth Park and the adjacent Aquatic Gardens are the second most-visited eBird* hotspot in the District (eBird hotspots are birding sites of special importance). To date, almost 7,000 eBird Checklists have been submitted for KP/KAG, and 246 species have been recorded there, more than at any other site in the District save one. Due to KP's unique habitat, many of these species are found only at KP or a couple other sites in the District.

Because KP is such a unique area, the birding community is naturally concerned with actions that could harm or even eliminate vital bird habitat. For example:

• Will the existing no-mow meadow areas be uprooted, with all vegetation removed, in order to cap with fill? This will cause a great deal of temporary (and probable permanent) loss of critical bird habitat. Even replanted, it will take years to recover. Or can the public areas, playing fields, etc. be remediated without disturbing these meadows?

• How will the remediation affect the existing fringing shrub/vine habitat and the marsh? Ideally, this important habitat should not be disturbed.

• KPN also has several small but important wetland/pools that attract shorebirds during migration. We feel these should be left undisturbed as much as possible.

Finally, although KPS is not included in Alternative 3, this is also an important area for birds. Willow flycatcher, yellow-breasted chat, and yellow warbler all have bred here in the past. Are there any plans for modest improvements to this area (e.g. a paved path) that would allow safe access for birders?

Once again, I thank you for the opportunity to comment on Kenilworth Park's future and hope that the value of this habitat to the District's birds and birders is clear and taken into consideration as plans move forward.

Sincerely,

Nate Graham
Ward 1

*eBird, based at the Cornell Lab of Ornithology, is among the world's largest biodiversity-related community science projects, with more than 100 million bird sightings contributed annually by birders around the world and an average participation growth rate of approximately 20% year over year. eBird data document bird distribution, abundance, habitat use, and trends through checklist data collected within a simple scientific framework. Birders enter when, where, and how they went birding, and then fill out a checklist of all the birds seen and heard during the outing including estimates of the number of each species observed.

ATTACHMENT 12

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1- National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

MEMORANDUM

TO: Administrative Record for the Kenilworth Park Landfill Site

FROM: Kenilworth Park Landfill Contaminated Site Team (CST):
Donna Davies, National Park Service (NPS) Project Manager
Jonathan Ordway, VHB (NPS Contractor)
Jeffrey Johnson, Department of the Interior (DOI) Legal Lead

DATE: July 15, 2022

CC: Shawn Mulligan, Lead, NPS Environmental Compliance and Cleanup Division

RE: FoKAG Comments on Kenilworth Park Landfill Site Proposed Plan

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The purpose of this memorandum is to convey responses to comments on the Kenilworth Park Landfill Proposed Plan. This memo addresses the attached letter from the Friends of Kenilworth Aquatic Gardens (FoKAG), submitted on March 9, 2021.

FoKAG's comments expressed in the March 2021 letter are copied below.

FoKAG Comments:

The current Kenilworth Marsh, which feeds the aquatic gardens, is a fraction of the much bigger wetland system that historically occupied the east bank of the Anacostia River. The use of Kenilworth Park as a landfill between 1942 and 1970 destroyed this vibrant wetland ecology. The neighboring community was subjected to decades of toxic smoke and polluted soils and its relationship with the District's greatest natural space was severed.

The removal of all contaminated soil and the restoration of a significant portion of wetlands would be the best solution to the contamination of Kenilworth Park. This restoration would protect the community from the pollution, restore its relationship to the Anacostia River, and insulate it from the impacts of climate change. This work would restore some of the richest wetland habitats in the District of Columbia.

Kenilworth North has the most recreation potential in the area closest to the community. There is existing infrastructure that will allow for easy utilities access. It would also better accommodate ball fields. That is the easternmost side of Kenilworth North. The westernmost portion is closer to the River and should be the natural buffer to accommodate wildlife habitat and provide a more riparian area.

Should a full restoration be impossible, then the next best course of action is a version of Alternative 4 which best harnesses existing recreation infrastructure at Kenilworth North, while creating a natural buffer to accommodate wildlife habitat and restore the riparian areas along the Anacostia River.

Alternative 4, with additional emphasis on stormwater management features, wetlands and trails would provide the best outcomes for the community and environment. The focus should be on removing the maximum amount of contaminated material, rather than simply covering it. The decisions made today should not restrict the District's options when it comes to the restoration of the Anacostia River shore and wetlands adjacent to Watts Branch and Kenilworth Marsh. Native trees should not be removed, and clean soil used. Kenilworth Park South should be retained as a natural area with minimal capping.

NPS Response:

NPS understands and appreciates FoKAG's preference for landfill removal over the proposed placement of a clean soil barrier. However, as described in the Proposed Plan and the 2020 Feasibility Study Addendum Report, NPS must evaluate each remedial alternative against the nine criteria described in Section 300.430(e)(9)(iii) of the Comprehensive Environmental Response, Compensation, and Liability Act's (CERCLA's) implementing regulations, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

The NCP divides the nine criteria into three categories: threshold criteria (criteria one and two), balancing criteria (three through seven), and modifying criteria (eight and nine). One of the five balancing criteria is cost; the other four are referred to as "non-cost balancing criteria." Alternative 5 was deemed to be relatively ineffective (compared with the other alternatives) on the non-cost balancing criterion of short-term effectiveness because implementation of Alternative 5 would take significantly longer to complete than the other alternatives. Alternative 5 failed to meet the additional requirement of cost-effectiveness set forth in CERCLA Sections 121(a) and 121(b)(1), and Section 300.430(f)(1)(ii)(D) of the NCP. Because the cost of landfill excavation, disposal, and revegetation is so much higher than the installation of a clean soil barrier, an alternative of partial landfill removal (removing waste only in certain areas of the Site) would also fail to meet the cost-balancing criterion.

NPS also appreciates the value of restoring tidal wetlands. However, wetland restoration is not required to (1) address the risk to human health or the environment posed by the release of hazardous substances, pollutants, or contaminants at the Site or (2) comply with applicable or relevant and appropriate requirements (ARARs). Restoration may occur as part of a Natural Resources Damage Assessment (authorized under CERCLA), or through other programs.

In its comments on the Proposed Plan, the District of Columbia (District) Department of Energy and Environment (DOEE) indicated that the District intends to restore tidal wetlands in an approximate 18-acre area of Kenilworth Park North (KPN) and preserve meadow habitat in approximately 3 acres (see Responsiveness Summary Attachment 24). To accommodate the District's preliminary plans, NPS modified the Preferred Alternative (Alternative 3) to eliminate the clean soil barrier in areas where the District intends to restore wetlands and meadow habitat (see Figure 2 of the Responsiveness Summary).

Because the District's plans for KPN have not been finalized, the clean soil barrier boundaries that NPS included for KPN in the Selected Remedy are conceptual in nature and will be adjusted based on the District's final plans for KPN. These plans will be finalized during the remedial design phase (the next phase) of the CERCLA response process after issuance of the Record of Decision (ROD).

The District has indicated to NPS that it plans on conducting public engagement activities in 2022 to obtain public input on the future uses of KPN; therefore, members of the public are encouraged to participate in the District's planning process and provide their input through that process.

NPS's Selected Remedy will maintain Kenilworth Park South (KPS) as a natural area, which FoKAG indicated as their preferred use for KPS.

Attachment: March 9, 2021 FoKAG Letter

From: Justin Lini <jljlini@gmail.com>
Sent: Tuesday, March 9, 2021 7:41 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: Elizabeth Curwen <elizabeth.curwen@gmail.com>; tina@fokag.org <tina@fokag.org>; Mikeska, Gretchen (DOEE) <gretchen.mikeska@dc.gov>; nick.kushner@dc.gov <nick.kushner@dc.gov>
Subject: [EXTERNAL] Submission of Comments - Kenilworth Park Landfill Site Feasibility Study Addendum Report

Ms. Davies;

Good evening. I hope this note finds you well. I'm writing on behalf of the Friends of Kenilworth Aquatic Gardens to file our comments for the Kenilworth Park Landfill Site Feasibility Study Addendum Report.

Please let me know if you have any questions at all. Until later, have a pleasant evening.

Justin A. Lini
MA , International Peace and Conflict Resolution
(202) 768-8019
www.justinlini.com
LinkedIn
On Twitter at @NE_DC_11

Friends of Kenilworth
AQUATIC GARDENS

9 March, 2021

Ms. Donna Davies
CERCLA Project Manager
National Park Service
1900 Anacostia Drive, SE
Washington, D.C. 20020

Re: Submission of Comments - Kenilworth Park Landfill Site Feasibility Study Addendum Report

Dear Ms. Davies;

Thank you for the opportunity to provide feedback on the remediation of Kenilworth Park. The Friends of Kenilworth Aquatic Gardens is a 501c3 nonprofit organization that connects people to the park through stewardship, engagement, and educational programs. We envision aquatic gardens that inspire. Our work connects the community to nature in their backyard through summer camps, volunteer projects, and stewardship of the gardens. The aquatic gardens occupy the area immediately north of Kenilworth Park North. Like all members of the community, the long-term health of Kenilworth Aquatic Gardens will be impacted by the decisions made in the remediation of Kenilworth Park.

The current Kenilworth Marsh, which feeds the aquatic gardens, is a fraction of the much bigger wetland system that historically occupied the east bank of the Anacostia river. The use of Kenilworth Park as a landfill between 1942 and 1970 destroyed this vibrant wetland ecology. The neighboring community was subjected to decades of toxic smoke and polluted soils and its relationship with the District's greatest natural space was severed.

The removal of all contaminated soil and the restoration of a significant portion of wetlands would be the best solution to the contamination of Kenilworth Park. This restoration would protect the community from the pollution, restore its relationship to the Anacostia River, and insulate it from the impacts of climate change. This work would restore some of the richest wetland habitats in the District of Columbia.

Kenilworth North has the most recreation potential in the area closest to the community. There is existing infrastructure that will allow for easy utilities access. It would also better accommodate ball fields. That is the easternmost side of Kenilworth North. The westernmost portion is closer to the River and should be the natural buffer to accommodate wildlife habitat and provide a more riparian area.

Office: 1212 Quincy St NW
Washington, DC 20011
The Gardens: 1550 Anacostia Ave NE
Washington, DC 20019
202-494-0456
kenaqgardens.org

Friends of Kenilworth
AQUATIC GARDENS

Should a full restoration be impossible, then the next best course of action is a version of Alternative 4 which best harnesses existing recreation infrastructure at Kenilworth North, while creating a natural buffer to accommodate wildlife habitat and restore the riparian areas along the Anacostia River.

Alternative 4, with additional emphasis on stormwater management features, wetlands and trails would provide the best outcomes for the community and environment. The focus should be on removing the maximum amount of contaminated material, rather than simply covering it. The decisions made today should not restrict the District's options when it comes to the restoration of the Anacostia River shore and wetlands adjacent to Watts Branch and Kenilworth Marsh. Native trees should not be removed and clean soil used. Kenilworth Park South should be retained as a natural area with minimal capping.

The Friends of Kenilworth Aquatic Gardens supports the additional option, as per the letter sent on January 5, 2021, and supports the AWCAC position.

Thank you again for the opportunity to contribute to this most important work.

Sincerely;

Elizabeth Curwen
Board Chair,
Friends of Kenilworth Aquatic Gardens

Cc: Gretchen Mikeska (DOEE), Nick Kushner (DPR)

Office: 1212 Quincy St NW
Washington, DC 20011

The Gardens: 1550 Anacostia Ave NE
Washington, DC 20019

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ATTACHMENT 13

From: Handsfield, Will (DDOT) <William.Handsfield2@dc.gov>
Sent: Wednesday, March 10, 2021 10:17 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] Kenilworth Park Comments

Donna,

I'm pleased to offer these comments on Kenilworth Park's development plan in my personal capacity.

First, I am a regular user of the park, and probably visit it either specifically for park activities, or to pass through it at least 6 times per week. One or more members of my family are usually with me, and our typical activities are birding, playing frisbee or ball in a field, bicycling to or through the area, running, and picnicking. In particular, I've come to realize Kenilworth Park has a great diversity of interesting birds, and just in the past two weeks, my son and I have been to the section between Dean Ave and the ART (near Benning Trash Transfer station) to look at the American Woodcocks that do display flights at dusk – a new bird for us both. We also enjoy watching beavers in the Anacostia and Watts Branch, and I have paddled past this whole area multiple times in the river to look at wildlife.

Here is what I think is important for the park to maintain

- The open fields and meadows with some of them left unmowed and as wildlife habitat. In particular, some pools/ponds have formed on the top of the landfill sections, and those are popular with birds of different types.
- The woodland edges along the meadows are great habitat for deer, birds, and other creatures that always make the park special with unexpected sightings.
- The wonderful environment for bicycling, running, and walking, with lots of space, wide paths (some currently old, disconnected roads), and great views.
- 24/7 public access throughout the park, including all areas north of the trash transfer station, and south of Kenilworth marsh.

Here is what I think is important for the park to add:

- The informal bike path between the trash transfer station through Kenilworth Park should be improved to around a 16' trail width with maybe 2' on either side of crushed gravel surface. It's a very popular route, and would potentially host thousands of users per day when the park is improved. There should be space for walking, running, and biking to accommodate different speeds and people walking side by side.
- The bike path should link up with the future Arboretum bridge as directly as possible.
- Access to the park from the Mayfair neighborhood along Hays and Jay Streets. There used to be a park "hiker/biker" access point there, there is still an opening in the fence, but the honeysuckle has overgrown the trail and it is currently impassable. Please add this back.
- A hiker/biker path along Watts Branch + benches at overlooks to allow for strolling and sitting along the creek.
- Working bathrooms at some point in the park, perhaps at the parking area or near the track. Bathrooms should be open from 7 AM until at least 7 or 8 PM
- Areas of seating for picnics and gatherings (birthdays, etc)
- A kayak/small boat dock along the Anacostia so people in small watercraft can access the park via the river.
- A Kenilworth marsh viewing area along the north side of the park. There is an informal one now that looks like it is used at night for either camping or partying, it should be formalized and cleaned up.

Here is what I think the park should manage differently:

- Dean Ave might work better as a park road if it terminated further to the east, perhaps near the current ART crossing, leaving most of the park car free. Converting the rest of the current road into a very wide sidewalk extension along the existing alignment could then act as a sort of main promenade through the park that would be wonderful for most users.
- A central parking lot to host maybe 30 cars at the (new) terminus of Dean Ave
- People like the wide open fields for letting their dogs be off-leash. I am not a dog owner, and am extremely critical of how frequently dogs are off leash in other NPS parks, but I believe there is enough space for perhaps one large section of the fields to allow off-leash dogs.
- I think we can have fewer total sports fields, and maybe those that remain should be on the eastern edge of the site that is more accessible to cars, while the western fields could just be open meadow nearer to the bike path and river.
- The bush honeysuckle and Bradford pear trees in the park are invasives, and crowd out native species that would better support bird and animal life. NPS should work with DOEE to develop and implement a comprehensive invasive plant management plan for the Anacostia basin.

Here is what I think the park should restrict:

- Restrict motorbikes and other motorized vehicles from accessing most of the park. Right now, it's become kind of a gravel/pothole training ground for people with touring motorcycles and dirt bikes, and I've watched them tear around the grass field/meadow as they practice taking their motorcycles through shallow ponds, ruts, and potholed roads – this should be stopped as it damages the field/meadow and worsens the road conditions. I've also seen people use cars to bring in huge speakers to do some sort of sound competition I didn't quite understand, and that disrupted all the other park users from enjoying the peace and quiet of the area.
- For any sports fields that remain, please resist the pressure to turn them over to organized leagues, and instead keep them open for general community use at all or most times.

I really appreciate this park, and am grateful for the opportunity to share my views on the development plan. Thanks for your work on this, and we can't wait to see the upcoming plans.

Will Handsfield, AICP
Bicycle Program Specialist

Planning & Sustainability Division
District Department of Transportation
55 M Street SE, Suite 500
Washington, DC 20003

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ATTACHMENT 14

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1- National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

MEMORANDUM

TO: Administrative Record for the Kenilworth Park Landfill Site

FROM: Kenilworth Park Landfill Contaminated Site Team (CST):
Donna Davies, National Park Service (NPS) Project Manager
Jonathan Ordway, VHB (NPS Contractor)
Jeffrey Johnson, Department of the Interior (DOI) Legal Lead

DATE: July 15, 2022

CC: Shawn Mulligan, Lead, NPS Environmental Compliance and Cleanup Division

RE: Pepco Comments on Proposed Plan Related to Surface Water Sediment
Kenilworth Park Landfill Site Proposed Plan

The purpose of this memorandum is to convey responses to comments on the Kenilworth Park Landfill (KPL) Proposed Plan received from the Potomac Electric Power Company (Pepco). Pepco submitted comments in a letter dated March 12, 2021, which is included with this memorandum as Attachment A. Comments were related to surface water sediment quality conditions adjacent to KPL in the Anacostia River, Kenilworth Marsh, Watts Branch, and the Unnamed Tributary to Watts Branch (Unnamed Tributary).

Pepco's comments express the opinion that the KPL remedial investigation (RI) did not sufficiently assess the potential contribution of contaminants from KPL found in off-Site surface water sediment. Pepco expressed its opinion that historical waste disposal in the landfill and subsequent runoff from contaminated landfill cover materials, as well as existing surface soil and shallow groundwater conditions, are likely sources of sediment contamination and should be investigated further.

As stated in the RI Addendum Report (JCO, 2019a), NPS concluded no evidence was found to confirm that contaminants from KPL are currently migrating into surface water sediments and causing an unacceptable exposure risk. As noted in the 2012 Kenilworth Feasibility Study (NPS, 2012), the concentration trends of contaminants found in sediment from upstream to downstream locations adjacent to KPL do not provide evidence to suggest that KPL is a significant source.

NPS has identified multiple potential historical sources of sediment contamination other than KPL including:

- Documented releases of polychlorinated biphenyl (PCB)-containing oil at the Pepco Benning Road Facility in an area that drains to the municipal separate storm sewer system (MS4) and discharges into the Unnamed Tributary, Watts Branch, and ultimately the Anacostia River.
- Releases from undocumented source(s) of PCBs to Watts Branch approximately 2 miles upstream of KPL.
- Placement of sediment from the Anacostia River in Kenilworth Marsh during the marsh restoration project in the 1990s.

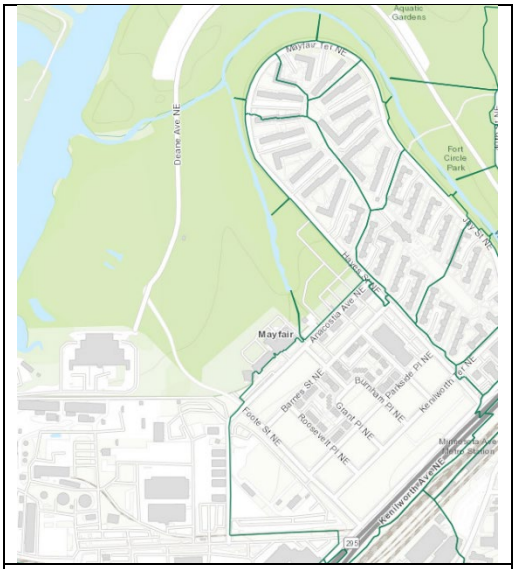
MS4 Outfall to Unnamed Tributary

NPS recognizes that impacts to sediment quality from historical waste disposal practices, or from stormwater runoff prior to revegetation at KPL, cannot be ruled out; however, other sources (e.g., releases at the Pepco Benning Road Facility) are likely to have had a more significant impact on sediment quality than KPL. Furthermore, any historical releases from the landfill that are no longer ongoing would not require any further response action at KPL and are therefore irrelevant to the remedy selection for this Site.

The sections below include NPS's research conducted after receiving Pepco's March 12, 2021 comment letter (Section 1.0), NPS's responses to specific comments from the letter (Section 2.0), and conclusions based on the research and responses to comments (Section 3.0). References cited in this memorandum are listed in Section 4.0. Text quoted directly from Pepco's March 2021 comment letter are presented in italics in the following sections.

1.0 DOCUMENTED RELEASES OF PCB-CONTAINING OIL AT PEPCO BENNING ROAD FACILITY

NPS conducted research following the receipt of the March 12, 2021 comment letter from Pepco. NPS's research revealed a previously unidentified pathway for the migration of PCB-containing oil from the Pepco Benning Road Facility through the MS4, which discharges through an outfall pipe into the Unnamed Tributary (see image to the right, which shows that the triangular area southwest of Foote Street NE is within the Pepco Facility). A PCB Source Tracking Report (MACTEC, 2010) for the Pepco Facility identified four stormwater outfalls (005, 014, 015, and 401) within the northeast area of the facility that discharge to the municipal storm sewer. Stormwater drainage areas shown on figures in the February 2020 Pepco RI Report (AECOM, 2020) confirm that this area, which is referred to as the Substation No. 7 area, drains to the MS4 outfalls. Research conducted by NPS indicates the municipal storm sewer has been in place and was likely receiving stormwater runoff from the area since the 1940s.



MS4 Sewer Shed – Unnamed Tributary

A 1988 Pepco document describes soil sampling and analysis for PCBs in the Pepco RI "Target Area 7 – 1988 Parking Lot Cleanup Area," which is adjacent to Benning Substation No. 7 (Pepco, 1988). The document indicates the area was "used previously as a storage area for off-line transformers," where there had been "instances of minor oil spills resulting from leaking equipment." The 1988 document also indicated the presence of an exterior concrete pad in this area that was "used to prepare PCB capacitor banks for disposal." Soil sampling in the parking area and specifically around the concrete pad identified PCB concentrations in soil as high as 140,000 micrograms per kilogram (µg/kg) (Pepco 1988).

Documentation reviewed by NPS suggests practices that resulted in releases of PCB-containing oil occurred over a period from the mid-1960s to the late 1980s and that the MS4 network has been in place since the 1940s. Therefore, there is a high probability that PCB-containing oils were carried for decades with stormwater into the storm sewer and ultimately to the Unnamed Tributary, Watts Branch, and the Anacostia River. These findings are consistent with sample analytical results confirming that elevated concentrations of PCBs were found in sediment just downstream of the MS4 outfall (238 µg/kg and 472 µg/kg), which is located at the headwater to the Unnamed Tributary.

The concrete slab and surrounding soil were removed from the Substation No. 7 area in 1988, and the area was subsequently paved. It is reasonable to conclude that migration of PCB-containing oil from the MS4 outfall is a more significant source for PCB contamination in sediment in the Unnamed Tributary, and areas downstream, than KPL.

2.0 PEPCO COMMENTS

Pepco's comments are provided in the attached letter dated March 12, 2021 (Attachment A). In addition to the various Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) milestone documents, Pepco's comments refer to the Interim Responses to Comments that were provided by NPS during the 120-day public comment period (90-day original period with 30-day extension), included with this memorandum as Attachment B. In the comment document, Pepco asserts the following:

[The National Park Service (NPS)] has not adequately investigated and evaluated the contribution to existing contamination in river sediments in areas adjacent to the KPL site (and possibly further downstream as well) attributable to historical waste disposal operations at the site and subsequent runoff from contaminated cover materials as well as to existing surface soil and shallow ground water conditions. As a result, the Proposed Plan includes no remedial action to address contaminated sediments.

… This is a major deficiency that must be addressed in a supplemental RI/FS before any final remedial action can be selected for the site. … The necessary supplemental RI/FS for site sediment need not delay remedial action on the landside. The Park Service could designate sediments as an additional operable unit for which remedial action will be evaluated in a supplemental RI/FS conducted in parallel with the landside remedial actions outlined in the Proposed Plan.

Pepco provides six specific comments to support its assertions, some of which have multiple parts (see Attachment A). The key points raised in the comments are summarized or paraphrased below, along with NPS responses.

2.1 Comment 1: The Park Service has improperly excluded the sediments in the adjacent surface waters in delineating the KPL "site" addressed by the RI/FS and Proposed Plan.

In this comment Pepco refers to the CERCLA definition of a "facility" as, "*that portion of a facility that includes the location of a release (or releases) of hazardous substances and wherever hazardous substances have come to be located*," and thus "*the extent of a site is not limited by property boundaries*" (EPA, 1996). Pepco contends "*that there is strong evidence that PCBs released at the KPL site 'have come to be located' in sediments in the Anacostia River and other connected surface water bodies adjacent to the site*" and they suggest that additional investigation of sediment is required.

As explained further in Attachment C (Legal Context for Defining the KPL Site Boundaries), Pepco's interpretation of how a site should be defined fails to acknowledge NPS's discretionary authority to establish site boundaries for investigation and response actions. With regards to sediment in the Anacostia River, there is no rational basis for extending the KPL Site boundaries such that they would overlap with the Anacostia River Sediment Project (ARSP) Site that was investigated and will be remediated by the District of Columbia (District) Department of Energy and Environment (DOEE). NPS agrees, however, that additional investigation and potential response actions are necessary for sediment in the Unnamed Tributary and Watts Branch.

Pepco's assertion in this comment contradicts conclusions that were presented by NPS in the 2012 Feasibility Study (FS) Report, which indicates there are multiple sources of contaminants in sediment and that "the data do not indicate an overall impact from the Site on sediment in the Anacostia River, the Watts Branch, or Kenilworth Marsh…" (NPS, 2012). These conclusions were based on the absence of a clear trend when comparing concentrations of contaminants in sediment samples collected from upstream to downstream locations. The 2012 FS Report includes a caveat, however, that "the available sediment data were from samples collected during different investigations at different times. Therefore, the confidence in conclusions drawn from these upstream-downstream data plots created by combining data from different time frames is somewhat reduced" (NPS, 2012).

NPS acknowledges that a more robust data set may further strengthen the conclusion that KPL is not a significant source of contaminants in sediment, particularly within Watts Branch and the Unnamed Tributary. There are several lines of evidence indicating that significant sources of sediment contamination are located upstream of the landfill in Watts Branch and the Unnamed Tributary. There are also significant sources of contaminants to the Anacostia River sediments other than the landfill that impact sediment quality near KPL; contaminated sediment migration from the Anacostia River into the tidal zone of Watts Branch is likely to have occurred from tidal action and storm surges.

The contaminants present in the buried waste and surface soils (primarily PCBs, polycyclic aromatic hydrocarbons [PAHs], and lead) are found at relatively low concentrations in most of the land-side samples collected from KPL. As indicated in the 2019 RI Addendum Report (JCO, 2019a), no evidence has been found to confirm that groundwater migration of these contaminants is a significant transport pathway. If PCBs, PAHs, or lead from the landfill came to be located in sediment, the pathway would have been through sediment transport with runoff or by direct deposition when the landfill was active. As the landfill operations were discontinued in 1970 and the land surface is currently stabilized with mature vegetation, there are few likely pathways for ongoing contaminant migration from KPL to surface water.

In the comment letter dated March 12, 2021, Pepco asserts:

There is no legal or scientific basis for the Park Service to ignore contaminated sediments adjacent to the KPL site. The remedial investigation and evaluation of remedial alternatives for the site should be

expanded to include the areas of contaminated sediment adjacent to the site in accordance with EPA guidance and consistent with the approach taken at other sites along the river.

As noted above, the Anacostia River sediments adjacent to the KPL Site have already been investigated and will be remediated by DOEE as part of the ARSP. As explained in Attachment C, there is no legal requirement or defensible rationale to expand the boundaries of the KPL Site to include areas that are also within the ARSP Site. However, additional investigation and response actions are appropriate to address (1) the previously referenced releases of PCB-containing transformer and capacitor oils in Pepco's Substation No. 7 area (Pepco, 1988), which drains to the MS4 sewer-shed and (2) documented releases of PCBs upstream and outside the influence of either the KPL or Pepco Sites.

The highest concentration of total PCB congeners found in Watts Branch (1,020 µg/kg) was detected in a sediment sample collected approximately 2 miles upstream of KPL. Concentrations of total PCB congeners in the samples collected immediately downstream of this location were 84 µg/kg, 63 µg/kg, 50 µg/kg, and 22 µg/kg, suggesting a pattern of downstream migration from a significant source. NPS documented these findings in the 2019 Tributary Study Report (JCO, 2019b), which NPS conducted to support development of anthropogenic background/reference concentrations for contaminants of concern (COCs) established by the ARSP. Although several variables can dictate how PCB concentrations are distributed in sediment and multiple potential sources of PCBs are present in urban watersheds, these analytical results demonstrate that significant sources of PCBs upstream of KPL are likely contributing to the conditions identified downstream.

Some of the higher concentrations of PCBs found in sediment were detected in samples collected near the confluence of Watts Branch with the Anacostia River. This area is tidally influenced, and it is likely that PCB-containing sediment has migrated from the Anacostia River into the tidal zone of Watts Branch. In addition, the Unnamed Tributary discharges into this tidal zone of Watts Branch, adding a potential source of PCB contamination that may be sourced from historical releases from the Pepco Benning Road Facility.

The existing analytical data indicate multiple sources of contamination upstream of the KPL Site. NPS does not agree that the KPL Site boundaries should be extended beyond the landfill limits. However, NPS concurs that collection of additional samples from the Unnamed Tributary, Watts Branch, and Kenilworth Marsh is warranted to provide data that will allow a more complete assessment of sediment quality. NPS further agrees that it would be useful to collect additional samples along migration pathways where overland flow from the landfill would discharge into adjacent surface water (probable points of entry).

2.2 Comment 2: The Park Service's claim that the KPL Site is not a source of sediment contamination is contradicted by the data.

The 2012 Feasibility Study Report (NPS, 2012) includes an analysis of sediment data that were collected during multiple sampling events over a relatively long period of time. NPS concluded that the concentrations of various contaminants (PAHs, PCBs, and lead) found in sediment samples collected in the vicinity of the Site did not indicate an overall impact from COCs at the Site. This conclusion was based on an analysis of an upstream-to-downstream sample concentration trend that implied other sources may be impacting sediment quality in the vicinity of the KPL Site (i.e., stormwater discharges and deposition of contaminated sediment in the Anacostia River that suspends and deposits sediment through tidal fluctuations and storm surges).

In the analysis and conclusions section of the KPL 2012 FS Report, NPS makes the point that (1) there are multiple sources of the contamination in the sediment within the Anacostia River, Watts Branch, the Unnamed Tributary, and Kenilworth Marsh and that (2) the concentrations of contaminants in sediment near the KPL Site do not suggest KPL is the primary source of these contaminants.

Pepco indicates in its comment letter that, "*Nowhere does NPS consider what other possible source may account for these high concentrations of PCBs in the unnamed tributary of Watts Branch, which borders the eastern boundary of KPS approximately 0.3 miles upstream of the confluence of Watts Branch and the Anacostia River.*" As noted above, uncontained releases of PCB-containing oil from transformers and capacitors on the Pepco Site and transmission through the storm sewer was potentially a significant source of the PCBs found in the sediment from the Unnamed Tributary and Watts Branch.

Pepco's statement continues: "*Nor does NPS anywhere evaluate risks to human health or ecological receptors associated with site sediment concentrations that are far in excess of the Preliminary Remediation Goal of 65 ug/kg derived by DOEE for the ARSP Interim Record of Decision.*" NPS did not evaluate those risks because those areas of contaminated sediment are outside of the Site, and the evidence suggests that KPL is not the primary source of sediment contamination found adjacent to the landfill. NPS agrees that additional assessment of sediment quality and potential exposure risk is warranted.

NPS disagrees with Pepco's statement that, "*NPS effectively ignored significantly elevated PCB concentrations in multiple sediment samples on all sides of the site based on conclusory and unsupportable claims that the KPL site is not the source.*" As noted in the interim response to comments (Attachment B), NPS acknowledges that KPL could have contributed to sediment contamination in the past; however, without addressing other sources (e.g., the Pepco Substation No. 7 area and upstream releases to Watts Branch), NPS could not distinguish that historical contamination from KPL from other, likely more significant sources.

Consistent with the information presented above, NPS disagrees with Pepco's assertion that, "*the most likely source of PCBs in sediment adjacent to the KPL site … is the historical burning and disposal of waste at the site.*" With its comments, Pepco included a tabulation of historical subsurface soil and waste sampling data compiled from various KPL investigation reports. Pepco's tabulation, which is consistent with NPS records, shows that, other than one outlier sample of waste from the middle of Kenilworth Park South (KPS), the highest concentration of PCBs found in the waste material was 2,720 µg/kg. PCBs were not detected in 34 of the 106 subsurface samples analyzed for PCB Aroclors. When removing the outlier concentration (93,000 µg/kg), the average total PCB Aroclor concentration in subsurface soil and waste was 418 µg/kg. Conversely, multiple samples reported in the 1988 Pepco document for the Substation No. 7 area detected PCB Aroclor concentrations in the range of 5,000 µg/kg to 140,000 µg/kg (the soil cleanup level identified at the Pepco Site in 1988 was 10,000 µg/kg, which was 154 times higher than the ARSP sediment cleanup goal). As previously discussed, stormwater flowing across the Substation No. 7 area discharged through the MS4 directly into the Unnamed Tributary. In addition, PCBs present in the waste are more likely to be bound to solids and less mobile once buried, whereas PCBs in transformer and capacitor oils released to the ground surface without containment can be more readily mobilized into the stormwater collection systems and ultimately to surface water sediments.

Pepco noted in this comment that KPL "*waste disposal activities involved direct disposal of waste into surface waters and marshes at the site, and also resulted in uncontrolled runoff to the surrounding water bodies from areas filled with waste (and later with contaminated construction debris)*." In the various KPL remedial investigation reports, NPS acknowledged that the former recreational lakes and associated low-lying areas were filled with landfill waste and that waste may have been disposed along the current bank of the Anacostia River and Kenilworth Marsh where there were inlets from these water bodies to the recreational lakes. However, if KPL was the most significant source of sediment contamination in the area, there should be significantly higher concentrations near KPL when compared with upstream reference concentrations. As noted above, the 2012 FS Report (NPS, 2012) included comparisons of upstream-to-downstream sediment sample concentrations and concluded the results do not identify a clear pattern. Nevertheless, NPS agrees that additional study and potential response actions are warranted in areas that are not included within the Pepco, KPL, or ARSP Sites.

Pepco noted that one of the sediment samples collected during the ARSP Tributary Study (JCO, 2019b) from a location adjacent to KPL (sample WB-01) had the highest concentration of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) toxicity equivalence (TEQ) observed in the tributary study (24.61 picogram per gram [pg/g]). Pepco indicates that, "*the presence of elevated dioxins in sediment and soil samples across the landfill property is consistent with the historical practice of open burning of municipal waste and disposal of incinerator ash in the landfill. The open burning of municipal waste is known to be a significant source of dioxins and furans (EPA, 2006).*"

Insufficient data are available to support Pepco's claim that concentrations of dioxins and furans are elevated in soil and sediment "across the landfill property." Open burning was discontinued in 1968 and the landfill was covered with soil from off-Site sources in 1970; therefore, mobilization of waste containing dioxins and furans would require excavation, which is, and will remain, restricted at the Site. The groundwater sampling and analysis performed as part of the supplemental groundwater study and in subsequent confirmatory sampling, did not identify evidence that dioxins or furans are migrating in groundwater to the degree that they would pose an unacceptable exposure risk.

Sample WB-01, referenced in Pepco's comment, was a surface sediment sample, and the conditions in that sample are more likely to reflect recent accumulation of sediment. Additional investigation of dioxins and furans in sediment may be warranted; however, such an investigation would require a rigorous assessment of dioxins and furans as a background condition. Dioxins and furans are commonly found in urban environments due to atmospheric fall-out from coal-fired power plant emissions and other sources (EPA, 1997; American Lung Association, 2011). Dioxins and furans have been identified in multiple background studies within and near the District and the presence of these chemicals in sediment near the KPL Site may not be elevated above background concentrations.

2.3 Comment 3: Multiple lines of evidence indicate that historical waste disposal operations at the KPL Site contributed PCBs to sediments in adjacent surface waters.

Comment 3 is four pages long and is broken into three sub-sections. The first section reiterates Pepco's assertion that PCBs present in the KPL waste material is evidence that the buried waste and historical waste disposal practices explain the elevated PCB concentrations found in surface water sediment near the KPL Site. As noted in prior responses, there are multiple likely sources of PCBs that have come to be located in sediment within the Unnamed Tributary, Watts Branch, and the Anacostia River. Concentrations of PCBs found in soil on a portion of the Pepco Site that drains to the storm sewer system feeding the Unnamed Tributary prior to removal in 1988 were significantly higher than the concentrations detected within KPL landfill soil and waste. In addition, PCB-containing oils released to the ground surface without containment at Pepco were more likely to migrate than the PCBs bound to waste and soil in the landfill.

The second section of this comment claims that surface water runoff from the two landfill areas (KPS and Kenilworth Park North [KPN]) are likely sources of PCBs in sediment because PCBs were detected in surface soil samples and erosive conditions were present on the landfills before vegetative cover was well established. Pepco also quotes statements made in the 2000 Preliminary Assessment/Site Investigation (PA/SI) Report (E&E, 2000) for KPS that the detection of PCBs in sediment pond samples were evidence of contaminant migration from surface soils. As noted above, the migration of PCBs into surface water from landfill cover materials is likely to be less significant than the migration of PCBs from other sources (e.g., spilled transformer and capacitor oils). The conclusions drawn in the 2000 PA/SI Report were based on limited data and involved a degree of speculation. Accordingly, additional assessment of soil and sediment quality at KPL and in upstream locations would help clarify the origin of PCBs detected in surface water sediment.

The third section of this comment refers to the distribution of PCBs in Anacostia River sediment samples collected near the KPL Site. Pepco claims that higher concentrations of total Aroclors in those samples are evidence that KPL is a significant source. These assertions of attribution based solely on proximity discount the hydrodynamic conditions in the Anacostia River that govern the mobilization and deposition of sediment. The ARSP identified sediment contamination in the vicinity of KPL as being from "undifferentiated sources." As NPS indicated in the interim response to comments (Attachment B), the Site limits of the ARSP extend to the mean high-water level on the eastern bank of the Anacostia River, which generally abuts the limits of the KPL Site. Although no clear evidence exists to confirm that contaminants from KPL extend into the Anacostia River, additional investigation may be warranted for purposes of attribution.

2.4 Comment 4: Inadequate Evaluation of Site Surface Soil

In this comment, Pepco summarizes surface soil data and findings from prior investigation activities and presents several arguments to support its opinion that the evaluation of surface soil at KPL was inadequate. The arguments embodied in this comment ignore the context within which the data and findings were originally presented. Pepco's comments, along with NPS's responses, are summarized below.

- Pepco points out that no additional characterization of surface soil at KPN was performed as part of RI Addendum activities, implying this is a potential data gap. NPS implemented an incremental sampling method (ISM) program to assess surface soil quality at KPS as part of the RI Addendum. This supplemental sampling was performed because a different future land use had been proposed for KPS since completing the 2008 RI. The updated land use is established in the 2017 Anacostia Park General Management Plan (NPS, 2017) and calls for leaving KPS in its current natural state (i.e., zoned as Natural Resource Recreation). NPS also recognized that the prior areal coverage of surface soil sampling and analysis for PCBs was limited and that additional data were required to assess potential human health exposure risks under the updated future land use scenario. Conversely, NPS determined in the 2007 RI that the concentrations of surface soil at KPN were unacceptable for the intended future land use, which is currently assumed to remain the same. The future land use at KPN involves organized sport and recreation/community activities and special events. From a human health risk assessment perspective, these are considered high-intensity and high-frequency activities. Therefore, NPS concluded that additional sampling at KPN would not change the conclusion that remedial measures would be required.

- Pepco notes that PCB Aroclors were detected in most of the ISM sampling units (SU) with detected concentrations ranging from 14 µg/kg to 1,400 µg/kg. Pepco contends that the widespread detection of Aroclors in the ISM samples suggests that Aroclors have a high potential to migrate into surface water. NPS does not agree with this conclusion, and provides additional information below:

    - To provide additional context: 95% of the total PCB concentrations in each SU were less than 1,000 µg/kg; 82% were less than 500 µg/kg; and, 39% were less than 100 µg/kg. When compared against the concentrations of PCBs detected in soil at the Pepco Site where the cleanup level was 10,000 µg/kg, the concentrations detected at KPS are low.

    - As shown on Figure 1, three of the KPS SUs where total PCB Aroclor concentrations were elevated relative to the other SUs (ISM-1, ISM-2, and ISM-3) are within the floodplain of the Anacostia River and Watts Branch. The concentrations of PCB Aroclors in the nearest ISM SUs upgradient of that floodplain area (ISM-8, ISM-12, ISM-18, and ISM-26) were significantly lower. Sediment deposition during flooding is a widely

accepted source of PCB contaminants found in floodplains; the Hudson River PCB Superfund Site is a prime example. These floodplain SUs are more likely to have been impacted by river sediment deposition than migration from the landfill.

- Pepco noted that "*the average concentration of Aroclor 1260 ranged from 500 to 1,000 µg/kg in four SUs including ISM-1 (707 µg/kg), which is located south of ISM-2 and adjacent to the river in the vicinity of a seep water sample where Aroclor 1260 was detected (0.051 micrograms per liter [µg/L] at KPS-S-12).*" As noted above, SUs ISM-1 and ISM-2 are within the floodplain and susceptible to impacted river sediment deposition. DOEE collected "seep" sample KPS-S-12 from a location within the mud flat that is inundated during high tide. The method of sample collection included digging a small hole and pumping water out of it without filtration. The turbidity of these samples was too high to measure. PCBs detected in this sample are likely representative of the impacted river sediments that were entrained into it during collection and the surface soil concentrations in the floodplain; accordingly, the seep water sample data are not representative of contaminant migration from the landfill.


KPS-S-12 Sample from low-tide mud flat

- Pepco refers to the human health risk assessment findings for KPS, which under the most conservative assumptions (i.e., a visitor spending 2 hours per day in direct contact with contaminated soil, 350 days per year, for 26 years) result in an estimated excess lifetime cancer risk of 2E-5 for a visitor. This estimated excess risk is above the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) point of departure (1E-6), which was the target risk level adopted by NPS for the KPL Site. Pepco's comments do not acknowledge that the requirements of the Anacostia Park General Management Plan allowed NPS to consider more representative exposure scenarios that are consistent with the anticipated (and in this case mandated) future land use. KPS will remain zoned as natural resources recreational. The most frequent visitors to KPS are likely to remain on the proposed Anacostia Riverwalk Trail, which will be paved. Visitors who venture off trail, such as birders, are not expected to visit the park at as high a frequency and thus have a lower exposure potential. These alternate-visitor scenarios were identified in the Proposed Plan. Also, the risk calculations are based on contact with bare soil, but KPS will remain vegetated, providing an additional buffer to potential visitor exposure.

- In this comment, Pepco indicates that dioxins and furans were not included in the KPS Site ISM sample analyses, implying that this is a potential data gap. Dioxins and furans were not identified as contaminants of potential concern (COPCs) in surface soil at the Site and were therefore not included in the ISM sample analyses. Although dioxin and furan compounds may have been generated during open burning prior to 1968 and could be present in the incinerator ash contained within the landfill, the waste was covered with 2 to 7 feet of imported soil in 1970. There is no information suggesting a source of dioxins and furans in the soil cover materials or in the fill that was later placed over the 1970 cap in the late 1990s.

2.5 Comment 5: Inadequate Evaluation of Seep Water Impacts

NPS disagrees with Pepco's assertion that the evaluation of potential impacts from seep water was inadequate. In this comment, Pepco mischaracterizes the findings presented in the 2018 Seep Characterization Report (Tetra Tech, 2018), which was prepared on behalf of DOEE. Pepco's comments

fail to acknowledge the relevant context for the seep water findings, discussed in Section 3.4 of the 2019 RI Addendum Report (JCO, 2019a). Because of the method of collection, the seep water samples were not representative of either groundwater or surface water. Therefore, it is misleading to compare the seep water sample concentrations to surface water standards.

Most of the seep water samples were collected from small holes that DOEE's contractor excavated either in the tidal mud flats within the Anacostia River, or in low-lying areas near the bottom of slopes. Four of the 11 seep samples were collected from river sediment that is inundated during high tide. River sediments are known to contain PCBs and other contaminants of concern originating from multiple sources (e.g., the nearby Pepco Benning Road Facility CERCLA Site).

As shown in the photographs and indicated in the sampling report narrative, the seep samples contained a high concentration of suspended solids. DOEE's contractor was not able to record sample turbidity as originally planned, because the turbidity level was too high for the instrument to measure. As a result, the samples represented a combination of soil/sediment and water. Because the contaminants of interest have low solubility and tend to adhere to soil solids, NPS considers the contaminants detected in the seep water samples most likely to be associated with the solids, not groundwater or surface water.

Several of the seep samples were intentionally collected near existing groundwater monitoring wells so that the seep water analytical results could be compared with groundwater analytical results. Groundwater monitoring wells are designed to limit solids from entering the wells. EPA developed low-purge sampling methods to further reduce the potential to entrain suspended solids in groundwater samples. NPS used low-purge methods to collect representative groundwater samples from the Site. Comparisons of the seep water and groundwater data were presented in the 2019 RI Addendum Report (JCO, 2019a). The comparisons show that concentrations of several contaminants (e.g., PCB Aroclors and dioxin/furan compounds) were significantly higher in the turbid seep samples than in the nearby groundwater samples. In fact, PCBs were not detected in any of the groundwater samples collected during the past three rounds of KPL monitoring.[1]

Pepco's comment acknowledges the points NPS raised in the RI Addendum Report (i.e., that the concentrations of contaminants in seep water samples represent solids in the samples and not migration of dissolved-phase compounds in shallow groundwater to the river). However, without technical justification, Pepco expresses a contradictory conclusion. In its summary of the comment, Pepco indicates that further evaluation of seep water is warranted to assess the potential for contaminant migration from the landfill to the Anacostia River. NPS does not agree that further assessment of seep water is necessary. NPS considers the groundwater monitoring data from the wide network of monitoring wells to be the strongest indicator of potential contaminant transport from the landfill to surface water. Analytical results from multiple rounds of representative groundwater sampling support NPS's conclusion that contaminant migration in groundwater is not posing an unacceptable risk to human health or the environment.

Pepco suggests NPS should evaluate the potential effects on human health via fish consumption caused by contaminant migration from the landfill to the Anacostia River, as Pepco was required to do for the Benning Road Site. NPS was not required to perform this assessment because the Anacostia River is not part of the KPL Site, and there is no evidence that the Site is significantly impacting either sediment or surface water quality. To the extent that PCBs in the sediment adjacent to the KPL Site pose risks to human health through a fish ingestion pathway, those risks will be addressed – and are being addressed – as part of the ARSP.

[1] PCBs were detected in two monitoring wells that were sampled with bailers in 2006. Low-purge sampling methods were developed by EPA with the specific objective of reducing the entrainment of solids and obtaining samples that are more representative of groundwater migration.

2.6 Comment 6: The Park Service must conduct supplemental investigation and analysis of the KPL site as a past and present source of PCBs and other contaminants in river sediments.

NPS did not conduct a supplemental investigation of sediment quality in the Anacostia River or nearby water bodies (Watts Branch and the Unnamed Tributary) because there is no evidence that contaminants found in the landfill are currently migrating toward surface water to a degree that would pose an unacceptable risk to receptors in those water bodies (and would therefore require active remedial measures). Although the past waste disposal practices at KPL cannot be ruled out as a potential historical contributor to contaminants in sediment, the contribution is expected to be small when compared with other more significant contributors (i.e., the nearby Pepco Benning Road Facility CERCLA Site).

The currently available data do not indicate KPL is a significant source of sediment contamination in nearby surface water. Although sediment contamination in the Anacostia River is being addressed by the ARSP, no current response action is being undertaken to assess and respond to sediment impacts found in Watts Branch or the Unnamed Tributary. Therefore, NPS established a new site that encompasses the Unnamed Tributary and the downstream portion of Watts Branch. These areas are currently under NPS jurisdiction and subject to NPS CERCLA authority. NPS expects to initiate a remedial investigation to assess sediment contamination in these water bodies. NPS also believes additional response activities may be appropriate for Kenilworth Marsh and will coordinate with other agencies to identify appropriate next steps for assessment and potential response activities.

3.0 CONCLUSION

NPS agrees that further assessment and possible remedial measures should be considered for the sediment in Watts Branch, the Unnamed Tributary, and Kenilworth Marsh. These water bodies are not currently being investigated as part of the Anacostia River Sediment Project or the Pepco Benning Road Facility Site. Because releases from upstream sources are potentially impacting land that is currently under its jurisdiction, NPS is exercising its CERCLA authority to assess the need for (and if needed, implement) a response action to address contaminated sediment associated with these surface water bodies.

4.0 REFERENCES

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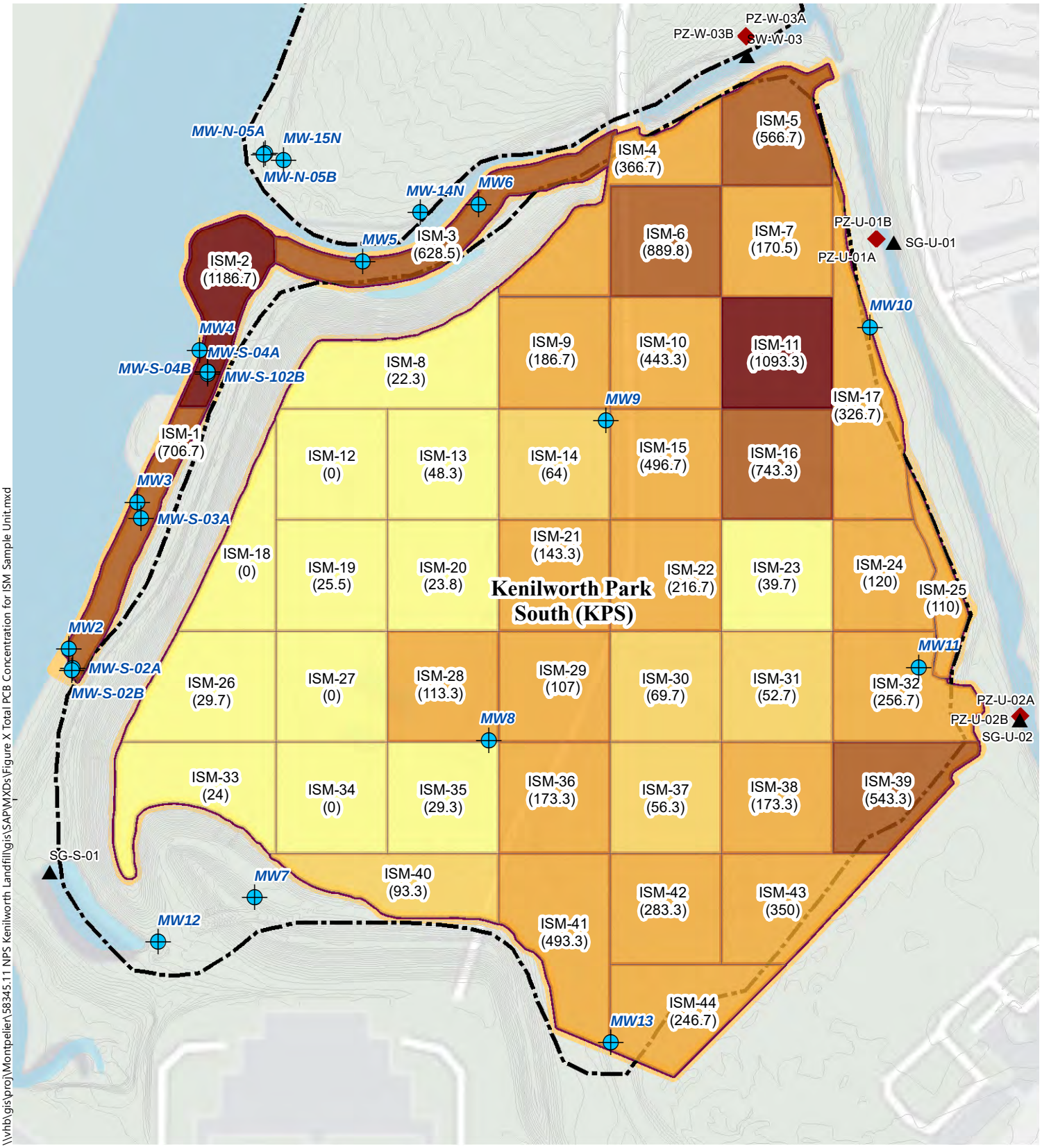
Attachments:

1. Figure 1 Concentration Distribution of Total PCBs (KPS)
2. Attachment A: March 12, 2021 Pepco Comment Letter
3. Attachment B: December 28, 2020 NPS Interim Response to Comments Memorandum (Amended February 1, 2021)
4. Attachment C: Legal Context for Defining the Kenilworth Park Landfill Site Boundaries

FIGURE 1: CONCENTRATION DISTRIBUTION OF TOTAL PCBS (KPS)



\\vhb\gis\proj\Montpelier\58345.11 NPS Kenilworth Landfill\gis\SAP\MXDs\Figure X Total PCB Concentration for ISM Sample Unit.mxd

0 100 200 400 Feet

Legend

- Piezometer
- Staff Gauge
- Monitoring Well
- Cap Boundary Grid
- KPN and KPS Landfill Boundaries
- 1 ft Contour (USACE 2000)
- Cap Boundaries
- Water

Kenilworth Park South | Washington, DC

Total PCB Concentration for ISM Sampling Unit (SU) Replicates (ug/kg)*

- 0.0 - 50.0
- 50.1 - 100.0
- 100.1 - 500.0
- 500.1 - 1000.0
- > 1000.0

*All concentrations provided in () are presented in micrograms per kilogram (ug/kg).

Concentration Distribution of Total PCBs

ATTACHMENT A: MARCH 12, 2021 PEPCO COMMENT LETTER

From: Sanford, Tammy D:(PHI) <tammy.sanford@exeloncorp.com>
Sent: Friday, March 12, 2021 12:52 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: Murdock, Eric (emurdock@hunton.com) <emurdock@hunton.com>; Tomlinson, David:(BSC) <David.Tomlinson@constellation.com>; Damera, Ravi <Ravi.Damera@aecom.com>
Subject: [EXTERNAL] Pepco Comments on KPL Proposed Plan

Hi Donna,

Attached are Pepco comments on the KPL Proposed Plan.

Respectfully,

Tammy D. Sanford
Director, Support Services

Pepco Holdings
701 9th Street N.W.
Washington, DC 20068
(202) 428-1345 (Microsoft Teams Phone) I 412.400.7216 (c)
tammy.sanford@constellation.com I exeloncorp.com

Comments of Potomac Electric Power Company on
National Park Service Proposed Plan for the Kenilworth Park Landfill

March 12, 2021

In accordance with 40 C.F.R. § 300.430, the Potomac Electric Power Company (Pepco) submits the following comments on the National Park Service (Park Service or NPS) Proposed Plan for the Kenilworth Park Landfill (KPL) and the supporting analysis and information contained in the administrative record, including the various Remedial Investigation and Feasibility Study (RI/FS) reports. Pepco owns and operates the Benning Road Service Center which is situated immediately downstream of a cove of the Anacostia River that borders the south end of the KPL site. Pepco's comments are informed by its experience conducting extensive investigation and evaluation of environmental conditions in this segment of the Anacostia River as part of an RI/FS for the Benning Service Center site. As discussed below, the Park Service has not adequately investigated and evaluated the contribution to existing contamination in river sediments in areas adjacent to the KPL site (and possibly further downstream as well) attributable to historical waste disposal operations at the site and subsequent runoff from contaminated cover materials as well as to existing surface soil and shallow ground water conditions. As a result, the Proposed Plan includes no remedial action to address contaminated sediments. This is a major deficiency that must be addressed in a supplemental RI/FS before any final remedial action can be selected for the site.

Comment 1: The Park Service has improperly excluded the sediments in the adjacent surface waters in delineating the KPL "site" addressed by the RI/FS and Proposed Plan.

In its Interim Response to Public Comments (RTC) dated February 1, 2021, the Park Service states that the KPL site "does not include any portion of the Anacostia River" and that "if the sediments adjacent to Kenilworth need to be remediated, that will be done as part of the Anacostia River Sediments Project (ARSP) remediation." (RTC #43) The Park Service acknowledged that this is not consistent with the approach taken at other sites along the river, including the Pepco Benning Service Center site, the Washington Gas East Station site, and the Washington Navy Yard site.

The Park Service is conducting its response actions at the KPL site pursuant to its authority under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Guidance issued by the U.S. Environmental Protection Agency (USEPA) makes clear that for purposes of CERCLA response actions a site should be defined, consistent with the definition of "facility" under CERCLA, as "that portion of a facility that includes the location of a release (or releases) of hazardous substances and ***wherever hazardous substances have come to be located***," and thus "the extent of a site is not limited by property boundaries." (USEPA 1996) (emphasis added). As explained in detail in the comments below, there is strong evidence that PCBs released at the KPL site "have come to be located" in sediments in the Anacostia River and other connected surface water bodies adjacent to the site.

The Park Service offers several excuses for its failure to consider sediments adjacent to the KPL site, none of which withstands scrutiny. First, it points to the fact that PCBs have been detected at higher concentrations at certain upstream locations (RTC #43), but the same is true of the other sites along the river where adjacent sediments are included within the scope of the site-specific investigations and response actions. Moreover, even if some of the PCBs in sediments adjacent to the KPL site are

attributable to upstream sources does not change the fact that the KPL site itself is also a likely source of PCBs in these sediments. The Park Service also attempts to deny any connection between the release of PCBs at the landfill and the presence of PCBs in river sediments, claiming in the June 2019 Remedial Investigation Addendum Report that "the Site does not appear to be a source of sediment contamination in the River" (NPS 2019a, Section 5.6.), but the Park Service has failed to conduct the necessary investigation and analysis to evaluate the contribution of the KPL site to PCBs in the adjacent sediments, and thus has no basis for this claim, which is contradicted by multiple lines of evidence as detailed below. Indeed, in its Interim Response to Comments, the Park Service acknowledges that the KPL RI/FS " did not investigate whether the Site may have been a historical source of contaminants" to the adjacent surface water bodies (RTC #44) and that "the potential for contaminants at the Site to have migrated into [Watts Branch and the unnamed tributary to Watts Branch] cannot be ruled out." (RTC #64) Finally, the Park Service tries to explain away its failure to consider sediments adjacent to the site by stating that "the boundaries of the Site were drawn to ensure that the Kenilworth Site and the ARSP Site were mutually exclusive." (RTC #52) The KPL site should have included the adjacent sediments based on the sampling data available to the Park Service by the early 2000s, at least a decade before the ARSP was launched. The Park Service cannot rely on the District's more recent initiative to address river sediments in other segments of the river to justify its unduly narrow delineation of the KPL site.[1]

There is no legal or scientific basis for the Park Service to ignore contaminated sediments adjacent to the KPL site. The remedial investigation and evaluation of remedial alternatives for the site should be expanded to include the areas of contaminated sediment adjacent to the site in accordance with EPA guidance and consistent with the approach taken at other sites along the river.[2]

Comment 2: The Park Service's claim that the KPL site is not a source of sediment contamination is contradicted by the data.

In the Proposed Plan, the Park Service denies any connection between the KPL site and the contamination in adjacent river sediments, asserting that "there is no apparent trend in the concentrations to indicate that these contaminants originated from the Site or that a migration pathway exists between the Site and adjacent sediments," postulating instead that "urban stormwater discharges and tidal effects are the predominant factors that influence sediment quality near the Site." (NPS, 2020, pages 9-10) This assertion is based on a flawed evaluation of the sampling data and a myopic focus on the current conditions at the site. As described in Comment #3 below, there are multiple lines of

[1] In addition, in its Interim Response to Comments, the Park Service states the position that any "allegations that Kemilworth contributed hazardous substances to the river in the past" would be "addressed in the context of allocation discussions among potentially responsible parties for the ARSP." (RTC #52) The possibility that source attribution may be addressed at some future time in the context of allocation proceedings does not relieve the Park Service of the requirement to conduct a proper RI/FS that confirms to applicable CERCLA regulation and guidance.

[2] The Interim ROD for the ARSP designated a small area of sediment in the Anacostia River adjacent to the KPL site as an "Early Action Area" based on elevated PCB concentrations. Because early actions are being sequenced to focus on Kingman Lake and Washington Channel before proceeding with the early actions in the Main Stem of the river, no remediation is likely to occur in the area adjacent to the KPL site for several years. Moreover, nothing in the Interim ROD for the ARSP prevents the Park Service from conducting a supplemental RI/FS focused on all of the sediments surrounding the KPL site, while taking into account any actions planned for the small Early Action Area identified in the Interim ROD.

evidence showing that the historical operations and conditions at the KPL site are substantial sources of PCB contamination in the adjacent sediments.

The Proposed Plan includes a passing reference to the fact that PCBs (and contaminants) were detected in "some" of the sediment samples from water bodies adjacent to the KPL site (NPS, 2020, page 9), but does not provide any information about the extent or magnitude of the detections. This sediment sampling dates back 20 years to the Preliminary Assessments/Site Investigations (PA/SI) conducted separately for Kenilworth Park Landfill South (KPS) and Kenilworth Park Landfill North (KPN) (NPS, 2000a, 2002). As documented in the 2012 Feasibility Study Report (NPS, 2012, Figure 2-7) and the 2000 KPS PA/SI report, elevated concentrations of PCBs were detected in nearly all of the numerous samples collected from sediment adjacent to the KPL site. PCBs were detected (as the sum of Aroclors) in 11 of the 12 sediment samples collected from the Anacostia River adjacent to the KPL site, ranging from 167 ug/kg to ~500 ug/kg. Similar PCB concentrations were observed in sediment samples from Watts Branch (186-482 ug/kg), Kenilworth Marsh (125-510 ug/kg), and the unnamed tributary to Watts Branch, with one tributary sample containing 750 ug/kg PCBs. All of these concentrations were measured as total Aroclors; the concentrations likely would be even higher if measured as total congeners.

More recent sampling conducted by DOEE confirmed the presence of elevated concentrations in sediments adjacent to the KPL site. In surface sediment samples collected by DOEE during the ARSP, total PCBs (sum of congeners) adjacent to KPS ranged from 73 to 187 ug/kg (R6-38, R6-08, R6-33, R6-23, R6-06, and R6-22). A similar range was found in ARSP surface sediment adjacent to KPN. In two ARSP subsurface sediment samples collected adjacent to KPS at depths of 1 to 3 feet, total PCBs concentrations were 1,009 and 1,392 ug/kg (R6-23 and R6-22, respectively). The ARSP sediment data collected adjacent to KPL indicates the PCBs are primarily Aroclors 1248 and 1260. (DOEE, 2018)

(All of the sampling data for sediments adjacent to the KPL site are compiled and presented in the attached **Table 1**.)

The 2012 FS Report asserts that "the data collected adjacent to the Site (i.e., the Anacostia River, the Watts Branch, and Kenilworth Marsh) do not indicate an overall impact form COCs at the Site on surface water or sediment." (NPS, 2012, Section 2.6.3) In fact, most PCB concentrations in sediments at the KPL site are elevated compared to the following measurements of upstream and background concentrations:

- The concentration of PCBs detected in two river surface sediment samples collected by NPS approximately one-quarter mile upstream of the KPL site during the early phase of the RI were 121 ug/kg and 107 ug/kg total PCBs. (NPS, 2012)
- The sediment background threshold value calculated by NPS based on the tributary study after removing data considered representative of suspected point sources was 84 ug/kg total PCBs. (NPS, 2019b)
- The PCB background concentration calculated by DOEE as part of the ARSP is 17 ug/kg total PCB congeners. (DOEE, 2019b)
- The local background threshold value for PCBs (as Aroclors) calculated by Pepco for the segment of the river that includes the KPL site was 180 ug/kg.

As shown in Table 1, for many of the sediment samples at the KPL site, the concentrations of PCBs were substantially higher than any of the foregoing values, strongly suggesting that the site is a source of the PCBs in sediment near the site.

The 2012 FS report also points to the variability of the data as a basis to conclude that the KPL site is not impacting sediments in the Anacostia River and Watts Branch. However, variability alone is not a basis to assume that KPL site is not a source of the observed sediment contamination (and the 2012 FS report cites no scientific authority to support its reliance on sampling variability to exclude the KPL site as a source). While the report acknowledges the substantially elevated PCB concentration in sediment samples from the unnamed tributary of Watts Branch (which range from 238 to 750 ug/kg), it discounts these findings based on the fact that the concentration of PCBs in the next downstream sampling location (in Watts Branch) was 242 ug/kg (itself an elevated concentration). Nowhere does NPS consider what other possible source may account for these high concentrations of PCBs in the unnamed tributary of Watts Branch, which borders the eastern boundary of KPS approximately 0.3 miles upstream of the confluence of Watts Branch and the Anacostia River.[3] Nor does NPS anywhere evaluate risks to human health or ecological receptors associated with site sediment concentrations that are far in excess of the Preliminary Remediation Goal of 65 ug/kg derived by DOEE for the ARSP Interim Record of Decision.

In developing remedial action alternatives for the KPL site, NPS effectively ignored significantly elevated PCB concentrations in multiple sediment samples on all sides of the site based on conclusory and unsupportable claims that the KPL site is not the source.[4] In particular, NPS failed to consider the most likely source of PCBs in sediment adjacent to the KPL site, which is the historical burning and disposal of waste at the site. As described in Comment #3 below, these waste disposal activities involved direct disposal of waste into surface waters and marshes at the site, and also resulted in uncontrolled runoff to the surrounding water bodies from areas filled with waste (and later with contaminated construction debris). The variability that NPS relies on to disavow any connection between the KPL site and the surrounding sediments in fact is consistent with the kind of episodic releases that would have resulted over time from burning and burying heterogeneous waste streams of the kind disposed of at the site. Unlike a release from a particular source at a particular location, which might be expected to show a concentration gradient, the release of PCBs at different times and different places at the site during the course of three decades of waste disposal would be expected to produce exactly the kind of concentration distribution observed at the site.

Although misinterpreted by the Park Service, the sampling results from the NPS 2018 tributary study (NPS, 2019b) support the conclusion that the KPL site is itself a source of PCBs and other contaminants in sediments. That study included ten samples of surface sediment collected along the length of Watts Branch adjacent to and upstream of the KPL site. PCB levels in the two sediment samples collected from the stretch of Watts Branch adjacent to the north and south landfills (WB-01 and WB-02) contained 321 ug/kg and 101 ug/kg, respectively. The Park Service states that these locations are subject to tidal influence of the river and therefore excluded them from the calculation of background statistics noted

[3] As discussed in Comment #3 below, elevated PCB concentrations in the unnamed tributary are likely attributable to overflow from a silt pond that received runoff from contaminated material placed at KPS in 1997 and 1998.
[4] Notably, DOEE identified the KPL site as a likely source of PCB contamination in subsurface sediment based on the sampling in the Anacostia River conducted for the ARSP Remedial Investigation. (DOEE 2018; Table 12.1).

above. The fact that these areas are tidally influenced may be a valid basis for excluding them from the calculation of contributions from Watts Branch, but it is not a valid basis for concluding that the KPL Site itself is not a source of PCBs detected in these locations, especially given the elevated concentrations relative to upstream and background sediment samples. One of these locations adjacent to the KPL site (WB-01) had the highest concentration of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) toxicity equivalence (TEQ) observed in the tributary study (24.61 pg/g). The presence of elevated dioxins in sediment and soil samples across the landfill property is consistent with the historical practice of open burning of municipal waste and disposal of incinerator ash in the landfill. The open burning of municipal waste is known to be a significant source of dioxins and furans (EPA, 2006).

Comment 3: Multiple lines of evidence indicate that historical waste disposal operations at the KPL Site contributed PCBs to sediments in adjacent surface waters.

A. Waste Disposal Activities

As described in the Proposed Plan and documented in numerous site reports, the District of Columbia used the KPL site for disposal of waste for nearly 30 years, from 1942 to 1970. Waste disposed of at the site included ash from the District's municipal solid waste incinerators and municipal and other solid waste that was burned openly and then buried on site. During the last two years of operations, raw municipal solid waste was buried without burning. The 2007 KPN RI Report describes the landfill as "a large heterogeneous mass of incinerator ash, burned municipal waste, some putrescible wastes, and some barrier and capping material of uncertain origins." (NPS, 2007, Section 4.4) The 2008 KPS RI Report cited an earlier study which estimated that a total of 3.3 million tons of burned residue and incinerator ash was disposed of at the site as of 1968, followed by another 499,500 tons of "raw refuse" and 316,500 tons of incinerator ash during the final two years of operations. (NPS, 2008) (Section 2.4).

Sampling conducted by the Park Service confirms that PCBs were present in the waste materials disposed of at numerous locations across the site. A total of 106 subsurface samples were collected at KPL during the various site investigations and analyzed for PCBs. PCBs were detected in 72 of these samples (68%), in many cases at concentrations far exceeding the Preliminary Remedial Goal (PRG) of 65 ug/kg for PCBs in sediment derived by DOEE for the ARSP. For example, during the PA/SI for KPN, PCBs (as total Aroclors) were detected in subsurface soil at concentrations ranging from 124.5 ug/kg to 641 ug/kg. (NPS, 2002, Table 5-8) During the 2006 KPN RI, PCBs were detected in subsurface soil at concentrations as high as 2,700 ug/kg. (NPS, 2007, Table 5-8) Similarly, during the PA/SI for KPS, PCBs (as total Aroclors) were detected in the majority of the samples collected from depths within the waste materials, and the concentrations exceeded 500 ug/kg in 12 of these samples. (NPS, 2000, Section 5.1.1.1, Figure 5-1, Table 5-6) Aroclor 1242 was reported at concentrations up to 2,700 ug/kg and Aroclor 1254 was reported at concentrations up to 93,000 ug/kg. (NPS, 2000, Table 5-6) This latter PCB concentration exceeded the threshold for waste requiring special handling under the Toxic Substance Control Act. (See **Table 2** for a summary of all of the subsurface soil sampling data for the KPL site.)

There are at least two pathways connecting these waste materials at the KPL site to the adjacent sediments. First, as described in the Proposed Plan, these waste materials were placed directly into low-lying wet areas and recreational lakes at the site that were created by the U.S. Corps of Engineers in the 1930s. According to the 2008 KPS RI Report, the waste material "was placed directly into the river without any barrier and landfill wastes mixed with soil still extend into the water." (NPS, 2008, Section

2.4) As a result, the report noted that "there is zero distance from the former landfill to surface water because landfill wastes mixed with soil still extend into the river and Watts Branch." (NPS, 2008, Section 4.3.1) The 2007 KPN RI Report stated that, based on the field observations conducted at the time of sampling, landfill material appears to extend into Kenilworth Marsh at sediment sample SD-7; this location has the highest concentrations of PCBs detected in marsh sediment samples (510 ug/kg). (NPS. 2007, Table 5-2) In the 2019 RI Addendum Report, the Park Service noted that waste material was identified in only two of eight borings for monitoring wells installed along the western edge of the KPL site in 2018 as part of the Supplemental Groundwater investigation, suggesting that the placement of waste directly into the river was less extensive that previously described. These borings are spaced hundreds of feet apart and do not provide a comprehensive profile of the location of buried waste along the river bank. In fact, as shown on **Table 3**, many of the boring logs for monitoring wells installed in close proximity to adjacent surface water bodies during previous site investigations show clear evidence of waste materials. Moreover, even if the waste disposal into the water did not extend into the area currently comprising the river bed, there is no question that waste was used to fill previously existing surface waters at the site (NPS, 2019, Section 5.1) and contaminants associated with these materials would have been subject to migration to other areas of the river as a result of stream flow and tidal influence until such time as the area was filled to an elevation above the river surface.

Second, in addition to the placement of waste materials directly into areas currently comprising the river and stream beds adjacent to the KPL site, stormwater runoff from exposed waste materials flowed to the adjacent surface waters. These stormwater flows would have occurred over the entire 30-year operating period. There is no indication that any controls were used to prevent or reduce contaminant loading to site runoff, and nothing to prevent stormwater from carrying PCBs sorbed to soil particles into the river.

As described in Comment #2 above and consistent with the existence of these migration pathways, PCBs (and various other landfill-related contaminants, including polycyclic aromatic hydrocarbons (PAHs) and lead) have been detected in nearly all sediment samples collected from the Anacostia River, Kenilworth Marsh, and Watts Branch adjacent to the KPL site.

B. Runoff From Cover Materials

1. KPS

In early 1997, the Park Service contracted with two construction companies to place demolition debris and soil excavated from construction sites over large areas of KPS. The placement of this material continued for nearly two years and resulted in the issuance of a notice of violation to the Park Service by the District of Columbia Environmental Health Division in October of 1998. (NPS, 1998, Section 2.3) The total amount of material deposited was estimated to be 400,000 cubic yards, and at the west side of Deane Avenue the material rose to a height of more than 40 feet above the Anacostia River. (NPS, 2008, Section 2.4)

The Park Service does not appear to have required any testing or screening of this material prior to its placement at the site. In late 1998, a Park Service contractor conducted an investigation of the fill area on east side of Deane Avenue. The report documenting that investigation noted that "few records are available as to the amount of fill and its source or quality. Some of the companies dumping fill at the

site provided analytical data with respect to the material they dumped and others did not." (NPS, 1998, Section 1). The report further noted that "field observations by E&E of the site during September 1998 showed that the fill was not 'clean.' It contained a large proportion of demolition debris including concrete, rebar, brick, lumber, angle iron, asphalt, fabric, carpet, glass, etc." During this investigation, 20 soil samples were collected from this material, and the concentrations of PAHs exceeded risk-based screening levels in 16 of the samples, with the highest concentration of total PAHs exceeding 370 mg/kg. (NPS, 1998, Section 2.2.2) These samples were not analyzed for PCBs. However, samples collected in 1999 for the PA/SI showed total PCB Aroclors of 213 ug/kg in sediments (SED-13) from a silt pond located near Watts Branch that drained the construction fill on the north side of the landfill at KPS, 265 ug/kg (SED-14) in sediments from a silt pond located in the southwest corner of the KPL site that drained the construction fill on the west side of Deane Avenue, and 238 ug/kg in sediments (SED-4) from a ditch that drained the construction fill on the east side of Deane Avenue. (NPS, 2000, Figure 4-3 and Table 5-13) Based on the presence of PCBs in the silt pond sediment samples, NPS concluded that the fill contained PCBs and that contaminant levels in the silt ponds showed evidence of contaminant migration at the Site (NPS, 2000, Section 5.1.2.1). In addition, Aroclor 1242 was detected at a concentration of 2000 ug/kg in a sample (BH-17) collected from an area believed to be within the construction fill (or the initial cap placed by the District). (NPS, 2000, Section 5.1.1.1 and Table 5-6)

Drainage ditches were constructed to carry runoff from these construction fill areas. In the area west of Deane Avenue, ditches carried stormwater to the two silt ponds noted above, one located near the Anacostia River in the southeast corner of the site, and another located near Watts Branch on the north side of KPS. These silt ponds were constructed to overflow to the Anacostia River and Watts Branch (NPS, 2000, Section 2.3) On the east side of Dean Avenue, a drainage ditch (noted above) led to another silt pond approximately 120 feet north of the fence for the Thomas Elementary School. This pond was designed to drain to the unnamed stream that runs adjacent to KPS towards Watts Branch. (NPS, 2000, Section 2.3) The 2000 PA/SI report noted that these conditions would lead to the migration of contaminants from the construction fill area to adjacent surface waters, observing that "the vegetation cover is still very poor and erosion is active," that "the shortest distance from the recent fill which (would be considered a source) to surface water is less than 50 feet," and that "even the two-year expected 24 hours storm is likely to cause severe erosion and will probably result in discharge of heavily sediment-laden water to Watts Branch and the Anacostia River unless the new fill has substantial vegetation cover or is otherwise protected." (NPS, 2000, Section 7.2) As described in the 2008 KPS RI Report, "lack of adequate grading and vegetative cover" led to erosion problems for these materials, and as soil was carried away, "protruding construction debris was posing a continuing physical hazard." (NPS, 2008, Section 2.4). In 2002 and 2003, the Park Service arranged to have demolition debris removed from the construction fill areas and the material regraded to improve drainage (NPS, 2008, Section 4.3.1), but not before substantial amounts of the material was eroded away by stormwater flowing to the adjacent surface waters. The 2008 KPS RI Report described one incident in particular in which heavy rainfall caused stormwater to breach the berm located near the southwest corner of the site and discharge to the Anacostia River.

The sediment sampling data confirms that the placement of these materials and subsequent erosion likely led to the migration of PCB-contaminated soils to surface waters surrounding the site. Elevated PCBs were detected in sediment in close proximity to the silt pond located adjacent to Watts Branch at the north end of KPS (SD-14; total PCB Aroclors = 482 ug/kg) and the silt pond adjacent to the unnamed

tributary along the east side of KPS (SED-4; total PCB Aroclors = 238 ug/kg). The discharge resulting from the berm that was breached in the southwest corner of the site would have flowed into or just upstream of the cove of the Anacostia River where elevated PCBs have been detected (SED-10; total Aroclors = 344 ug/kg). (NPS, 2012, Figure 2-7) The 2008 KPS RI Report acknowledges that the primary route of off-site contaminant migration appears to be surface water runoff with eroded surface soil discharging to the surface water. (NPS, 2008, Section 5.8)

2. KPN

Sampling conducted as part of the KPN field investigations showed widespread presence of PCBs in the capping material. During the initial sampling at KPN conducted in 2000, PCBs were detected in five of ten surface samples at concentrations of total PCB Aroclors ranging from 824 ug/kg to 7930 ug/kg. (NPS, 2000, Table 5-4) PCBs were detected in all six additional surface soil samples collected in 2002 as part of the PA/SI at concentrations of total PCB Aroclors ranging from 101 ug/kg to 5280 ug/kg. (NPS, 2002, Table 5-13). PCBs likewise were detected in nine additional surface soil samples collected in 2006 for the KPN RI at concentrations ranging from 560 ug/kg to 7900 ug/kg. (NPS, 2007, Table 5-5) As described in the 2007 KPN RI Report, the landfill surface "slopes down towards surface water bodies on three sides" and "surface drainage travels from the center of the landfill where it is highest, generally towards the nearest surface water." (NPS, 2007, Section 4.3.1) Given these drainage patterns, at least until vegetative cover was established at the site, stormwater runoff would have carried PCB contaminated soils in the capping material to the adjacent surface waters at concentrations far exceeding the PRG of 65 ug/kg derived by DOEE for the ARSP.

C. PCB Distribution in Sediments

In the stretch of the Anacostia River encompassing the KPL site, the concentrations of key constituents in sediment, including PCBs, are higher along the landfill side than along the opposite side of the river. This pattern is evident in the surface sediment samples collected by DOEE during the ARSP RI adjacent to and across the river from the KPL site. Of the five surface sediment samples collected adjacent to KPS, the concentrations of total PCBs (sum of congeners) range from 128 to 187 ug/kg. In the surface sediment sample collected on the opposite bank from KPS, the concentration of total PCBs is 38 ug/kg (RI-R6-07-SS). This pattern is also observed in the samples collected along KPN although not as pronounced. The maximum concentration of total PCBs adjacent to KPN is 162 ug/kg, compared to 119 ug/kg on the opposite bank.

A similar pattern can be seen in subsurface sediment from both sides of the river. In subsurface sediment samples collected adjacent to KPS [RI-R6-22-SC (1.2-2.5') and RI-R6-23-SC (2.4-3.4')], the highest concentrations of total PCBs (sum of Aroclors[5]) were 430 and 470 ug/kg, respectively. On the opposite bank in sample RI-R6-07-SC, the concentrations of total PCBs (sum of Aroclors) were 11.9 and 5.9 ug/kg at depths of 1.5-2.5' and 3.5-4.5', respectively. In subsurface sediment samples adjacent to KPN [RI-R6-11-SC (3-4') and RI-R6-27-SC (5.4-6.4')], the highest concentrations of total PCBs (sum of Aroclors) were 210 ug/kg and 240 ug/kg respectively. On the opposite bank at location RI-R6-26-SC, concentrations were 152 ug/kg (0.7-1.7'), 4.7 ug/kg (2.8-3.8'), and not detected (4.3-5.3').

[5] Not all of the subsurface sediment samples were analyzed for PCB congeners; therefore, the PCB Aroclors are used in the discussion of subsurface sediment.

The proximity of higher concentrations of PCBs on the east side of the river provides another line of evidence that the landfill is a source of contaminants to the river. In addition, the higher concentrations of PCBs in subsurface sediment suggest historical loading from the landfill into the river, consistent with the migration pathway described above.

Comment 4: Inadequate Evaluation of Site Surface Soil

As described in the 2019 RI Addendum Report, the concentrations of Aroclors 1254 and 1260 exceeded risk-based goals established by NPS for a year-round recreational receptor scenario in nearly every soil sample collected at KPN during the PA/SI and initial RI. (NPS, 2019a, Section 5.2.1) As described above, total PCBs ranging from 1,000 ug/kg to as high as 7,900 ug/kg were found in many of the surface soil samples collected across KPN. Despite the widespread presence of elevated PCBs and other landfill-related constituents in soil samples, including metals and PAHs, no further characterization of soil at KPN was performed during subsequent RI activities.

At KPS, the concentrations of Aroclor 1260 and Aroclor 1254 exceeded the risk-based goal in three out of the four surface samples collected during the PA/SI. (NPS, 2008, Table 5-1). In 2017, NPS conducted an additional evaluation of surface soil at KPS using an incremental sampling method (ISM) to further characterize contaminant distribution across the site. At each of 44 sampling units (SU) approximately one acre in size, three replicate ISM samples were collected at a depth of 0.5 feet. Samples were analyzed for PCB Aroclors, PAHs, and TAL metals (dioxins and furans were not included). Methods and results of the ISM study are described in Appendix E of the RI Addendum report (NPS, 2019a).

PCBs, including Aroclor 1260 and to a lesser extent Aroclor 1254, were detected in approximately 80% of the 132 ISM samples collected, with detected concentrations ranging from 14 ug/kg to 1,400 ug/kg. As shown in Figure 9 of Appendix E (NPS, 2019a), the average concentration of PCBs (Aroclor 1260) in the three replicate samples exceeded 1,000 ug/kg in two SUs: ISM-11 located in the northeastern part of the site (1,093 ug/kg) and ISM-2 located in the northwestern corner at the intersection of Watts Branch and the Anacostia River (1,187 ug/kg). The average concentration of Aroclor 1260 ranged from 500 to 1,000 ug/kg in four SUs including ISM-1 (707 ug/kg), which is located south of ISM-2 and adjacent to the river in the vicinity of a seep water sample where Aroclor 1260 was detected (0.051 ug/L at KPS-S-12). In an additional 21 SUs, the average Aroclor 1260 concentration ranged from 100 to 500 ug/kg. The ISM data clearly indicate a widespread distribution of Aroclor 1260 across the surface of the KPS site. While Aroclor 1254 was detected less frequently in KPS surface soil than Aroclor 1260, the highest Aroclor 1254 concentrations were found in the northern part of the site, including SUs located adjacent to Watts Branch (average of 223 ug/kg in ISM-2 and 560 ug/kg in ISM-6) (NPS, 2019a) (Appendix E, Figure 8).

The Park Service performed a human health risk assessment using the ISM surface soil data, also presented in Appendix E of the RI Addendum Report (NPS, 2019a). The exposure point concentrations were calculated as the site-wide average of the 95% upper confidence limit (UCL) concentrations calculated for each SU. The excess lifetime cancer risk (ELCR) was estimated to be 2E-05 for a visitor and 2E-06 for an outdoor worker. Noncancer hazard indices were below 1 when segregated on a target organ basis. NPS attributed the majority of the cancer risk to Aroclors 1254 and 1260, benzo(a)pyrene, arsenic and cobalt.

Despite exceedance of the cumulative cancer risk threshold of 1E-06, and the widespread presence of PCBs, as well as PAHs and metals, across the surface of KPS, including areas adjacent to Watts Branch and the Anacostia River, the Proposed Plan does not include any remedial action for soils at KPS. In lieu of active remediation, the selected alternative identifies institutional controls to restrict and/or manage future activities that might otherwise result in health risks or hazards, including prohibiting future residential development over the former landfill areas, prohibiting construction of higher intensity visitor use areas without the installation of clean fill barriers, and requiring precautionary planning and safety measures for proposed excavation activities. These measures do not address the current risks associated with direct contact exposures to contaminants in soil or indirect exposures from contaminant runoff and leaching and subsequent discharge into the Anacostia River and Watts Branch from surface soils at KPS. Further, the historical presence of PCBs and other contaminants in soils across the KPL property have been uncontrolled and likely served as potential sources to the river. As noted in Comment 6 below, further evaluation is needed regarding historical conditions at the site as sources of contaminants in river sediments.

Comment 5: Inadequate Evaluation of Seep Water Impacts

DOEE identified the absence of chemical constituent characterization for seeps emanating from the KPL site as a data gap and agreed to conduct a seep water investigation to address this data gap. The results of this investigation are documented in a Seep Characterization Report prepared by DOEE's contractor (DOEE, 2018) and included as Appendix D.1 of the NPS 2019 RI Addendum Report. As described in the Seep Characterization Report, in late April/early May 2018, DOEE collected samples of seep water at 10 locations within 25 feet of adjacent surface waters subject to tidal influences of the Anacostia River. Sampling locations were identified based on field observations and identification of a preferential flow pathway from the toe of the landfill to the river based on infrared thermographic analysis. At all locations, seep water was observed flowing away from the buried waste toward the nearest surface water feature at the time of sampling, and at three location, seep water was observed to be flowing directly from the site to the Anacostia River.

PCBs (Aroclors 1254 and/or 1260) were detected in 7 of the 10 seep water samples and dioxin and furan congeners were detected in all 6 of the seep water samples analyzed for dioxins and furans (note: the dioxin/furan samples were filtered in the lab with a 1 micron filter prior to analysis). As previously noted, open burning of municipal waste, which occurred on the landfill property for many years, is known to be a significant source of dioxins and furans (USEPA, 2006). Multiple other compounds were detected in seep water samples, including total petroleum hydrocarbons (TPH), PAHs, pesticides, and metals. At two of the seep sample locations where the seep was observed flowing directly into the Anacostia River (KPS-S-12, located along the western bank of KPL South in the vicinity of sediment sample R6-23, and KPN-6, located along the western bank of KPN just upstream from the confluence of Watts Branch and the Anacostia River), Aroclor 1260 was detected at concentrations of 0.051 ug/L and 0.024 ug/L, respectively. The maximum detected concentrations of several compounds in seep water, including PCBs (0.42 ug/L based on the sum of detected Aroclors 1254 and 1260) and TCDD-TEQ (0.0686 ug/L), were observed at KPN-S-3, which is located on the northern side of KPN adjacent to the marsh.

Based on the widespread distribution of PCBs and other contaminants in seep water, as well as exceedances of aquatic screening levels, DOEE concluded in the Seep Characterization Report that the

seep water sampling results "suggest the potential for seeps to be affecting surface water and the transition zone between groundwater and surface water." That report further stated that the conceptual site model for the KPL site "should be updated to include the seep to surface water pathway" and that "exceedances of surface water quality criteria and potential human and ecological receptor exposures also needs to be considered in supplemental RI reports." (DOEE, 2018).

The Park Service evaluation of seep water in the RI Addendum Report fails to give adequate consideration to these issues. In particular, the evaluation of potential human health risk considered direct exposure to seep water through an incidental recreational contact scenario, but did not consider indirect exposure via fish consumption for either seep water or groundwater discharging to surface water. The District and EPA have derived surface water quality criteria for protection of fish consumption by humans. For total PCBs and 2,3,7,8-TCDD, the human health water quality criteria are 6.4E-05 ug/L and 5.1E-09 ug/L, respectively.[6] PCBs and TCDD-TEQ in all samples exceed their respective human health water quality criteria by several orders of magnitude.[7] The Park Service failed to consider either of these criteria in evaluating human health risks posed by seep water. For bioaccumulative compounds such as PCBs, the primary Anacostia River constituent of concern (COC), this represents a major gap in the evaluation of potential risk posed by conditions at the KPL site. It is also inconsistent with the DOEE-directed approach for evaluating groundwater-to-surface water discharge impacts in the Baseline Human Health Risk Assessment performed by Pepco as part of the RI for the Benning Service Center site. In that evaluation, the potential impacts from discharge of groundwater (which was non-detect for PCBs) into the Anacostia River were evaluated by comparing modeled surface water concentrations to ambient water quality criteria derived to be protective of human exposure via fish consumption.

In the RI Addendum, the Park Service attributes the presence of elevated contaminants in seep water samples, including PCBs, pesticides and dioxins/furans, to solids in the sample and not migration of dissolved phase compounds in shallow groundwater to the river. However, the consistent detection of a wide variety of landfill-related compounds in the seep water samples and the field observation that seep water was flowing into the adjacent surface water indicates a complete migration pathway for landfill contaminants into the river and Kenilworth Marsh. Even after taking into account dilution of seep water in the receiving water (dilution of shallow groundwater in the river was estimated to be 680-fold in the RI Addendum), surface water concentrations from seep water discharge still exceed the human health water quality criteria for PCBs and for TCDD-TEQ. The NPS evaluation does not address this potential ongoing risk from landfill seep water.

In summary, further evaluation is warranted before it is appropriate to conclude that seep water does not represent an historical or ongoing source of contaminants to the river or pose a current risk to human health and the environment.

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[6] Table 3-2 of Appendix D.1. states that no water quality criteria have been established for Aroclors 1254 and 1260, but fails to acknowledge the fact that the sum of these two Aroclors in some samples was significantly higher than the applicable water quality criteria for total PCBs.

[7] The maximum detected concentrations of several compounds in seep water including PCBs (0.42 ug/L based on the sum of detected Aroclors 1254 and 1260) and 0.0686 ug/L for 2,3,7,8-TCDD-toxicity equivalents (TCDD-TEQ), were observed at KPN-S-3, which is located on the northern side of KPL North adjacent to the marsh.

Comment 6: The Park Service must conduct supplemental investigation and analysis of the KPL site as a past and present source of PCBs and other contaminants in river sediments.

The Park Service acknowledges in its Interim Response to Comments that "additional sampling and forensic analysis of PCBs in the landfill may inform whether and to what degree the landfill was a historical source of PCBs in the river sediments" (RTC #59) but fails to explain why it did not conduct this evaluation itself as part of the RI/FS for the KPL site. The RI/FS work at other sites along the river, including the Pepco Benning Service Center site, has included extensive research regarding historical site activities coupled with detailed forensic analysis of sampling results to evaluate potential site contributions to contamination in river sediments. There is no reason that the Park Service should not conduct a source assessment and forensics evaluation of similar rigor. This would involve detailed evaluation of the nature of the waste streams disposed of at the site, the manner in which such waste streams were managed, the nature of cover and capping materials placed at the site, the progression of waste disposal and landfilling activities over time, and fate and transport mechanisms for waste placed into surface waters and marsh areas, and cover materials placed over the landfill, combined with the application of appropriate statistical and forensic evaluation of the sampling data. To inform this evaluation, NPS needs to search for and consider information sources such as documents or records of waste disposal operations at the site, historical aerial photos, interviews of persons knowledgeable about site operations, and newspaper accounts.

Additional sediment sampling also is necessary (both surface and subsurface sediments to a horizon representative of the landfill operational history) to address additional areas identified based on the investigation of historical activities and also to update the dataset. Most of the sediment sampling conducted by the Park Service for the KPL site is more than 20 years old. Although DOEE collected additional samples in the Anacostia River adjacent to the KPL site during the RI for the ARSP (as noted above), there have been only two recent sediment samples collected in the segment of Watts Branch that runs through the KPL site and no recent sediment samples from the unnamed tributary of Watts Branch adjacent to the KPL site.[8] The entire sediment dataset needs to be updated and expanded to ensure that it meets current data quality objectives and is adequate to support a complete site characterization, source evaluation, updated risk assessment, and evaluation of remedial alternatives. To that end, the supplemental RI should include additional surface and subsurface sediment sampling, including testing for radioactive isotopes for purposes assessing deposition time frames. It also should include pore water sampling and benthic community assessment, particularly in Watts Branch and its unnamed tributary adjacent to the site. Samples from all media must be analyzed for PCB congeners using Method 1668.

The necessary supplemental RI/FS for site sediment need not delay remedial action on the landside. The Park Service could designate sediments as an additional operable unit for which remedial action will be evaluated in a supplemental RI/FS conducted in parallel with the landside remedial actions outlined in the Proposed Plan. However, the ROD for the landside remedial action should make clear that it is not the complete site remedy, and that remedial action for site sediments and any supplemental

[8] In its response to Comment #116 on the Draft ARSP RI (March 2018), DOEE noted that data collected before 2006 for various site investigations along the Anacostia River may be useful for qualitative evaluation, but do not represent current conditions. Therefore, data collected prior to 2006 were excluded from the ARSP database.

landside remedies to address the migration of site-specific contaminants to the River (e.g., capping of KPS or groundwater remedies not sufficiently evaluated in the FS) will be addressed in a separate ROD.

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Table 1
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Summary of Available PCB Sediment Data in Proximity to Kenilworth Park Landfill

Sample	Horizon	Sample Date	General Location	Total PCBs (Aroclors) (a) (ug/kg)	Total PCBs (Congeners) (b) (ug/kg)	Source
SED-1	Surface	1999	Watts Branch (upstream)	164	NA	NPS (2000; Table 5-13)
SED-2	Surface	1999	Watts Branch	186	NA	NPS (2000; Table 5-13)
SED-3	Surface	1999	Stream (east side of landfill)	750	NA	NPS (2000; Table 5-13)
SED-4	Surface	1999	Stream near Grant St.	238	NA	NPS (2000; Table 5-13)
SED-5	Surface	1999	Drainage ditch	ND	NA	NPS (2000; Table 5-13)
SED-6	Surface	1999	Watts Branch	242	NA	NPS (2000; Table 5-13)
SED-7	Surface	1999	Anacostia (adjacent to KPS)	223	NA	NPS (2000; Table 5-13)
SED-8	Surface	1999	Anacostia (adjacent to KPS)	390	NA	NPS (2000; Table 5-13)
SED-9	Surface	1999	Anacostia (adjacent to KPS)	334	NA	NPS (2000; Table 5-13)
SED-10	Surface	1999	Anacostia (Pepco Cove)	341	NA	NPS (2000; Table 5-13)
SED-11	Surface	1999	Anacostia (adjacent to KPS)	400	NA	NPS (2000; Table 5-13)
SED-12	Surface	1999	Anacostia (upstream of KPN)	207	NA	NPS (2000; Table 5-13)
SED-13	Surface	1999	Silt pond north of landfill	213	NA	NPS (2000; Table 5-13)
SED-14	Surface	1999	Silt pond south of landfill	265	NA	NPS (2000; Table 5-13)
SMP-A	Surface	3/15/2000	Anacostia (upstream of KPN)	121	NA	NPS (2000; Table 5-16)
SMP-B	Surface	3/15/2000	Anacostia (upstream of KPN)	107	NA	NPS (2000; Table 5-16)
SMP-C	Surface	3/15/2000	Anacostia (adjacent to KPN)	499	NA	NPS (2000; Table 5-16)
SMP-E	Surface	3/15/2000	Anacostia (adjacent to KPN)	183	NA	NPS (2000; Table 5-16)
SMP-F	Surface	3/15/2000	Anacostia (adjacent to KPN)	273	NA	NPS (2000; Table 5-16)
SMP-G	Surface	3/16/2000	Anacostia (bank opposite KPN)	200	NA	NPS (2000; Table 5-16)
SMP-I	Surface	3/16/2000	Anacostia (bank opposite KPS)	177	NA	NPS (2000; Table 5-16)
SMP-J	Surface	3/16/2000	Anacostia (adjacent to KPS)	167	NA	NPS (2000; Table 5-16)
SMP-K	Surface	3/16/2000	Anacostia (bank opposite Pepco)	361	NA	NPS (2000; Table 5-16)
SMP-L	Surface	3/16/2000	Anacostia (just south of Pepco cove)	1334	NA	NPS (2000; Table 5-16)
SMP-M	Surface	3/16/2000	Anacostia (bank opposite KPN)	401	NA	NPS (2000; Table 5-16)
SMP-N	Surface	3/16/2000	Anacostia (bank opposite KPN)	233	NA	NPS (2000; Table 5-16)
KWS-SU-BK-10	Surface	6/20/2001	Grant St storm sewer outfall (adjacent to KPS)	472	NA	NPS (2008; Appendix L, Table 7)
KWN-SD-01	Surface	6/28/2001	Anacostia (adjacent to KPN)	15.5	NA	NPS (2002; Table 5-18)
KWN-SD-01D	Surface	6/28/2001	Anacostia (adjacent to KPN)	ND	NA	NPS (2002; Table 5-18)
KWN-SD-02	Surface	6/28/2001	Kenilworth Marsh	125	NA	NPS (2002; Table 5-18)
KWN-SD-03	Surface	6/28/2001	Kenilworth Marsh	164	NA	NPS (2002; Table 5-18)
KWN-SD-04	Surface	6/28/2001	Kenilworth Marsh	228	NA	NPS (2002; Table 5-18)
KWN-SD-05	Surface	6/28/2001	Kenilworth Marsh	253	NA	NPS (2002; Table 5-18)
KWN-SD-6	Surface	2/28/2006	Kenilworth Marsh	336	NA	NPS (2007; Table 5-2)
KWN-SD-7	Surface	2/28/2006	Kenilworth Marsh	510	NA	NPS (2007; Table 5-2)
KWN-SD-8	Surface	2/28/2006	Kenilworth Marsh	389	NA	NPS (2007; Table 5-2)
KWN-SD-9	Surface	2/28/2006	Kenilworth Marsh	460	NA	NPS (2007; Table 5-2)
KWN-SD-10	Surface	2/28/2006	Kenilworth Marsh	327	NA	NPS (2007; Table 5-2)
KWN-SD-11	Surface	3/1/2006	Kenilworth Marsh	253	NA	NPS (2007; Table 5-2)
KWN-SD-12	Surface	3/1/2006	Anacostia (adjacent to KPN)	236	NA	NPS (2007; Table 5-2)
KWN-SD-13	Surface	3/1/2006	Watts Branch	227	NA	NPS (2007; Table 5-2)
KWN-SD-14	Surface	3/1/2006	Watts Branch	482	NA	NPS (2007; Table 5-2)
KWN-SD-15	Surface	3/1/2006	Watts Branch	242	NA	NPS (2007; Table 5-2)
KWN-SD-16	Surface	3/1/2006	Ditch (north side KPN)	66	NA	NPS (2007; Table 5-2)
KWN-SD-17	Surface	3/1/2006	Watts Branch	427	NA	NPS (2007; Table 5-2)
KWN-SD-18	Surface	3/1/2006	Ditch (north side KPN)	230	NA	NPS (2007; Table 5-2)

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Sample	Horizon	Sample Date	General Location	Total PCBs (Aroclors) (a) (ug/kg)	Total PCBs (Congeners) (b) (ug/kg)	Source
SEDBACK600N	Surface	11/14/2013	Kenilworth Marsh	140	219	AECOM (2020)
RI-R6-06-SS	Surface (c)	8/4/2014	Anacostia (adjacent to KPS)	84.5	128	DOEE (2019; Appendix A)
RI-R6-08-SS	Surface (c)	7/30/2014	Anacostia (Adjacent to KPS)	92	168	DOEE (2019; Appendix A)
RI-R6-07-SC-1.5-2.5	Subsurface	10/10/2014	Anacostia (bank opposite KPS)	11.9	NA	DOEE (2019; Appendix A)
RI-R6-07-SC-3.5-4.5	Subsurface	10/10/2014	Anacostia (bank opposite KPS)	5.9	NA	DOEE (2019; Appendix A)
RI-R6-07-SS	Surface	7/30/2014	Anacostia (bank opposite KPS)	28	38	DOEE (2019; Appendix A)
RI-R6-09-SC-0.5-1.5	Subsurface	10/8/2014	Anacostia (adjacent to KPN)	19.1	NA	DOEE (2019; Appendix A)
RI-R6-09-SC-2.0-3.0	Subsurface	10/8/2014	Anacostia (adjacent to KPN)	217	NA	DOEE (2019; Appendix A)
RI-R6-09-SC-5.0-6.0	Subsurface	10/8/2014	Anacostia (adjacent to KPN)	ND	NA	DOEE (2019; Appendix A)
RI-R6-09-SS	Surface	7/30/2014	Anacostia (adjacent to KPN)	49	51	DOEE (2019; Appendix A)
RI-R6-10-SC-1.0-2.0	Subsurface	10/8/2014	Anacostia (adjacent to KPN)	ND	NA	DOEE (2019; Appendix A)
RI-R6-10-SC-3.5-4.5	Subsurface	10/8/2014	Anacostia (adjacent to KPN)	ND	NA	DOEE (2019; Appendix A)
RI-R6-10-SS	Surface	7/30/2014	Anacostia (adjacent to KPN)	12	28	DOEE (2019; Appendix A)
RI-R6-11-SC-3.0-4.0	Subsurface	10/8/2014	Anacostia (adjacent to KPN)	210	NA	DOEE (2019; Appendix A)
RI-R6-11-SC-6.0-7.0	Subsurface	10/8/2014	Anacostia (adjacent to KPN)	32	NA	DOEE (2019; Appendix A)
RI-R6-11-SS	Surface	7/31/2014	Anacostia (adjacent to KPN)	11.7	14	DOEE (2019; Appendix A)
RI-R6-12-SS	Surface (c)	7/31/2014	Anacostia (adjacent to KPN)	58	143	DOEE (2019; Appendix A)
RI-R6-22-SC-1.2-2.5	Subsurface	5/20/2015	Anacostia (adjacent to KPS)	430	1392	DOEE (2019; Appendix A)
RI-R6-22-SC-15.0-16.0	Subsurface	5/20/2015	Anacostia (adjacent to KPS)	ND	NA	DOEE (2019; Appendix A)
RI-R6-22-SC-3.4-4.6	Subsurface	5/20/2015	Anacostia (adjacent to KPS)	73	NA	DOEE (2019; Appendix A)
RI-R6-22-SC-7.0-8.0	Subsurface	5/20/2015	Anacostia (adjacent to KPS)	8.3	NA	DOEE (2019; Appendix A)
RI-R6-22-SC-9.6-10.6	Subsurface	5/20/2015	Anacostia (adjacent to KPS)	ND	NA	DOEE (2019; Appendix A)
RI-R6-22-SS	Surface (c)	4/30/2015	Anacostia (adjacent to KPS)	89	187	DOEE (2019; Appendix A)
RI-R6-23-SC-2.4-3.4	Subsurface	5/19/2015	Anacostia (adjacent to KPS)	470	1009	DOEE (2019; Appendix A)
RI-R6-23-SC-3.8-4.8	Subsurface	5/19/2015	Anacostia (adjacent to KPS)	135	NA	DOEE (2019; Appendix A)
RI-R6-23-SC-7.9-8.9	Subsurface	5/19/2015	Anacostia (adjacent to KPS)	19	NA	DOEE (2019; Appendix A)
RI-R6-23-SS	Surface (c)	4/30/2015	Anacostia (adjacent to KPS)	66	154	DOEE (2019; Appendix A)
RI-R6-24-SC-1.3-2.3	Subsurface	5/19/2015	Anacostia (KPN at Watts Branch)	15	68	DOEE (2019; Appendix A)
RI-R6-24-SC-2.5-3.5	Subsurface	5/19/2015	Anacostia (KPN at Watts Branch)	71	NA	DOEE (2019; Appendix A)
RI-R6-24-SC-4.2-5.2	Subsurface	5/19/2015	Anacostia (KPN at Watts Branch)	20	NA	DOEE (2019; Appendix A)
RI-R6-24-SS	Surface (c)	4/30/2015	Anacostia (KPN at Watts Branch)	117	207	DOEE (2019; Appendix A)
RI-R6-26-SC-0.7-1.7	Subsurface	5/21/2015	Anacostia (bank opposite KPN)	152	502	DOEE (2019; Appendix A)
RI-R6-26-SC-2.8-3.8	Subsurface	5/21/2015	Anacostia (bank opposite KPN)	4.7	NA	DOEE (2019; Appendix A)
RI-R6-26-SC-4.3-5.3	Subsurface	5/21/2015	Anacostia (bank opposite KPN)	ND	NA	DOEE (2019; Appendix A)
RI-R6-26-SS	Surface (c)	4/27/2015	Anacostia (bank opposite KPN)	64	119	DOEE (2019; Appendix A)
RI-R6-27-SC-2.3-3.3	Subsurface	5/14/2015	Anacostia (adjacent to KPN)	42	190	DOEE (2019; Appendix A)
RI-R6-27-SC-5.4-6.4	Subsurface	5/14/2015	Anacostia (adjacent to KPN)	240	NA	DOEE (2019; Appendix A)
RI-R6-27-SC-8.0-9.0	Subsurface	5/14/2015	Anacostia (adjacent to KPN)	ND	NA	DOEE (2019; Appendix A)
RI-R6-27-SS	Surface	4/27/2015	Anacostia (adjacent to KPN)	40.4	23	DOEE (2019; Appendix A)
RI-R6-28-SC-1.5-2.5	Subsurface	5/14/2015	Anacostia (adjacent to KPN)	ND	1.1	DOEE (2019; Appendix A)
RI-R6-28-SC-5.0-6.0	Subsurface	5/14/2015	Anacostia (adjacent to KPN)	ND	NA	DOEE (2019; Appendix A)
RI-R6-28-SS	Surface	4/27/2015	Anacostia (adjacent to KPN)	43	62	DOEE (2019; Appendix A)
P2-R6-33-SS	Surface (c)	6/28/2016	Anacostia (adjacent to KPS)	22	170	DOEE (2019; Appendix A)
P2-R6-38-SS	Surface (c)	6/28/2016	Anacostia (at confluence with Watts Branch)	14	73	DOEE (2019; Appendix A)
P2-R6-42-SS	Surface (c)	6/9/2016	Anacostia (KPN at Watts Branch)	167	195	DOEE (2019; Appendix A)
P2-R6-47-SS	Surface	6/28/2016	Anacostia (adjacent to KPN)	NA	162	DOEE (2019; Appendix A)
P2-R6-50-SS	Surface	6/9/2016	Anacostia (adjacent to KPN)	66	72	DOEE (2019; Appendix A)

Table 1
Attachment to Pepco Comments of March 12, 2021 on NPS Proposed Plan for the Kenilworth Park Landfill
Summary of Available PCB Sediment Data in Proximity to Kenilworth Park Landfill

Sample	Horizon	Sample Date	General Location	Total PCBs (Aroclors) (a) (ug/kg)	Total PCBs (Congeners) (b) (ug/kg)	Source
WB-01	Surface	11/27/2018	Watts Branch (adjacent to KPL)	NA	321	NPS (2019b; Table 7)
WB-02	Surface	11/27/2018	Watts Branch (adjacent to KPL)	NA	102	NPS (2019b; Table 7)
WB-03	Surface	11/28/2018	Watts Branch	NA	31	NPS (2019b; Table 7)
WB-04	Surface	11/27/2018	Watts Branch	NA	22	NPS (2019b; Table 7)
WB-05	Surface	11/28/2018	Watts Branch	NA	51	NPS (2019b; Table 7)
WB-06	Surface	11/28/2018	Watts Branch	NA	63	NPS (2019b; Table 7)
WB-07	Surface	11/28/2018	Watts Branch	NA	84	NPS (2019b; Table 7)
WB-08	Surface	11/28/2018	Watts Branch	NA	1022	NPS (2019b; Table 7)
WB-09	Surface	11/28/2018	Watts Branch	NA	3.9	NPS (2019b; Table 7)
WB-10	Surface	11/28/2018	Watts Branch	NA	3.3	NPS (2019b; Table 7)

Acronyms:
DOEE - Department of Energy and Environment.
KPN - Kenilworth Park North Landfill.
KPS - Kenilworth Park South Landfill.
NA - Not Analyzed.
ND - Not Detected.
NPS - National Park Service.
PCB - Polychlorinated Biphenyl.

Notes:
(a) Aroclors were analyzed using Method 8082. Total PCBs were calculated as the sum of detected Aroclors.
(b) Congeners were analyzed using Method 1668A. Total PCBs were calculated as the sum of detected congeners.
(c) Sample was collected by DOEE for the ARSP and identified as fringe (accessible for human contact) surface sediment. There are likely other surface sediment samples that would be considered fringe/accessible, but were not labeled as such by NPS.

Sources:
AECOM. 2020. Remedial Investigation Report. Benning Road Facility. Prepared for Pepco and Pepco Energy Services. February 2020. See Appendix W, Attachment 1, Table 2.
DOEE. 2019. River-Wide Remedial Investigation Report. Final. Anacostia River Sediment Project, Washington, D.C. Prepared by TetraTech. December 2019.

NPS. 2000. Preliminary Assessment/Site Investigation of Kenilworth Park Landfill. Prepared by Ecology and Environment, Inc. June, 2000.
NPS. 2002. Preliminary Assessment/Site Investigation of Kenilworth Park Landfill North. Prepared by Ecology and Environment, Inc. February, 2002.
NPS. 2007. Final Remedial Investigation at the Kenilworth Park Landfill North. November. Prepared by Ecology and Environment.
NPS. 2008. Final Remedial Investigation at the Kenilworth Park Landfill South. June. Prepared by Ecology and Environment.
NPS. 2019b. Final NPS Tributary Sediment Sampling Study Report, Anacostia River Sediment Project Site, National Capital Region. Prepared by The Johnson Company. September 18, 2019.

Table 2
Attachment to Pepco Comments of March 12, 2021 on NPS Proposed Plan for the Kenilworth Park Landfill
Summary of Available PCB and PAH Subsurface Soil Data - Kenilworth Park Landfill

Site	Location	Sample ID	Depth (feet)	Date	Aroclor 1242 (ug/kg)	Aroclor 1248 (ug/kg)	Aroclor 1254 (ug/kg)	Aroclor 1260 (ug/kg)	Total PCBs (Aroclors) (a) (ug/kg)	Total PAHs (17) (ug/kg)	Source
KPN	KL-SB-01	KL-SB-01C	12 (c)	2000	ND	ND	ND	ND	ND	6,920	NPS (2000a) Table 5-5 (PCBs) Table 5-8 (PAHs) (b)
KPN	KL-SB-03	KL-SB-03A	12 (c)	2000	ND	ND	ND	ND	ND	4,881	
KPN	KL-SB-05	KL-SB-05A	8 (c)	2000	ND	ND	ND	ND	ND	1,610	
KPN	KL-SB-06	KL-SB-06B	12 (c)	2000	ND	ND	ND	ND	ND	2,716	
KPN	KL-SB-07	KL-SB-07A	16 (c)	2000	ND	ND	ND	ND	ND	1,458	
KPN	KL-SB-07	KL-SB-07C	16 (c)	2000	ND	ND	ND	ND	ND	5,121	
KPN	KL-SB-08	KL-SB-08A	8 (c)	2000	ND	ND	ND	ND	ND	1,741	
KPN	KL-SB-9	KL-SB-9B	20 (c)	2000	ND	ND	16.5	11.1	27.6	9,070	
KPN	KL-SB-9	KL-SB-9D	20 (c)	2000	106	ND	79.4	62.9	248.3	19,580	
KPN	KL-SB-10	KL-SB-10B	16 (c)	2000	ND	ND	99.6	ND	99.6	12,620	
KPN	KL-SB-10	KL-SB-10C	16 (c)	2000	20	ND	31.1	ND	51.1	19,995	
KPN	KL-SB-11	KL-SB-11A	16 (c)	2000	ND	ND	ND	ND	ND	4,971	
KPN	KL-SB-11	KL-SB-11D	16 (c)	2000	34.3	ND	64.8	ND	99.1	728	
KPN	KL-SB-12	KL-SB-12B	5 (c)	2000	658	ND	248	ND	906	3,771	
KPN	KL-SB-13	KL-SB-13C	24 (c)	2000	ND	ND	196	ND	196	42	
KPN	KL-SB-13	KL-SB-13D	24 (c)	2000	123	ND	130	ND	253	1,748	
KPN	KL-SB-14	KL-SB-14A	8 (c)	2000	114	ND	59.7	ND	173.7	408	
KPN	KL-SB-16	KL-SB-16A	8 (c)	2000	278	ND	ND	43.8	321.8	4,257	
KPN	KL-SB-19	KL-SB-19B	12 (c)	2000	ND	ND	ND	ND	ND	612	
KPN	KL-SB-19	KL-SB-19B DUP	12 (c)	2000	ND	ND	8.6	14.2	22.8	870	
KPN	KL-SB-20	KL-SB-20B	12 (c)	2000	ND	ND	ND	ND	ND	ND	
KPN	KWN-SB-26	KWN-SB-26	6 - 8	6/26/2001	112	ND	145	ND	257	ND	NPS (2002) Table 5-8 (PCBs) Table 5-5 (PAHs) (b)
KPN	KWN-SB-27	KWN-SB-27	9 - 12	6/26/2001	780	ND	310	284	1,374	1,348	
KPN	KWN-SB-28	KWN-SB-28	4 - 5.5	6/26/2001	535	ND	634	ND	1,169	8,450	
KPN	KWN-SB-29	KWN-SB-29	6 - 7	6/26/2001	ND	ND	ND	46.8	46.8	269,480	
KPN	KWN-SB-30	KWN-SB-30	6 - 7	6/26/2001	576	ND	286	92.2	954	7,919	
KPN	KWN-SB-31	KWN-SB-31	5.5 - 7	6/26/2001	55.7	ND	46.3	37.5	140	1,951	
KPN	KWN-SB-33	KWN-SB-33	4 - 8	6/26/2001	ND	ND	ND	ND	ND	2,488	
KPN	KWN-SB-34	KWN-SB-34	4 - 6	6/26/2001	401	ND	ND	110	511	3,632	
KPN	KWN-SB-35	KWN-SB-35	4 - 8	6/26/2001	254	ND	ND	168	422	5,278	
KPN	KWN-SB-35	KWN-SB-35 (Duplicate)	4 - 8	6/26/2001	199	ND	342	100	641	3,961	
KPN	KWN-SB-36	KWN-SB-36	3 – 4	6/26/2001	82.7	ND	ND	41.8	125	25,361	
KPN	SB-1 (MW-10)	KWN-SB-1-030706-055-25	25	3/7/2006	17	21 U	70	9.4	96.4	420 U	NPS (2007) Table 5-8 (PCBs) Table 5-7 (PAHs)
KPN	SB-2 (MW-11)	KWN-SB-2-030606-057-10	10	3/6/2006	19 U	10	19 U	19 U	10	380 U	
KPN	SB-2 (MW-11)	KWN-SB-2-030606-057-20	20	3/6/2006	20 U	20 U	20 U	20 U	ND	290 U	
KPN	SB-3 (MW-12)	KWN-SB-3-030606-059-10	10	3/6/2006	18 U	18 U	18 U	18 U	ND	370 U	
KPN	SB-3 (MW-12)	KWN-SB-3-030606-059-20	20	3/6/2006	20 U	20 U	20 U	20 U	ND	400 U	
KPN	SB-4 (MW-13)	KWN-SB-4-030706-061-10	10	3/7/2006	570	19 U	490	220	1,280	1,200	
KPN	SB-4 (MW-13)	KWN-SB-4-030706-061-20	20	3/7/2006	23	22 U	340	21 U	363	4,000	
KPN	SB-4 (MW-13)	KWN-SB-4-030706-061-30	30	3/7/2006	21 U	21 U	21 U	21 U	ND	410 U	
KPN	SB-5 (MW-14)	KWN-SB-5-030306-063-05	5	3/3/2006	19 U	1,800	19 U	920	2,720	2,700	
KPN	SB-6 (MW-15)	KWN-SB-6-030306-065-05	5	3/3/2006	26 U	26 U	14	26 U	14	510 U	
KPN	SB-6 (MW-15)	KWN-SB-6-030306-065-10	10	3/3/2006	26 U	26 U	18	12	30	510 U	
KPS	GS-1	GS-1	8-15	10/14/1998	NA	NA	NA	NA	NA	894	NPS (1998) Table 5 (b)
KPS	GS-2	GS-2	8-15	10/14/1998	NA	NA	NA	NA	NA	10,309	
KPS	GS-3	GS-3	8-15	10/14/1998	NA	NA	NA	NA	NA	1,483	
KPS	GS-4	GS-4	8-15	10/14/1998	NA	NA	NA	NA	NA	455	
KPS	GS-5	GS-5	8-15	10/14/1998	NA	NA	NA	NA	NA	2,773	
KPS	GS-6	GS-6	8-15	10/14/1998	NA	NA	NA	NA	NA	4,460	
KPS	GS-7	GS-7	8-15	10/14/1998	NA	NA	NA	NA	NA	ND	
KPS	GS-8	GS-8	8-15	10/14/1998	NA	NA	NA	NA	NA	337	

Table 2
Attachment to Pepco Comments of March 12, 2021 on NPS Proposed Plan for the Kenilworth Park Landfill
Summary of Available PCB and PAH Subsurface Soil Data - Kenilworth Park Landfill

Site	Location	Sample ID	Depth (feet)	Date	Aroclor 1242 (ug/kg)	Aroclor 1248 (ug/kg)	Aroclor 1254 (ug/kg)	Aroclor 1260 (ug/kg)	Total PCBs (Aroclors) (a) (ug/kg)	Total PAHs (17) (ug/kg)	Source
KPS	MW7	KL-MW7-S2	from augers	5/5/1999	620	ND	200	120	940	2,200	
KPS	BH1	KL-BH1-S1	10-12	5/5/1999	ND	ND	13	9.4	22	1,600	
KPS	BH1	KL-BH1-S2	20-22	5/5/1999	ND	ND	16	15	31	2,600	
KPS	BH1	KL-BH1-S3	30-32	5/5/1999	310	ND	170	120	600	ND	
KPS	BH2	KL-BH2-S1	10-12	5/5/1999	ND	ND	28	27	55	1,300	
KPS	BH2	KL-BH2-S2	20-22	5/5/1999	ND	ND	ND	ND	ND	100	
KPS	BH2	KL-BH2-S3	30-32	5/5/1999	260	ND	190	120	570	10,952,000	
KPS	BH3	KL-BH3-S1	10-12	5/5/1999	ND	ND	7	7	14	ND	
KPS	BH3	KL-BH3-S2	20-22	5/5/1999	170	ND	170	200	540	3,300	
KPS	BH3	KL-BH3-S3	30-32	5/5/1999	410	ND	180	180	770	10,400	
KPS	BH4	KL-BH4-S1	10-12	5/5/1999	ND	ND	88	100	188	7,600	
KPS	BH4	KL-BH4-S2	20-21.5	5/5/1999	91	ND	84	81	256	5,600	
KPS	BH4	KL-BH4-S3	30-32	5/5/1999	ND	ND	130	83	213	800	
KPS	BH5	KL-BH5-S1	10-12	5/6/1999	ND	ND	ND	ND	ND	1,800	
KPS	BH5	KL-BH5-S2	20-22	5/6/1999	ND	ND	ND	ND	ND	1,500	
KPS	BH5	KL-BH5-S3	37-39	5/6/1999	ND	ND	ND	ND	ND	1,500	
KPS	BH6	KL-BH6-S1	10-12	5/6/1999	ND	ND	ND	ND	ND	1,400	
KPS	BH6	KL-BH6-S2	20-22	5/6/1999	ND	ND	ND	ND	ND	2,700	
KPS	BH6	KL-BH6-S3	32-34	5/6/1999	ND	ND	ND	ND	ND	68,600	
KPS	BH7	KL-BH7-S1	10-12	5/6/1999	ND	ND	ND	ND	ND	ND	
KPS	BH7	KL-BH7-S2	20-22	5/6/1999	ND	ND	ND	ND	ND	500	
KPS	BH7	KL-BH7-S3	30-32	5/6/1999	ND	ND	ND	ND	ND	284,800	
KPS	BH8	KL-BH8-S1	10-12	5/6/1999	ND	ND	ND	ND	ND	12,400	
KPS	BH8	KL-BH8-S2	20-22	5/6/1999	ND	ND	93,000	ND	93,000	2,600	NPS (2000b)
KPS	BH9	KL-BH9-S1	10-12	5/6/1999	ND	ND	ND	ND	ND	2,000	Table 5-6 (PCBs)
KPS	BH9	KL-BH9-S2	23-25	5/6/1999	ND	ND	ND	ND	ND	ND	Table 5-4 (PAHs)
KPS	BH9	KL-BH9-S3	30-32	5/6/1999	2,700	ND	ND	ND	2,700	6,500	
KPS	BH10	KL-BH10-S1	10-12	5/6/1999	ND	ND	ND	ND	ND	128,700	
KPS	BH10	KL-BH10-S2	20-22	5/6/1999	ND	ND	ND	ND	ND	200	
KPS	BH10	KL-BH10-S2 (Duplicate)	20-22	5/6/1999	ND	ND	ND	ND	ND	100	
KPS	BH11	KL-BH11-S1	10-12	5/7/1999	47	ND	51	ND	98	600	
KPS	BH11	KL-BH11-S2	20-22	5/7/1999	17	ND	30	25	72	2,700	
KPS	BH12	KL-BH11-S3	25-27	5/7/1999	230	ND	130	ND	360	6,100	
KPS	BH12	KL-BH12-S1	10-12	5/7/1999	1,700	ND	220	ND	1,920	1,100	
KPS	BH12	KL-BH12-S2	20-22	5/7/1999	560	ND	230	ND	790	5,700	
KPS	BH13	KL-BH13-S1	10-12	5/7/1999	43	ND	33	20	96	5,800	
KPS	BH13	KL-BH13-S2	20-22	5/7/1999	ND	ND	ND	ND	ND	900	
KPS	BH13	KL-BH13-S3	30-32	5/7/1999	ND	ND	18	ND	18	9,500	
KPS	BH14	KL-BH14-S1	10-12	5/7/1999	ND	ND	ND	ND	ND	6,100	
KPS	BH15	KL-BH15-S1	10-12	5/7/1999	46	ND	14	ND	60	200	
KPS	BH15	KL-BH15-S2	20-22	5/7/1999	NA	ND	NA	NA	NA	1,800	
KPS	BH16	KL-BH16-S1	from auger	5/10/1999	1,200	ND	94	110	1,404	5,500	
KPS	BH16	KL-BH16-S2	22-24	5/10/1999	360	ND	200	48	608	3,400	
KPS	BH17	KL-BH16-S3	30-32, not fill	5/10/1999	55	ND	85	120	260	7,600	
KPS	MW9	KL-MW9-S1	12-14	5/10/1999	420	ND	100	63	583	3,000	
KPS	MW10	KL-MW10-S1	from augers	5/10/1999	90	ND	74	81	245	183,300	
KPS	MW11	KL-MW11-S1	8.5-10.5	5/11/1999	ND	ND	ND	33	33	2,800	
KPS	BH17	KL-BH17-S1	5-7	5/11/1999	2,000	ND	ND	ND	2,000	4,600	
KPS	BH18	KL-BH18-S2	5-7	5/11/1999	ND	ND	ND	14	14	700	

Table 2
Attachment to Pepco Comments of March 12, 2021 on NPS Proposed Plan for the Kenilworth Park Landfill
Summary of Available PCB and PAH Subsurface Soil Data - Kenilworth Park Landfill

Site	Location	Sample ID	Depth (feet)	Date	Aroclor 1242 (ug/kg)	Aroclor 1248 (ug/kg)	Aroclor 1254 (ug/kg)	Aroclor 1260 (ug/kg)	Total PCBs (Aroclors) (a) (ug/kg)	Total PAHs (17) (ug/kg)	Source
KPS	In old landfill	KWS-SS-NE-1	6-8	6/19/2001	122	ND	119	48	289	10,708	NPS (2008) Table 5-4
KPS	In old landfill	KWS-SS-NE-2	10-12	6/19/2001	149	ND	111	22	282	4,854	
KPS	In old landfill	KWS-SS-NE-3	5-6	6/19/2001	ND	ND	ND	ND	ND	5,607	
KPS	In old landfill	KWS-SS-NE-4	6-7	6/19/2001	56.8	ND	38.4	7.37	102.57	1,872	
KPS	In old landfill	KWS-SS-AR-1	2.5	6/18/2001	ND	ND	ND	7.85	7.85	221	
KPS	In old landfill	KWS-SS-AR-2	1	6/18/2001	ND	ND	55.7	22.4	78.1	5,570	
KPS	In old landfill	KWS-SS-AR-3	1.25	6/18/2001	ND	ND	71.8	32.3	104.1	3,402	
KPS	In old landfill	KWS-SS-AR-4	2	6/18/2001	ND	ND	51.8	ND	51.8	296	
KPS	In old landfill	KWS-SS-AR-5	1.5	6/18/2001	ND	ND	87.9	55.7	143.6	2,109	
KPS	In old landfill	KWS-SS-AR-6 (Duplicate)	1.5	6/18/2001	ND	ND	66.5	61.8	128.3	2,177	
KPS	above old landfill	KWS-SS-WA-1	2-3	6/19/2001	47.7	ND	123	105	275.7	8,609	
KPS	above old landfill	KWS-SS-WA-2	1.5-2.5	6/19/2001	ND	ND	ND	22.8	22.8	106,580	
KPS	In old landfill	KWS-SS-WA-3	6.5-7.5	6/19/2001	ND	ND	150	9.13	159.13	4,930	
KPS	In old landfill	KWS-SS-WA-4	6-7	6/19/2001	ND	ND	ND	12.6	12.6	2,028	
KPS	In old landfill	KWS-SS-WA-5	2.5-4	6/19/2001	ND	ND	ND	21.5	21.5	21,785	

Acronyms:
KPN - Kenilworth Park North Landfill.
KPS - Kenilworth Park South Landfill.
NA - Not Analyzed.
ND - Not Detected.
NPS - National Park Service.
PAH - Polycyclic Aromatic Hydrocarbon.
PCB - Polychlorinated Biphenyl.

Notes:
(a) Aroclors were analyzed using Method 8082. Total PCBs were calculated as the sum of detected Aroclors.
(b) Total PAHs were not presented, and were calculated here as the sum of 17 PAHs, detected concentrations only.
(c) Total boring depth. Sample depth not provided.

Sources:
NPS. 1998. Report on Sampling the Kenilworth Site. Prepared by Ecology and Environment, Inc. December 1998.
NPS. 2000a. Geoprobe Sampling. Kenilworth Park Landfill North. Prepared by Ecology and Environment, Inc. October 2000.
NPS. 2000b. Preliminary Assessment/Site Investigation of Kenilworth Park Landfill. Prepared by Ecology and Environment, Inc. June, 2000.
NPS. 2002. Preliminary Assessment/Site Investigation of Kenilworth Park Landfill North. Prepared by Ecology and Environment, Inc. February, 2002.
NPS. 2007. Final Remedial Investigation at the Kenilworth Park Landfill North. November. Prepared by Ecology and Environment.
NPS. 2008. Final Remedial Investigation at the Kenilworth Park Landfill South. June. Prepared by Ecology and Environment.

Table 3
Attachment to Pepco Comments of March 12, 2021 on NPS Proposed Plan for the Kenilworth Park Landfill
Summary of Boring Log Information

Report	Well ID	General Location	Notes	Date	Waste Material	Depth (ft)
The Johnson Company, 2016. KPL Supplemental Groundwater Study Report.	MW-S-01A	KPS, Adjacent to Anacostia River		12/15/2013		
	MW-S-02A	KPS, Adjacent to Anacostia River		12/16/2013	FILL with debris (brick, glass, ceramic)	0.5-2
	MW-S-03A	KPS, Adjacent to Anacostia River		12/15/2013		
	MW-S-04A	KPS, Adjacent to Anacostia River	Adjacent to pre-landfill lake	12/14/2013	FILL with debris (anthracite coal, glass, ceramic)	1-10
	MW-N-05A & MW-N-05B	KPN, Adjacent to Watts Branch and Anacostia River		12/10/2013		
	MW-N-06A & MW-N-06B	KPN, Adjacent to Anacostia River		12/10/2013		
	MW-N-07A & MW-N-07B	KPN, Adjacent to Anacostia River		12/12/2013		
	MW-N-08A & MW-N-08B	KPN, Adjacent to Anacostia River		12/18/2013		
	MW-N-09A & MW-N-09B	KPN, Adjacent to Kenilworth Marsh		12/18/2013	FILL with debris (trace glass, other debris)	0-0.5; 11; 15
	MW-N-10A & MW-N-10B	KPN, Adjacent to Kenilworth Marsh		12/12/2013	FILL with debris (brick, glass, ceramic insulator)	0-1
	MW-N-11A & MW-N-11B	KPN, Near Kenilworth Marsh		12/17/2013	FILL with debris (glass)	0.2-1.2
	PZ-U-01A & PZ-U-01B	Adjacent to KPS on the unnamed tributary.		1/6/2014		
	PZ-U-02A & PZ-U-02B	KPS, Adjacent to unnamed tributary		1/6/2014		
	PZ-W-01A & PZ-W-01B	Watt's Branch, Upstream of KPN		1/6/2014		
	PZ-W-02A & PZ-W-02B	KPN, Adjacent to Watts Branch		1/6/2014		
	PZ-W-03A & PZ-W-03B	KPN, Adjacent to Watts Branch		1/6/2014		
The Johnson Company, 2019. KPL Groundwater Study Report.	MW-R-02A	Watts Branch, Upstream of KPN		9/6/2017		
	MW-R-01A	Adjacent to Watts Branch, near KPN		9/6/2017		
	MW-N-05AA	KPN, Adjacent to Watts Branch and Anacostia River		9/5/2017	Grass/trash styrofoam	0-0.8
NPS, 2008. Final RI at the KPS Landfill.	MW-7	KPS, Near the Cove		5/4/1999	Fill with glass and paper (5-6'), railroad ties timber (6-7'), gravel with metal wire (15-17.5). Black stinking fill material, interval not specified.	5-7, 15-17.5
	MW-10	KPS, Adjacent to unnamed tributary		5/10/1999	Strong smell of petroleum product, fill, interval not specified.	
	MW-11	KPS, Near unnamed tributary		5/11/1999	Fill 8.5-9'	8.5-9
NPS, 2007. Final RI at the KPN Landfill.	MW-1N	KPN, Near Watts Branch		6/18/2001		
	MW-2N	KPN, Adjacent to Kenilworth Marsh		6/19/2001	Landfill cap with debris to 15' bgs, black wet ashes 15-17'	0-17
	MW-3N(R)	KPN, Adjacent to Kenilworth Marsh		3/1/2006	Landfill material to ~28-29', fill material with concrete	0-29
	MW-4N	KPN, Between Anacostia River and Kenilworth Marsh	Within Pre-landfill Lake footprint	6/20/2001	Demolition debris/landfill cap to 5', fill with diesel smell 5-10'	0-10
	MW-5N	KPN, Near Anacostia River	Adjacent to pre-landfill lake	6/19/2001	Landfill material (fill with brick, concrete, wood) 0-4', fill material 4-10'	0-10
	MW-6N	KPN, Adjacent to Anacostia River	Within Pre-landfill Lake footprint	6/20/2001	Fill/debris (glass, rubble, brick, concrete, cobbles) to 10'. No recovery 10-20'.	0-10
	MW-7N	KPN, Adjacent to Anacostia River	Within Pre-landfill Lake footprint	6/20/2001	Fill (cobbles with metal, rubble, glass)	0-4
	MW-9N	KPN, Adjacent to Watts Branch		6/21/2001		
	MW-9N(R)	KPN, Adjacent to Watts Branch		3/2/2006		
	MW-10N	KPN, Near Kenilworth Marsh		3/7/2006	Landfill cap to 2', landfill materials observed at 10-12'. Split spoon sampling, limited cores collected.	2-12
	MW-14N	KPN, Adjacent to Watts Branch		3/3/2006		
	MW-15N	KPN, Adjacent to Watts Branch and Anacostia River		3/3/2006		
	MW-16N	KPN, Adjacent to Watts Branch		3/2/2006		

Table 3
Attachment to Pepco Comments of March 12, 2021 on NPS Proposed Plan for the Kenilworth Park Landfill
Summary of Boring Log Information

Report	Well ID	General Location	Notes	Date	Waste Material	Depth (ft)
NPS, 2000 (October). Kenilworth Park Landfill North Geoprobe Sampling Washington, DC. (No boring logs provided, information extracted from Table 3-2)	1	KPN, Adjacent to Watts Branch		Unknown	Burnt fill material with glass from 2' to 12'	2-12
	3	KPN, Adjacent to Watts Branch		Unknown	soil with construction debris	0-12
	4	KPN, Adjacent to Watts Branch		Unknown		
	5	KPN, Near Anacostia River		Unknown	0-3.5' fill material, glass, rubble; 3.5'-8' burnt fill material	0-8
	6	KPN, Near Anacostia River	Adjacent or within pre-landfill lake	Unknown	Small amounts of burnt fill 0-4'; 4'-7.5' burnt fill material, glass, metal	0-7.5
	7	KPN, Near Anacostia River	Adjacent or within pre-landfill lake	Unknown	3.5'-15' burnt fill material	3.5-15
	8	KPN, Adjacent to Watts Branch	Adjacent to pre-landfill lake	Unknown	3'-8' burnt filled material	3-8
	9	KPN, Adjacent to Anacostia River		Unknown	4'-11' soil with debris, brick and glass; burnt fill to 20'	4-11
	10	KPN, Adjacent to Kenilworth Marsh	Adjacent or within pre-landfill lake	Unknown	3'-14.5' burnt fill, metal, glass	3-14.5
	11	KPN, Adjacent to Kenilworth Marsh		Unknown	Clay with lenses of burnt fill 0-12'; below 12' burnt fill material, brick, metal	0-16
	12	Boring location not shown on figure		Unknown	Burnt fill with glass 3'-5'	3-5
	13	KPN, Adjacent to Kenilworth Marsh		Unknown	Burnt fill material with glass to 21'	2.5-21
	14	KPN, Adjacent to Kenilworth Marsh		Unknown	Topsoil with cement rubble to 3'; burnt fill to 8'	0-8
	19	KPN, Near Watts Branch		Unknown	3'-10.5' burnt fill material	3-10.5

ATTACHMENT B: DECEMBER 28, 2020 NPS INTERIM RESPONSE TO COMMENTS MEMORANDUM (AMENDED FEBRUARY 1, 2021)

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1 - National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

MEMORANDUM

TO: Administrative Record

FROM: Donna Davies, NPS CERCLA
Federal Government Lead,
Kenilworth Park Landfill Site

DATE: February 1, 2021

CC: Tara Morrison, NPS, National Capital Parks – East (NACE), Superintendent
Michael Commisso, NPS, NACE, Chief Resource Management
Sean McGinty, NPS, NACE, Public Information Officer

RE: Interim Response to Public Comments Received on the
Proposed Plan for Cleanup for the
Kenilworth Park Landfill Site

The National Park Service (NPS) released a Proposed Plan for Cleanup of the Kenilworth Park Landfill Site (Site) on November 12, 2020. NPS is the lead agency for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response activities completed at the Site. The release of the Proposed Plan initiated a public comment period that will extend to February 10, 2021.

On November 18, 2020, NPS held a virtual public meeting to present the Proposed Plan, to obtain initial feedback from the public, and to answer questions. On December 10, 2020, NPS presented the Proposed Plan to the Leadership Council for a Cleaner Anacostia River and in January 2021, NPS participated in several community advisory commission meetings. NPS has also been receiving questions and comments from the public via email.

NPS will review comments received on the Proposed Plan and supporting documents (e.g., Remedial Investigation and Feasibility Study Reports) as part of the cleanup selection process. The table below provides interim responses to questions and comments received to date during the public meetings or through email. On December 29, 2020, NPS posted on the Kenilworth Park Landfill webpage a

memorandum that provided responses to the first 69 comments received. NPS updated this memorandum to include comments and questions received from December 30, 2020 through January 31, 2021 (see response to comments 70 through 79 in the table below).

NPS identified four general recurring themes in questions and comments received to date. These themes revolve around 1) the purpose of the CERCLA response action, 2) restoration of natural resources, 3) future use of the Site, and 4) consideration of an approach that includes partial landfill removal. Provided below are NPS's responses to these four general themes. Following these responses is a table that summarizes each comment/question NPS has received through January 31, 2021.

Theme 1 - Purpose of a CERCLA Response Action

Section 104(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) vests the President with legal authority to respond to releases of hazardous substances when necessary to protect public health or welfare or the environment. The President has delegated that response authority to the Secretary of the Interior for releases of hazardous substances on land under the jurisdiction, custody, or control of the Department of the Interior, and the Secretary has re-delegated that authority to the National Park Service (NPS) for releases on land under its management, including the Kenilworth Park Landfill Site.

NPS cannot take response action at a contaminated site under section 104(a) of CERCLA unless there is an unacceptable risk to human health or the environment. Once an unacceptable risk has been established (usually through risk assessments conducted as part of the remedial investigation), NPS develops alternatives to address those unacceptable risks. NPS is required to evaluate remedial alternatives in accordance with the nine criteria described in section 300.430(e)(9)(iii) of the National Oil and Hazardous Substances Pollution Contingency Plan (commonly referred to as the NCP). To be selected as the final remedy, an alternative must also be cost-effective, which means that its costs are proportional to its overall effectiveness (see section 300.430(f)(1)(ii)(D) of the NCP).

Theme 2 - Restoration of Natural Resources

NPS is not authorized to restore natural resources under section 104 of CERCLA. Sometimes a response action designed to address unacceptable risks will have incidental benefits that might be viewed as the restoration or enhancement of natural resources, but the response action cannot be designed or selected for that reason; instead, NPS would need to select the alternative in accordance with the nine criteria prescribed by the NCP. Also, as noted above, any such alternative would need to satisfy the additional requirement of cost-effectiveness. Because NPS does not have the authority to restore natural resources under section 104, it is prohibited from pursuing that objective in the guise of a response action. [1]

[1] *See, e.g.*, U.S. Environmental Protection Agency (EPA), Reusing Cleaned Up Superfund Sites: Ecological Use Where Waste Is Left on Site, OSWER 9202.1-27-D (July 2006) at p. 6 ("EPA cannot fund, nor require PRPs or others, to fund certain "betterments" or "enhancements" of a remedy. Generally, a prohibited enhancement is an action that is not necessary to support the effectiveness of a remedy in protecting human health or the environment."), p. 7 (noting that while revegetation can be part of a remedy, "some extensive efforts to create or restore the structure and function of an ecosystem to exacting specifications may be considered enhancements, unless the need for the restoration is a result of environmental stressors or damages caused by the remediation"), p. 39 (explaining that "efforts to create new wetlands, where none existed prior to the disturbance, or to undertake extensive efforts to restore a wetland, where other practical alternatives exist, may be considered 'enhancements'"). As noted above, a response action is not necessarily prohibited just because it will result in the incidental improvement of natural

CERCLA does allow state and federal natural resource trustees to recover "damages for injuries to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss resulting from such a release [of hazardous substances]." (see section 107(a)(4)(C) of CERCLA). Damages recovered by the trustees from potentially responsible parties can be used to restore natural resources. In most cases, the natural resource damage assessment (NRDA) occurs after the response action because any claim for natural resource damages would be limited to the residual damages that remain after implementation of the remedy. NPS and its fellow natural resource trustees are in the early stages of the NRDA process for the Anacostia River, and the area to be assessed may include sites along the river, including the Kenilworth Park Landfill Site.

Theme 3 - Future Use of the Site

The reasonably anticipated future use of a site must be considered at multiple points in the CERCLA process (e.g., risk assessment, the development of alternatives, remedy selection, etc.).[2] But that future use is not determined as part of the CERCLA process; instead, the lead agency must make assumptions about how the site is likely to be used in the future. In some cases, the future use of a contaminated site is dictated by law. In most cases, however, the reasonably anticipated future use is nothing more than a prediction based on the available information.

In this case, the future use of Kenilworth Park South (KPS) is controlled by the General Management Plan for Anacostia Park. NPS is required to manage KPS in accordance with the GMP, and the GMP requires that KPS be devoted to natural resources recreation – in other words, it must be maintained in its natural state for passive recreational uses. For that reason, the assessment of risks and the development of remedial alternatives for KPS have been based on that future use.

The future use of Kenilworth Park North (KPN) is less certain. Congress has directed NPS to transfer administrative jurisdiction over KPN to the District of Columbia. The transfer legislation, which has been identified as an applicable or relevant and appropriate requirement (ARAR) for the Site, imposes some broad constraints on the future use of KPN. Specifically, the property must be "used only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." Within those broad constraints, however, the future use of KPN will be determined by the District of Columbia, not NPS.

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resources, but the response action cannot be selected for that reason. NPS investigates and remediates contaminated sites with funding from the Department of the Interior's Central Hazardous Materials Fund (the CHF). CHF funds may not be used for natural resource damage assessment or restoration activities. *See* Office of Environmental Policy and Compliance, *Central Hazardous Materials Fund (CHF) Financial Management Guidance,* Environmental Compliance Memorandum 10-4 (Sept. 18, 2018) at p. 2 (prohibiting the use of CHF funds for "Natural Resource Damage Assessment and Restoration activities").

[2] *See, e.g.*, U.S. EPA, *Land Use in the CERCLA Remedy Selection Process*, OSWER 9355.7-04 (May 25, 1995) at p. 6 ("The baseline risk assessment generally needs only to consider the reasonably anticipated future land use; however, it may be valuable to evaluate risks associated with other land uses."), p. 7 ("In cases where the future land use is relatively certain, the remedial action objective generally should reflect this land use."); Memorandum from James E. Woolford, Director, Office of Superfund Remediation and Technology Innovation, U.S. EPA, to Superfund National Program Managers, Regions 1 – 10, OSWER 9355.7-19 (Mar. 17, 2010) at p. 3 ("Whenever possible, the Agency also seeks to avoid response actions that might hinder or prevent site reuse consistent with the Agency's assumptions regarding reasonably anticipated future land use.").

Prior to NPS's evaluation of possible alternatives, the District informed NPS that it plans to use KPN to provide active recreational opportunities (e.g., sports fields). Although these plans were very preliminary and conceptual in nature, they provided sufficient information to allow NPS to complete feasibility study level evaluation of possible alternatives to address the unacceptable risk posed to active recreational users of KPN.

It is important to emphasize that NPS's preferred alternative (Alternative 3) would not limit the future creation of wetlands at KPN. During evaluation of Alternative 3, NPS assumed that most of KPN would be covered with a clean soil cap with the exception of buffer areas (i.e., areas preserved in their natural state between the park and surrounding surface water bodies). This assumption was made to maximize the District's flexibility in its future use of the Site and to ensure a conservative estimate of costs for purposes of comparison with the other alternatives. However, nothing in the preferred alternative requires that entire area be capped, and adjustments to the capped area can be made during the remedial design to accommodate other land uses such as wetlands or meadows.

NPS's preferred Alternative 3 is the most flexible option of any of the possible alternatives NPS evaluated. As a comparison, Alternative 5 would not allow the District to develop any portion of KPN into sports fields; therefore, in addition to the less favorable ranking for Alternative 5 based on cost, this alternative is not as favorably evaluated when compared to Alternative 3 because, although development of wetlands may meet the transfer legislation ARAR, it still limits where the District could develop recreational fields in the future. Several comments received have focused on the partial removal of landfill waste at KPN and restoration of wetlands; these scenarios would similarly limit the District's future use of KPN and add significant costs to the remedy without any comparable corresponding reduction in risk to active recreational users.

To reiterate, NPS cannot indirectly – and unilaterally – impose a specific future use of KPN on the District through the CERCLA process. To provide input on the specific future-use plans for KPN, members of the public are encouraged to participate in the District's planning process and provide their input to the District through this process. The District's Department of Parks and Recreation (DPR) has notified NPS that it is hosting virtual meetings in each ward to discuss the recreational needs and desires of the different neighborhoods. DPR is hosting the meeting for Ward 7, where KPN is located, on February 10. Additional information regarding this meeting can be accessed from this link:

https://ready2playdc.com/ward-meetings

The meeting DPR will be hosting on February 10 will include a discussion of all parks managed by DPR within Ward 7 and will not focus on KPN; however, Nick Kushner with DPR has further notified NPS that they are working to organize specific engagement around the future of KPN. Any additional comments on the future plans for KPN should be directed to Mr. Kushner.

Nick Kushner, Community Planner
Capital Projects, Planning and Design
DC Department of Parks and Recreation
1250 U St. NW | Washington, DC 20009
P: 202.391.9188 | E: nick.kushner@dc.gov

Theme 4 – Partial Landfill Removal

NPS received multiple requests to consider an approach that removes only a portion of the KPN landfill (not the entire former landfill as was evaluated under Alternative 5) and restores wetlands on that part

of KPN. Some of these requests were accompanied by what might be described as conceptual design plans for the future use of KPN. In an effort to be responsive to questions from the public, NPS estimated the costs associated with those alternatives. Those proposals were not, however, formally incorporated into the FS Addendum for two reasons.

First, as explained above, the future use of KPN will be determined by the District, subject only to the requirements of the transfer legislation. But the future-use plans submitted in support of the hybrid approach do not appear to have been developed by or in coordination with the District government. Instead, they were submitted by a subset of stakeholders whose opinions on this issue may or may not reflect the views of the community as a whole. NPS takes no position on the desirability of those plans, but they need to be directed to the District agencies responsible for planning the future use of the Site. Second, for the reasons stated above in NPS's response to Theme 3, there is no legally permissible rationale for formally evaluating a sixth alternative in the FS Addendum. The hybrid alternative would entail a significant increase in costs without providing any corresponding reduction in risk to human health or the environment. Some commenters have argued that the hybrid alternative would provide significant restoration benefits, but those benefits are not a proper consideration in the evaluation of remedial alternatives. As stated above, if the District decides to create wetlands, or incorporate another land use such as meadows in a portion of KPN, this can be included in the remedial design phase of the CERCLA process to accommodate a different configuration of land use. The clean soil cap is only required in high-frequency, high-intensity land use areas such as athletic fields. If areas of KPN are reserved for restoration in the future (i.e., not developed as athletic fields or public gathering areas), no clean soil barrier would be required.

NPS Interim Response to Comments/Questions Kenilworth Park Landfill Site December 29, 2020 Updated February 1, 2021		
No.	**Comment**	**Response**
1.	The gates at the south end of KPS were briefly padlocked shut last week. Are there future plans to close these gates? If so, when and for how long? Why is closure necessary as the proposed plan does not include any development of the KPS area?	The gates were closed because unauthorized vehicles were entering the park from the Anacostia Riverwalk Trail presenting safety concerns unrelated to contamination. Kenilworth Park South (KPS) has been administratively closed for several years. NACE is currently reviewing the closure status and access considerations.
2.	Please explain how none of the alternatives meet the criterion to reduce toxicity, mobility, etc.	This criterion reflects the statutory preference for the reduction of toxicity, mobility, or volume *through treatment.* Remedial actions implemented to address site risks generally fall into one of two categories: (1) treatment; or (2) engineering control options, such as containment with use of institutional controls to supplement engineering controls as appropriate. Because of the volume and heterogeneity of waste in landfills, treatment of the buried waste is impractical. Treatment of the surface soils is similarly impractical due to the lack of a concentrated source zone and volume of impacted soil. NPS focused on engineering control options (i.e. capping and removal) at this site because treatment is not practical. Because none of the remedial alternatives involves treatment technologies, this criterion has no effect on the evaluation of alternatives.
3.	Alternative five's cost includes the return of both North and South to the original state, what would be the cost to do so only for North?	In response to this question, NPS developed a preliminary estimate of cost for an approach where Kenilworth Park South would be addressed as described under Alternative 3 and KPN would be addressed as described under Alternative 5. This approach considered full removal of the KPN landfill and revegetation as wetlands. This cost would be approximately $320 million. Although NPS provided estimated costs associated with this approach, it is important to review NPS responses to Themes 1 through 4 above to understand why this approach was not evaluated as a possible alternative in the Feasibility Study.
4.	If the option with the soil covering over both KPN and KPS is chosen, will that mean the fields and track and KPN will be unusable? What is the timeline for that type of remediation?	The fenced-in track and athletic field were constructed on imported soil fill that was placed after the landfill cover and after much of the early investigation activities were completed. It is unlikely that the soil

NPS Interim Response to Comments/Questions Kenilworth Park Landfill Site December 29, 2020 Updated February 1, 2021		
No.	**Comment**	**Response**
		in this area (shaded tan and with a different cross hatch pattern on the figures) would need to be covered with additional soil. The disruption to visitors during placement of the soil fill under the preferred alternative is uncertain as the final plans for redevelopment have not been established by the District. NPS expects the District will develop specific plans to ensure the remediation has as little impact to visitor use as possible.
5.	There are many reasons why wetlands should be restored at this property. There are also many reasons why the local community should have improved recreational amenities. The alternatives present an unfortunate all-or-nothing choice with regard to wetlands. Can a sixth alternative be developed that provides both wetlands and space for amenities?	Please see NPS's responses to Themes 1 through 4 above. As the federal land manager and lead agency, NPS is authorized to assess and implement a remedial action under CERCLA at the Kenilworth Park Landfill Site to address unacceptable risk posed to human health by hazardous substances present is the site's surface soil and subsurface soil and waste. NPS developed and evaluated remedial alternatives to address this unacceptable risk. The lead agency must consider the reasonably anticipated future use of the site as part of the development of possible alternatives to address this risk. The future use of Kenilworth Park South is controlled by the General Management Plan for Anacostia Park. The GMP requires that Kenilworth Park South be managed for natural resources recreation -- in other words, that it be maintained in a natural state for passive recreational uses. Congress has directed NPS to transfer administrative jurisdiction over KPN to the District. Once that transfer occurs, KPN will not be part of Anacostia Park and will not be subject to the GMP. The transfer legislation provides that KPN must be "used only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." Within those broad constraints, the future use of KPN will be determined by the District government. Prior to NPS's evaluation of possible alternatives, the District

NPS Interim Response to Comments/Questions Kenilworth Park Landfill Site December 29, 2020 Updated February 1, 2021		
No.	**Comment**	**Response**
		informed NPS that it plans to use KPN to provide active recreational opportunities (e.g., sports fields). Although these plans were very preliminary and conceptual in nature, they provided sufficient information to allow NPS to complete feasibility study level evaluation of possible alternatives to address the unacceptable risk posed to active recreational users of KPN. NPS understands the value in restoring wetlands along the Anacostia River and Watts Branch; however, because development of wetlands does not address risks that hazardous substances at the site pose to human health or the environment, it cannot be included as part of the CERCLA remedial action. Although NPS is not authorized to develop wetlands as part of the site's CERCLA remedial action, if wetlands or other projects intended to increase resiliency are planned for this area, it is possible this work could be included in the CERCLA remedial action planning efforts. NPS suggests community members provide input on the specific plans for KPN by participating in the District's planning process and provide their input to the District through this process (see response to Theme 3 for upcoming event).
6.	Is this process subject to NEPA review?	No, CERCLA response actions are exempt from NEPA; however, NEPA's purposes are achieved through compliance with the CERCLA process.
7.	can you put up a map on share screen and show the location of the proposed trail bridge from Kenilworth to the Arboretum?	Figure 4 from the Proposed Plan was displayed for the audience. The figure shows the proposed alignment of the Anacostia Riverwalk Trail (ART) as depicted in the ART Environmental Assessment and on conceptual design plans prepared by the District Department of Transportation.

NPS Interim Response to Comments/Questions Kenilworth Park Landfill Site December 29, 2020 Updated February 1, 2021		
No.	**Comment**	**Response**
8.	Would a simple boathouse-type facility on the shore of the river in KPN be possible in the future under Alternative 3 or 4?	There is no reason why a boathouse-type facility could not be constructed in KPN under alternatives 3 or 4. Figures 4 and 5 in the Proposed Plan identify a "Water Access" location, which is outside the footprint of the landfill. Specific water access development plans for KPN will be determined by the District.
9.	Site History - most of the social history of the site and surrounding neighborhoods was omitted from the report. Is this information deemed irrelevant to the project?	The purpose of the Proposed Plan is to explain NPS's preferred alternative to clean up the site. Earlier documents prepared as part of the Remedial Investigation/Feasibility Study phase of the CERCLA process provide site history details. The Kenilworth Park Landfill Site Community Involvement Plan includes details on the surrounding community and environmental justice analysis. These considerations are important to the project.
10.	ART and Bridge - these elements are made to appear higher priority than the remediation. How was it determined that the specific configuration (of ART and Bridge) be given priority when there are other ways to configure this important link once the park remediation and design are established. The EA specifically states that the design of trail and bridge will conform to the requirements of the Kenilworth Park Landfill actions.	NPS will work with the District during construction of the ART and pedestrian bridge to ensure the work is completed in a manner that protects the environment and human health. Plans for expansion of the ART and bridge are underway; therefore, these elements are shown in the Proposed Plan figures depicting Alternatives 3 and 4. NPS worked with the District Department of Transportation to ensure the portion of the ART that has already been constructed over the landfill was completed in a manner that avoided disturbing buried waste. The ART was constructed approximately 2 feet above the surrounding land surface to integrate with an eventual soil barrier. By taking appropriate measures to protect workers and manage excavated waste to avoid spreading contamination, abutments for the Arboretum bridge may be installed over the former landfill at any time. NPS does not consider development of either the ART or bridge to be higher priority than completion of the CERCLA response. The alignment of the ART will not be determined as a part of the CERCLA process.

NPS Interim Response to Comments/Questions Kenilworth Park Landfill Site December 29, 2020 Updated February 1, 2021		
No.	**Comment**	**Response**
11.	The land use and maintenance proposed in Alts 1-4 render most of the site, located in an important river ecosystem, useless as habitat. Please explain how these alternatives protect the environment.	Please see NPS's response to Theme 2 above. The purpose of a CERCLA response is to address unacceptable risk posed to human health or the environment by hazardous substances present at a site. NPS does not agree that Alternative 3 would render most of the site useless as habitat. In fact, a key consideration for adopting Alternative 3 over Alternative 4 is that valued habitat within Kenilworth Park South will be preserved. The future use of KPN will be determined by the District government. Prior to NPS's evaluation of possible alternatives, the District informed NPS that it plans to use KPN to provide active recreational opportunities (e.g., sports fields). Although these plans were very preliminary and conceptual in nature, they provided sufficient information to allow NPS to complete feasibility study level evaluation of possible alternatives to address the unacceptable risk posed to active recreational users of KPN. Also, as noted above, NPS has authority under CERCLA to respond to releases of hazardous substances that pose unacceptable risks to human health and the environment; it cannot use that authority to recreate an environment that is no longer there (or never was) (see response to Theme 2). This response does not imply, however, that additional measures to enhance habitat along Watts Branch and the Anacostia River could not be taken. Portions of the landfill adjacent to the River and Watts Branch could be excavated and revegetated to create more habitat and flood resiliency independent of the CERCLA response action (see response to Themes 3 and 4).
12.	Cost of Alt 5 is characterized as "non cost balancing". Please explain this term. The evaluation analysis diminishes the value of wetlands.	Remedial alternatives must be evaluated against the nine criteria described in section 300.430(e)(9)(iii) of the NCP. For purposes of

NPS Interim Response to Comments/Questions Kenilworth Park Landfill Site December 29, 2020 Updated February 1, 2021		
No.	**Comment**	**Response**
	Given all the benefits, please explain how this determination was made. DoEE, which requires "no net loss and eventual net gain of wetlands", will inherit management of the park. Many agencies (EPA, USFWS etc) offer financial support for wetland restoration. FEMA considers it an effective flood control measure. Clearly wetlands are very valuable to other agencies.	remedy selection (see section 300.430(f)(1)(i)), those nine criteria are divided into three categories: threshold criteria (the first two), balancing criteria (three through seven), and modifying criteria (eight and nine). One of the five balancing criteria is cost; the other four are referred to as "non-cost balancing criteria." Alternative 5 was deemed to be relatively ineffective (compared with other alternatives) on the non-cost balancing criterion of short-term effectiveness. In addition, that alternative failed to meet the additional requirement of cost-effectiveness set forth in section 300.430(f)(1)(ii)(D) of the NCP. In other words, its costs were not proportional to its overall effectiveness. In this context, "effectiveness" is measured in connection with the first three balancing criteria. CERCLA response actions are required to address unacceptable risks posed by the presence of CERCLA hazardous substances at the site. The evaluation of costs is relative to the alternatives that meet the response action objectives. The economic value of creating additional wetlands and providing flood resiliency does not factor into the CERCLA response action selection criteria.
13.	Was there consideration given to integrating park design and remediation? Rather than making the objective of Alt 5 removal of all landfill material, the objective could be to design a Wetland Park featuring water dependent activities, maximizing area of wetland creation while designing also for compatible land-based activities. This would make best use of site and financial resources.	Please see NPS's responses to Themes 1 through 4 above.
14.	There are different ecosystem services associated with different parts of the site. In particular, the riparian area of the site alongside the Anacostia has and could have significant value for habitat, recreation and flood management. Did the evaluation of site remediation options consider ecosystem service value in development of the five options?	Please see NPS's response to Themes 1 and 2 above. The restoration of natural resources to provide additional ecosystem services, create habitat, provide recreational opportunities, or reduce flood risks is not the objective of a CERCLA response action. However, a remedy designed to address unacceptable risks from exposure to hazardous substances may incidentally provide such benefits.

NPS Interim Response to Comments/Questions Kenilworth Park Landfill Site December 29, 2020 Updated February 1, 2021		
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15.	can you clarify what, if any, remediation is being done on Kenilworth south? There are many lovely fruit bearing trees and bushes, I can see kids, and adults, helping themselves to the fruit. I'm concerned if the soil isn't healthy then the fruit won't be either.	The future use of KPS is controlled by the General Management Plan (GMP) for Anacostia Park. The GMP requires that KPS be managed for natural resources recreation -- in other words, that it be maintained in a natural state for passive recreational uses. Under NPS's preferred alternative 3, no vegetation will be removed from KPS. The contaminants of concern that drove potential human health risk at KPS were polycyclic aromatic hydrocarbons (PAHs). Exposure to PAHs by eating fruit from trees growing at KPS is not expected to be significant. In general, plant uptake of PAHs from soil is limited, because PAHs tend to strongly bind to organic matter in soil, thus rendering them unavailable for uptake by plants. In cases where plants may take up PAHs from soil, this uptake is typically limited to the skins or outer layer of roots that are in direct contact with impacted soils. PAHs that are stored in the outer layer of the plant are not readily transferred to the interior of the plant to any appreciable degree. Thus, there is little potential for risk from eating fruit from trees at KPS. As an aside, picking fruit from trees growing within a national park is prohibited.
16.	I understand that KPN consists of 80 acres and Alt 3 proposed to place a soil cap on 60 acres. Over time, athletic areas will likely be rearranged and years from now athletic events or other activities are likely to occur on these unprotected areas. What would be the extra cost to cover the entire site? Monte Edwards Committee of 100	The preferred alternative includes placing a clean soil barrier in areas of KPN in all areas that could potentially be developed for organized sport and recreation/community activity and special events areas. There are natural buffer areas along the outer portions of KPN that will be held in a natural undeveloped state as part of the transfer requirements, and, like KPS, will not require a barrier due to the anticipated lower frequency and intensity of use. The specific areas to be developed for organized sport and recreation/community activity and special events, as well as the area to be set aside as natural buffer, have not been delineated; therefore, to provide a conservative

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		estimate, NPS included all areas that could potentially be developed for active recreational use.
17.	Did the team consider restoration of wetlands in limited areas adjacent to Anacostia river and Watts branch?	Please see NPS's response to Themes 2 through 4 above. Within the context of a CERCLA response, restoration of wetlands adjacent to the Anacostia River is not tied to the reduction of unacceptable risk posed by the contamination; therefore, NPS has no authority under CERCLA to restore wetlands as part of the response action. As noted in the responses to other comments, if the District chooses to create wetlands, these plans can be integrated with the CERCLA remedial action during the CERCLA remedial design phase which begins after issuance of the Record of Decision.
18.	What considerations were given to wildlife habitat in the area, for instance, the American Woodcock, which breeds in this area and is a Species of Greatest Conservation Need?	During NPS's evaluation of possible alternatives, alternative 3 received a more favorable short-term implementation rating relative to alternatives 4 and 5 because alternative 3 would not destroy existing habitat located on KPS. NPS also conducted a risk assessment to evaluate risks to ecological receptors, including birds, during the remedial investigation.
19.	will NPS remediation take place prior to transfer to DC?	Remediation is not anticipated to take place before KPN is transferred to the District.
20.	How much of the shoreline of the site has sea wall? What part of the shoreline does not have seawalls? What is the seawall made of? What is the condition of the seawall? If KPS is to be a natural resource area, why not reestablish wetlands along the shoreline? Monte Edwards Committee of 100	There is approximately 1,700 feet of sea wall that runs along the Anacostia River bank in the northern portion of KPN. There is no sea wall along approximately 2,200 feet along the southern portion of KPN and the entire length of KPS. The sea wall consists of a rip rap foundation with a trapezoidal stone masonry wall that terminates a few feet above mean high water. Based on recent condition assessment the sea wall next to KPN is in stable condition with no need for repairs. Re-establishing shoreline is outside the authority NPS has under CERCLA, but such an activity could be implemented under a different program. Note that the topography of KPS would likely limit the feasibility of re-establishing wetlands along the River in this area.

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21.	We understand your responsibility under CERCLA. The concern for the community is that we are left with healthy land which can serve the community. These alternatives do not do that.	The preferred alternative (Alternative 3) addresses the risk posed to human health by hazardous substances in site surface soil, subsurface soil and waste and allows the land to be used for its reasonably anticipated future use (i.e. passive and active recreational uses).
22.	To be clear, there is no requirement that the remedial action be all excavation, or all capping. Correct? In the context of CERCLA response, your remedial options table already certifies that the excavation of the site to return it to its original state, including wetlands, does meet the criterion to reduce risk.	Full removal of the landfill would eliminate the unacceptable human health risks identified through the remedial investigation and associated risk assessments. However, the preferred Alternative 3 (partial clean soil barrier) ranks higher than Alternative 5 (full removal) based on short-term effectiveness and cost and does not limit the District's future use of KPN by reducing areas that may be developed into sports fields. The cost associated with excavating and disposing of landfill waste is significantly higher than placing a clean soil barrier within areas that will be used for Organized Sport and Recreation/Community Activities and Special Events with no additional reduction in risk. Although partial excavation of waste to restore tidal mud flats and wetlands may have a benefit for flood resiliency, the additional cost for waste excavation and removal would still be less cost effective than the clean soil barrier and there would still be a short-term negative impact to the surrounding neighborhood due to increases in truck traffic.
23.	Your preferred alternative already treats North different from South, why didn't you treat excavation in a similar manner?	The preferred alternative does not apply one remedy to KPN and a different remedy to KPS. Instead, the same remedy – *i.e.*, placement of a clean soil barrier over all surfaces that pose an unacceptable risk to human health or the environment – is applied to the entire Site. Due to differences in the future uses envisioned for KPS and KPN, the application of the remedy results in only one of those areas being capped. In contrast, the uniform application of Alternative 5 (excavation of all landfill waste) across the entire Site results in both KPN and KPS being excavated.
24.	For the estimated costs of the abatement, would that be borne by the National Park Service or by DC Government after the transfer of KPN?	Cost sharing negotiations between the District and the United States are ongoing.

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25.	Can you clarify the timeline of the Record of Decision (ROD) being released, the transfer of jurisdiction and the remedial work being completed? My understanding so far is that the jurisdiction would transfer after the ROD but before the remedial work. Will the remedial work be overseen by NPS after jurisdiction has been transferred or would the district take over managing the remedial work?	It is anticipated that the Record of Decision (ROD) will be issued in 2021 and the transfer of administrative jurisdiction for KPN is expected to occur after issuance of the ROD. The remedial design phase will begin after issuance of the ROD. This phase will include development of the detailed engineering plans to implement the remediation. After completion of the remedial design phase, the implementation of the design will begin. NPS will continue to oversee the CERCLA remedial action as the federal lead agency; however, the specific future roles and responsibilities of the District government and NPS will be negotiated and outlined in a future agreement between the United States and District.
26.	A recent development in Virginia used barges instead of trucks. Could option #5 work with less disruption to the community if an alternative to truck traffic is used? I agree with others that pursuing option #5 is a worthwhile effort.	Using barges rather than trucks will not significantly change the analysis or the factors used to select the preferred alternative. The use of barges could increase the absolute and relative cost of Alternative 5 as that approach would require additional loading, unloading, and hauling above and beyond that which would be required for trucking and would have no impact to reduction of risk to recreational users.
27.	How has NPS determined the presumed future use?	The future use of KPS is controlled by the NPS General Management Plan for Anacostia Park. This plan requires that KPS be managed for natural resources recreation -- in other words, that it be maintained in a natural state for passive recreational uses. Congress directed NPS to transfer administrative jurisdiction over KPN to the District. Once that transfer occurs, KPN will not be part of Anacostia Park and will not be subject to the General Management Plan. The transfer legislation provides that KPN must be "used only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." Within those broad constraints, the future use of KPN will be determined by the District government.

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		Prior to NPS's evaluation of possible alternatives, the District informed NPS that it plans to use KPN to provide active recreational opportunities (e.g., sports fields). Although these plans were very preliminary and conceptual in nature, they provided sufficient information to allow NPS to complete feasibility study level evaluation of possible alternatives to address the unacceptable risk posed to active recreational users of KPN.
28.	Following the comment period, looking at an actual timeline and considering that option 3 is accepted, when would the 1-2 year plan begin? When would this project take place?	The estimated 1 to 2 years was an estimate to complete the implementation of alternative 3. The implementation begins after the remedial design phase, which is the CERCLA phase when the detailed engineering drawings and plans are prepared. The remedial design phase will begin after issuance of the Record of Decision. The timeline to fully implement the remedy is uncertain but for the selected alternative could reasonably fall within the range of 5 to 10 years in the future. This would include preparing the remedial design (engineering drawings and plans) and conducting the site work (i.e. actual placement of the clean soil barrier).
29.	Is woodland going to be removed, and if so, where, and how will the disturbed land be treated?	Under the preferred alternative, wooded areas located within KPS will remain, and natural buffer areas along the outer portions of KPN will be held in a natural undeveloped state as part of the transfer requirements of KPN. Alternatives 4 and 5 would require significant removal of existing woodlands.
30.	Please explain the difference between "unacceptable" and "acceptable" risk. Does this differ for those of us who live here and use the park daily?	As part of the Feasibility Study, NPS adopted a target excess cancer risk level of one in one million. Within the regulations that implement CERCLA, the national contingency plan or NCP, acceptable long-term cancer risk can range from one in ten thousand to one in one million. Acceptable short-term, or "acute," risk is established by what is known as the "hazard index" (HI). The HI is a ratio of the potential exposure to a substance (e.g., a concentration in media such as soil) and the level (or concentration) at which no adverse effects are expected from exposure to that substance. A hazard index of 1.0 was

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		the target short term acceptable risk (i.e., the level at which no adverse effect is anticipated). The acceptable risk level for cancer is based on the frequency and intensity of exposure. Therefore, the variable risk and cleanup levels are based on the activity likely to be undertaken. Walking along established trails on a daily basis is a different exposure scenario from playing contact sports on an athletic field. The exposure scenarios are described in the 2020 Feasibility Study Addendum report. NPS has prepared a poster that provides further explanation on how risk is evaluated during the CERCLA process. This poster is entitled "What is Risk Assessment" and is posted under the "Want to Know More" section of the webpage.
31.	What additional outreach activities will the NPS be taking to connect with communities in Kenilworth, Paradise, Mayfair Mansions, and Eastland Gardens? It's important they are engaged, and their feedback is sought and recorded.	NPS agrees that it is important to engage and seek feedback from the communities surrounding the Kenilworth Park Landfill Site. Input from the community is very important to consider during the selection of a cleanup alternative for the Site and will coordinate with the Deanwood Citizens Association and other community groups to participate in upcoming meetings. Update – NPS participated in four community and neighborhood meetings. NPS has also consulted with members of the Anacostia Park and Community Collaborative (APACC) to help in their community outreach efforts. APACC is a network of organizations committed to maximizing the value of public spaces along the Anacostia River to residents of Wards 7 and 8 in the District. APACC has created a webpage and Facebook page specifically targeted to nearby residents to provide information and accept input on NPS's Proposed Cleanup Plan.
32.	Thanks for the presentation. Given the proximity to the Anacostia River, and the ongoing ARSP, did the NPS consider alternatives that	The Remedial Investigation concluded that there is currently no unacceptable risk from contaminants at the landfill migrating to the River via groundwater; therefore, consideration of measures to

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	would reduce or eliminate contaminant exposure in the river adjacent to the site?	prevent impacts to the River were not necessary. If contaminated river sediments adjacent to the site need to be remediated, that will be done as part of the Anacostia River Sediment Project.
33.	If the shoreline is not naturalized or graded, there can be no access for boating	Any grading or naturalization needed to accommodate boat access can be completed independently of this response action. The preferred alternative would not preclude those activities in the future.
34.	We are observing the "silting-in" of the Anacostia River. With alternative 3, capping cover of soil in KPN and South, what will keep it from running off into the river? What is the plan to remediate this?	The remedial design for the clean soil barrier would require stormwater protection measures in accordance with applicable laws and regulations. These requirements would be incorporated into the remedial design to prevent sediment contamination from newly placed soil. These areas would be vegetated to provide long-term stability. Also, the clean soil barrier is proposed inside an existing natural buffer, so the new soil barrier would not extend to the banks of the Anacostia River or Watts Branch.
35.	Is the cost of the selected alternative to be shared with the District?	Cost sharing negotiations between the United States and the District are ongoing.
36.	How will the construction affect the Anacostia River trail access?	The existing Anacostia Riverwalk Trail located along the northern portion of KPN is located outside the areas currently designated to receive a clean fill barrier; therefore, access is not expected to be impacted during the cleanup.
37.	When the District assumes administrative control of North, which agencies will have that control? In particular, who will be responsible for the shoreline?	It is NPS's understanding that following the transfer to the District, the Department of Parks and Recreation (DPR) will have primary responsibility for managing KPN. It is anticipated that DPR would consult with the District Department of Energy and Environment (DOEE) regarding natural resource issues such as the shoreline. Actual management roles and responsibilities for KPN will be determined by the District, not NPS.
38.	What (if anything) is preventing DC government from developing its plan for Kenilworth North at the same time as this process so they can be coordinated, as per Trey's point about making efficient use of dollars (federal and local)?	There is nothing preventing the District government from developing its plan for KPN at the same time as the CERCLA process proceeds. The alternatives identified in the Feasibility Study and Proposed Plan are not intended to be detailed engineering drawings; they are

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		conceptual and were used to develop approximate costs. Prior to developing and evaluating the alternatives, NPS consulted with the District to discuss its preliminary plans for KPN, which included development of additional sports fields. Although the District's plans were very preliminary, they were sufficient for NPS's cost estimating purposes. The area shown for a soil barrier in Alternative 3 is meant to represent a conservative scenario of sports field development as no specific plans have yet been developed by the District. After the formal cleanup plan is issued in the Record of Decision, the next phase of the CERCLA process will be preparation of the remedial design. This phase will likely be completed after KPN has been transferred to the District. During the remedial design, the specific construction drawings, plans, and specifications will be prepared. These plans will need to accommodate whatever the District's future plans are for the site. The remedial design for the cleanup will not occur without coordination with the District. Update – DPR has notified NPS that it is hosting virtual meetings in each ward to discuss the recreational needs and desires of the different neighborhoods. DPR is hosting the meeting for Ward 7, where KPN is located, on February 10. Additional information regarding this meeting can be accessed from this link: https://ready2playdc.com/ward-meetings The meeting DPR will be hosting on February 10 will include a discussion of all parks managed by DPR within Ward 7 and will not focus on KPN; however, Nick Kushner with DPR has further notified NPS that they are working to organize specific engagement around the future of KPN. Any additional comments on the future plans for KPN should be directed to Mr. Kushner (see response to Theme 3 for contact information).

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39.	You have already talked about realignment of the Riverwalk trail that I assume would involve DDOT during the design phase. Do you plan to incorporate others, such as DOEE, who would likely advocate for some form of their Living Shoreline draft plan in terms of wetlands or sills to replace deteriorated seawalls? Monte Edwards Committee of 100	Realignment of the Anacostia Riverwalk Trail is not part of the CERCLA response action. The alignment of the existing Anacostia Riverwalk Trail within KPN will remain as constructed in 2015. The alignments of future trail segments within KPN and KPS are managed by DDOT and are proceeding independent of the CERCLA response action. DDOT does consult with NPS to ensure the trail construction is completed in a manner that protects worker health and mitigates possible hazards encountered during construction. Any plans for development of living shoreline the District may wish to incorporate along Watts Branch or the Anacostia River could be considered during the remedial design phase of the project. NPS and the District will continue to work closely together on this project. For additional information see responses to Themes 2 and 3.
40.	What is proposed to be done with the former community center site?	The future of the former community center site and related facilities (building foundation, swimming pool, basketball and tennis courts) will be determined by the District during redevelopment planning.
41.	If I understood correctly, currently building on either KPS or KPN would cause an unacceptable exposure risk to workers. After the soil cap is in place would building on the site be possible without these risks?	Risk posed to workers is only unacceptable if no protective measures are taken. Part of the remedy includes "institutional controls," which for this Site will include administrative requirements to implement precautions before and during any proposed excavation activities to protect worker safety and address this risk. Installing utilities or constructing buildings over the site is possible as long as protective measures are taken in the design and construction. NPS will provide oversight of any excavation activities to ensure appropriate protective measures are taken.
42.	When uses change it is not just a matter of applying more fill. Any changes will require significant regrading as long as contaminated material remains below.	The Preferred Alternative was selected based on the District's current plan to develop KPN for active recreational opportunities (e.g., sports fields). Specific areas to be covered will be delineated as part of the remedial design phase of the project and will be based on the District's specific development plans for KPN.

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		As part of the institutional controls put in place to manage the site, there will be limitations on future land use and precautions will be required to protect worker safety during construction and excavation activities.
43.	Thank you for this presentation. I'm curious about the Kenilworth site and its influence on the Anacostia River. The proposed plan suggests that contamination in the tidal Anacostia River do not appear to be attributable to the Kenilworth site. Are there data that have been collected in Watts Branch that can be compared with Anacostia River data that informed this statement? Thank you.	The Kenilworth Park Landfill Site, in contrast to other sites located along the Anacostia River such as the Washington Gas East Station site, the Washington Navy Yard, and the Pepco Benning Road site, does not include any portion of the Anacostia River. If the sediments adjacent to Kenilworth need to be remediated, that will be done as part of the Anacostia River Sediments Project (ARSP) remediation. NPS collected sediment samples from Watts Branch and the Unnamed Tributary during the preliminary assessment/site inspection and remedial investigation phases of the project. NPS also reviewed results reported from sediment samples collected from Watts Branch as part of the ARSP and a related tributary study. The results reveal contaminants, including polychlorinated biphenyls (PCBs), at higher concentrations at some locations upstream of the Site. This indicates there are sources of contamination located upstream of the Kenilworth Park Landfill Site. Based on the review of available data, NPS concluded that the Kenilworth Park Landfill Site is not a current, ongoing source of contamination to adjacent surface waters including Watts Branch or the Anacostia River.
44.	I'm looking back through the FS Addendum for information about how groundwater from the site moves contaminants and/or contaminated sediment into the river and/or into Watts Branch, but I'm finding nothing. Does NPS persist in its assertion that there is no migration of contamination from the site to the river or to Watts Branch?	Information regarding the potential migration of contaminants in groundwater is provided in the 2019 Remedial Investigation (RI) Addendum report, which is referenced in the 2020 Feasibility Study (FS) Addendum. The RI/FS documents are intended to be complementary where the FS builds on the data and conclusions of the RI.

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		The RI Addendum report concluded that there are no unacceptable risks associated with contaminants in groundwater migrating to the Anacostia River, Kenilworth Marsh, or Watts Branch. The RI/FS did not investigate whether the Site may have been a historical source of contaminants to those water bodies. Sediment contamination in the Anacostia River adjacent to the Site is being addressed as part of the Anacostia River Sediment Project (see response to comment 43).
45.	NICK Kushner - would you mind supplying your contact info?	Nick Kushner, AICP Community Planner Capital Projects, Planning and Design DC Department of Parks and Recreation 1250 U St. NW | Washington, DC 20009 P: 202.391.9188 | E: nick.kushner@dc.gov
46.	This might be covered in the addendum report but I was wondering if preferred alternative 3 is chosen, how often and for how long will the site be monitored for potential erosion (e.g., along the river and stream banks)? And if there is erosion occuring, what are the plans to address this?	NPS's preferred alternative 3 would not involve earthwork along the river and stream banks; therefore, erosion in these areas associated with installation of the clean soil barrier is unlikely. Nevertheless, NPS included monitoring for erosion as a component of the Institutional Controls. The frequency and duration of monitoring for erosion and mitigation steps to address erosion will be established and outlined as part of the Record of Decision issued for the Site and will be detailed in plans prepared as part of the remedial design phase. In addition, CERCLA requires NPS to conduct a review of the remedy's protectiveness at least once every five years if the selected remedy will leave waste at the Site (as most of the evaluated alternatives would).
47.	Barges were used in the construction of the ART - as far north as NY Ave	Thank you for the comment, no response is necessary. See the response to comment 26.
48.	Barges are already in use for other projects along the river so that is a very worthwhile question.	Thank you for the comment, no response is necessary. See the response to comment 26.

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49.	Good Afternoon, Was there a recording of the Wednesday meeting and materials I can share with my constituents? I am the ANC of Parkside which abuts NPS land adjacent to the Anacostia River and was not aware of the event until after it ended.	A recording of the virtual meeting and transcript has been posted on the Kenilworth Park Landfill webpage www.nps.gov/anac/learn/management/kpls.htm
50.	Donna: I live in River Terrace in NE DC and am excited to see that Kenilworth Park will be cleaned up. I think Alternative 3 makes the most sense. However, I would like to advocate for the inclusion of a car-top canoe / kayak launch near the site of the proposed footbridge to the Arboretum. As an avid kayaker, there aren't nearly enough spots to easily (and safely) launch between Bladensburg Waterfront Park and the Anacostia boat ramp. I already use the make-shift launch in Kenilworth Park, but it would be very nice to have something more formal in the final plans. Let me know if you have any questions or would like to discuss! Thanks, Ben Grillot 3445 Clay Street NE	Congress has directed NPS to transfer administrative jurisdiction over KPN to the District; therefore, the District will determine the configuration of future park facilities. The water access location shown on Figure 4 from the Proposed Plan shows the water access location that was included on a conceptual design plan prepared by the District Department of Transportation. The preferred alternative would allow for the type of boat launch you have described.
51.	I am a regional bicycle advocate and very interested in the Anacostia River Trail access. I unfortunately missed the public meeting concerning the NPS Kenilworth Park Landfill Site project. Recently, Jersey barriers have been placed in the trail access at the terminus of Deane Ave at Watts Branch Creek. This trail is a moderately traveled spur from the ART as a bypass for Mayfair District / Parkside Apartments (where the surface route is often filled with debris and glass making this route dangerous).	The placement of the jersey barriers, at the terminus of Deane Ave at Watts Branch Creek, and the gate located along the Anacostia River Trail to the south, was originally placed because of the unsafe physical conditions (uneven terrain and construction debris), which resulted in the administrative closure of the area. Over the years, the jersey barriers have been inadvertently moved and gate re-opened without park approval. This has led to vehicles accessing the site, which have created additional safety concerns. NPS recently repositioned the jersey barriers and re-locked the gate to remedy the issue. NPS is

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	Could you please advise me of the trail bypass closure (trail users would like the barriers to have a 3 ft opening for continued pedestrian and bicyclist access)? Also, I'm very interested in the trails proposed for Alternative 3. Can you share greater detail than available on the Alternative PDF map posted from the meeting? P.S. I am supportive of the NPS preferred alternative 3 at this time. My priority is to maintain and improve access to Kenilworth Park for trail users.	currently reviewing the administrative closure and access to the area for visitor use. At this time, the only trail planned for development across KPS is the continuation of the Anacostia Riverwalk Trail. DDOT determined the alignment of this trail, which was shown on the Alternative 3 figure. NPS has not yet determined the future of the road that runs north to south across KPS and is also shown on the Alternative 3 figure; it may be removed or it may remain, but NPS will make that decision outside of the CERCLA process.
52.	What if any responsibility does NPS have for remediation of contaminated sediment adjacent to Kenilworth Park? On one of the ARSP documents this area is identified as a hot spot. As you know, many members of the general public followed the ARSP with great interest. While the DoEE has done an exceptional job making their plans available and comprehensible to the public, many members of the gp are completely in the dark about activities and plans of the other PRPs (PEPCO, WASH GAS, NPS, etc). It would be very helpful to gain a full picture of activities around Kenilworth Landfill, especially now while the Feasibility Report and Proposed Plan for Remedial are out for public comment.	The RI Addendum concluded that the Kenilworth Park Landfill Site is not an ongoing source of contaminants to river sediments, at least not at concentrations that create unacceptable risks to human health or the environment. The Kenilworth Park Landfill Site, in contrast to the Washington Gas East Station site, the Washington Navy Yard, and the Pepco Benning Road site, does not include any portion of the Anacostia River. If the sediments adjacent to Kenilworth need to be remediated, that will be done as part of the ARSP remediation. To the extent there are allegations that Kenilworth contributed hazardous substances to the river in the past, those allegations would be addressed in the context of allocation discussions among the potentially responsible parties for the ARSP. NPS will not be remediating contaminated river sediments as part of the Kenilworth response action. The boundaries of the Site were drawn to ensure that the Kenilworth Site and the ARSP Site were mutually exclusive. In other words, the Site boundaries were designed to avoid the possibility that the same area would be subject to overlapping and potentially inconsistent investigations and response actions. Because other contaminated sites along the river include

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		portions of the adjacent riverbed, those sites were essentially carved out of the ARSP and will not be addressed as a part of that response action. Instead, the sediments adjacent to those sites are being investigated in accordance with the legal agreements in place for those sites and will be remediated, if necessary, in accordance with separate records of decision issued for those sites.
53.	I wanted to comment on the remediation plan that was recently published. I am not sure if I will be able to attend the meeting, but there are a couple of questions that I have and that I am hoping can be answered for me as well as for the public. (1) It sounds like the preferred alternative would include placing topsoil on the Anacostia Trail as well as the fields. Is this correct? If so, what is the likely timeline for this work, and how long would the trail be "offline"? (2) Does the plan impact the planned bridge over the river to the Arboretum in any way?; (3) Can the planned segment of the Anacostia Trail across Kenilworth Park South be constructed before the remediation work is done at KPN, so that trail users would have an alternate route while the work is being done? Thanks.	1. The proposed clean soil barrier included in the Preferred Alternative 3, will not cover the Anacostia Riverwalk Trail. The fill placed during construction of the trail and the asphalt surface provide a barrier between visitors and the underlying soil. The 12-inch clean soil barrier placed over areas of KPN will butt up against the trail, which was designed to be approximately 2 feet above the surrounding ground surface. There is no plan to take the trail offline for the preferred alternative; however, alternate routes would need to be considered for Alternative 5 (complete removal of the landfill and return to mud flats and wetlands). Following issuance of the final plan in the Record of Decision the remedial design phase will begin and will include the specific details of the plan. 2. During construction, hazards such as methane gas and possible unexploded ordnance must be considered and mitigated. Also, if contaminated soil or waste is disturbed during construction, this soil/waste must be properly managed. Finally, the final remediation plan must be considered during design and construction of the bridge. For example, if the preferred alternative becomes the final plan for the Site, the bridge design must consider the raised ground surface elevation associated with the future clean soil barrier to be placed over KPN. The construction of the Arboretum pedestrian bridge can proceed independent of the remediation of the Site as long as precautions such as those identified above are considered and addressed.

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		3. The construction of the Anacostia Riverwalk Trail across Kenilworth Park South is moving forward and is proceeding independent of the cleanup project.
54.	I am opposed to the plan to develop Kenilworth Park. As a community member who enjoys the park on a weekly basis, I request that the land be preserved for wildlife. It is one of the only true wilderness areas easily accessible in DC, and as it hosts breeding woodcocks, Northern Harriers, spring peepers, Kestrels, and many other species of wildlife. Looking out over the meadow in the morning and hearing the birdsongs brings a smile to my face. I have also seen children enjoying the sights and sounds of a wild place they may not otherwise have access to in the city. Thank you for your consideration.	One of the benefits NPS considered for Alternative 3 is the fact that this alternative would require no destruction of the current habitat located on Kenilworth Park South. There are also areas of KPN that will remain as natural resource buffer areas.
55.	This is such a wonderfully rich natural environment and hosts many native species. Please preserve it.	Thank you for your comment, NPS's Preferred Alternative 3 would preserve KPS and natural buffer areas within KPN in its current condition.
56.	I am the advisory neighborhood commissioner. One of the commissioners for the area. I just wanted to see if you could restate what the timelines were on potential decisions being made for the proposed alternatives part one, part two for the alternatives that have been proposed, what is the breakout between the responsibilities for who is paying for those different courses of action. The federal government versus DC government. Is that also driving what alternatives or accidents and or plans are being made?	The future schedule for the process is as follows: As required under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), NPS is accepting comments on the Proposed Plan and supporting documents through February 10, 2021. NPS will review and consider all comments received on the plan and feedback from the District and will decide if the preferred alternative will be chosen as the final remedy for the site. The final remedy will be documented in the Record of Decision (ROD). The ROD requires review and approval by various Department of the Interior and NPS officials; therefore, an exact timeframe cannot be determined. However, this process is expected to be completed within one year. After issuance of the ROD, the site will move into the remedial design phase. This phase is expected to take approximately two years. After completion of the remedial design phase, the remedial action will begin. This is the phase when the actual work is completed at the site.

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		Assuming the preferred alternative is selected, this phase is expected to take one to two years after selection of a contractor. The timeline for full implementation of the selected remedy is uncertain but could reasonably fall within the range of five to ten years. Cost sharing negotiations between the United States and the District are ongoing. The source of funding for the response action is not a factor that was considered in selecting the preferred alternative.
57.	Hi! I am a DC resident and a frequent user of the KPN area as an avid birder. As you may know, Kenilworth Park is one of the best spots for birding and wildlife viewing in the city, and frequently used for that purpose. More birds have been seen there than anywhere else in the city this year (https://ebird.org/region/US-DC/hotspots?yr=cur), and almost 250 species have been reported from there (https://ebird.org/region/US-DC/hotspots?yr=all). The lists include the Aquatic Gardens also, but the Park is the more heavily-birded area -- it has hosted a large number of extremely uncommon DC species in the last few years, including a DC-first Loggerhead Shrike, multiple Nelson's Sparrows, etc. It is also the best or only place in DC for Meadowlarks, Blue Grosbeak, and others. It is a critical habitat for many nesting birds: the recently-started MD/DC breeding bird count has unofficially (so far) tallied ~60 species as Probable or Confirmed breeding in the KP/KAG parks, which is tied for the most of any DC hotspot (with Theodore Roosevelt Island), and 20% more than anywhere else. These stats and others have been pulled from the eBird database (I'm into data analytics by trade). If there are other numbers of interest, please feel free to request anything from me.	NPS's preferred alternative 3 would not impact existing habitat located on KPS. This was one of the short-term benefits NPS considered during the evaluation of possible alternatives. KPS is designated in the Anacostia Park Management Plan as a Natural Resource Recreation zone. The only planned development within KPS is the construction of the Anacostia Riverwalk Trail Phase II Realignment. Your comment about expanding areas within KPN to un-mowed meadows is noted; however, because Congress directed NPS to transfer administrative jurisdiction over KPN to the District, future plans for KPN will be determined by the District. There will also be natural buffer areas along the outer portions of KPN that will be held in a natural undeveloped state. Update - The District's Department of Parks and Recreation (DPR) has notified NPS that it is hosting virtual meetings in each ward to discuss the recreational needs and desires of the different neighborhoods. DPR is hosting the meeting for Ward 7, where KPN is located, on February 10. Additional information regarding this meeting can be accessed from this link: https://ready2playdc.com/ward-meetings

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	After reading through the proposal, it occurred to me that a modification of Alternative 3 might be of interest to the community. I rarely see anyone using the playing fields (except occasionally the one by the back parking lot). I would propose giving over more of the mowed-grass area to un-mowed field. That should lower the cost, because the un-mowed areas don't need to be capped with additional soil, and expand the area useful to wildlife. Potentially, the savings could be moved into a wetland renewal project on site along the Anacostia. At any rate, I and the DC birding community are heavy users of the KP site. We love it and dearly hope that these alterations don't have any adverse long-term effects on the wildlife that lives and breeds there. Thank you!	The meeting DPR will be hosting on February 10 will include a discussion of all parks managed by DPR within Ward 7 and will not focus on KPN; however, Nick Kushner with DPR has further notified NPS that they are working to organize specific engagement around the future of KPN. Any additional comments on the future plans for KPN should be directed to Mr. Kushner, see response to Theme 3 for his contact information.
58.	One of the reports mentions that remediation methods will accommodate future use. With all the investment in returning the river to swimmable and fishable, it is curious that water dependent activities have not been accommodated. Further, the possibility of accommodating these activities in the future will be prevented by the implementation of this and associated plans. Condition of Watts Branch and continuing degradation of river due to disconnection of the river from the flood plain have not been addressed.	Please see NPS's responses to Themes 1 through 3. Future land use is not dictated by the CERCLA process; to the contrary, CERCLA response actions are developed around expected future land use. For KPS, future land use is established in NPS's Anacostia Park General Management Plan. For KPN, future land use will be determined by the District when administrative jurisdiction is passed to them from NPS in accordance with the transfer legislation. Prior to NPS's evaluation of possible alternatives, the District informed NPS that it plans to use KPN to provide active recreational opportunities (e.g., sports fields). Although these plans were very preliminary and conceptual in nature, they provided sufficient information to allow NPS to complete feasibility study level evaluation of possible alternatives to address the unacceptable risk posed to active recreational users of KPN.

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		The Proposed Plan is conceptual and does not necessarily represent what the final remedial design will include. The clean soil barrier was selected to protect areas of the park where visitors could encounter surface soil at a relatively high frequency and at a relatively high intensity (e.g., during routine sports team practices and games). Selection of the preferred alternative will not prevent the District from selecting alternative land use configurations provided they are selected before the remedial design is completed. The conditions of Watts Branch, Kenilworth Marsh, and the Unnamed Tributary to Watts Branch were evaluated as part of the original Preliminary Assessment/Site Investigation (PA/SI) for Kenilworth Park South and the Remedial Investigation (RI) of KPN. Additional analysis of sediment data collected as part of the PA/SI and RI activities was included in support of the 2012 Feasibility Study. Because available data indicate there are likely multiple undifferentiated upstream sources of contaminants to the surface water and sediment adjacent to the Site, and because the existing data do not suggest an ongoing contribution of contaminants from the landfill, additional assessment and evaluation of response actions did not include Watts Branch, the tributary to Watts Branch, or Kenilworth Marsh.
59.	Were other migration pathways to the river other than groundwater, including soil pathways (soil runoff) to the River and/or direct placement of landfill material into the River? Were PCBs detected in sediments adjacent to South or North? clarification: were other pathways evaluated. including the historical pathways; Does NPS consider Kenilworth a source (historical source) of PCBs to the Anacostia?	PCBs are present in River sediment adjacent to both KPN and KPS. The distribution of PCBs in sediment in these areas does not indicate significantly higher concentrations of contaminants from the landfill; however, historical contributions from the landfill cannot be ruled out. Additional sampling and forensic analysis of PCBs in the landfill may inform whether and to what degree the landfill was a historical source of PCBs in the river sediment. PCB concentrations are also higher in zones of sediment deposition (zones where the current slows down and solids settle out); therefore, PCBs in river sediment

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		near Kenilworth Park Landfill may also be attributable to sources farther upstream.
60.	Existing conditions at KPS appear to support current and future use. It makes sense that KPS remain in current condition. However, Alternative 5 is applied to KPN would accommodate a wider range of activities. Can this alternative be developed? Was it previously considered?	An approach where KPS remains in its current condition (Alternative 3) and KPN is returned to tidal wetlands (Alternative 5) was considered and presented at the Leadership Council meeting where this question was posed. Please see response to Comment No. 3 for details. For additional context regarding why this approach was not considered further, please see response to Theme 3.
61.	Location of the proposed Anacostia River trail precludes naturalization of shoreline, restoration of Watts Branch and installation of wetlands. Has there been any thought given to modifying location of trail?	The alignment of the ART will not be determined as a part of the CERCLA process. Any concerns with the proposed alignment of the ART should be directed to DDOT.
62.	To be able to install wetlands, the District would be left holding the bag for removal of landfill material.	Please see NPS's responses to Themes 1 through 4. NPS will select a remedial alternative in accordance with the criteria described in the NCP based on the information in the administrative record. It will not base that decision on the source of funds needed to complete the work. Also, as noted above, the restoration of natural resources is beyond NPS's response authority under CERCLA.
63.	The definition of "short term" and long term are relative. Ten years is a very short time even in comparison to the time between close of the Landfill and the present.	The criterion of short-term effectiveness is related to risks posed to workers and members of the surrounding community during remedy implementation. In general, remedial alternatives that take longer to implement will receive a lower score on this criterion than alternatives that can be implemented over a shorter time period. The term is unrelated to the period of time between the landfill closure and the present.
64.	Was sampling done in Watts Branch or unnamed stream?	Sampling in Watts Branch and the Unnamed Tributary to Watts Branch was performed as part of the Preliminary Assessment/Site Investigation (PA/SI) for Kenilworth Park South and the Remedial

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		Investigation (RI) for KPN. An analysis of sediment data was summarized in the 2012 Feasibility Study and at that time NPS concluded: "The data do not indicate an overall impact from the Site on surface water or sediment in the adjacent surface water bodies (Anacostia River, Watts Branch, and Kenilworth Marsh)." Nevertheless, contaminants that are present in the landfill are also present in Watts Branch and the Unnamed Tributary to Watts Branch. Although there are multiple sources of contaminants in these surface water features including stormwater discharges, the potential for contaminants at the Site to have migrated into these surface water bodies in the past cannot be ruled out. A recent tributary study completed by NPS in support of the Anacostia River Sediment Project identified the highest concentrations of PCBs in Watts Branch sediment to be located approximately 2.5 miles upstream of the Site.
65.	I'll be interested to see Donna's responses to Fred as well. Relatedly, was Watts Branch treated as a receiving body of water itself, or only as a vehicle to the Anacostia?	See response to comment 64.
66.	I am happy to wait for a written response, but I do remain curious about how DOEE, DPR, and any other District agencies will interact in the cleanup, transition, and then ongoing management	It is NPS's understanding that following the transfer to the District, the Department of Parks and Recreation (DPR) will have primary responsibility for managing KPN. It is anticipated that DPR would consult with the District Department of Energy and Environment (DOEE) regarding natural resource issues such as the shoreline. Actual management roles and responsibilities for KPN will be determined by the District, not NPS.
67.	Is NPS prohibited from considering efforts beyond the bare minimum? "Not authorized" left me a bit unclear on the actual bounds on the agency	NPS is not authorized to use its response authority to restore natural resources; that authority may be used only to address unacceptable risks to human health and the environment posed by hazardous substances at the site. Accordingly, NPS is therefore prohibited from selecting a response action to achieve restoration objectives. See responses to Themes 1 through 3 for additional clarification.

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68.	We need to do everything we can to eliminate the inefficiencies inherent in keeping these stages of this project heavily silo'd. Not only that the District only begins management after the cleanup, but also that CERCLA and NRDA are held apart. That is not required, and we should fix it now while we can benefit by doing so.	NPS agrees with the need to eliminate inefficiencies. As a practical matter, however, the NRDA process almost always comes after a remedy because an NRD claim is limited to residual damages to natural resources that remain after the remedy is implemented. For that reason, attempts to conduct a NRDA before a remedy is selected can create its own inefficiencies.
69.	Can public be involved in talks between DPR and NPS for future use of Site?	Please see above for NPS's response to Theme 3. As described in this response, NPS does not have authority to determine how KPN is re-developed. Update - The District has started public engagement regarding future use of KPN, see information include in response to Theme 3 for upcoming event.
70.	The comment below is text extracted from a letter submitted to NPS from DC Audubon Society. The letter is included as Attachment 1 to this memorandum. We are writing to request that the National Park Service (NPS) provide a sixth alternative for remediation at the Kenilworth Park Landfill Site. We have reviewed the September 2020 Feasibility Study Addendum Report, and while we appreciate the considerable effort and analysis that went into preparation of this document, we find that the alternatives do not adequately cover the full range of reasonable remediation options. Below we provide a recommendation for a sixth option. Excavation of contaminants and restoring wetlands is the most effective, permanent solution at this property, and wetlands provide many valuable ecosystem services. For this reason, we expect some stakeholders to support Alternative 5. However, excavation and restoration is only considered in that alternative, and presents an all-or-nothing scenario, which we believe leaves the options incomplete.	In response to Comment 3, NPS developed a preliminary estimate of cost for a scenario where KPS would be addressed as described under Alternative 3 and KPN would be addressed as described under Alternative 5. This approach considered full removal of KPN landfill and revegetation as wetlands. This cost would be approximately $320 million. The alternate approach suggested in this comment would involve removal and revegetation of approximately 75% of KPN and would result in a cost of about $240 million. These costs are very high level and are not intended for construction estimating purposes. Although NPS has provided these rough costs for perspective, this approach is not under consideration for the reasons outlined above under Themes 2, 3, and 4 and summarized below. NPS included Alternative 5 in the Feasibility Study because it would eliminate risk posed to recreational users and future workers by completely removing the landfill (and complete removal is a standard alternative to evaluate for landfill sites); however, it would do so at significantly greater costs than the other alternatives and would also limit the District's future use of the Site. NPS is required to evaluate

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	We request that a sixth alternative be added that (1) excavates contaminants and restores wetlands in the western portion of KPN, west of the running track; (2) caps lands in KPN east of the track, and (3) leaves Kenilworth Park South as is. We are confident that this will strike the appropriate balance required by the applicable decision criteria. Ultimately, we wish to see the highest and best use of Kenilworth Park, and are grateful that NPS is prioritizing remediation of this important property. Thank you for considering our request.	remedial alternatives in accordance with the nine criteria described in section 300.430(e)(9)(iii) of the National Oil and Hazardous Substances Pollution Contingency Plan (commonly referred to as the NCP). To be selected as the final remedy, an alternative must also be cost-effective, which means that its costs are proportional to its overall effectiveness (see section 300.430(f)(1)(ii)(D) of the NCP). As described under NPS's response to Theme 3, the approaches suggested in many comments where only portions of KPN are removed, similarly limit the District's future use of the Site and adds significant costs without any associated decrease in risk posed to recreational users involved with high-intensity activities (i.e., "active" recreational users). As described under Theme 2, NPS is not authorized to restore wetlands as part of the CERCLA response action. Costs for restoration under a Natural Resources Damage Assessment (NRDA) may be sought in the future, but that process is typically initiated after the CERCLA response action has been completed. The Proposed Plan (preferred Alternative 3) can be adapted in the remedial design phase to accommodate a different configuration of land use. The clean soil cap is only required in high-frequency, high-intensity land use areas such as athletic fields. If the District decides to reserve areas of KPN for wetland restoration in the future (i.e., not developed as athletic fields and public gathering areas), no clean soil barrier would be required. NPS cannot indirectly – and unilaterally – impose a specific future use of KPN on the District through the CERCLA process. To provide input on the specific plans for KPN, members of the public are encouraged to participate in the District's planning process and provide their input

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		to the District through this process (see response to Theme 3 for upcoming event).
71.	Did the feasibility study and proposed plan consider the impacts on the river? Was Watts Branch considered its own receiving body of water for contaminants or was it considered only as a vehicle for contaminants entering the Anacostia River? As I was reviewing the memorandum to the administrative record, I had two questions about the response to the following question found on page five: Q: Alternative five's cost includes the return of both North and South to the original state, what would be the cost to do so only for North? A: In response to this question, NPS developed a preliminary estimate of cost for a hybrid alternative where Kenilworth Park South would be addressed as described under Alternative 3 and KPN would be addressed as described under Alternative 5. The hybrid considered full removal of the KPN landfill and revegetation as wetlands. This cost would be approximately $320 million. Based on this response, it would seem that the $320,000,000 estimate is based off of the area outlined in alternative 5, which is larger than the footprint of alternative 3. 2) I was wondering how much it would cost and approximately how long it would take to excavate the contaminated soil of the area that matched the footprint of alternative 3 (while leaving Kenilworth Park South untouched as proposed in alternative 3)? 3) Is it possible for an additional alternative (similar to the one proposed above) to become a part of the public record so that it could be considered along with alternatives 1-5?	Impacts to the River are being addressed as part of the Anacostia River Sediment Project, which is separate from the Kenilworth Park Landfill Site. Yes, Watts Branch was considered as part of the surface water migration pathway and sediment samples were collected from Watts branch during early investigation activities at Kenilworth Park Landfill. See the response to comment 64 for additional information. The area designated for a potential soil barrier in Alternative 3 is based on an estimate of the most area within KPN that could be developed for organized sports and public gatherings, which is less than the entire landfill footprint. The area selected assumes that a portion of KPN would be reserved as natural buffer and would not be developed. Therefore, the area within KPN to be remediated in Alternative 3 is smaller than the area that would be completely removed under Alternative 5. The removal scenario that was suggested during the public meeting included full removal of the landfill at KPN. Other commenters have requested NPS estimate costs of a partial landfill removal at KPN. NPS provided a high-level cost estimate for these scenarios in Theme 4 above. However, for the reasons explained in response to Themes 3 and 4, NPS is not considering a sixth alternative.

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72.	I have a question about the "FEASIBILITY STUDY ADDENDUM REPORT *FINAL* Kenilworth Park Landfill Site Anacostia Park Washington, D.C.". In the last pages of this document, cost estimates are provided. In TABLE B.5 Cost Estimate for Alternative 5: Landfill Removal Shoreline Stabilization, two estimates are provided for the disposal of 2,906,428 tons of waste. The first estimate as ADC at Subtitle D facility at $32 a ton is $93,005,693 based on engineers estimate, based on experience; assumes 50% of material excavated. The second estimate as non-hazardous waste at Subtitle D facility at $80 a ton is $232,514,232 based on engineers estimate, based on experience; assumes 50% of material excavated. The second estimate is used in the subtotals and totals for the overall cost of Alternative 5. Why isn't the first estimate of $32 a ton used in the subtotals and totals for the overall cost of Alternative 5?	As part of Alternative 5, NPS estimated that 4,305,819 cubic yards (or 5,812,856 tons) of soil and waste will need to be excavated, loaded onto trucks, and transported for offsite disposal (e.g., landfill). To estimate fees associated with final disposal, NPS assumed that 50 percent (or 2,906,428 tons) of the material would be disposed as waste at a non-hazardous landfill (RCRA Subtitle D facility). This material may include the historical ash and other debris in the north and south landfills. The disposal cost (tipping fee) for this material was estimated to be $80 per ton, based on comparisons with similar excavation and removal activities. Considering that much of the material to be removed is soil with low concentrations of chemical contaminants, NPS assumed that the rest of the excavated material (an additional 2,906,428 tons) could be reused at another landfill as "alternate daily cover" (ADC) material. Because of its beneficial reuse, disposal fees associated with ADC material are usually less than standard tipping fees. In this case, NPS assumed a unit cost of $32 per ton for material to be used as ADC at another landfill. There is no way to definitively estimate the volume of soil vs the volume of waste, so these volume estimates are inherently uncertain. The total cost estimate for Alternative 5 includes disposal fees for 2,906,428 tons of material consisting of waste that has no potential beneficial reuse at $80/ton, as well as 2,906,428 tons of material consisting of mostly soil that has a potential beneficial reuse as daily cover in a landfill at $32/ton. Both line items are included in the total estimated cost for this alternative. Note that the total cost estimated for Alternative 5 assumes that none of the soil or waste material would be considered "hazardous waste." If any of the excavated material requires disposal in a facility

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		permitted to handle hazardous waste (i.e. RCRA Subtitle C hazardous waste facility), there would be a significant increase in the estimated hauling and disposal costs.
73.	I have a question about the hybrid plan you presented at the Leadership Council. Has it been brought over to the official NPS documents site yet? I checked last week and only found it referenced in the table of interim responses. I greatly appreciated your attention to that request of mine but if it's not being presented to the general public, I'm not sure how helpful it is for the comment process. Whether or not it has been presented more effectively on the NPS website, I am also interested in seeing your response to Audubon's letter sent to you by Joel, as his request refined that idea further to something closer to my original intention from the public meeting.	The hybrid alternative NPS presented at Leadership Council meeting was developed to help make the point that adding a sixth alternative to the Feasibility Study would not change NPS's preferred alternative. The reason for this is because removing the landfill for the benefit of creating wetlands is considered restoration, which is outside the authority of NPS to be completed as part of a CERCLA response action (see response to Theme 2). NPS's preferred Alternative 3 is conceptual and was put forward for the purpose of generating costs that could be compared to the other alternatives. The area shown in the Proposed Plan for the soil barrier was selected by assuming as much area of KPN that could be developed for athletic fields (the most sensitive use) would be. By assuming a larger area, NPS generated a more conservative cost estimate. If areas of the park are not used for public gatherings and athletic fields, no soil barrier would be required. Therefore, if the District decides it should invest in the creation or expansion of wetlands or create other natural areas that do not involve the higher frequency and higher intensity exposure scenario, no soil barrier would be required. Put simply, if areas of KPN are going to be developed for higher intensity uses (athletic fields and public gathering areas) then a soil barrier is required to address risk from low-level surface soil contamination. If the area is not going to be used for higher-intensity uses and will remain meadows or restored as wetlands, then no soil barrier would be required. The District will decide how KPN is developed in the future.

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		To provide input on the specific plans for KPN, members of the public are encouraged to participate in the District's planning process and provide their input to the District through this process (see response to Theme 3 for upcoming event).
74.	Letter from Anacostia Watershed Community Advisory Committee providing a suggested land use configuration for KPN. The entire letter is included as Attachment 2.	See Response to Themes 1 through 4. NPS cannot indirectly – and unilaterally – impose a specific future configuration of KPN on the District through the CERCLA process, nor does it have the authority under CERCLA to complete restoration activities that are included in this proposed land use plan. Adjustments to the area covered under Alternative 3 can be made during the remedial design phase to accommodate other land uses such as wetlands or meadows. To provide input on the specific plans for KPN, members of the public are encouraged to participate in the District's planning process and provide their input to the District through this process (see response to Theme 3 for upcoming event).
75.	I and my family have often enjoyed walking in the Kenilworth Aquatic Gardens and kayaking on the Anacostia River. It is distressing how dirty it can be, and that we are warned about the risks of swimming. It is very distressing to learn of the severe pollution in the landfill. While it concerns me that my occasional recreation is at risk, I am more concerned about the residents of nearby communities. I am told that those residents may not have had enough voice in how the park will be used after remediation. I am also concerned about the extent of excavation, as I'm aware sometimes problems can emerge when excavation occurs that could have been avoided through covering and maintaining the site properly. I hope the NPS	NPS has conducted extensive investigations of the Site to determine the substances that are present and the risk they may pose to human health and the environment following the process outlined in CERCLA. Based on these investigations, NPS determined that the only unacceptable risk to human health or the environment posed by the Kenilworth Park Landfill Site is the presence of certain contaminants in surface soil. The risk is based on the potential to ingest (hand to mouth) contaminated soil when involved with activities at a relatively high frequency and intensity for an extended period (e.g., a visitor participating in organized sports such as soccer or football three or more times per week for several years). The risk of ingesting contaminated soil while participating in activities other than organized sports, such as walking on the trails, is considered

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	will work harder to engage the community, District government, and other relevant agencies to come up with the best possible solution.	negligible. To learn more about how NPS assessed risks associated with hazardous substances at this site, you can review the poster available at the following link: https://www.nps.gov/anac/learn/management/upload/04-Poster_RA_Final-508compliant.pdf The low levels of contaminants at the landfill should not interfere with enjoyment of the park. Although the risks are low, NPS has determined reduction of these risks is necessary for areas of KPN to be developed for active recreational uses of public gatherings. One common misconception among the public about NPS's Proposed Cleanup Plan is that it is being used to establish the future use of the park. The future use of KPS is defined in NPS's Anacostia Park General Management Plan that was adopted in 2017. The future use of KPN will be determined by the District. The District has started public engagement regarding future use of KPN, see information include in response to Theme 3 for upcoming event. All future activities completed at the Site, such as excavation, will be completed in accordance with specific plans that will be developed during the remedial design phase of the CERCLA process (this phase follows the issuance of the Record of Decision). These specific, detailed plans will determine possible risk associated with each planned activity and outline specific mitigation steps required during completion of the activity to ensure workers, visitors, and the environment are fully protected.
76.	Thank you for the opportunity to comment on the proposed remediation plan for the Kenilworth Landfill Site.	Please refer to Theme 2 above regarding limitations associated with restoration of natural resources. For the reasons outlined under

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	As a resident of Eastland Gardens, in the neighborhood surrounding the park, I believe this opportunity is a turning point, to repair previous environmental damage done to the park and the surrounding community. I believe the goal of this remediation should be to deliver a safe, healthy, vibrant community space that provides recreational opportunities, access to nature, wildlife habitat and natural system benefits, particularly in resilience to flooding and rising tides. To get there, I support a more full presentation and discussion of the hybrid alternative noted in the NPS response to previous comments -- where KPS is remediated as per Alt. 3 and KPN follows Alt. 5 -- but do feel that more details regarding this hybrid alternative are crucial in order to further discussion, before any final alternative is selected. Additionally, while NPS' purview is limited to CERCLA, it is crucial that NPS + District Government develop a collaborative and connected community planning effort, given the planned transfer of KPN to DC Government. This process should begin with the community's vision for this space, with decisions as to remediation plans, future recreational build-out, park services, etc., flowing from that vision. With a clearer goal in mind, I believe both community & government actors would be more able to evaluate the remediation proposals based on current state of the park + plans for future use/recreational build-out. Instead, the two-track process we see now is hard to navigate for residents, whose lives are and will continue to be impacted directly by these decisions. Surely one cohesive planning effort between government actors would yield a more cohesive product, maximize efficiency of planning efforts and project dollars, and demonstrate a community-centered planning process, which we all hope this is meant to be.	Themes 2 through 4, NPS will not be developing an alternative land use scenario for KPN and is therefore not considering a sixth alternative. As noted in Theme 3, NPS will no longer have administrative jurisdiction over KPN, so decisions about future land use configurations are the responsibility of the District. Adjustments to the area covered under Alternative 3 can be made during the remedial design phase to accommodate the District's final land use configurations. To provide input on the specific plans for KPN, members of the public are encouraged to participate in the District's planning process and provide their input to the District through this process (see response to Theme 3 for upcoming event).

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No.	**Comment**	**Response**
77.	My vote is for alternative #5 plan to be selected to cleanup Kenilworth Park Landfill.	Comment noted.
78.	I am writing to express my opinions for land use at the Kenilworth Park Landfill Site. I have been a resident of DC for 12 years and for the last 3 years have lived right down the way from the site, in River Terrace just by the Benning Road Bridge. I use the Anacostia River Trail often, wandering into Kenilworth Park via foot with my family and dog, or via bike. First let me say that I am VERY excited that NPS is taking on this project! It is so needed and the community is really excited about it. Northeast DC gets so little attention but has so many hidden gems that could be better maintained for community use, this being one of them. The amount of open space there is unbelievable and holds so much potential! I reviewed the alternatives in the proposal and wish to express my support for Alternative 5, Landfill Removal & Revegetation. Though this is of course the most costly of options in the short term, I believe it will reap the most benefits in the long run, including but not limited to: • Anacostia River clean up efforts • advancing health equity in ward 7 - both in terms of eliminating chronic health conditions caused by the landfill toxicity, but also providing a clean safe green space for residents to exercise and enjoy • increasing desire to buy or rent property in the area • making way for future developments in the area • attracting more attention and visitorship to Kenilworth Aquatic Gardens	Comment noted.

NPS Interim Response to Comments/Questions Kenilworth Park Landfill Site December 29, 2020 Updated February 1, 2021		
No.	**Comment**	**Response**
	Thank you for the time you have spent and continue to spend reviewing community comments. I look forward to watching this project unfold and hope that the ultimate plan will best represent the community-wide pulse.	
79.	I am a resident nearby in Deanwood in Ward 7. I have two recommendations for the Kenilworth Park Landfill Site. 1) I agree that we should keep KPS as naturalistic as possible and complete the Anacostia River Trail cut through trail through this section. 2) My preference is that the KPN section should undergo complete landfill removal and shoreline restoration. All contaminants should be removed. The land should also be transferred into a community land trust as part of the transfer to the DC government. The Community Land Trust should consist of a board of residents in the immediate impact area who should be able to prioritize future land use to their needs, given the history of environmental injustice they have been subjected to.	Comment noted regarding support of Alternative 5 (complete removal of landfill). Congress directed NPS transfer jurisdiction administration of KPN to the District; therefore, the District will manage KPN in the future. NPS does not have the authority to revise the Congressional law mandating this transfer to create a community land trust as part of the transfer. NPS suggests community members provide input on the specific plans for KPN by participating in the District's planning process and provide their input to the District through this process (see response to Theme 3 for upcoming event).
80.	I am writing to comment on the Proposed Plan for Cleanup of the Kenilworth Park Landfill Site. I live near the site. My daughter is five months old and we like to go on walks through the affected area. I want a plan that can be finished in a reasonable timeframe and keep my daughter and me safe. After a review of the available options, I firmly support Alternative 3. It has the best combination of protection of public health, feasibility, and short timeframe. After dealing with a polluted former landfill for so long, the idea that the program goals could be achieved in two years sounds amazing.	Comment noted.

5 January 2021

Ms. Donna Davies
CERCLA Project Manager
National Park Service
1900 Anacostia Drive, SE
Washington, D.C. 20020

Re: Kenilworth Park Landfill Site Remediation Alternatives

Dear Ms. Davies,

We are writing to request that the National Park Service (NPS) provide a sixth alternative for remediation at the Kenilworth Park Landfill Site. We have reviewed the September 2020 Feasibility Study Addendum Report, and while we appreciate the considerable effort and analysis that went into preparation of this document, we find that the alternatives do not adequately cover the full range of reasonable remediation options. Below we provide a recommendation for a sixth option.

Excavation of contaminants and restoring wetlands is the most effective, permanent solution at this property, and wetlands provide many valuable ecosystem services. For this reason, we expect some stakeholders to support Alternative 5. However, excavation and restoration is only considered in that alternative, and presents an all-or-nothing scenario, which we believe leaves the options incomplete.

We request that a sixth alternative be added that (1) excavates contaminants and restores wetlands in the western portion of Kenilworth Park North, west of the running track; (2) caps lands in Kenilworth Park North east of the track, and (3) leaves Kenilworth Park South as is. We are confident that this will strike the appropriate balance required by the applicable decision criteria.

Ultimately, we wish to see the highest and best use of Kenilworth Park, and are grateful that NPS is prioritizing remediation of this important property. Thank you for considering our request.

Sincerely,

Adam Kron / Joel Merriman
Chair / Vice Chair, Conservation & Advocacy Committee
DC Audubon Society

Trey Sherard
Riverkeeper
Anacostia Riverkeeper

Anne Lewis
President
City Wildlife

Chris Weiss
Executive Director
DC Environmental Network

Elizabeth Curwen
Board Chair
Friends of Kenilworth Aquatic Gardens

Dan Smith
President
Friends of Lower Beaverdam Creek

Marian Dombroski
Director
Friends of Quincy Run Watershed

Charlotte Runzel
Board Chair
Surfrider Foundation, DC Chapter

Cc: Gretchen Mikeska (DOEE), Nick Kushner (DPR)

tributaries

ATTACHMENT 2
Interim Response to Comments on
Kenilworth Park Landfill Proposed Plan
February 1, 2021

Donna Davies, CERCLA Project Manager
National Capital Parks - EAST
1900 Anacostia Drive, SE
Washington, DC 20020

RE: **Kenilworth Park Landfill Feasibility Study and Proposed Plan: Request for Additional Alternative**

Dear Ms. Davies,

On behalf of the Anacostia Watershed Community Advisory Committee (AWCAC) we thank you for your ongoing efforts to inform the public about this important undertaking. While we applaud the thorough site investigations and analysis representing work across almost two decades, we find the proposed alternatives do not align with the parameters set out in the two documents under review. In addition, the future use of the park has not been adequately defined or accommodated. Therefore we request that additional alternatives be developed in coordination with DOEE and DPR. In particular, a hybrid alternative between Alternative 3 and Alternative 5 should be developed, further refined from the first "Hybrid Alternative" we were very pleased to see presented at the December 2020 meeting of the Leadership Council for a Cleaner Anacostia River (LCCAR). Then these can be presented so that the public can provide meaningful review and comment. For instance, despite being presented to the LCCAR on December 10th, a map or otherwise engaging visual of that preliminary Hybrid Alternative is still nowhere to be found on the NPS website, the alternative is referred to only briefly in text in the initial interim response to comments. As a member of the public who had not attended the LCCAR meeting, I would have no idea how to visualize the hybrid alternative, nor how it compares to the others per the criteria.

We would like to offer an adapted scenario for management zones for future use of the parkland. This aspect of the investigation is frustrated by the lack of a masterplan for the site which will not be developed until the District assumes responsibility for Kenilworth Park North. However, even before a master plan is developed, the site can be organized into zones based on physical characteristics, proximity to the neighborhood and to the Anacostia River. On the following page is a diagram illustrating the three land use management zones defined in the report, here modified to reflect input from the community and the natural assets of the Park. It also recognizes the special character and status of Kenilworth Park-South. (see attached **Kenilworth Park Management Zones,** adapted from Figue 3 in the **Feasibility Study Addendum Report.**

Community Activities and Special Events: like in other parks, special events tend to inhabit all available space, therefore, this zone can be expected to overlap the others. Trails and walking paths should serve and be coordinated with this zone and designed with surfaces appropriate to the use.

Organized Sports and Recreation: this zone should be the most accessible to the adjacent neighborhoods. Locating facilities across from residential areas will give the community ownership and enhance safety. Trails and walking paths must be designed to serve this zone. This area must be compact and well defined - not spread across the site.

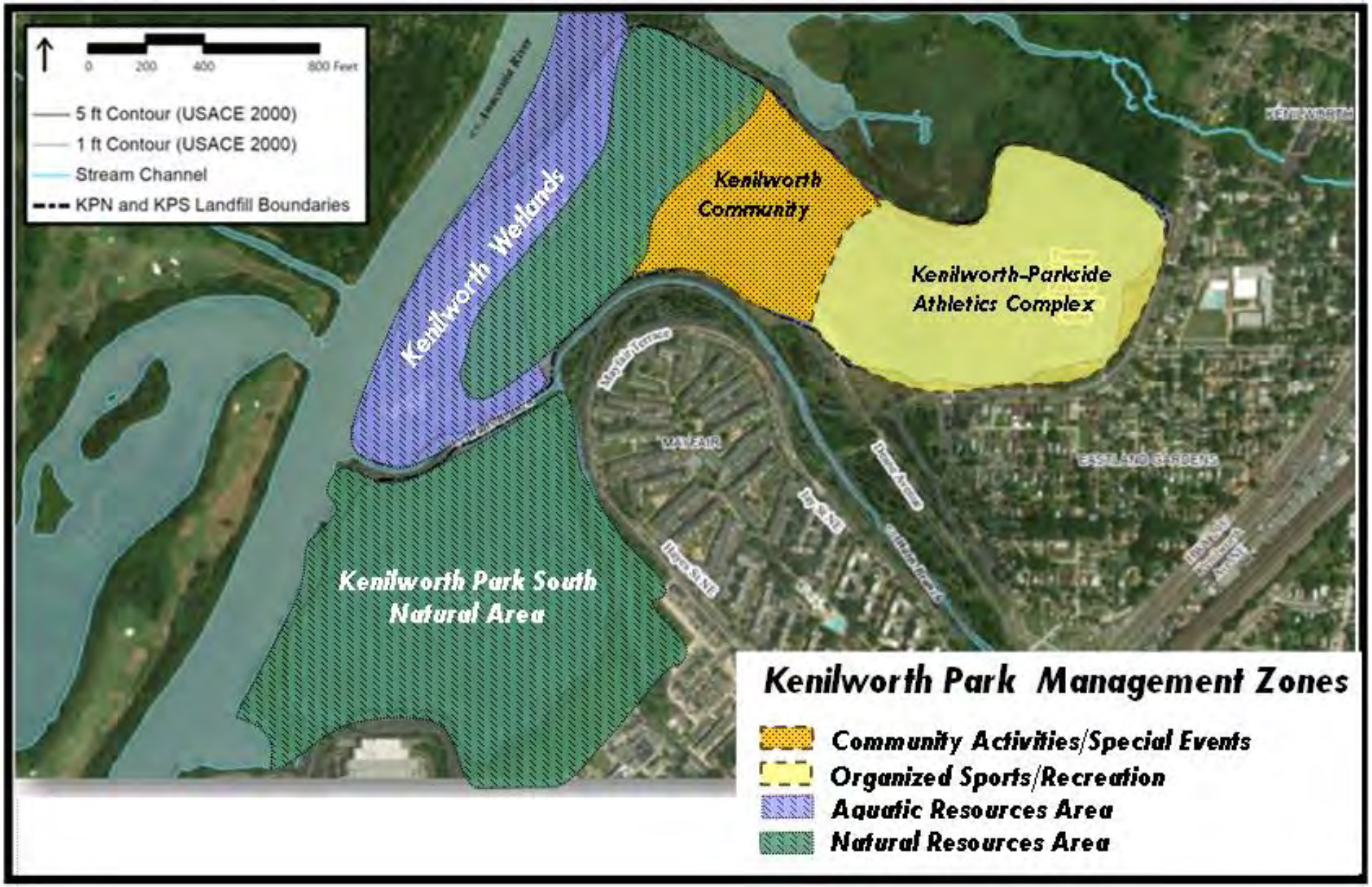
Natural Resources Area: KPS must remain undisturbed allowing only natural surface trails and use/maintenance of existing bridges. It can be expected that naturalization of Watts Branch may cause some disturbance. Meadow and wildlife areas in KPN must also be preserved or re-established as appropriate.

Remediation will be straight forward within this framework with methods appropriate to future use and physical characteristics of the site. Both selective extensive removal of landfill material will likely be required. This must accommodate shoreline stabilization and wetland restoration of the Aquatic Resources Area. Kenilworth Park South would remain outside the scope of remediation work. The future naturalization of Watts Branch must also be accommodated. We understand that the National Park Service prioritizes maximum use and enjoyment of parks as well as stewardship of natural resources within the CERCLA requirements. We request that an alternative be offered that will support park managers in achieving these goals. Thank you very much for your consideration. We look forward to hearing from you.

Sincerely,

AWCAC Chairs

Trey Sherard, Chair	trey@anacostiariverkeeper.org
David Paglin, Vice Chair	dpaglin@aol.com
Marian Dombroski, Vice Chair	mdombros@gmail.com
and	
Dennis Chestnut, Watt Branch Alliance	dchestnut.chestnut@gmail.com
Anacostia Riverkeeper	


0 200 400 800 Feet
5 ft Contour (USACE 2000)
1 ft Contour (USACE 2000)
Stream Channel
KPN and KPS Landfill Boundaries
Kenilworth Wetlands
Kenilworth Community
Kenilworth-Parkside Athletics Complex
Kenilworth Park South Natural Area
Kenilworth Park Management Zones
Community Activities/Special Events
Organized Sports/Recreation
Aquatic Resources Area
Natural Resources Area

ATTACHMENT C: LEGAL CONTEXT FOR DEFINING THE KENILWORTH PARK LANDFILL SITE BOUNDARIES

Attachment C

Legal Context for Defining the Kenilworth Park Landfill Site Boundaries

In its comments, Pepco asserts that a site must be defined as "'that portion of a facility that includes the location of a release (or releases) of hazardous substances and *wherever hazardous substances have come to be located*,' and thus 'the extent of a site is not limited by property boundaries.'"[2] Pepco also suggests that the Kenilworth Park Landfill (KPL) Site should be expanded into the Anacostia River as was done for other CERCLA sites established along the River.

The terms "facility" and "site" are not (or at least not always) synonymous. The former is defined as:

(A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or

(B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.[3]

The first part of this definition provides a list of common, discrete sources of hazardous substances. The second part is a catch-all provision that expands the universe of facilities to include any area where hazardous substances have come to be located.

The term "facility" is used in a number of contexts. First, it's used to define the "covered persons" subject to potential liability under section 107(a).[4] In addition, the term is also used to describe the limits of a federal agency's delegated response authority under CERCLA. Section 104(a) of CERCLA authorizes, but does not require, the president to respond to releases and threatened releases of hazardous substances to protect the public health or welfare or the environment.[5] NPS has been delegated that same authority for releases on or solely from facilities under its jurisdiction, custody, or control.[6]

The term "site," in contrast, is not defined in either CERCLA or the NCP,[7] but it may be understood to refer to the focus of a response action. In some cases, the facility and the site, when understood in this sense, are the same thing; in others, the site may be larger or smaller than the facility. For example, multiple facilities

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[2] Comments of Potomac Electric Power Company on National Park Service Proposed Plan for the Kenilworth Park Landfill (Mar. 12, 2021) ("Pepco Comments") at 1 (quoting U.S. EPA, Clarifying the Definition of "Site" Under the National Priorities List (May 1996) ("EPA Fact Sheet") (emphasis added by Pepco)).

[3] 42 U.S.C. § 9601(9); *see also* 40 C.F.R. § 300.5 ("facility").

[4] *See* 42 U.S.C. § 9607(a).

[5] 42 U.S.C. § 9604(a)(1) (providing that "the President is authorized to act").

[6] Executive Order No. 12580, 52 Fed. Reg. 2923 (Jan. 29, 1987), as amended; Departmental Manual Part 207, Ch. 7.

[7] The NCP does define the term "on-site" for purposes of the permit exemption of section 121(e) of CERCLA. *See* 40 C.F.R. § 300.5 ("*On-site* means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action."). Notably, this definition is consistent with, but not identical to, the statutory and regulatory definition of "facility."

are sometimes investigated as a single site.[8] Similarly, a single facility or site may be divided into multiple operable units and addressed through multiple investigations and remedies rather than all at once.[9]

The exercise of NPS's delegated response authority is discretionary, not mandatory.[10] Accordingly, Pepco's assertion that any contaminated sediments in the adjacent surface water bodies "must be addressed in a supplemental RI/FS before any final remedial action can be selected for the site" is incorrect.[11] NPS has broad discretion to investigate all of a facility, part of a facility, or nothing at all, as long as its decision is reasonable based on the administrative record. As explained in the NPS response to Pepco's comments, the initial decision to limit the investigation of KPL to the landfill itself (excluding the river) was reasonable; in contrast, the subsequent investigation of the adjacent river sediments as part of the ARSP renders Pepco's proposed expansion of the KPL site into the river wholly unreasonable.

The fact sheet cited in Pepco's comments has no applicability here. That document addresses how to establish the boundaries of a "site" for purposes of its placement on the National Priorities List (NPL).[12] Kenilworth is not an NPL site. There are several rules that apply to NPL sites but not to non-NPL sites.[13] Moreover, Pepco's reliance on the statement that "the extent of a site is not limited by property boundaries" is not relevant here. NPS has not defined the Kenilworth site based on property boundaries: the United States owns the former landfill, and the United States owns the bed of the Anacostia River. The reason for excluding the Anacostia River from the Kenilworth site is unrelated to property boundaries. Based on the sediment sampling findings referenced in the 2012 FS report, NPS concluded there were multiple more significant sources of sediment contamination in the Anacostia River. NPS used its discretionary authority to focus on surface and subsurface soils, including the waste material in the landfill (Operable Unit 1) and the shallow groundwater beneath OU1 (Operable Unit 2). Without excluding KPL as a potential historical source, DOEE and NPS established the limits of the Anacostia River Sediment Project (ARSP) site such that it would not overlap with terrestrial sites along the river, including the KPL Site.

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[8] *See* 42 U.S.C. § 9604 (d)(4) ("Where two or more noncontiguous facilities are reasonably related on the basis of geography, or on the basis of the threat, or potential threat to the public health or welfare or the environment, the President may, in his discretion, treat these related facilities as one for purposes of this section.").

[9] *See* 40 C.F.R. § 300.5 ("Operable unit") ("The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site.").

[10] *See* 42 U.S.C. § 9604(a)(1) (providing that "the President is *authorized* to act") (emphasis added). While the exercise of CERCLA response authority is generally discretionary, CERCLA does establish some mandatory obligations for federal agencies. For example, EPA is required to ensure that a preliminary assessment (PA) is conducted for each site listed on the Federal Agency Hazardous Waste Compliance Docket. *See* 42 U.S.C. § 9620(d)(1). Once a federal facility has been placed on the National Priorities List (NPL), there are deadlines for the completion of a remedial investigation and feasibility study (RI/FS) and remedial action, if necessary. *See* 42 U.S.C. § 9620(e). NPS completed PAs for the site nearly two decades ago, and the site is not listed on the NPL.

[11] *See* Pepco Comments at 1.

[12] The introductory paragraph of the fact sheet states that it "is intended to answer some common questions on the definition of an *NPL site*." EPA Fact Sheet at 1 (emphasis added). Pepco's comments misleadingly state that the fact sheet explains how a site should be defined for "purposes of CERCLA response actions." The fact sheet includes no general guidance on response actions; it is limited to how sites are defined for purposes of inclusion on the NPL.

[13] For example, in calculating a hazard ranking score ("HRS") to determine a site's eligibility for listing on the NPL, a "release" is established when a sample measurement is at least three times above the background concentration; there is no similar requirement for evaluating background conditions at non-NPL sites.

Pepco notes that the Kenilworth Park Landfill site is being treated differently than other sites along the Anacostia River (*i.e.*, Washington Gas East Station, Pepco Benning Road, and Washington Navy Yard), where the investigations include the adjacent river sediments. Each of those sites is being investigated pursuant to a legal agreement that was negotiated and executed before the ARSP existed. For those sites, the investigations include both the terrestrial facility and contamination in the adjacent sediments because there were no plans to conduct a river-wide investigation of sediment contamination when those agreements were entered. When the original ARSP site boundaries were established, moreover, the site was defined to include the portions of the river that were being investigated by Washington Gas, Pepco, and the Navy. Those areas were later carved out of the ARSP based largely on arguments from those parties that it would be duplicative, inefficient, and wasteful to include each of those areas in two sites. Those arguments apply with equal force to Pepco's proposal to include the sediments adjacent to KPL in two separate sites.

Although the current data do not suggest that KPL is a significant source of sediment contamination in the Anacostia River, there is nothing that would prevent the District from conducting additional sampling and addressing river sediment contamination adjacent to KPL as a part of the ARSP. Therefore, there is no rational basis to expand the Kenilworth site into the Anacostia River, creating a situation where the same area would be subject to two separate investigations and two separate and potentially inconsistent records of decision (RODs) issued by two different agencies under two different laws.[14]

In short, NPS enjoys broad discretion in delineating the boundaries of a site for purposes of investigating and remediating hazardous substances. Here, NPS's decision not to extend the boundaries of the Kenilworth site into the ARSP site is eminently reasonable.

[14] Pepco argues that the "KPL site should have included the adjacent sediments [within the boundaries of that site] based on the sampling data available to the Park Service by the early 2000s, at least a decade before the ARSP was launched." Pepco Comments at 2. NPS investigated sediments in the River, Kenilworth Marsh, Watts Branch, and the Unnamed Tributary more than twenty years ago and concluded that KPL was unlikely to be a significant source of contamination relative to other sources. Pepco may disagree with that earlier conclusion, but there is no question that the decision was reasonable and supported by the data available at that time. The relevant issue now is whether to expand the Kenilworth site into the adjacent sediments even though those sediments were already investigated and will be addressed as a part of the ARSP. NPS believes that doing so would be irrational.

ATTACHMENT 15

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1- National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

MEMORANDUM

TO: Administrative Record for the Kenilworth Park Landfill Site

FROM: Kenilworth Park Landfill Contaminated Site Team (CST):
Donna Davies, National Park Service (NPS) Project Manager
Jonathan Ordway, VHB (NPS Contractor)
Jeffrey Johnson, Department of the Interior (DOI) Legal Lead

DATE: July 15, 2022

CC: Shawn Mulligan, Lead, NPS Environmental Compliance and Cleanup Division

RE: NOAA Comments on Kenilworth Park Landfill Site Proposed Plan

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The Kenilworth Park Landfill (KPL) Contaminated Site Team (CST) prepared this memorandum on the advice of the CST Legal Lead Jeffrey Johnson (DOI Office of the Solicitor). The purpose of this memorandum is to convey responses to comments on the KPL Proposed Plan received in the attached email from the National Oceanic and Atmospheric Administration (NOAA), dated March 12, 2021.

NOAA comments expressed in the March 2021 letter are copied below, followed by NPS's responses.

NOAA Comment 1

NOAA recommends a hybrid remedy be evaluated which includes (1) excavation of a portion of landfill material along the Anacostia River and Watts Branch where waste was deposited and burning activities occurred in former wetland and aquatic habitats with (2) consolidation for capping on site and/or offsite disposal and/or beneficial reuse. The transitional area from the landfill to the Anacostia or Watts Branch is reported to have steep banks in many locations and the composition of the waste and fill material between the metallic landfill footprint and aquatic habitats are not well characterized. NOAA believes there is risk and/or ARAR justifications for pursuing evaluation of this alternative.

NPS Response 1

This comment implies that unstable slopes are present at the Site that may be prone to significant erosion or other forms of failure that could result in landfill waste migrating into the Anacostia River or Watts Branch. In general, the steeper slopes in the transitional area between the landfill and surface water are consistent with landfill closure guidance: 3 to 1 (horizontal to vertical). A few transitional areas with steeper slopes (e.g., along the south bank of Watts Branch) are present near the Site's confluence with the

Anacostia River. Although a few areas on Site have experienced surface erosion caused by concentrated drainage (i.e., the northern Kenilworth Park South [KPS] sediment pond overflow), there is no evidence of significant slope failure or exposure of buried waste. The areas of surface erosion will be further evaluated during the pre-design surface soil sampling recommended by DOEE in their comments to the Proposed Plan comments (see Responsiveness Summary Attachment 24, and the response to Comment 3).

The 2019 Remedial Investigation (RI) Addendum (JCO, 2019a) concluded that no unacceptable risks to aquatic habitats are associated with ongoing contaminant migration from the landfill. This conclusion is based on the groundwater investigation findings documented in the RI Addendum Report (JCO, 2019a). As referenced above, DOEE recommended an additional assessment of potential stormwater migration pathways, which NPS has agreed can be included as a pre-remedial design investigation.

NPS does not agree with NOAA's assertion that the Site poses a risk that would justify an applicable or relevant and appropriate requirement (ARAR) for pursuing evaluation of a partial landfill removal option. Although NPS did not include a hybrid alternative in the formal Feasibility Study (FS) Addendum analysis, it informally evaluated two separate hybrid alternatives: one that would excavate all of Kenilworth Park North (KPN) and another that would excavate approximately 75% of KPN (both hybrid alternatives would have allowed KPS to remain in its current, natural condition). The estimated costs of the hybrid options were $320 million and $240 million, respectively. Removal of landfill waste (full excavation, as evaluated under Alternative 5 of the FS Addendum, or partial, as recommended by NOAA) would adequately address risk to human health and the environment. However, these alternatives fail to meet the additional requirement of cost effectiveness set forth in Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sections 121(a) and 121(b)(1), and Section 300.430(f)(1)(ii)(D) of the NCP because the cost of landfill excavation, disposal, and revegetation is so much higher than installation of a clean soil barrier (the Selected Remedy) and would not provide a corresponding increase in protectiveness as compared with the other alternatives. There is no justification for NPS to choose a partial landfill removal option based on risk reduction.

Similarly, NPS is not aware of an ARAR justification for pursuing a remedy that includes partial removal of landfill wastes. NPS concluded that the Selected Remedy complies with ARARs and as noted above, does so at much less cost than partial removal of landfill waste.

NOAA Comment 2

Human health risks from recreational activities related to nature related activities should be clearly presented stand alone as there is no remedial action being planned for Kenilworth South. The publicly provided Interim Response to Public Comments (#15) suggests human health risks may be present for these types of activities. The ecological risk summary is insufficient and should describe the screening and baseline ERA as well as any risk management decisions or conclusions.

NPS Response 2

NPS concluded that Kenilworth Park South (KPS) presents no unacceptable human health risks associated with recreational uses such as walking, jogging, or bird watching. Risks were evaluated by considering the frequency and intensity of typical visitor experiences at the park under the reasonably anticipated future use of KPS. If contact sports or playgrounds were constructed at KPS, a similar protective barrier would likely have been proposed. However, the Anacostia Park Management Plan designates KPS as a Natural Resource Recreation area; the only development planned in KPS is an extension of the paved Anacostia Riverwalk Trail (ART).

The ecological risk assessments and follow-up analysis completed for the Site are documented in the 2007 and 2008 RI Reports (E&E, 2007a; E&E, 2008), the 2007 Baseline Ecological Risk Assessment (BERA) Problem Formulation Reports for KPN and KPS (E&E, 2007b; E&E, 2007c), the 2012 Feasibility Study Report (JCO, 2012), and the 2019 RI Addendum Report (JCO, 2019a). NPS concluded that the Site poses no unacceptable ecological exposure risks; therefore, no risk-management decisions were required.

NOAA Comment 3

The proposed plan states, "Sediment samples were collected from the Anacostia River, Kenilworth Marsh, and Watts Branch. PAHs, PCBs, and lead were reported in some of the samples; however, there is no apparent trend in the concentrations to indicate that these contaminants originated from the Site or that a migration pathway exists between the Site and adjacent sediments. Similar to surface water, urban stormwater discharges and tidal effects are the predominant factors that influence sediment quality near the Site." At the last Mayor's Advisory Council Meeting the NPS acknowledged that a historical pathway existed (as described in the site history) and in the Interim Responses identifies that site remediation will be done under the ARSP. Subsurface and surface sediment sampling data have identified elevated concentrations of PCBs relative to risk-based screening and background levels at several sampling locations along the landfill and an area adjacent to the landfill was identified as an Early Action Area in the DC Interim ROD. The ARSP data does not support that urban stormwater and tidal effects are the predominant factors influencing contaminants near the site. These efforts would benefit from stronger coordination in evaluation and implementation of land and adjacent water based remedial planning including the buffer areas.

NPS Response 3

NPS concluded in the 2019 RI Addendum Report that no evidence of ongoing migration of contaminants has been observed from the landfill to surface water that would cause an unacceptable exposure risk. As noted above in the response to Comment 1, DOEE recommended the collection of additional surface soil samples in areas adjacent to water bodies to confirm there is no significant overland runoff pathway for contaminant migration. Given the lack of significant erosion, NPS considers this pathway unlikely to cause an unacceptable exposure risk; however, NPS has agreed that additional sampling during the remedial design phase would provide additional data to reduce uncertainty regarding the potential for surface soil contaminants to be impacting adjacent surface waters. The findings of the additional investigation would not change the configuration of the proposed clean soil barrier. If the planned sampling were to indicate that additional measures are needed, those measures would be in addition to the proposed clean soil barrier. To the extent additional remedial measures are necessary, they would be selected through an Explanation of Significant Differences (ESD) or an ROD amendment.

NPS is considering, in consultation with other regulatory agencies, establishing a site that encompasses the Unnamed Tributary and the downstream portion of Watts Branch. These areas are currently under NPS jurisdiction and subject to NPS CERCLA authority. NPS expects to conduct additional sampling to assess sediment contamination in these water bodies. NPS believes additional response activities may also be appropriate for Kenilworth Marsh and will coordinate with other agencies to identify appropriate next steps for assessment and potential response activities.

NOAA Comment 4

Shoreline restoration along the landfill would provide protection from erosion and restore several ecosystem functions related to habitat and water quality that address wetland, stream, wetland, and surface water ARARs. Living shoreline restoration is a priority restoration action in restoration planning for the Anacostia River. The proposed plan should also further describe the evaluation of wetland,

riparian and river protection ARARs relevant to the site. EPA has climate change guidance for Superfund (https://www.epa.gov/superfund/superfund-climate-resilience). This should be evaluated as a To Be Considered criteria at a minimum in the ARAR evaluation process.

NPS Response 4

NPS appreciates the value of enhanced living shorelines; however, shoreline restoration is not required to protect public health and welfare or the environment at the Site, nor is it required to meet applicable or relevant and appropriate requirements (ARARs). In its comments on the Proposed Plan (see Responsiveness Summary Attachment 24), DOEE recommended removing the clean soil barrier from the 500-year floodplain on KPN where the District intends to restore tidal wetlands outside of the CERCLA response action. NPS's Selected Remedy includes modifications to the Preferred Alternative that include removing the clean soil barrier from the 500-year floodplain as currently mapped. DOEE's plans are preliminary in nature; the final boundaries for the clean soil barrier will be determined during the remedial design phase and will be based on the District's final plans for KPN.

NOAA Comment 5

In regard to Theme 2 of the Interim Responses to Public Comments, NOAA is committed to working with remedial agencies, PRPs, and co-trustees on remediation and restoration efforts on the Anacostia River. NOAA supports coordinating and integrating remediation and restoration actions to the maximum extent practical, especially at federal sites, and has significant case experience working with DOI and EPA and successes with federal PRP's at several sites in the Chesapeake Bay Watershed. NOAA is committed to providing technical support and working as a partner under the Urban Water Federal Partnership to support living shoreline and other restoration activities for the Anacostia.

NPS Response 5

NPS acknowledges Comment 5.

References

Ecology and Environment (E&E). 2007a. Final Remedial Investigation at the Kenilworth Park Landfill, N.E. Washington, D.C. November.

E&E. 2007b. Problem Formulation Technical Report for the Baseline Ecological Risk Assessment, Kenilworth Park North Landfill Site, N.E. Washington, D.C. December.

E&E. 2007c. Problem Formulation Technical Report for the Baseline Ecological Risk Assessment, Kenilworth Park South Landfill, N.E. Washington, D.C. December.

E&E. 2008. Final Remedial Investigation at the Kenilworth Park South Landfill, N.E. Washington, D.C. June.

The Johnson Company (JCO). 2012. Feasibility Study Report, Kenilworth Park Landfill, Northeast Washington D.C. National Capital Parks – East. April.

JCO, 2019a. Remedial Investigation Addendum Report, Kenilworth Park Landfill, National Capital Parks – East, Washington, D.C. June.

Attachment: March 12, 2021 NOAA Email

From: Simeon Hahn - NOAA Federal <simeon.hahn@noaa.gov>
Sent: Friday, March 12, 2021 12:56 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: grant.blumberg <grant.blumberg@noaa.gov>; rich.takacs <rich.takacs@noaa.gov>; Diane Evers - NOAA Federal <diane.evers@noaa.gov>
Subject: [EXTERNAL] Comments on Kenilworth Proposed Plan

NOAA respectfully submits the following comments on the proposed plan for Kenilworth Landfill as part of trustee coordination with remedial agencies in the CERCLA process.

Comments on Proposed Plan

NOAA recommends a hybrid remedy be evaluated which includes (1) excavation of a portion of landfill material along the Anacostia River and Watts Branch where waste was deposited and burning activities occurred in former wetland and aquatic habitats with (2) consolidation for capping on site and/or offsite disposal and/or beneficial reuse. The transitional area from the landfill to the Anacostia or Watts Branch is reported to have steep banks in many locations and the composition of the waste and fill material between the metallic landfill footprint and aquatic habitats are not well characterized. NOAA believes there is risk and/or ARAR justifications for pursuing evaluation of this alternative.

Human health risks from recreational activities related to nature related activities should be clearly presented stand alone as there is no remedial action being planned for Kenilworth South. The publicly provided Interim Response to Public Comments (#15) suggests human health risks may be present for these types of activities. The ecological risk summary is insufficient and should describe the screening and baseline ERA as well as any risk management decisions or conclusions.

The proposed plan states "Sediment samples were collected from the Anacostia River, Kenilworth Marsh, and Watts Branch. PAHs, PCBs, and lead were reported in some of the samples; however, there is no apparent trend in the concentrations to indicate that these contaminants originated from the Site or that a migration pathway exists between the Site and adjacent sediments. Similar to surface water, urban stormwater discharges and tidal effects are the predominant factors that influence sediment quality near the Site." At the last Mayor's Advisory Council Meeting the NPS acknowledged that a historical pathway existed (as described in the site history) and in the Interim Responses identifies that site remediation will be done under the ARSP. Subsurface and surface sediment sampling data have identified elevated concentrations of PCBs relative to risk based screening and background levels at several sampling locations along the landfill and an area adjacent to the landfill was identified as an Early Action Area in the DC Interim ROD. The ARSP data does not support that urban stormwater and tidal effects are the predominant factors influencing contaminants near the site. These efforts would benefit from stronger coordination in evaluation and implementation of land and adjacent water based remedial planning including the buffer areas.

Shoreline restoration along the landfill would provide protection from erosion and restore several ecosystem functions related to habitat and water quality that address wetland, stream, wetland, and surface water ARARs.. Living shoreline restoration is a priority restoration action in restoration planning for the Anacostia River. The proposed plan should also further describe the evaluation of wetland, riparian and river protection ARARs relevant to the site. EPA has climate change guidance for Superfund (https://www.epa.gov/superfund/superfund-climate-resilience). This should be evaluated as a To Be Considered criteria at a minimum in the ARAR evaluation process.

In regard to Theme 2 of the Interim Responses to Public Comments NOAA is committed to working with remedial agencies, PRPs, and co-trustees on remediation and restoration efforts on the Anacostia River. NOAA supports coordinating and integrating remediation and restoration actions to the maximum extent practical, especially at federal sites, and has significant case experience working with DOI and EPA and successes with federal PRP's at several sites in the Chesapeake Bay Watershed. NOAA is committed to providing technical support and working as a partner under the Urban Water Federal Partnership to support living shoreline and other restoration activities for the Anacostia.

END of Comments

--
Simeon Hahn
NOAA Regional Resource Coordinator - Mid Atlantic
1650 Arch St
Philadelphia PA 19103
215-814-5419 (w)
206-617-5438 (c)

ATTACHMENT 16

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1- National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

MEMORANDUM

TO: Administrative Record for the Kenilworth Park Landfill Site

FROM: Kenilworth Park Landfill Contaminated Site Team (CST):
Donna Davies, National Park Service (NPS) Project Manager
Jonathan Ordway, VHB (NPS Contractor)
Jeffrey Johnson, Department of the Interior (DOI) Legal Lead

DATE: July 15, 2022

CC: Shawn Mulligan, Lead, NPS Environmental Compliance and Cleanup Division

RE: DC Audubon Society Comments on Kenilworth Park Landfill Site Proposed Plan

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The purpose of this memorandum is to convey NPS's responses to comments submitted by DC Audubon Society on the Kenilworth Park Landfill Proposed Plan. This memo provides responses to two letters submitted by DC Audubon Society: one letter dated January 2021, and the attached letter dated March 12, 2021.

RESPONSE TO JANUARY 2021 LETTER

DC Audubon Society submitted an initial comments letter to NPS in January 2021. In this initial letter, DC Audubon requested that NPS consider a sixth alternative for the Site, which would include excavating a portion of the former landfill in the western portion of Kenilworth Park North (KPN) to allow for restoration of wetlands in this area, placing clean soil cover over land in KPN east of the track, and leaving Kenilworth Park South (KPS) untouched.

NPS received requests from numerous commentors to evaluate different hybrid alternatives during the initial comment period. Upon this request, NPS considered the costs for removal of waste from KPN (modified versions of Alternative 5) while addressing KPS as described under Alternative 3 (see Responsiveness Summary, Table 2, Comment 3). The cost to remove portions of the landfill are much higher than the placement of a clean soil barrier. Although partial landfill removal would eliminate risk posed to recreational users and future workers, it would do so at a significantly greater cost than the Selected Alternative (a modified version of Preferred Alternative 3) without a corresponding increase in protectiveness.

NPS is required to evaluate remedial alternatives in accordance with the nine criteria described in Section 300.430(e)(9)(iii) of CERCLA's implementing regulations, the National Oil and Hazardous Substances

Pollution Contingency Plan (NCP). To be selected as the final remedy, an alternative must also be cost-effective (Sections 121(a) and 121(b)(1) of CERCLA), which means that its costs are proportional to its overall effectiveness (Section 300.430(f)(1)(ii)(D) of the NCP); therefore, the various hybrid approaches suggested in multiple public comments would not be evaluated as favorably as NPS's Preferred Alternative 3 due to the significantly higher cost required to achieve the same level of risk reduction.

CERCLA authorizes natural resource trustees to pursue damages for injury to, destruction of, or loss of natural resources and associated assessment costs. Natural resource damage claims are typically sought after a remedy is selected. Damages recovered by the natural resource trustees can be used to restore natural resources. NPS seeks to coordinate response and restoration activities whenever practicable, but the trustees have not commenced the natural resource damage assessment process for this site.

RESPONSE TO LETTER DATED MARCH 12, 2021

In addition to the initial January 2021 letter, DC Audubon Society's submitted a second letter on March 12, 2021 (attached). Comments from this letter can be broken down into the following four broad categories:

1. Future vision for the park
2. Future park management practices
3. The importance of Kenilworth Park for bird habitat
4. Concerns regarding potential adverse impacts to birds and other wildlife from contaminants present in Site soils

NPS's responses to each of the four broad categories is provided below:

NPS Response to Future Vision for the Park Comments

DC Audubon Society's specific vision for Kenilworth Park, as detailed in their March 12, 2021 letter, is consistent with the vision expressed in multiple public comments. This vision includes the following actions: (1) a minimum 300-foot-width native forested buffer would be created, as needed, and maintained along the Anacostia River and Kenilworth Marsh; (2) a native forest or meadow would be restored and maintained in the western portion of KPN, roughly west of the running track, allowing sufficient space for community recreational amenities in the eastern portion of this area; and (3) KPS would be maintained as a natural area.

The future use of KPS is governed by the Management Plan for Anacostia Park (Management Plan). The Management Plan requires KPS to be managed for natural resources recreation (i.e., maintained in a natural state for passive recreational uses). The NPS Management Plan requirements for KPS align with DC Audubon Society's vision.

Congress has directed NPS to transfer administrative jurisdiction over KPN to the District of Columbia (District). Once that transfer occurs, KPN will not be part of Anacostia Park and will not be subject to the NPS Management Plan. The transfer legislation provides that KPN must be "used only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." Within those broad constraints, the future use of KPN will be determined by the District. The District Department of Energy and Environment (DOEE) provided comments on the Proposed Plan (see Responsiveness Summary Attachment 24). These comments included a preliminary land-use plan that sets land aside for future tidal wetlands restoration and meadow habitat. To address DOEE's comments, NPS modified the Proposed Plan to eliminate the clean soil barrier in areas where wetland restoration may occur in the future, and in the area reserved for meadow habitat.

NPS understands the value in restoring wetlands along the Anacostia River and Watts Branch; however, restoration of wetlands is not required to address risks posed to public health or welfare or the environment by the release of hazardous substances at the Site, nor is it required to meet applicable or relevant and appropriate requirements (ARARs). Although the Selected Remedy does not include restoration of wetlands as part of the CERCLA response action, this project (or other projects intended to increase resiliency in this area) could be planned and scheduled in coordination with the CERCLA response.

The District has indicated to NPS that it plans on conducting public engagement activities in 2022 to obtain public input on the future uses of KPN; therefore, members of the public are encouraged to participate in the District's planning process and provide their input through that process.

NPS Response to Future Park Management Practices Comments

DC Audubon indicated concern regarding the type of soil used for the clean soil cover. The remedial design will include a prescribed process that must be followed to ensure any soil or fill brought onto the Site is assessed to establish that the fill material is uncontaminated and is physically similar to the native material in the destination area. NPS will ensure that any imported fill material will be protective of human health and the environment. NPS also noted DC Audubon Society's management requests including reduced mowing and invasive plant control. Specific plans and requirements will be developed during the remedial design phase of the CERCLA response action, which will provide details on the clean fill specifications and revegetation requirements for areas to be covered with the clean soil barrier. The remedial design phase will begin after the Record of Decision (ROD) has been issued.

NPS Response to the Importance of Kenilworth Park for Bird Habitat Comment

NPS acknowledges DC Audubon Society's comments regarding the important bird habitat that the Site occupies. NPS's Selected Remedy will not destroy existing habitat in KPS; this was an important consideration during evaluation of the possible alternatives. The potential loss of bird habitat at KPN will depend on the District's future land-use planning and the extent to which the land is used for athletic facilities versus preservation of meadow habitat.

NPS Response to Concerns Regarding Adverse Impact to Birds and Other Wildlife

NPS evaluated the potential for ecological risk at the KPL Site during the remedial investigation (RI). The assessments of ecological risk included exposure pathways to wildlife (including birds) through consumption of food (e.g., earthworms and subterranean invertebrates). These evaluations were performed using models that allowed for consideration of bioavailability, which is governed to some degree by soil pH and the presence of organic carbon. The ecological risk assessments concluded that hazardous substances at the Site pose no unacceptable risk to birds and other wildlife. Final conclusions of the ecological risk to wildlife are documented in the 2012 Feasibility Study Report, which is available on the NPS Kenilworth Park Landfill webpage.

Attachment: January and March 2021 DC Audubon Society Letters

From: Joel Merriman <jmerr@hotmail.com>
Sent: Tuesday, January 5, 2021 8:52 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: Adam Kron <amkron@gmail.com>; Murray, Christopher <christopher.murray@marquette.edu>; Trey Sherard <trey@anacostiariverkeeper.org>; Anne Lewis <annelewisdc@gmail.com>; Chris Weiss <cweiss@dcenvironmentalnetwork.org>; Elizabeth Curwen <elizabeth.curwen@gmail.com>; Tina O'Connell <tina@fokag.org>; Justin Lini <jljlini@gmail.com>; Dan Smith <smithdc@comcast.net>; marian dombroski <mdombros@gmail.com>; Chair, D.C. Chapter of the Surfrider Foundation <chair@dc.surfrider.org>; Surfrider DC Secretary <secretary@dc.surfrider.org>; gretchen.mikeska <gretchen.mikeska@dc.gov>; Nick Kushner <Nick.Kushner@dc.gov>
Subject: [EXTERNAL] Kenilworth Landfill Site Remediation Options

Dear Ms. Davies,

On behalf of DC Audubon Society, Anacostia Riverkeeper, City Wildlife, DC Environmental Network, Friends of Kenilworth Aquatic Gardens, Friends of Lower Beaverdam Creek, Friends of Quincy Run Watershed, and the DC Chapter of Surfrider Foundation, I am writing to formally request the addition of a sixth remediation alternative at the Kenilworth Park Landfill Site for public consideration.

We appreciate the considerable time and effort that went into development of the five alternatives that have been presented. However, we find that the alternatives do not adequately cover the full range of reasonable remediation options. In the attached letter, we recommend a sixth alternative that we are confident will strike the appropriate balance required by the applicable decision criteria.

Ultimately, we wish to see the highest and best use of Kenilworth Park, and are grateful that NPS is prioritizing remediation of this important property. Thank you for considering our request. We look forward to hearing from you soon.

Best wishes,

Joel Merriman
Vice Chair, Conservation & Advocacy Committee
DC Audubon Society
703-883-7985

5 January 2021

Ms. Donna Davies
CERCLA Project Manager
National Park Service
1900 Anacostia Drive, SE
Washington, D.C. 20020

Re: Kenilworth Park Landfill Site Remediation Alternatives

Dear Ms. Davies,

We are writing to request that the National Park Service (NPS) provide a sixth alternative for remediation at the Kenilworth Park Landfill Site. We have reviewed the September 2020 Feasibility Study Addendum Report, and while we appreciate the considerable effort and analysis that went into preparation of this document, we find that the alternatives do not adequately cover the full range of reasonable remediation options. Below we provide a recommendation for a sixth option.

Excavation of contaminants and restoring wetlands is the most effective, permanent solution at this property, and wetlands provide many valuable ecosystem services. For this reason, we expect some stakeholders to support Alternative 5. However, excavation and restoration is only considered in that alternative, and presents an all-or-nothing scenario, which we believe leaves the options incomplete.

We request that a sixth alternative be added that (1) excavates contaminants and restores wetlands in the western portion of Kenilworth Park North, west of the running track; (2) caps lands in Kenilworth Park North east of the track, and (3) leaves Kenilworth Park South as is. We are confident that this will strike the appropriate balance required by the applicable decision criteria.

Ultimately, we wish to see the highest and best use of Kenilworth Park, and are grateful that NPS is prioritizing remediation of this important property. Thank you for considering our request.

Sincerely,

Adam Kron / Joel Merriman
Chair / Vice Chair, Conservation & Advocacy Committee
DC Audubon Society

Anne Lewis
President
City Wildlife

Elizabeth Curwen
Board Chair
Friends of Kenilworth Aquatic Gardens

Marian Dombroski
Director
Friends of Quincy Run Watershed

Trey Sherard
Riverkeeper
Anacostia Riverkeeper

Chris Weiss
Executive Director
DC Environmental Network

Dan Smith
President
Friends of Lower Beaverdam Creek

Charlotte Runzel
Board Chair
Surfrider Foundation, DC Chapter

Cc: Gretchen Mikeska (DOEE), Nick Kushner (DPR)

From: Joel Merriman <jmerr@hotmail.com>
Sent: Friday, March 12, 2021 2:57 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: DC Audubon Announcements <dcaudubonsociety@gmail.com>; vgray@dccouncil.us <vgray@dccouncil.us>; Councilmember Mary Cheh <mcheh@dccouncil.us>; Stidham, Tammy <Tammy_Stidham@nps.gov>; Mikeska, Gretchen (DOEE) <gretchen.mikeska@dc.gov>; Nick Kushner <Nick.Kushner@dc.gov>; Dan Rauch <daniel.rauch@dc.gov>; Ossi, Damien (DOEE) <damien.ossi@dc.gov>; Wells, Tommy (DOEE) <tommy.wells@dc.gov>; Morrison, Tara D <Tara_Morrison@nps.gov>; Adam Kron <amkron@gmail.com>
Subject: [EXTERNAL] DC Audubon Society Comments - Kenilworth Park Cleanup Plan

Dear Donna,

Please find attached comments from DC Audubon Society regarding the proposed cleanup plan for the Kenilworth Park Landfill site. Thank you for the work that has gone into this, and the effort to prepare the park for its next phase of functionality for DC residents and wildlife.

Best wishes,

Adam Krohn / Joel Merriman
Chair / Vice Chair, Conservation & Advocacy Committee
DC Audubon Society

12 March 2021

DC AUDUBON SOCIETY

Ms. Donna Davies
CERCLA Project Manager
National Park Service
1900 Anacostia Drive SE
Washington, D.C. 20020

Re: Kenilworth Park Landfill Site Feasibility Study Addendum Report

Dear Ms. Davies,

Thank you for the opportunity to provide these comments on the Feasibility Study Addendum Report for the Kenilworth Park Landfill Site. We appreciate the tremendous amount of time, data collection, and analysis that went into the preparation of this document. We believe the Kenilworth Park site to be of outsized importance in the District due to its ecological and social value. We appreciate that NPS is investing the time and resources necessary to eliminate risks to human health and the environment on this property, and to put it on a path toward its highest and best use.

As you are aware, we sent a letter to NPS on 5 January 2021 requesting provision of a sixth alternative for remediation. We advocated that excavation of contaminants and restoring wetlands is the most effective, permanent solution at this property, and that wetlands provide many valuable ecosystem services. We noted that excavation and subsequent restoration of wetlands is only considered in Alternative 5, which presents an all-or-nothing scenario for this action, and that the failure to consider alternatives including *some* excavation and wetland restoration leaves the options incomplete. For these reasons, we requested that a sixth alternative be added that (1) excavates contaminants and restores wetlands in the western portion of Kenilworth Park North, roughly west of the running track; (2) caps lands in Kenilworth Park North east of the track, and (3) leaves Kenilworth Park South as is.

We maintain our belief that the scenario described above would strike the appropriate balance required by the applicable decision criteria and allow for the highest and best use of the property. This would remain our preferred outcome. However, we have since received a response from NPS indicating that this is not feasible as part of the CERCLA decision process, though it may be considered and implemented by the District once management of the property is transferred.[1]

If NPS maintains its position that the scenario described above (a hybrid of Alternatives 3 and 5) is not feasible, we could conditionally support Alternative 3. Our support for Alternative 3 would be premised on the interest and understanding that the current ecological value of the property would be enhanced and maintained in perpetuity. The Park currently supports one of the largest contiguous areas of meadow in the District, a habitat that is considered a local priority, per the 2015 District of Columbia Wildlife Action Plan.[2] Given this NPS property's historical setting as an extensive tidal wetland, we believe it is imperative that natural character be retained in its western portion (i.e., Kenilworth Park South and Kenilworth Park North roughly west of the running track), and recreational amenities be limited to the eastern portion.

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[1] *See* NPS, Memorandum re Interim Response to Public Comments Received on the Proposed Plan for Cleanup for the Kenilworth Park Landfill Site (Feb. 1, 2021) [hereinafter NPS Response], *available at* https://www.nps.gov/anac/learn/management/upload/2021-02-01-Memo-Re-Interim-Response-to-Comments-on-KPL-Proposed-Plan-Appended-508c.pdf.

[2] DC Dep't of Energy & Env't, 2015 District of Columbia Wildlife Action Plan, https://doee.dc.gov/service/2015-district-columbia-wildlife-action-plan

We note that in the recent response to our 5 January 2021 letter, NPS recommended that we direct our comments regarding wetland and meadow habitat restoration to the District and specifically stated that:

> ...if the District decides to create wetlands, or incorporate another land use such as meadows in a portion of KPN, this can be included in the remedial design phase of the CERCLA process to accommodate a different configuration of land use. The clean soil cap is only required in high-frequency, high-intensity land use areas such as athletic fields. If areas of KPN are reserved for restoration in the future (i.e., not developed as athletic fields or public gathering areas), no clean soil barrier would be required.[3]

NPS also noted that there is nothing in Alternative 3 to "require[] that entire area be capped, and adjustments to the capped area can be made during the remedial design to accommodate other land uses such as wetlands or meadows."[4] We fully intend to take NPS's recommendation that we address our concerns regarding habitat restoration to the District. In order to preserve this possibility and allow for the greatest flexibility while protecting human health in the high-use areas, we request that NPS adjust the remedial design to limit the capped area to "high-frequency, high-intensity land use areas such as athletic fields," which we urge be limited to the eastern portion of Kenilworth Park North.

We would specifically envision a setting in which: (1) a minimum 300-foot-width native forested buffer would be created, as needed, and maintained along the Anacostia River and Kenilworth Marsh, (2) a native forest or meadow would be restored and maintained in the western portion of Kenilworth Park North, roughly west of the running track, allowing sufficient space for community recreational amenities in the eastern portion of this area, and (3) Kenilworth Park South would be maintained as a natural area.

In order to maintain the above option, we request that no native trees be removed as part of the ultimate remediation action, and where trees are removed, they be replaced with native trees on an equal inch-to-inch calculation, on the site. Where soil is used to cap the site, a clean soil medium matching or approximating the natural Anacostia floodplain soil should be used for any capping that is implemented. This will have the highest likelihood of restoring the ecosystem in the long run. Reforestation can be accomplished through reducing mowing and implementing invasive plant control, though some planting and seeding will likely be needed, beyond replacement, to recover the ecosystem.

For NPS's consideration in reaching its final decision, we provide the following details regarding the ecological value of the property and surrounding areas.

<u>Ecological Value of Kenilworth Park and Surrounding Protected Areas</u>

The Kenilworth-Kingman-Arboretum complex is one of the largest blocks of habitat remaining in the District. This block encompasses two Conservation Opportunity Areas , the bulk of the District's wetland and grassland habitats, and the most robust riparian buffer [riparian referring to vegetation adjacent to rivers and streams]. Portions of the Kingman and Heritage Islands have been designated as State Conservation and Critical Wildlife Areas, the only such in the District.[5] The stretch of the Anacostia River through this area can be navigated without the view being obstructed by major human infrastructure, making it significant, aesthetically, and for water-based recreation.

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[3] *See* NPS Response at 4-5.

[4] *Id.* at 3.

[5] D.C. 2015 Wildlife Action Plan, Chapter 3.

According to Cornell Lab of Ornithology's eBird database, which compiles bird observations submitted by citizen scientists, 234 bird species have been observed at Kenilworth Park & Aquatic Gardens in the past 10 years, the second-highest total at birding "hotspots" in the District. This is derived from almost 5,000 checklists over the same time span, making Kenilworth the most frequently visited birding hotspot in the District in the last decade. Similarly, the Kingman and Heritage Island, and Arboretum hotspots are among the top 10 largest species lists in the District. Species documented in this collective area include 57 of 58 birds listed as Species of Greatest Conservation Need in the 2015 DC Wildlife Action Plan (54 of these have been documented in Kenilworth Park alone).[6] Kenilworth Park is the only reliable breeding location in the District of one such species, the American woodcock. DCAS's annual outing to observe the courtship display of this species in the spring is one of our most popular events.

Given the above, we additionally request that an analysis of the potential effects of toxicants on birds and other wildlife be conducted to supplement the analysis conducted to date. Some birds, such at the American Woodcock, feed on earthworms and other subterranean invertebrates, potentially exposing them to harm. Others may be exposed via bioaccumulation, the process by which toxins gradually accumulate in organisms at increasingly high tiers of the food chain.

Ultimately, we wish to see the highest and best use of Kenilworth Park, and are grateful that NPS is prioritizing remediation of this important property. Thank you for considering our comments.

Sincerely,

Adam Kron / Joel Merriman
Chair / Vice Chair, Conservation & Advocacy Committee
DC Audubon Society
dcaudubonsociety@gmail.com

Cc:
Gretchen Mikeska (DOEE)
Nick Kushner (DPR)
Dan Rauch (DOEE)
Damien Ossi (DOEE)
Tommy Wells (DOEE)
Tara Morrison (NPS)
Tammy Stidham (NPS)
Vincent Gray (DC Council)
Mary Cheh (DC Council)

DC Audubon Society is an all-volunteer, non-profit organization with over 1,300 members whose mission is to promote the appreciation and conservation of birds and their habitats in the DC area. In addition to working on conservation, education, and advocacy, at least once a month DC Audubon Society conducts free bird walks throughout the District that aim to introduce our community to the wide array of birds and wild places that we are fortunate to have here.

[6] *Id.*, Chapter 2.

ATTACHMENT 17

MEMORANDUM

TO: Administrative Record for the Kenilworth Park Landfill Site

FROM: Kenilworth Park Landfill Contaminated Site Team (CST)
Donna Davies, National Park Service (NPS) Project Manager
Jonathan Ordway, VHB (NPS Contractor)
Jeffrey Johnson, Department of the Interior (DOI) Legal Lead

DATE: July 15, 2022

CC: Shawn Mulligan, Lead, NPS Environmental Compliance and Cleanup Division

RE: Sierra Club Comments on Kenilworth Park Landfill Site Proposed Plan

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The purpose of this memorandum is to convey responses to comments on the Kenilworth Park Landfill (KPL) Site Proposed Plan received from the Sierra Club of Washington D.C. (Sierra Club). Sierra Club submitted these comments in a letter dated March 12, 2021 (Comments Letter).

Provided below are NPS responses to the Sierra Club's comments and questions. NPS attempted to organize the responses in the same order and formatting as they are presented in the Comments Letter. Text quoted directly from the letter are presented below in italics.

PREAMBLE

The Sierra Club's comments prior to the Executive Summary included the following two points:

1. Sierra Club expressed concern that the Proposed Plan does not adequately address the needs that have been identified by the District for the desired future use of Kenilworth Park and does not meet the modifying criteria of Community Acceptance, further noting that environmental justice is a priority for the Sierra Club.

2. Sierra Club requested NPS select Alternative 5 to remove all landfill and overlying material from Kenilworth Park North (KPN) and to further study and take remediation measures to ensure legacy contamination from Kenilworth Park South (KPS) is not leaching into or running off to the surrounding land or water bodies.

NPS Response – Point 1

Congress has directed NPS to transfer administrative jurisdiction over KPN to the District. The transfer legislation provides that KPN must be "used only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities." Within those broad constraints, the future use of KPN will be determined by the District. Prior to NPS's evaluation of possible alternatives, the District informed NPS that it planned to use KPN to provide active recreational opportunities to the public (e.g., sports fields). Although these plans were preliminary and conceptual in nature, they provided sufficient information to allow NPS to complete a feasibility study-level evaluation of possible alternatives to address the unacceptable risk posed to active recreational users of KPN. Of the alternatives evaluated by NPS, NPS's Selected Remedy (modified version of Alternative 3) provides the most flexibility to the District to configure KPN for desired future use. Alternative 5, complete removal of landfill material and restoration of tidal wetlands, limits the District's ability to develop a portion of the Site for active recreational uses.

The District Department of Energy and Environment (DOEE) provided comments on NPS's Proposed Plan (see Responsiveness Summary, Attachment 24), which included a preliminary land-use plan. This plan updates the initial conceptual plans the District provided to NPS during the remedial investigation/feasibility study (RI/FS) phase of the CERCLA response. The District's updated preliminary land-use plan for KPN includes areas along the Anacostia River and Watts Branch where the District intends to restore tidal wetlands; the preliminary plan also includes an area on KPN to be maintained as meadow habitat. To accommodate the District's preliminary plans, NPS modified the Preferred Alternative 3 to eliminate the clean soil barrier in areas where the District intends to restore wetlands and maintain meadow habitat (see Figure 2 of the Responsiveness Summary for Selected Remedy).

Because the District's plans for KPN have not be finalized, the clean soil barrier boundaries NPS included for KPN in the Selected Remedy are conceptual in nature and will be adjusted based on the District's final plans for KPN. These revisions will be made during the remedial design phase, which is the next phase of the CERCLA response process after issuance of the Record of Decision (ROD). The District has indicated to NPS that it plans on conducting public engagement activities in 2022 to obtain input on the future uses of KPN; therefore, members of the public are encouraged to participate in the District's planning process and provide their input through that process.

As a response to Sierra Club's comment that the Selected Remedy lacks community acceptance, NPS would like to reference the Responsiveness Summary, Sections 1.4, 2.2, and 3.1, for details regarding the comments NPS received supporting the Proposed Plan, and community engagement activities NPS conducted to ensure the local community and other interested members of the public were provided an opportunity to participate in the CERCLA remediation selection process in a meaningful way. As documented in Sections 2.2 and 3.1 of the Responsiveness Summary, NPS was committed to community engagement activities; NPS's engagement activities went significantly above those required by CERCLA and its implementing regulations, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

NPS Response – Point 2

NPS understands and appreciates Sierra Club's preference for full landfill removal (Alternative 5) over the proposed placement of a clean soil barrier. However, as described in the Proposed Plan (NPS, 2020b) and the 2020 Feasibility Study Addendum Report (VHB, 2020), NPS must evaluate each remedial alternative against the nine criteria described in Section 300.430(e)(9)(iii) of the NCP.

The NCP divides the nine criteria into three categories: threshold criteria (criteria one and two), balancing criteria (three through seven), and modifying criteria (eight and nine). One of the five balancing criteria is cost; the other four are referred to as "non-cost-balancing criteria." Although landfill removal (Alternative 5) does address risk to human health and the environment, it was deemed to be relatively ineffective (compared with other alternatives) on the non-cost-balancing criterion of short-term effectiveness because implementation of Alternative 5 would take significantly longer to complete than the other alternatives and would pose significant risks to visitors, workers, and the environment during that time. Alternative 5 also failed to meet the additional requirement of cost-effectiveness set forth in Sections 121(a) and 121(b)(1) of CERCLA, and Section 300.430(f)(1)(ii)(D) of the NCP because (1) Alternative 5 offers no additional benefit in risk reduction over NPS's Preferred Alternative 3 and (2) the cost of landfill excavation, disposal, and revegetation is so much higher than the installation of a clean soil barrier. An alternative of partial landfill removal (remove waste only in KPN) would also fail to meet the cost-balancing criteria. There is no justification to select an alternative that reduces risk by full or partial removal of the landfill at far greater cost, over an alternative that also fully addresses risk at far less cost in far less time (NPS's Selected Remedy).

The second issue Sierra Club noted in Item 2 above was concern over contaminant leaching or runoff from Kenilworth Park South (KPS) into surrounding land or water bodies. NPS concluded in the 2019 Remedial Investigation (RI) Addendum Report (JCO 2019) that there is no ongoing migration of contaminants from either KPN or KPS. In its comments on the Proposed Plan, DOEE recommended the collection of additional surface soil samples in areas adjacent to water bodies to confirm there is no significant overland runoff pathway for contaminant migration. Given the lack of significant erosion, NPS considers this pathway unlikely to cause an unacceptable exposure risk. However, NPS agreed additional sampling during the remedial design phase of the CERCLA response would provide additional data to reduce uncertainty regarding the potential for surface soil contaminants to impact adjacent surface waters. The findings of the additional investigation would not change the configuration of the proposed clean soil barrier. If the sampling were to indicate that additional remedial measures are needed, those measures would be in addition to the proposed clean soil barrier.

INTERAGENCY COORDINATION

Sierra Club Quotes:

The Proposed Plan needs to include information detailing when and under what conditions the transfer of administrative jurisdiction from NPS to the District's Department of Parks and Recreations (DPR) will occur; how NPS and the District will be working together to develop the remedial design for the cleanup and the timeline to do so; and finally, at what point the District's future plans for the Site will be factored into CERCLA process…

…Because the remediation plan is determined by the future use of the Site, we request that NPS include the Department of Energy & Environment (DOEE) and DPR's plans in its Proposed Plan along with a process to seek public and community input to determine how the Site will be used after the remediation is complete and in developing the remediation design plan once a Proposed Plan is selected…

NPS Response:

See NPS's response to Preamble Point 1 above. The transfer of administrative jurisdiction for KPN and the remedial design phase will occur after issuance of the ROD. The remedial design phase will include development of the detailed engineering plans and specifications required to implement remediation activities. After completion of the remedial design phase, the remedial action phase will begin. Actual

implementation (i.e., construction) of the response action will be completed during the remedial action phase of the CERCLA response.

NPS will continue to oversee the CERCLA remedial action as the federal lead agency. However, the specific future roles and responsibilities of the District and NPS during the upcoming remedial design and remedial action phases are being negotiated and will be outlined in a future agreement between the United States and District. NPS anticipates that the District will be responsible for completing the remedial design and implementing the remedy, and NPS will oversee the District's work (see Responsiveness Summary, Section 3.4).

PREFERRED ALTERNATIVE 3

Sierra Club Quotes:

The Sierra Club finds that the Anacostia Park Management Zones of KPN are incongruent with the desired future use of the Site and does not believe that a proposed remediation plan should be based on these management zones as they are currently designed.

NPS has stated that there is nothing in the preferred alternative that requires that the entire area be capped and "adjustments to the capped area can be made during the remedial design to accommodate other land uses such as wetlands or meadows." However, there is only flexibility in determining what areas receive a cap or not, this does not consider the removal of the contaminated soil.

Finally, leaving the contaminated soil in place at KPN could restrict the District's future plans for the Park. While NPS has stated that their Proposed Plan does not preclude the District from exploring and undertaking other land uses for the Site that are outside the considerations of CERCLA, it would be illogical and expensive for the District to agree to the installation of a cleansoil barrier only to have the District cover the cost of the removal of contaminated soil once it assumes administrative jurisdiction.

NPS Response

Future Land Use KPN: NPS did not use the Anacostia Park Management Zones to determine likely land use in specific areas of KPN (see NPS's response to Preamble Points 1 and 2 above for details regarding NPS's approach for determining future land use of KPN). For KPN, NPS used the Anacostia Park Management Zones only to develop a series of likely human health exposure scenarios related to the frequency and intensity of the potential visitor exposures. The 2020 FS Addendum Report provides the assumptions used in each scenario (VHB 2020). These assumptions were used to develop target remediation goals (concentrations) that would protect visitors participating in various activities. For example, a visitor participating in league play for a contact sport at the Site (e.g., rugby or football) was assumed to have a higher frequency and intensity of potential exposure to soil than a visitor walking or running on an established trail. To develop feasibility-level costs, NPS used information provided by the District on likely future land uses to estimate the areas where a clean soil barrier would potentially be needed. Because the cleanup goals for organized sports activities were the most stringent, NPS assumed this land use would occur over most of KPN, to avoid significantly under-estimating the cost for Preferred Alternative 3.

NPS assumed that the majority of KPN would be devoted to sports fields because the District has been communicating its intent to use KPN for that purpose for years. The District's plans to restore wetlands on some limited portions of KPN were communicated to NPS more recently (specifically, during the public comment period on the Proposed Plan). Preferred Alternative 3 will allow the District to determine the most appropriate distribution of sports fields, wetlands, meadows, and other uses on KPN consistent

with the requirements of the transfer legislation. Alternative 5, in contrast, would preclude the use of KPN for sports fields and meadows.

Waste Removal: A response action alternative involving partial excavation of waste was not considered because the cost associated with excavating and disposing of landfill waste is many times higher than the Preferred Alternative 3 (selective placement of a clean soil barrier). To address the human health risks determined to be unacceptable as part of the RI and the RI Addendum, placement of a clean soil barrier is as protective as waste removal. Therefore, based on the NCP evaluation criteria, partial or full landfill removal would not rank higher than the Preferred Alternative. Complete removal (Alternative 5) was considered because it would have the advantage of removing all waste and associated contamination from the site, eliminating the need for future monitoring and institutional controls. Partial removal would not provide this potential benefit.

In its comments on the Proposed Plan (see Responsiveness Summary, Attachment 24), DOEE recommended modifications to the proposed clean fill barrier to exclude areas for future tidal wetland restoration. NPS adopted DOEE's recommendations in the Selected Remedy. The modification, which can be further adjusted by the District during the remedial design phase based on the final plan for KPN, is intended to prevent placement of the clean fill barrier over an area that may eventually be excavated for tidal wetlands restoration.

NPS and the District are currently discussing a cost-sharing agreement that will provide for future cost allocations. Responsibility for the costs of implementing the Selected Remedy will be governed by that agreement, not by the outcome of the remedy selection process.

REMEDIAL EFFICACY CONCERNS

Sierra Club Quotes:

We are concerned that the impacts to the environment and human health caused by the contamination at the Kenilworth Park Landfill Site have not been adequately evaluated and as a consequence, will not be adequately remediated by Alternative 3.

NPS Response:

The quote above and additional narrative in the attached comment letter refers to the presence of certain contaminants, primarily polychlorinated biphenyls (PCBs), found at elevated concentrations in sediment samples from the Anacostia River, Kenilworth Marsh, Watts Branch, and the Unnamed Tributary to Watts Branch (Unnamed Tributary).

NPS collected sediment samples from Watts Branch and the Unnamed Tributary during the preliminary assessment/site inspection and RI phases of the project. NPS also reviewed results reported from sediment samples collected from Watts Branch as part of DOEE's Anacostia River Sediments Project (ARSP) and a related tributary study. The results reveal contaminants, including PCBs, at higher concentrations at some locations upstream of the Site. This indicates significant sources of contamination may be located upstream of the KPL Site that are likely contributing to the conditions near the landfill.

Based on the review of available data, NPS concluded that the KPL Site is not an ongoing source of contamination to adjacent surface waters including Watts Branch or the Anacostia River. However, in its Proposed Plan comment letter, DOEE recommended additional sampling to confirm contaminants from surface soil are not migrating into surface water via stormwater runoff. DOEE proposed that sampling be completed during the remedial design phase as the findings will not affect the Selected Remedy. NPS is agreeable to this recommendation. NPS, in consultation with DOEE and other regulatory agencies, is

considering additional investigations for Watts Branch, the Unnamed Tributary, and Kenilworth Marsh separately from the KPL Site response action.

OUTSTANDING QUESTIONS

Question 1:

If fabric is used to cover the area that NPS outlines in its Preferred Alternative 3, please list the types of plantings (e.g., shrubs, trees) that can be planted and the depth of their roots, as well as the type of park amenities that can be constructed, without disturbing the fabric soil cover in the Proposed Plan. NPS should clearly communicate what types of activities and park amenities can be offered or permitted with the installation of a fabric soil cover in the Proposed Plan.

NPS Response:

The visual warning layer described in the Preferred Alternative was proposed in case future excavation occurs without knowledge of the underlying contaminants. This type of warning layer is commonly used for similar capping projects. Because the warning layer is not designed to create an impervious barrier between the new cap and the underlying soil, the material can be safely cut away for planting vegetation that requires root zones to penetrate more than the overlying 12 inches of clean soil fill without compromising its purpose. The planned plantings will be identified as part of the remedial design.

Question 2:

We have several questions regarding Alternative 3: 'NPS would construct a clean soil barrier of a geotextile fabric overlain by 1 foot of clean soil (6 inches of common fill and 6 inches of topsoil)' (page 14 of Proposed Plan):

- *In what ways will NPS design a cover that accounts for potential effects of climate change, which could involve changes in onsite soil development or increased vulnerability to flooding?*
- *Will the fabric overlay become compromised if it becomes submerged during floods? Does the fabric degrade and what is its lifespan?*

NPS Response:

Detailed design considerations and specifications will be evaluated and determined during the remedial design phase, which is the next phase of the CERCLA process. NPS anticipates that the remedial design will be completed by DOEE after transfer of administrative jurisdiction and not by NPS. NPS will continue in an oversight role as the CERCLA federal lead agency.

Under the revised configuration of future land use, the clean soil barrier will not be installed within the 500-year floodplain and is not anticipated to be subject to flooding. The visual warning would be more permeable than the soil and would not be affected by flooding. The warning layer material does not degrade appreciably over time.

Question 3:

One of the Primary Balancing Criteria used to compare alternatives is the Long-Term Effectiveness and Permanence of the alternatives, which considers the ability of the alternative to protect human health and the environment over time. According to the 100-year floodplain of Kenilworth Park, the outer edges of KPN and KPS boundaries will become a part of the floodplain (please reference the map produced by the District Department of Energy and the Environment:

https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/District%20of%20Columbia%20Floodplain%20Map%2042x50%2009112018.pdf). As such, if NPS selects Alternative 3,

- *How will stormwater runoff be managed?*
- *How would ground leaching be contained?*
- *How will the soil be contained?*
- *Is soil erosion a concern?*

We would like to ensure that the cap barrier is able to withstand erosion and other degradation associated with its location within a flowing, tidal, and otherwise dynamic waterbody. Any cap must provide a permanent barrier between the river water and sediment and the contents of the landfill.

NPS Response

After revising the Preferred Alternative in accordance with DOEE recommendations, the clean soil barrier will be outside of the 500-year floodplain. The lowest elevation of the proposed clean soil barrier will be approximately 15 feet above mean sea level.

Stormwater management details will be established as part of the remedial design process. The design will consider stormwater management and erosion control measures during and after construction in accordance with pertinent regulations included as applicable or relevant and appropriate requirements (ARARs), which are listed in Table 7 of the ROD.

NPS assumes the term "groundwater leaching" is a reference to the infiltration of precipitation (rain and snow melt) through the surface soil and the potential leaching of contaminants into groundwater. After a relatively extensive assessment of groundwater quality at the Site (presented in the 2019 RI Addendum [JCO 2019]), contaminants were found above conservative screening concentrations in only a few locations. While contaminant levels were above the screening threshold, the concentrations detected were relatively low and were determined not to present a significant risk to human health or the environment. Therefore, NPS concluded that no remedial measures were required to address groundwater.

In the question above regarding "how will soil be contained," NPS assumes the Sierra Club is referring to erosion control associated with the clean soil barrier. During construction, NPS will ensure standard erosion control measures (e.g., silt fencing) will be used as required by ARARs. The clean soil will also be stabilized by vegetation (the type of seeding and planting is to be determined as part of the remedial design). CERCLA and the NCP require NPS to evaluate, at least once every five years, whether the Selected Remedy remains protective of human health and the environment.

Question 4:

With the effects of climate change already being felt in the District of Columbia, please indicate:

- *How will NPS account for the impacts of climate change and extreme weather events on the Kenilworth Park Landfill Site in its development of remediation alternatives?*
- *How did NPS evaluate potential remedies for vulnerabilities to climate change, and how did this factor into the evaluation of each alternative?*
- *How will NPS's proposed remediation plan contribute to climate resiliency?*

NPS Response:

NPS considered Climate Change Policy PM 12-02 and NPS Management Policies 2006 §1.4.66 to assess the impact of climate change on Site conditions. Considerations included the effect that potential increased incidences of flooding and erosion would have on the long-term effectiveness of the Selected Remedy, and the potential for hazardous substances left on the Site to migrate into the environment in the future. Although climate resiliency will be factored into the remedial design for stormwater management and erosion control, it was not a factor for the KPL Site in the selection of technologies or development of alternatives.

Increased rainfall and extreme weather events do not factor into the risks posed by visitor and worker exposure to hazardous substances present in the surface soil, subsurface soil, or landfill waste. The proposed clean soil barrier will be limited to areas outside the 500-year floodplain; therefore, flooding and storm surge is less likely to affect the proposed clean fill barrier. Higher-intensity weather events brought on by climate change will need to be factored into the stormwater management design associated with the redevelopment of the park by the District; those considerations will be included in the remedial design.

The District intends to restore tidal wetlands within the 500-year floodplain at KPN along the Anacostia River and Watts Branch outside of the CERCLA response action. To accommodate those future resiliency measures, the Selected Alternative was modified from Preferred Alternative 3 by removing the clean soil barrier previously included within the 500-year floodplain. NPS expects that the District's tidal wetland restoration activities will improve flood resiliency in the area of Kenilworth Park.

RECOMMENDATIONS

Sierra Club Quote:

In the absence of an alternative that addresses the concerns presented above, we support eventual removal of all landfill and overlying material in KPN only. This work would be phased in coordination with other projects undertaken by the District to accommodate future park use and in close consultation with the neighborhoods surrounding the Park to ensure that excavation of contaminated soil is conducted in a way that is least disruptive to residents. We support the preservation and enhancement of habitat in KPS, along with any measures to guarantee that legacy contamination from the landfill is not impacting the surrounding ecosystem and human health. Any work conducted at KPS must be undertaken with the lightest hand and without removing or further capping landfill material. Work could also include stabilization of the existing trail and bridge to minimize human impact on the natural environment while ensuring the safety of park visitors.

Remediation, restoration, recreation and access must be aspects of all projects in the Park. It is essential that Watts Branch and the Anacostia Riverfront be rewilded before other work in adjacent areas can proceed. Removal of landfill material will contribute to reestablishment of the pre-landfill topographical grades, which will allow reconnection of these important water bodies with their floodplain. Re-integration of the river and stream into the hydrology of the Site, especially the natural areas, will be facilitated by the removal of landfill and cover material because the original grades have been so drastically altered. In studying the Site cross sections, as illustrated in Figure 3 on page 11 of the Proposed Plan, it became clear that piling more fill on the Site will only make it more difficult to connect the Anacostia River and Watts Branch with their floodplains, which is essential for re-wilding the stream, establishing wetlands and living shoreline and restoring some estuary functions.

NPS Response:

NPS acknowledges the Sierra Club's recommendations. NPS believes the Selected Remedy, in coordination with the District's future plans for KPN, address those recommendations.

REFERENCES

The Johnson Company (JCO), 2019. Remedial Investigation (RI) Addendum Report, Kenilworth Park Landfill, National Capital Parks – East, Washington, D.C. June.

National Park Service (NPS). 2020b. Proposed Plan for Cleanup of the Kenilworth Park Landfill Site. November.

Vanasse Hangen Brustlin (VHB). 2020. Feasibility Study Addendum Report, Kenilworth Park Landfill Site, Anacostia Park, Washington, D.C. September.

Attachment: March 12, 2021 Sierra Club Letter

From: Anna LaCombe <annalacombe2@gmail.com>
Sent: Friday, March 12, 2021 3:18 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: Larry Martin <lmartindc@gmail.com>; Catherine Plume <caplume@yahoo.com>; Aykut YILMAZ <ayilmaz83@yahoo.com>; Debbie Chang <debbie.chang@sierraclub.org>; Ankita Mandelia <ajmandelia@gmail.com>
Subject: [EXTERNAL] Sierra Club DC Chapter's Comments on the Proposed Plan for the Cleanup of the Kenilworth Park Landfill Site

Dear Ms. Davies,

I am pleased to submit the Sierra Club DC Chapter's Comments on the Proposed Plan for the Cleanup of the Kenilworth Park Landfill Site, which you will find attached to this email.

On behalf of the Sierra Club DC Chapter, we thank you for your consideration of our comments and we look forward to your responses.

Thank you,
Anna LaCombe

Vice Chair, Clean Water Committee
Sierra Club DC Chapter

SIERRA CLUB
WASHINGTON D.C.

Comments on the Proposed Plan for the Cleanup of the Kenilworth Park Landfill Site
Released November 12, 2020

Submitted March 12, 2021

The Sierra Club DC Chapter is pleased to submit the following comments to the National Park Service (NPS) in response to the Proposed Plan for the remediation of the Kenilworth Park Landfill Site (Proposed Plan). We commend NPS's Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) staff for their quick response to questions since the publication of the Proposed Plan over the course of the 120-day public comment period. The Sierra Club DC Chapter is pleased to provide the following questions, recommendations and observations in response to the announced request for comments below.

1) While NPS does not determine future use of the Kenilworth Park Landfill Site (Site), we are concerned that the Proposed Plan does not adequately address the needs that have been identified by the District for the desired future use of Kenilworth Park. The Proposed Plan also does not meet the modifying criteria of Community Acceptance. Environmental justice is a priority for the Sierra Club. To this end, we ask that the comments of and letters from groups and individuals that more closely represent the community surrounding the Kenilworth Park Landfill Site be prioritized, such as those of the Anacostia Parks and Community Collaborative and Watts Branch Alliance. If a critical mass of representation is not met, we also ask that more outreach be done with these communities to ensure that adequate communication is achieved.

2) We request that NPS adhere to Alternative 5 to remove all landfill and overlying material from Kenilworth Park North (KPN). We request that further study and remediation measures be taken to ensure that legacy contamination from Kenilworth Park South (KPS) is not leaching in or running off to the surrounding land or waterbodies. We believe the remediation solution we have proposed would protect human health and enable community needs and desires to drive the future development of the Park.

Executive Summary

The Sierra Club finds NPS's Proposed Plan in which it endorses Preferred Alternative 3 inadequate and insufficient. If NPS is unable to compose a hybrid alternative to conduct a more complete remediation at the water's edge such as has been advocated in public meetings, then it is our position that Alternative 5 should be selected and NPS should remove all landfill and overlying material in Kenilworth Park North and conduct further testing to ensure that legacy contamination from Kenilworth Park South is not affecting the surrounding land or waterbodies. If further testing concludes that contaminant leaching or runoff is not occurring at Kenilworth Park South, we support the protection and enhancement of natural features and existing habitat within Kenilworth Park South.

We submit the following questions to NPS for their review. These questions can also be found in the "Outstanding Questions" section of the document.

1. What types of plantings (e.g., shrubs, trees) can be planted, what is maximum depth of plantings and what type of park amenities can be constructed without disturbing the fabric soil cover in the Proposed Plan?
2. In what ways will NPS design a cover that accounts for potential effects of climate change, which could involve changes in onsite soil development or increased vulnerability to flooding?
3. Will the fabric overlay become compromised if it becomes submerged during floods? Does the fabric degrade and what is its lifespan?
4. If NPS selects Alternative 3, how will stormwater runoff be managed?
5. How would ground leaching be contained?
6. How will the soil be contained?
7. Is soil erosion a concern?
8. How will NPS account for the impacts of climate change and extreme weather events on the Kenilworth Park Landfill Site in its development of remediation alternatives?
9. How did NPS evaluate potential remedies for vulnerabilities to climate change, and how did this factor into the evaluation of each alternative?
10. How will NPS's proposed remediation plan contribute to climate resiliency?

Inter-Agency Coordination

The Proposed Plan needs to include information detailing when and under what conditions the transfer of administrative jurisdiction from NPS to the District's Department of Parks and Recreations (DPR) will occur; how NPS and the District will be working together to develop the remedial design for the cleanup and the timeline to do so; and finally, at what point the District's future plans for the Site will be factored into CERCLA process. Without this level of detail, NPS cannot know whether the remediation plan will protect human health or the environment, and the public will have no way of understanding the roles and responsibilities of each agency. We request that the level of detail included on page 19 of NPS's Interim Response to Comments/Questions in the Memorandum of Administrative Record (please find excerpt below) be included in the Proposed Plan and communicated to the public:

> "After the formal cleanup plan is issued in the Record of Decision, the next phase of the CERCLA process will be preparation of the remedial design. This phase will likely be completed after Kenilworth Park North has been transferred to the District. During the remedial design, the specific construction drawings, plans, and specifications will be prepared. These plans will need to accommodate whatever the District's future plans are for the Site. The remedial design for the cleanup will not occur without coordination with the District" (Memorandum of Administrative Record - Interim Response to Comments/Questions, page 19).

As the lead agency of the CERCLA process, NPS must clearly communicate to the public how the CERCLA process considers the future use of the Site in the Proposed Plan. Currently, this information is omitted in the Proposed Plan but found in the Interim Response to Comments/Questions on page 3:

> "The reasonably anticipated future use of a site must be considered at multiple points in the CERCLA process (e.g., risk assessment, the development of alternatives, remedy selection, etc.)."

Because the remediation plan is determined by the future use of the Site, we request that NPS include the Department of Energy & Environment (DOEE) and DPR's plans in its Proposed Plan along with a process to seek public and community input to determine how the Site will be used

after the remediation is complete and in developing the remediation design plan once a Proposed Plan is selected. These additions would add transparency to the process and help the public understand the coordination between federal and local agencies so that members of the public can direct their specific questions about planning to the correct agency.

Preferred Alternative 3
The Sierra Club finds that the Anacostia Park Management Zones of KPN are incongruent with the desired future use of the Site and does not believe that a proposed remediation plan should be based on these management zones as they are currently designed.

NPS recognizes that once the administrative transfer of Kenilworth Park North to the District is complete, KPN will not be a part of Anacostia Park and will not be subject to the General Management Plan for Anacostia Park (Memorandum of Administrative Record - Interim Response to Comments/Questions, page 7). The only stipulation is that Kenilworth Park North must be "used only for the provision of public recreational facilities, open space, or public outdoor recreational opportunities," as required by the transfer legislation. Thus, we do not think that the remediation plan designs should be based off of the Anacostia Park General Management Plan that was adopted in 2017.

The Sierra Club, like many DC environmental and community groups, understands the importance of the many uses of KPN and envisions a mixed-use site. There are many possible designs and configurations of the different management zones at KPN that would still conform to the transfer legislation.

NPS's Preferred Alternative 3 demonstrates a narrow interpretation of "recreational opportunities" as solely "sport fields" evidenced by a soil cover that overlays the Organized Sport and Recreation Zone of the Anacostia Park General Management Plan. As proposed, Preferred Alternative 3 restricts the use of KPN and does not allow for a broader interpretation of recreational opportunities. Additionally, in a response found in the first interim response to public comments, NPS states that:

> "Prior to developing and evaluating the Alternatives, NPS consulted with the District to discuss its preliminary plans for Kenilworth Park North, which included development of additional sports fields. Although the District's plans were very preliminary, they were sufficient for NPS's cost estimating purposes. The area shown for a soil barrier in Alternative 3 is meant to represent a conservative scenario of sports field development as no specific plans have yet been developed by the District" (Memorandum of Administrative Record - Interim Response to Comments/Questions, page 19).

However, in reading and reviewing the Proposed Plan, 2020 Kenilworth Park Landfill Final Feasibility Study Addendum Report and the map of Preferred Alternative 3, it is unclear where these additional sport fields would be placed, aside from the area marked "future baseball field." If there are additional sport fields that DPR wishes to build and are thus informing the design of the Proposed Plan, this should be indicated in the Proposed Plan and the accompanying maps. We believe the public cannot be expected to adequately provide comments and feedback to a remediation plan designed to meet future needs and uses of the Park when the future use of Kenilworth Park has not been defined.

The Sierra Club requests that NPS defers to the recommendations of the groups most impacted by the Site when designing a remediation plan. Examples of these potential future uses could include:

- locating (sports) facilities closer to the neighborhood;
- repairing (restore, rewild) Watts Branch, which will reduce flood risk and improve the Marvin Gaye Trail and Park System;
- providing access from neighborhood to and within the park;
- improving the neighborhood edge of the park; and
- prioritizing the creation of wetlands, including enhancing and expanding natural areas at Kenilworth Park and providing better access to and within the Park. Access to the West Bank, Anacostia River Trail must be coordinated with other park features and uses.

Finally, leaving the contaminated soil in place at KPN could restrict the District's future plans for the Park. While NPS has stated that their Proposed Plan does not preclude the District from exploring and undertaking other land uses for the Site that are outside the considerations of CERCLA, it would be illogical and expensive for the District to agree to the installation of a clean soil barrier only to have the District cover the cost of the removal of contaminated soil once it assumes administrative jurisdiction. NPS has stated that there is nothing in the preferred alternative that requires that the entire area be capped and "adjustments to the capped area can be made during the remedial design to accommodate other land uses such as wetlands or meadows." However, there is only flexibility in determining what areas receive a cap or not, this does not consider the removal of the contaminated soil.

Remediation Efficacy Concerns

We are concerned that the impacts to the environment and human health caused by the contamination at the Kenilworth Park Landfill Site have not been adequately evaluated and as a consequence, will not be adequately remediated by Alternative 3. In the interim response document, NPS acknowledged that:

> "The distribution of PCBs in sediment in these areas does not indicate significantly higher concentrations of contaminants from the landfill; however, historical contributions from the landfill cannot be ruled out. Additional sampling and forensic analysis of PCBs in the landfill may inform whether and to what degree the landfill was a historical source of PCBs in the river sediment. PCB concentrations are also higher in zones of sediment deposition (zones where the current slows down and solids settle out); therefore, PCBs in river sediment near Kenilworth Park Landfill may also be attributable to sources farther upstream" (Memorandum of Administrative Record - Interim Response to Comments/Questions, page 19).

It is the responsibility of NPS to conduct necessary analyses of the fate and transport of PCBs, PAHs and all other contaminants in the Kenilworth Park Landfill Site to thoroughly evaluate their environmental and human health impacts to the Watts Branch and Anacostia River watershed systems. The results of these analyses should be used to inform the remediation measures selected and used at the Site.

Without the above-mentioned analyses, it is unclear how effective any of the proposed remediation alternatives can be at protecting the environment and human health, including the Preferred Alternative 3. We would like to see fate and transport analyses of all contaminants present in the Kenilworth Park Landfill Site (both North and South), in a system that includes:

- the Kenilworth Park Landfill Site;
- Watts Branch;
- the unnamed tributary east of Kenilworth Park South;
- the Anacostia River;
- the Kenilworth Marsh;

- the PEPCO Service Station and DC Transfer Station; and
- all of the neighborhoods adjacent to these named locations including (but not limited to):
    - Eastland Gardens,
    - Paradise at Parkside,
    - Mayfair Mansions,
    - Thomas Elementary School,
    - Educare of DC, and
    - Mayfair.

The analyses should encompass all environmental media and the depth of upland material and river sediments should reach to at least 15 feet below the depth of the landfill and the riverbed, respectively.

That being said, if it is decided that the agency will move forward with Alternative 3 anyway, we have several concerns about the ability of this alternative to withstand age, due to both normal fluctuations in water levels and flow and due to long-term changes in flooding and morphology caused by climate change. We request that the following questions and concerns discussed in the remainder of this section of our comments be addressed both as responses to these comments and in the remediation design.

Outstanding Questions

If fabric is used to cover the area that NPS outlines in its Preferred Alternative 3, please list the types of plantings (e.g., shrubs, trees) that can be planted and the depth of their roots, as well as the type of park amenities that can be constructed, without disturbing the fabric soil cover in the Proposed Plan. NPS should clearly communicate what types of activities and park amenities can be offered or permitted with the installation of a fabric soil cover in the Proposed Plan.

We have several questions regarding Alternative 3: “NPS would construct a clean soil barrier of a geotextile fabric overlain by 1 foot of clean soil (6 inches of common fill and 6 inches of topsoil)” (page 14 of Proposed Plan):

- In what ways will NPS design a cover that accounts for potential effects of climate change, which could involve changes in onsite soil development or increased vulnerability to flooding?
- Will the fabric overlay become compromised if it becomes submerged during floods? Does the fabric degrade and what is its lifespan?

One of the Primary Balancing Criteria used to compare alternatives is the Long-Term Effectiveness and Permanence of the alternatives, which considers the ability of the alternative to protect human health and the environment over time. According to the 100-year floodplain of Kenilworth Park, the outer edges of KPN and KPS boundaries will become a part of the floodplain (please reference the map produced by the District Department of Energy and the Environment: https://doee.dc.gov/sites/default/files/dc/sites/ddoe/service_content/attachments/District%20of%20Columbia%20Floodplain%20Map%2042x50%2009112018.pdf). As such, if NPS selects Alternative 3,

- How will stormwater runoff be managed?
- How would ground leaching be contained?
- How will the soil be contained?
- Is soil erosion a concern?

We would like to ensure that the cap barrier is able to withstand erosion and other degradation associated with its location within a flowing, tidal, and otherwise dynamic waterbody. Any cap

must provide a permanent barrier between the river water and sediment and the contents of the landfill.

With the effects of climate change already being felt in the District of Columbia, please indicate:

- How will NPS account for the impacts of climate change and extreme weather events on the Kenilworth Park Landfill Site in its development of remediation alternatives?
- How did NPS evaluate potential remedies for vulnerabilities to climate change, and how did this factor into the evaluation of each alternative?
- How will NPS's proposed remediation plan contribute to climate resiliency?

Recommendations

In the absence of an alternative that addresses the concerns presented above, we support eventual removal of all landfill and overlying material in KPN only. This work would be phased in coordination with other projects undertaken by the District to accommodate future park use and in close consultation with the neighborhoods surrounding the Park to ensure that excavation of contaminated soil is conducted in a way that is least disruptive to residents. We support the preservation and enhancement of habitat in KPS, along with any measures to guarantee that legacy contamination from the landfill is not impacting the surrounding ecosystem and human health. Any work conducted at KPS must be undertaken with the lightest hand and without removing or further capping landfill material. Work could also include stabilization of the existing trail and bridge to minimize human impact on the natural environment while ensuring the safety of park visitors.

Remediation, restoration, recreation and access must be aspects of all projects in the Park. It is essential that Watts Branch and the Anacostia Riverfront be rewilded before other work in adjacent areas can proceed. Removal of landfill material will contribute to reestablishment of the pre-landfill topographical grades, which will allow reconnection of these important water bodies with their floodplain. Re-integration of the river and stream into the hydrology of the Site, especially the natural areas, will be facilitated by the removal of landfill and cover material because the original grades have been so drastically altered. In studying the Site cross sections, as illustrated in Figure 3 on page 11 of the Proposed Plan, it became clear that piling more fill on the Site will only make it more difficult to connect the Anacostia River and Watts Branch with their floodplains, which is essential for re-wilding the stream, establishing wetlands and living shoreline and restoring some estuary functions.

For more information, please contact Anna LaCombe, Clean Water Committee Vice Chair at annalacombe2@gmail.com, or Ankita Mandelia at AJMandelia@gmail.com.

ATTACHMENT 18

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1- National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

MEMORANDUM

TO: Administrative Record for the Kenilworth Park Landfill Site

FROM: Kenilworth Park Landfill Contaminated Site Team (CST)
Donna Davies, National Park Service (NPS) Project Manager
Jonathan Ordway, VHB (NPS Contractor)
Jeffrey Johnson, Department of the Interior (DOI) Legal Lead

DATE: July 15, 2022

CC: Shawn Mulligan, Lead, NPS Environmental Compliance and Cleanup Division

RE: Comments on Kenilworth Park Landfill Site Proposed Plan
Clean Water Action/Clean Water Fund and APACC

The purpose of this memorandum is to convey responses to comments on the Kenilworth Park Landfill (KPL) Site Proposed Plan received from the Clean Water Action (CWA)/Clean Water Fund (CWF) and the Anacostia Park and Community Collaborative (APACC). CWA/CWF and APACC submitted those comments in the attached letter dated March 12, 2021. Each of the concerns highlighted in the comment letter are presented in italics below, followed by the NPS response.

Legacy of Cover Soil Contamination

Transparency in the design, construction and implementation of selective clean fill barrier options is imperative given the historical legacy of contaminated soil cover at the Kenilworth Landfill site. As indicated in the proposed plan for clean-up, soil fill originally used to cover the landfill was contaminated with pollutants such as arsenic, PCBs, etc. In response to this legacy of contaminated material fill, we recommend that bioremediation techniques be integrated into the selected remediation alternative. We suggest that the "clean fill barrier" remedy only be considered in parallel with a clear plan for open and transparent public engagement and oversight in the design and implementation of the clean-up process so that the community can feel trust that contaminated soil will not again be used as an inexpensive remedy in a highly complicated multi-agency clean-up process. Simply using the term 'clean' fill barrier does little to build public trust that contaminated material will not be used again and we suggest that bioremediation alternatives be incorporated if clean fill barriers are selected. It will be particularly important to design public outreach materials in collaboration with stakeholder groups such as APACC about anticipated benefits and intended impacts of the selected clean-up alternative; and particularly target outreach efforts to engage the neighborhood residents that live adjacent to the park

who have been traumatized by a legacy of poor agency communications in land planning decision-making about Kenilworth Park.

NPS Response:

NPS concurs with APACC's comments regarding future community engagement and appreciates the need for clear and transparent communication during the subsequent phases of the CERCLA cleanup (remedial design and remedial implementation), particularly for residents of adjacent neighborhoods. NPS greatly appreciates APACC's previous assistance with public engagement activities during the Proposed Plan public comment period and would like to continue to collaborate with APACC to determine the best and most meaningful way to communicate with nearby residents during future phases of the cleanup process.

In 2008, NPS prepared a Community Involvement Plan (CIP) for the KPL Site. The CIP, prepared in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and CERCLA's implementing regulations, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), serves as a guide for NPS to engage and inform community members and other interested parties about the CERCLA activities at the Site. The CIP is a living document that is updated at key points of the CERCLA process. NPS will be updating the CIP after issuance of the Record of Decision (ROD) to identify additional community engagement activities, and will incorporate APACC suggestions as appropriate.

Regarding CWA/CWF's and APACC's comments about the clean fill barrier, NPS acknowledges historical issues with imported fill used as cover material at this Site. NPS has a national "Clean Fill Protocol" that must be followed prior to any party importing and placing fill on NPS land. The NPS Clean Fill Protocol will inform the development of specifications for the clean soil barrier during the remedial design phase. These specifications will include sampling and laboratory analysis of all fill to ensure the material is uncontaminated prior to being imported and placed on Site.

Bioremediation Alternative

Given the inequitable public health and safety risks that face the predominantly African American neighborhood residents who live near and may regularly use this contaminated site, EPA environmental justice principles suggest that the CERCLA remedy should integrate solutions that will not simply temporarily address public health risks, but clean up the site with a pragmatic remedy that utilizes ecologically restorative techniques that will render the site as safe as, if not safer and healthier to the community than it was before the placement of the landfill.

Furthermore, potential impacts of landfill pollutant leachates may contribute to public health risks that hinder the progress of restoring the Anacostia to swimmable and fishable conditions in the near future. We therefore recommend that bioremediation techniques either be integrated into the selected clean-up alternative or that the process for selecting a clean-up alternative be temporarily extended until further investigations of bioremediation alternatives have been conducted given that no bioremediation alternatives were described in the current proposed alternatives plan. Some microorganisms have been shown to substantially accelerate the decomposition of landfill pollutants at risk for leaching with the degradation of landfill liners and soil barrier erosion over time. For these reasons, we recommend that bioremediation techniques be considered as a safer clean-up alternative than a soil fill barrier alone. The integration of bioremediation techniques in the clean-up alternative is also likely more cost effective, less time consuming, and less intrusive to the surrounding communities than alternative 4 or 5 while potentially offering similarly effective remediation impacts.

NPS Response:

NPS considered biodegradation in the preliminary screening of alternatives presented in the 2012 Feasibility Study Report (JCO 2012). It was not carried forward in the development of alternatives because the available technologies are not suitable to remediate the contaminants that are causing unacceptable risks in surface soil at the KPL Site. Advances in bioremediation methods—such as phyto-remediation, where plants are used to extract and sometimes destroy (as opposed to transfer) contaminants—are discussed in the literature, but these technologies are not generally suited to the contaminants found at the Site (heavily chlorinated polychlorinated biphenyls [PCBs],[1] polycyclic aromatic hydrocarbons [PAHs], and metals). Even if bioremediation technologies were applicable, they would take decades to reduce contaminant concentrations in surface soil, and the outcome and effectiveness of using the technology is uncertain.

Based on the extensive groundwater quality assessments conducted at the KPL Site, NPS concluded the landfill has had very limited impacts on groundwater quality (see the 2019 Remedial Investigation Addendum report for sampling and analysis data). The groundwater quality does not resemble landfill leachate (it does not contain the typical landfill contaminants at significant concentrations); therefore, the discharge of Site groundwater to surface water is not expected to hinder the progress of restoring the Anacostia River to swimmable and fishable conditions.

The District Department of Energy and Environment (DOEE) provided comments on the Proposed Plan (see Responsiveness Summary, Attachment 24). These comments included a recommendation to perform a limited field investigation to analyze soil and groundwater samples for PCB congeners. DOEE's support for this recommendation was the evolving understanding of PCB distribution movement in the environment, coupled with better laboratory analyses and field investigation techniques. NPS agreed to this recommendation and acknowledges PCB congener analysis will (1) reduce inherent uncertainty associated with investigating environmental conditions and (2) support comparisons between PCBs found in surface soil and nearby sediment.

Public Engagement in the CERCLA Clean-up Design Plan

If the proposed alternative is selected and clean soil barriers are placed in selected areas, the public deserves confirmation that NPS and the CERCLA team will allow a strong and organized public engagement component and public transparency in key phases of the CERCLA clean- up implementation design process. While logistically, we understand that NPS and the selected design contractor cannot have full public transparency in the entirety of the design process, APACC feels strongly that it is important from an Environmental Justice perspective, that the community be given access to participation in key decision-making phases of the clean-up design and implementation plan. When asked, we have not been given clear indications as to how public engagement will be incorporated into the design phase of the selected clean-up alternative. In order to ensure that public stakeholders and particularly the residents surrounding the park site feel informed and safe about the clean-up remedy, It is imperative that NPS and the CERCLA team make a clear and transparent plan of action in respect to public transparency in the clean-up design process and prioritize structuring public engagement in partnership with interagency planning throughout the design and implementation process.

We are also extremely concerned about how the selected clean-up option and its implementation will potentially impact the long-term health and safety of the surrounding ecology which will ultimately impact the public health outcomes of the surrounding community after the implementation of the chosen remedy. If best management practices are not enforced in the implementation of the clean-up remedy,

[1] Heavily chlorinated PCBs are those with a higher number of chlorine (Cl) atoms like Aroclor 1254 and 1260, which are the most common PCBs found in surface soil samples from KPL.

natural processes such as contaminated stormwater runoff and polluted soil erosion can negatively impact the health of the river and landscape which indirectly impacts public health outcomes of the residents who live in the communities surrounding the park, regular users of the park, and folks who regularly access the river for recreation activities. Thus, we suggest that the selected remedy incorporate ecological restoration techniques as core elements of the clean-up design.

We also feel that public engagement in the implementation design is imperative to ensure public awareness about how public funds are spent in the development of this clean-up process and to ensure that conversations about if and how much remediation budget can be earmarked for the temporary employment of local residents (particularly residents of Ward 7) in the implementation of the remedy, and that the safety risks associated with the implementation of the selected clean up alternative be clearly and regularly communicated to the public across multiple avenues of community outreach.

NPS Response:

NPS understands and appreciates APACC's concerns regarding the need for extensive public engagement related to the design and implementation phases of the KPL Site remediation. NPS will continue to oversee the CERCLA remedial action as the federal lead agency; however, the specific future roles and responsibilities of the District government and NPS will be negotiated and outlined, along with the cost-sharing arrangement, in a future agreement between the United States and District (see Responsiveness Summary, Section 3.4). NPS anticipates the District will—with NPS oversight—prepare future documents, such as the remedial design, and implement the remedy. A priority of the NPS KPL Site CST will continue to be to engage the local community during the preparation of remedial design documents, and the NPL CST will work with APACC to identify effective methods for future engagement.

The District has notified NPS that it will be conducting future community engagement activities in 2022 to gather public input on the future use of KPN. Although the temporary employment of local residents in the cleanup process will be within the District's control rather than NPS's, the District indicated these opportunities may be identified through hiring fairs and information shared within the neighborhood. NPS recommends APACC contact the District to consider identifying necessary job training opportunities or apprenticeship programs that may be applicable for the required work.

Risk of Ground Foundation Settlement

When asked about the potential risk of ground settlement that soil fill may pose, CERCLA representatives indicated that this was a non-issue given the age of the landfill without any data presented to reinforce or ensure this statement to be true. APACC has concerns that if clean fill barriers are used either in selected areas (alternative 3) or on the entire KPN site (alternative 4), ground settlement risks may financially hinder the District from developing the park site in the future and cause unintended public health concerns in the future. We ask that additional investigative studies be conducted using ground settlement estimation methods to ensure that the design and implementation of the selected remedy not result in risks of future ground settlement that would not have been likely to occur in natural geological processes.

NPS Response:

During the remedial design phase, calculations will be performed to assess whether the addition of 1 foot of soil will cause significant settlement. Settlement occurs in landfills as organic waste degrades and shrinks in volume. For most of its operational period, waste placed at KPL was either burned on Site or consisted of ash from incinerators located in other areas of the District. Burned refuse and incinerator ash are less likely to shrink than raw municipal solid waste. Given that the landfill has been closed for 50 years, it is unlikely that significant future settlement will occur, particularly under the load of just 1 foot of soil. However, if structures are built over the landfill, geotechnical testing, analysis, and design will be

required (as it would for a similar structure located outside of the landfill footprint). These requirements will be included in planning documents and specifications that will be prepared during the remedial design phase.

Improvements in Future Public Engagement

While in regulatory terms, we have been told by NPS staff that none of the proposed clean-up alternatives would impede options for future development of the site, once implementation and remediation of KPN is under District authority, we recognize that the landfill legacy on the Kenilworth Park North site poses a potentially expensive remedial price tag for future development designs, depending on which clean-up plan is selected. Consequently, we would like to understand how clean fill soil barriers may financially impact the costs of developing various generalized options for future park developments desired by the community.

Although we understand that the CERCLA process is focused on cleaning up the current legacy of landfill pollutants, from a community equity and environmental justice perspective, we feel it imperative that the public understand how the selected clean-up remedy will address future public health concerns that arise from aging landfill sites. We strongly feel that both NPS and the District have a responsibility to ensure greater transparency and less technocracy in future public engagement process including.

- *Distributing mailed information sheets to the residents living in the surrounding neighborhoods of the park about current public health concerns in plain language,*
- *Educational sessions about the intended public health and safety outcomes of the selected clean-up alternative,*
- *Tabling with outreach materials at the Kenilworth Recreation Center and other public spaces near the site,*
- *Transparent conversations about the remediation budgeting process.*

NPS Response:

The Selected Remedy, which will place a clean soil barrier in certain high-use areas of KPN (e.g., athletic fields), complements the intended future land use identified by the District and supported by the community. Most comments received during public meetings or via emails or letters support mixed uses of the park to include the continued availability of athletic fields, eventual restoration of tidal wetlands, and preservation of meadow areas for ground-nesting birds. Although additional soil may be required to level the ground and build sports fields outside the 500-year flood zone, the clean soil barrier will include 6 inches of high-quality topsoil that will support re-vegetation consistent with the intended future use. NPS revised the limits of the clean soil barrier, removing it from within the 500-year floodplain. DOEE has indicated (see Responsiveness Summary, Attachment 24) that it intends to restore tidal wetlands in this area (not as part of the CERCLA response action).

During the remedial investigation phase, NPS performed risk assessments to determine both the short-term and long-term risks to human health posed by chemicals found in surface and subsurface soil and landfill waste. The groundwater to surface water migration pathway was also assessed. NPS determined the Site posed unacceptable risk to visitors involved in high-intensity, high-frequency recreational activities. The Selected Remedy effectively addresses and removes this risk. No long-term risk to nearby residents were identified. NPS prepared a series of posters to provide easily understandable explanations for aspects of the CERCLA response action, including the risk assessment process. NPS developed these posters and uploaded them to the NPS Kenilworth Park Landfill webpage, linked below:

https://www.nps.gov/anac/learn/management/upload/04-Poster_RA_Final-508compliant.pdf

The clean soil barriers and administrative controls included in the Selected Remedy are not short-term solutions. As part of the long-term monitoring CERCLA requires for this Site, periodic inspections (minimum of every five years) will be completed to ensure the clean soil barrier remains stable, is not eroding into adjacent surface waters, and is continuing to protect visitors and park staff as intended. The specific requirements of the long-term monitoring program will be outlined in the Long-Term Monitoring Plan prepared during the remedial design phase of the project.

NPS appreciates APACC's recommendations on how best to engage with residents of the surrounding community and will incorporate them into the updated CIP. NPS will also engage APACC to provide input on the next version of the CIP, which is due to be updated after the ROD is issued.

The cost-sharing agreement between the United States and the District is currently being negotiated. NPS anticipates that the District will be responsible for contracting work to be performed during the remedial design and remedial implementation phases of the project, subject to NPS oversight. NPS will continue to provide status updates of the project including when the contracting process is beginning. This will allow interested contractors from the nearby communities to advocate for inclusion in the District's solicitation process. The District's Office of Contracting and Procurement (OCP) code for the local Certified Business Enterprises (CBE) owned or controlled by minorities or women purchase requirements on any contract over $250,000 can be found here: https://code.dccouncil.us/us/dc/council/code/sections/2-218.91#(a)(2).

REFERENCES

The Johnson Company (JCO). 2012. Feasibility Study (FS) Report, Kenilworth Park Landfill, Northeast Washington D.C., National Capital Parks – East. April.

Attachment: March 12, 2021 APACC Letter

From: sturner@cleanwater.org <sturner@cleanwater.org>
Sent: Friday, March 12, 2021 3:25 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: Danielle Burs <dburs@dcappleseed.org>; akiima <akiima@apriceconsulting.com>; Antos, Katherine (DOEE) <katherine.antos@dc.gov>; nick.kushner@dc.gov <nick.kushner@dc.gov>
Subject: [EXTERNAL] Public Comment for Kenilworth Clean-up

Good Afternoon Donna,

Attached is the public comment for the Kenilworth clean-up alternatives on behalf of Clean Water Action/Clean Water Fund and APACC. I would like to thank you and your team again for making efforts to have robust community stakeholder conversations throughout the public comment period.

Thanks,
Stacia Turner (they/them)
Chesapeake Regional Director
Clean Water Action/Clean Water Fund
1444 Eye Street NW, Suite 400
Washington DC 20005
W: (202) 895-0420 x110
C: (480)390-2152
sturner@cleanwater.org

CLEAN WATER ACTION | CLEAN WATER FUND

Donna Davies
NPS CERCLA Project Manager

March 12, 2020

Dear Ms. Davies and Kenilworth CERCLA management staff,

On behalf of Clean Water Action/Clean Water Fund and our role as lead coordinating partner and fiscal agent of the Anacostia Park and Community Collaborative (APACC) we offer several comments about the proposed clean-up alternative 3 and the future public engagement plan for the remainder of the CERCLA process.

The Kenilworth Park site is a civic resource that is valuable to the community as well as the ecological resilience of the surrounding land area and the Anacostia river and its tributaries. This site has the potential to greatly enhance the social benefits of the community if the selected remedy **appropriately addresses both the current pollution risks as well as potential future pollution risks associated with aging landfill site contaminants.**

The National Park Service and relevant partner agencies have a responsibility to not only do the bare minimum within the CERCLA process. Indeed, they must go above and beyond the minimum to ensure that the public, and particularly residents of the adjacent neighborhoods (Kenilworth, Eastland Gardens, and Mayfair) have clear and transparent information that explains the selected clean-up alternative and the plan for remedy implementation -- and also how the selected clean-up option will potentially impact the residential conditions of the surrounding neighborhoods during implementation of the remedy.

In order to heal the injustices of how Kenilworth Park was historically utilized as a landfill dumping site in predominantly working-class African American neighborhoods, it is important to work towards implementing a socially and ecologically responsible clean-up plan rather than simply selecting an option that is the most cost effective and achieves the bare minimum in the CERCLA regulatory framework. For these reasons, APACC recommends that the CERCLA project team **investigate ways to incorporate bioremediation techniques into alternative 3.**

The National Park Service's preferred alternative clean-up option **("Selective Placement of Clean Fill Barriers and institutional Controls)** poses several areas of potential concern. While alternatives 4 and 5 are expensive options that would be likely to majorly disrupt the surrounding neighborhoods with heavy equipment and an extended timeline of ongoing construction and operation, there are several concerns regarding public oversight and transparency as it relates to the National Park Service's preferred clean-up alternative 3. The key areas of concern in alternative 3 are summarized below:

- **Legacy of cover soil contamination:** Transparency in the design, construction and implementation of selective clean fill barrier options is imperative given the historical legacy of contaminated soil cover at the Kenilworth Landfill site. As indicated in the proposed plan for clean-up, soil fill originally used to cover the landfill was contaminated with pollutants such as arsenic, PCB's, etc. In response to this legacy of contaminated

material fill, we recommend that biormediation techniques be integrated into the selected remediation alternative. We suggest that the “clean fill barrier” remedy only be considered in parallel with a clear plan for open and transparent public engagement and oversight in the design and implementation of the clean-up process so that the community can feel trust that contaminated soil will not again be used as an inexpensive remedy in a highly complicated multi-agency clean-up process. Simply using the term “clean” fill barrier does little to build public trust that contaminated material will not be used again and we suggest that bioremdiation alternatives be incorporated if clean fill barriers are selected. It will be particularly important to design public outreach materials in collaboration with stakeholder groups such as APACC about anticipated benefits and intended impacts of the selected clean-up alternative; and particularly target outreach efforts to engage the neighborhood residents that live adjacent to the park who have been traumatized by a legacy of poor agency communications in land planning decision-making about Kenilworth Park.

- **Bioremediation alternative:** Given the inequitable public health and safety risks that face the predominantly African American neighborhood residents who live near and may regularly use this contaminated site, EPA environmental justice principles suggest that the CERCLA remedy should integrate solutions that will not simply temporarily address public health risks, but clean up the site with a pragmatic remedy that utilizes ecologically restorative techniques that will render the site as safe as, if not safer and healthier to the community than it was before the placement of the landfill.

  Furthermore, potential impacts of landfill pollutant leachates may contribute to public health risks that hinder the progress of restoring the Anacostia to swimmable and fishable conditions in the near future. We therefore recommend that bioremediation techniques either be integrated into the selected clean-up alternative or that the process for selecting a clean-up alternative be temporarily extended until further investigations of biormediaton alternatives have been conducted given that no bioremediation alternatives were described in the current proposed alternatives plan. Some microorganisms have been shown to substantially accelerate the decomposition of landfill pollutants at risk for leaching with the degradation of landfill liners and soil barrier erosion over time. For these reasons, we recommend that bioremediaton techniques be considered as a safer clean-up alternative than a soil fill barrier alone. The integration of bioremediation techniques in the clean-up alternative is also likely more cost effective, less time consuming, and less intrusive to the surrounding communities than alternative 4 or 5 while potentially offering similarly effective remediation impacts.

- **Public Engagement in the CERCLA clean-up design plan**: If the proposed alternative is selected and clean soil barriers are placed in selected areas, the public deserves confirmation that NPS and the CERCLA team will allow a strong and organized public engagement component and public transparency in key phases of the CERCLA clean-up implementation design process. While logistically, we understand that NPS and the selected design contractor cannot have full public transparency in the entirety of the design process, APACC feels strongly that it is important from an Environmental Justice perspective, that the community be given access to participation in key decision-making phases of the clean-up design and implementation plan. When asked, we have not been given clear indications as to how public engagement will be incorporated into the design phase of the selected clean-up alternative. In order to ensure that public stakeholders and particularly the residents surrounding the park site feel informed and safe about the

clean-up remedy, It is imperative that NPS and the CERCLA team make a clear and transparent plan of action in respect to public transparency in the clean-up design process and prioritize structuring public engagement in partnership with interagency planning throughout the design and implementation process.

We are also extremely concerned about how the selected clean-up option and its implementation will potentially impact the long-term health and safety of the surrounding ecology which will ultimately impact the public health outcomes of the surrounding community after the implementation of the chosen remedy. If best management practices are not enforced in the implementation of the clean-up remedy, natural processes such as contaminated stormwater runoff and polluted soil erosion can negatively impact the health of the river and landscape which indirectly impacts public health outcomes of the residents who live in the communities surrounding the park, regular users of the park, and folks who regularly access the river for recreation activities. Thus, we suggest that the selected remedy incorporate ecological restoration techniques as core elements of the clean-up design.

We also feel that public engagement in the implementation design is imperative to ensure public awareness about how public funds are spent in the development of this clean-up process and to ensure that conversations about if and how much remediation budget can be earmarked for the temporary employment of local residents (particularly residents of Ward 7) in the implementation of the remedy, and that the safety risks associated with the implementation of the selected clean up alternative be clearly and regularly communicated to the public across multiple avenues of community outreach.

- **Risk of ground foundation settlement**: When asked about the potential risk of ground settlement that soil fill may pose, CERCLA representatives indicated that this was a non -issue given the age of the landfill without any data presented to reinforce or ensure this statement to be true. APACC has concerns that if clean fill barriers are used either in selected areas (alternative 3) or on the entire KPN site (alternative 4), ground settlement risks may financially hinder the District from developing the park site in the future and cause unintended public health concerns in the future. We ask that additional investigative studies be conducted using ground settlement estimation methods to ensure that the design and implementation of the selected remedy not result in risks of future ground settlement that would not have been likely to occur in natural geological processes.

- **Improvements in Future Public Engagement**: While in regulatory terms, we have been told by NPS staff that none of the proposed clean-up alternatives would impede options for future development of the site, once implementation and remediation of KPN is under District authority, we recognize that the landfill legacy on the Kenilworth Park North site poses a potentially expensive remedial price tag for future development designs, depending on which clean-up plan is selected. Consequently, we would like to understand how clean fill soil barriers may financially impact the costs of developing various generalized options for future park developments desired by the community.

  Although we understand that the CERCLA process is focused on cleaning up the current legacy of landfill pollutants, from a community equity and environmental justice perspective, We feel it imperative that the public understand how the selected clean-up remedy will address future public health concerns that arise from aging landfill sites. We

strongly feel that both NPS and the District have a responsibility to ensure greater transparency and less technocracy in future public engagement process including;

- Distributing mailed information sheets to the residents living in the surrounding neighborhoods of the park about current public health concerns in plain language,
- Educational sessions about the intended public health and safety outcomes of the selected clean-up alternative,
- Tabling with outreach materials at the Kenilworth Recreation Center and other public spaces near the site
- Transparent conversations about the remediation budgeting process.

We appreciate and applaud all of the recent additional efforts made by the KPN CERCLA project team to have continued and robust conversations with community stakeholders throughout the public comment period. We hope that these efforts continue after the selected remedy and throughout implementation design, and that additional efforts be made in the future to intentionally engage residents of the neighborhood residents surrounding KPN.

Sincerely,

Stacia Turner
Lead Coordinator, APACC
Chesapeake Regional Director, Clean Water Fund/Clean Water Action

ATTACHMENT 19

MEMORANDUM

TO: Administrative Record for the Kenilworth Park Landfill Site

FROM: Kenilworth Park Landfill Contaminated Site Team (CST):
Donna Davies, National Park Service (NPS) Project Manager
Jonathan Ordway, VHB (NPS Contractor)
Jeffrey Johnson, Department of the Interior (DOI) Legal Lead

DATE: July 15, 2022

CC: Shawn Mulligan, Lead, NPS Environmental Compliance and Cleanup Division

RE: AWCAC Comments on Kenilworth Park Landfill Site Proposed Plan

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The purpose of this memorandum is to convey responses to comments on the Kenilworth Park Landfill (KPL) Proposed Plan that NPS received in a March 12, 2021 letter from the Anacostia Watershed Community Advisory Committee (AWCAC).

1.0 GENERAL COMMENTS

NPS notes the concerns and recommendations made by AWCAC are mostly related to its desire to (1) reconnect and restore the flood plain through implementation of a remedial alternative that includes either full or partial removal of landfill material from Kenilworth Park North (KPN) and (2) restore tidal wetlands related to the Site. As described in the Proposed Plan and the 2020 Feasibility Study (FS) Addendum Report (VHB, 2020), NPS must evaluate each remedial alternative against the nine criteria described in Section 300.430(e)(9)(iii) of the Comprehensive Environmental Response, Compensation, and Liability Act's (CERCLA's) implementing regulations, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

The NCP divides the nine criteria into three categories: threshold criteria (criteria one and two), balancing criteria (three through seven), and modifying criteria (eight and nine). One of the five balancing criteria is cost; the other four are referred to as "non-cost-balancing criteria." One of the alternatives NPS evaluated in the Feasibility Study (FS) Addendum (VHB, 2020) included the full removal of landfill material (Alternative 5). Alternative 5 was deemed to be relatively ineffective (compared with other alternatives) on the non-cost-balancing criterion of short-term effectiveness because implementation of this alternative would take significantly longer to complete than the other alternatives and would therefore result in additional risks to park visitors, workers, and the environment during implementation.

Alternative 5 also failed to meet the additional requirement of cost-effectiveness set forth in CERCLA Sections 121(a) and 121(b)(1), and Section 300.430(f)(1)(ii)(D) of the NCP. Because the cost of landfill excavation, disposal, and revegetation is so much higher than NPS's Selected Remedy (installation of a clean soil barrier) and does not result in a proportional increase in protectiveness, an alternative of partial landfill removal (removing waste only in certain areas of KPN) would similarly fail to meet the cost-effectiveness requirement.

NPS appreciates the value of restoring tidal wetlands; however, as noted above, landfill removal and tidal wetland restoration is not required to address risks posed by the release of hazardous substances at the Site, nor is it required to meet applicable or relevant and appropriate requirements (ARARs). Potential flood risk caused by the change in landform is not related to the risk posed by hazardous substances. However, restoration may occur in connection with a Natural Resources Damage Assessment (authorized under CERCLA) or through other programs, such as those proposed by the District of Columbia (District) (see below).

In its comments on the Proposed Plan (see Responsiveness Summary, Attachment 24), the District Department of Energy and Environment (DOEE) indicated that the District intends to restore tidal wetlands in an approximately 18-acre area of KPN and preserve meadow habitat in approximately 3 acres. To accommodate the District's preliminary plans, NPS modified the Preferred Alternative (Alternative 3) to eliminate the clean soil barrier in areas where the District intends to restore wetlands and maintain meadow habitat (see Figure 2 of the Responsiveness Summary).

Because the District's plans for KPN have not been finalized, the clean soil barrier boundaries NPS included for KPN in the Selected Remedy are conceptual in nature and will be adjusted based on the District's final plans for KPN during the remedial design phase (the next phase of the CERCLA response process after issuance of the Record of Decision). The District has indicated to NPS that it plans on conducting public engagement activities in 2022 to obtain input on the future uses of KPN; therefore, members of the public are encouraged to participate in the District's planning process and provide their input through that process.

2.0 SPECIFIC COMMENTS

AWCAC comments quoted directly from its response to the Proposed Plan are included in italics below, with NPS responses following.

AWCAC Comment P7 – Kenilworth Park South (KPS): Current and Future Land Use

Building a new hard surface trail and bridge are not consistent with management of a 'stable and valuable wildlife habitat' which is managed for 'natural resource recreation.' This site must remain undisturbed except for work necessary to stabilize and re-wild Watts Branch. Authorization for trail construction, especially for a design which will further damage Watts Branch and the important riparian area of the stream and river by obstructing connection of these water bodies to their flood plain, cannot be included in this plan because it does not accomplish remediation. All references that imply permission for this or any other construction must be struck from this document. Access to this site for the intended use of KPS and for connection to trails in KPN can be provided utilizing the existing asphalt road, with minor improvements, crossing the existing bridge over Watts Branch which is slated for future re-wilding.

Only natural surface, minimally invasive trails - located to allow access while protecting natural resources from foot traffic and which do not require significant excavation or fill - can be permitted and still retain the integrity of this area for its intended use. The proposed extension of the ART places a road on a berm directly in the riparian of Watts Branch and the Anacostia River area thereby disturbing the

hydrology and disconnecting the rest of the site from the river and stream. This cannot be authorized in this document.

- *Consistent with the 2006 Management Plan, management of this area can include removal of invasive plants and introduction of additional native trees and meadow plants which will enhance and protect this important habitat. Instructions for the execution of such work should be included in the Proposed Plan for clean-up.*

- *In addition, work to accomplish the re-wilding of Watts Branch is within the requirements of the 2006 Management Plan so can be included in the management of KPS.*

NPS Response

The determination of the location of the Anacostia Riverwalk Trail (ART) extension is not a component of the Selected Remedy. The approximate ART alignment shown in the Proposed Plan figures was copied from the December 2011 document, "Environmental Assessment, Anacostia Riverwalk Trail Section 3 Realignment, Anacostia Park (NPS, 2011)." The CERCLA response action has no bearing on decisions related to alignment, design, or construction of the ART.

While NPS has the authority (as a land manager and a natural resource trustee) to remove invasive species from the park and restore natural resources, those activities are not required to address risk to the public health and welfare or the environment posed by the release of hazardous substances, nor are they required to meet ARARs; accordingly, they are not included in the Selected Remedy.

AWCAC Comment P13 - KPS: Organic Act of 1916

In compliance with this Act, 'NPS does not accept institutional controls that would impair the intended use of the park. For example, NPS would not allow permanent fencing or restrictive signage as an alternative to removal, containment, or treatment of contamination.' This plan must clarify how KPS will remain 'administratively closed' and still fulfill its intended use as a 'natural resource recreation' area.

NPS Response:

NPS is currently reviewing the temporary administrative closure of KPS. The Selected Remedy assumes KPS will be open to visitors.

AWCAC Comment P14 - KPS Alt 3

'... prohibit construction of higher intensity visitor use areas within KPS without the installation of clean fill barriers…' This statement implies permission to intensify use in KPS. This is inconsistent with management of a 'stable and valuable wildlife habitat.' This statement implies accommodation of a use which does not conform to the scope of this document and should be removed.

NPS Response:

The Proposed Plan does not dictate future land use of KPS. Although future land use at KPS is expected to remain the same as its current use, future park administrations have the authority, following the appropriate protocols, to change land-use management zones. This statement, which is one of the listed Institutional Controls, is included to alert future park administrations that a change in land use could trigger additional activities to ensure the remedy remains protective to human health.

AWCAC Comment ARARs: Organic and General Authorities Acts

NPS has a mandate to 'ensure non-impairment of national park resources.' Implementation of Alt 3 would place additional fill material over significant areas of the park. Further altering the grade from its pre-landfill elevations impairs national park resources and cannot be allowed. Therefore, Alt 3 is unacceptable.

NPS Response:

NPS does not consider the Selected Remedy to impair the intended future use of the park and expressly concluded that it attained all ARARs, including the non-impairment standard of the NPS Organic Act. Once administrative jurisdiction is transferred to the District, the non-impairment ARAR will no longer apply to KPN because it will not be located within a unit of the National Park System.

AWCAC Comment ARARs: AP Enabling Legislation

This statute was enacted to … 'prevent pollution of Rock Creek, Potomac and Anacostia River.' The TMDLs for Anacostia River includes sediment among Impairments. Alt 3 impedes implementation of stream bank stabilization, reconnection of flood plain and other sediment reduction methods and thus facilitates the pollution of Watts Branch and the Anacostia River. These Acts and the District's responsibilities under the Anacostia WIP would be violated were the implementation of Alternative 3 to be selected for remediation of KPN.

NPS Response:

As indicated in Section 7.2, Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) and other guidance to be considered (TBCs) of the 2020 FS Addendum (VHB, 2020), NPS considers the Selected Remedy to be compliant with ARARs. The revisions NPS made to the limits of the clean fill barrier (i.e., confining it to areas outside of the 500-year floodplain) are in consideration of the District's intended future tidal wetland restoration.

AWCAC Comment ARARs: DC Flood Hazard Control and EO No 11988

These documents regulate the placement and consideration of impacts of placement of fill in the 100 year flood plain and flood hazard areas. This document does not address these regulations.

NPS Response:

DOEE's recommended revision to the clean fill barrier limits includes removal of the barrier fill from the 500-year floodplain to allow for future tidal wetland restoration. NPS adopted this recommendation in the Selected Remedy. DOEE has the flexibility to further refine the limits of the barrier fill area during the remedial design phase.

AWCAC Comment ARARs: Transfer of Administration

Imposition of future use locations are based on assumptions assigned by NPS and used to develop and select the remedial alternatives. The diagram used to assign future use areas was based on existing Park use without regard for future use or physical characteristics of the site including natural resources. This severely limits the ability of the District to make best use of the Park to 'restore and protect the quality and resiliency of the riverine ecosystem, while providing high quality naturalized spaces.' Reconsideration of distribution/location of uses and remedial actions by the District should be allowed when the District assumes administrative jurisdiction.

NPS Response:

NPS did not determine the future use of KPN; instead, it identified the future land use for KPN after discussions with the District's Department of Parks and Recreation (DPR). NPS used DPR's preliminary, conceptual plans to develop and select remedial alternatives that accommodated future land uses but did not impede future development of additional possible land use configurations. DOEE's comments submitted on NPS's Proposed Plan identified additional preliminary future land uses for KPN, which were not provided by the District during development of the FS Addendum (VHB, 2020) or Proposed Plan (NPS, 2020). With this new information, NPS revised the Preferred Alternative to remove the clean fill barrier from areas of KPN where the District intends to restore wetlands along the Anacostia River and Watts Branch. This work will occur in coordination with, but outside of, the CERCLA response action. During the remedial design phase, the District will further refine the limits of the proposed clean soil barrier based on the District's final land use plan for KPN.

AWCAC Comment ARARs: Management Policies 2006 - 4.1.5 Restoration of Natural Systems

'Impacts on natural systems resulting from human disturbances include the introduction of exotic species; the contamination of air, water, and soil; changes to hydrologic patterns and sediment transport; the acceleration of erosion and sedimentation; and the disruption of natural processes. The Service will seek to return such disturbed areas to the natural conditions and processes characteristic of the ecological zone in which the damaged resources are situated.' Please include the definition of ecological zone in this plan. This statement appears to require reestablishment of existing grades, wetlands, and other elements consistent with reconstruction of natural areas.

NPS Response:

The 2006 NPS Management Policies (NPS, 2006) is a guidance document that addresses the management of units of the National Park System. NPS considered the 2006 Management Policies in the development, evaluation, and selection of remedial alternatives. The various provisions of the 2006 Management Policies authorize, encourage, or require NPS to manage park resources in certain ways, but does not require NPS to achieve those objectives under a CERCLA response action if those objectives are not related to the Selected Remedy. However, NPS may pursue the restoration goals embodied in Section 4.1.5 of the 2006 Management Policies through other legal mechanisms (e.g., the Natural Resource Damage Assessment process).

AWCAC Comment Management Zones (p24) 2.3.1.3

This section defines Planning Team and their function: 'Interdisciplinary teams, including park managers and technical experts, will prepare general management plans. Planning teams will work with the park superintendent and regional directors and consult with other park staff, NPS leadership, other agencies with jurisdiction by virtue of law or expertise, other knowledgeable persons, and the public concerning future management of park resources. The superintendent will be involved with all phases of the plan's development. The superintendent and regional director have ultimate responsibility for the contents of the plan, ensuring that there is consistency in direction and decisions between parks with similar resources and values. The regional director is the official responsible for approving general management plans.' Please define roles, responsibilities and composition of the Planning Team after the District assumes administrative Jurisdiction of the Park and include this in the Proposed Plan.

NPS Response:

This comment refers to NPS's Management Policies 2006 document (NPS, 2006); however, this document will not be relevant to KPN after NPS transfers administrative jurisdiction of KPN to the District and the District assumes management responsibilities for that portion of the Site. It is NPS's understanding that following the transfer, DPR will have primary responsibility for managing KPN. NPS anticipates DPR would consult with DOEE regarding natural resource issues such as the shoreline or meadow management. Actual management roles and responsibilities for KPN will be determined by the District, not NPS.

After issuance of the ROD, NPS will continue to oversee the CERCLA remedial action as the CERCLA lead agency. Although the specific future roles and responsibilities of the District government and NPS are being negotiated and will be outlined in a future agreement, NPS anticipates the District will be responsible for completing the remedial design and implementing the remedy, and NPS will oversee the District's work.

AWCAC Comment Fact Sheet: Presumptive Remedy for CERCLA Municipal Landfill Sites

This document recommends capping '...unless site specific conditions dictate otherwise'. Conditions at Kenilworth Park specific to this site, given its proximity to the Anacostia River and inclusion of Watts branch, certainly dictate otherwise. Original grades must be restored in order to protect human health and property from flooding and to restore environmental integrity.

NPS Response:

Restoring the original (pre-landfill) grades (ground surface elevations) is not required to address risks to human health and the environment associated with the releases of hazardous substances, pollutants, and contaminants at the Site, and is not required to meet ARARs.

3.0 REFERENCES

National Park Service (NPS). 2006. Management Policies 2006. ISBN 0-16-076874-8.

NPS. 2011. Environmental Assessment, Anacostia Riverwalk Trail Section 3 Realignment, Anacostia Park. December.

NPS. 2020. Proposed Plan for Cleanup of the Kenilworth Park Landfill Site. November.

Vanasse Hangen Brustlin (VHB). 2020. Feasibility Study Addendum Report, Kenilworth Park Landfill Site, Anacostia Park, Washington, D.C. September.

Attachment: March 12, 2021 AWCAC letter

From: marian dombroski <mdombros@gmail.com>
Sent: Friday, March 12, 2021 7:50 PM
To: Davies, Donna L <Donna_Davies@nps.gov>; Mcginty, Sean P <sean_mcginty@nps.gov>; Trey Sherard <trey@anacostiariverkeeper.org>; Dennis Chestnut <dchestnut.chestnut@gmail.com>; Anna LaCombe <annalacombe2@gmail.com>
Subject: [EXTERNAL] Comments: Remediation of Kenilworth Landfill - FS and PP

Hello Ms. Davies and Mr. McGinty,

Attached please find the comments of Anacostia Watershed Community Advisory Committee and 4 attachments for:

Remediation of Kenilworth Park Landfill: Feasibility Study Addendum Report (the Report) and Proposed Plan

Thank you,
Marian

--
Marian Dombroski, *RA, LEED AP*
301.775.1191

March 12, 2021

Donna Davies, CERCLA Project Manager
National Capital Parks - EAST
1900 Anacostia Drive, SE
Washington, DC 20020

RE: **Submission of Comments - Remediation of Kenilworth Park Landfill: Feasibility Study Addendum Report (the Report) and Proposed Plan**

Thank you for the opportunity to submit comments on behalf of the Anacostia Watershed Community Advisory Committee (AWCAC). AWCAC serves as the community arm of the Anacostia Watershed Restoration Partnership of which the National Park Service is also a member. As the main advisory committee to the Partnership, AWCAC connects communities with the Steering and Management Committees to ensure that public interests are represented in restoration projects and all other activities impacting the Anacostia River.

The remediation of Kenilworth Park Landfill will be a positive next step in restoration and reclamation of the Anacostia River both as a natural area and an asset to the community and region. A robust plan will "***restore and protect the quality and resiliency of the riverine ecosystem, while providing high quality naturalized spaces*",** a vision laid out in NPS ***Foundation Document Overview for Anacostia Park and Kenilworth Park and Aquatic Gardens.** This will require re-establishment of the Kenilworth Marsh System and living shoreline, an effort which will continue the collaboration among D.C. Department of Public Works, the National Park Service, the Environmental Protection Agency, and the COG which restored 33 acres of wetlands in Kenilworth Park, South.

All over the United States, visionary projects achieve environmental restoration and recreation goals bringing life back to degraded natural areas. A project of that scope would *"set the park on a course for citywide, regional, and national significance as a premier urban park.*"* The National Park Service, along with its partners, has a unique opportunity to create a Riverfront Park at the heart of the 2 mile long free flowing Kenilworth arm of the Anacostia River. This can be a park as unique as the Kenilworth Aquatic Gardens, US National Arboretum, the historic Langston Golf Course, Kingman and Heritage Island Parks—the jewels of the Upper Anacostia—which share this remarkable area on the Anacostia waterfront. No other major city includes a resource such as this. A scenic river with 2 miles of uninterrupted flow is a resource which must be preserved, enhanced and celebrated.

For Kenilworth Park, remediation will be a major component in realization of this vision. Coordination of remediation with restoration, recreation and equitable access goals will determine how well and at what cost this work can be accomplished. The uplands must be prepared for recreational use by the adjacent communities while the riverfront must be returned to a thriving natural area where fishing, boating, wading and swimming can all be enjoyed. The wetlands destroyed by landfill and burning activities must be reestablished to support wildlife, clean the air and water, sequester carbon and enhance resiliency.

CONCERNS

While analysis of site conditions appears comprehensive except for the deficiencies identified by the DoEE and other environmental experts, it is of great concern that selection of remedies appears to have escaped this rigor. Little explanation has been provided for selection of the specific remedies proposed. Superfund Program Goal and Expectations Program Goal (40 CFR 300.430(a)(1)(i)) states that "*The national goal of the remedy selection process is to*

select remedies that are protective of human health and the environment, that maintain protection over time, and that minimize untreated waste.

- *EPA expects to use a combination of methods, as appropriate, to achieve protection of human health and the environment.*
- *EPA expects to return usable ground waters to their beneficial uses wherever practicable, within a timeframe that is reasonable given the particular circumstances of the site."*

The methods proposed in the **Preferred Alternative #3** are not protective of human health and the environment in that they do nothing to mitigate the flood risk posed by the volume of material which remains on site. The drastic alteration of the grades has eliminated the possibility of reconnecting Watts Branch and the Anacostia River to their flood plains. Especially when considering goals for resiliency, it has not been demonstrated that the proposed method will maintain protection over time. The volume of untreated waste will not be reduced employing the proposed method.

The methods proposed in the **Preferred Alternative #3** do not provide a combination of methods, as appropriate, to achieve protection of human health and the environment. A single method is proposed for extensive areas of the site regardless of topography or proximity to natural resources including bodies of water.

The methods proposed in the **Preferred Alternative #3** do not return usable ground waters to their beneficial use. The destruction and filling of the Kenilworth wetlands eliminated the possibility of groundwater discharge to the surface there by depriving Watts Branch and the Anacostia River of large volumes of clean water

RECOMMENDATIONS

We wholeheartedly support the decision to preserve the quality habitat of **Kenilworth Park South** which has regenerated due to past remediation efforts. We hope that the adjacent PEPCO Lagoon will be included in future restoration efforts, reclaiming and reconnecting this valuable habitat and affording it a use more appropriate to its location that its current use as a maintenance yard. Any work conducted in Kenilworth Park South must be undertaken with the lightest hand focusing on enhancement of existing habitat and without removal or further site disturbance. This work should include stabilization of the exiting trail and bridge in order to minimize the impact of human visitation on the natural environment while protecting the safety of park visitors. No trail building including bridges and pavement can be allowed in this important designated natural area.

We support eventual removal of all landfill and overlying material in Kenilworth Park North only, as described in Alternative 5. This work can be phased as part of projects undertaken by the District to accommodate future park use. Remediation, restoration, recreation and access must be aspects of all work at Kenilworth Park. Planning and execution of work along the eastern border of the Park adjacent to Anacostia Avenue should begin as soon as possible. Kenilworth Park must be reestablished as a positive presence in the neighborhood to regain public trust, engage community members and begin the rebuilding effort which will be made possible by remediation work.

It is essential that Watts Branch and the Anacostia River front be rewilded before other work in adjacent areas can proceed. Removal of landfill material will contribute to reestablishment of grades which will allow reconnection of these important water bodies with their flood plain. Disruption of the hydrology of the site by the physical presence of the landfill material continues to degrade these essential resources and natural areas. The original grades have been so drastically altered that the environmental integrity can never be restored as long as the landfill material remains. Studying the site cross sections—figure 3 page 11 of the proposed plan - it is clear that piling additional fill on the site will only make it more difficult to connect the Anacostia River and Watts Branch with their flood plains, which is essential for re-wilding the stream, establishing wetlands and living shoreline and restoring some estuary functions.

The land which Kenilworth Park lies has served many uses over time. We can expect that priorities, needs and uses

will change going forward. The plan for remediation has been 50 years in the making starting with the closure of the landfill. It is short sighted to leave behind this legacy trash which will never go away without physical removal. Many long time residents of Ward 7, who endured the worst periods in the history of the landfill, have expressed a desire for complete removal of landfill material, location of recreational facilities close to the community, and strong connection to the Marvin Gaye Park system. These desires are not reflected in the Management Zones for Future Use included in the documents under review.

Development of formal plans by the District's Department of Parks and Recreation (DPR) and DoEE for future use and remediation of KPN are anticipated after the administrative transfer is complete. **The delineation of Management Zones for Future Use defined in this plan, and upon which the Alternatives were based, is flawed.** It disregards opportunities to restore the unique recreational experiences including water dependent activities, which were lost when the site was filled and which are prevented by the presence of landfill material. The delineation also fail to respond to community comments and requests received throughout the development of this project. As long as the fill remains, the restoration of lost resources is impossible. Opportunities at Kenilworth for water dependent recreation will be unique in the Anacostia Park System and are strongly endorsed in NPS documents. The layout of Future Use Zones included in this report actually prevents accommodation of these opportunities. We request that the District develop the scenario of use by drafting a new document defining Management Zones for Future Use which will allow the efficient, creative and equitable accommodation of land use and stewardship of natural resources and reflects the needs of stakeholders. Our recommendations for Management Zones are attached (**AWCAC - KPN MANAGEMENT ZONES.pdf**). Slides 6 and 7 reflect input from community found in record documents and collected at public meetings as well as input from environmental resources experts with whom we have consulted.

Removal of landfill material can be accomplished over time and phased as need, circumstances and resources allow. Accomplishing complete removal of landfill material in phases over time will reduce disruption of Park functions and nuisance to the neighborhood. Including remediation work as part of facilities enhancement projects will produce cost savings allowing removal of landfill material to be strategic and accomplished along with other site work including excavation and grading. Fill material can be removed from the Park at various locations further reducing nuisance to the community. Employing institutional controls (as described in Alternative 2) in areas included in later phases of work will keep visitors safe, allowing fullest possible use until the next phase is undertaken.

Wetlands, the historic function of this land, will be an important part of management of natural resources and site remediation. The fringe wetlands and Bladensburg Wetlands (ANA 11 - a former landfill) are remarkable projects that naturalized in a very short time eliminating risk to human health and safety. The District will assume responsibility for master planning the park and design of remediation work. They should be allowed latitude - discretion as to how much and when landfill material would be removed. Having the requirement to remove landfill material in he ROD will help the District streamline such work and may open up financial resources not otherwise available to projects which do not include remediation. In absence of the directive for removal of landfill material, and were another cap be installed, the District may be forced to pursue a less desirable plan simply to preserve the cap and would be forced to exclude remedial work which does not appear in the ROD. Such a limitation may make it impossible to install something as necessary as toilet facilities without adding vast layers of additional fill. As previously stated, a project which includes removal of landfill material phased to be included with other park improvements can employ institutional controls, a part of all Proposed Alternatives, to keep unimpacted areas of the Park in use.

In absence of an alternative which accommodates the concerns enumerated above, **we support ultimate removal of all landfill and overlying material (ALT 5) in Kenilworth Park North only**. Excavation and removal can be phased to coincide with site modifications consistent with future park use giving first priority to land adjacent to Anacostia Avenue. Second priority would be given to land adjacent to Watts Branch and the Anacostia River consistent with restoration/re-wilding of these essential environmental features.. **We support preservation and enhancement of Kenilworth Park South without removal or further capping of landfill material.**

In order to insure the best possible outcome for this site, we strongly encourage interagency coordination and a very

strong role for the District Department of Energy and the Environment which has played the lead role in the progress toward restoration of the Anacostia River. Working in partnership with the Department of Parks and Recreation and stakeholders, a balance of remediation, restoration, recreation and equitable access will insure the best possible outcome for now and into the future.

Following are comments directed to specific ARARs and elements of the Plan.

	COMMENTS - Proposed Plan and ARARs
Reference/topic	
P7 - KPS: **Current and Future Land Use**	Building a new hard surface trail and bridge are not consistent with management of a "stable and valuable wildlife habitat" which is managed for "natural resource recreation." This site must remain undisturbed except for work necessary to stabilize and re-wild Watts Branch. Authorization for trail construction, especially for a design which will further damage Watts Branch and the important riparian area of the stream and river by obstructing connection of these water bodies to their flood plain, cannot be included in this plan because it does not accomplish remediation. **All references that imply permission for this or any other construction must be struck from this document.** Access to this site for the intended use of KPS and for connection to trails in KPN can be provided utilizing the existing asphalt road, with minor improvements, crossing the existing bridge over Watts Branch which is slated for future re-wilding. Only natural surface, minimally invasive trails - located to allow access while protecting natural resources from foot traffic and which do not require significant excavation or fill - can be permitted and still retain the integrity of this area for its intended use. The proposed extension of the ART places a road on a berm directly in the riparian of Watts Branch and the Anacostia River area thereby disturbing the hydrology and disconnecting the rest of the site from the river and stream. This cannot be authorized in this document.
	• Consistent with the 2006 Management Plan, management of this area can include removal of invasive plants and introduction of additional native trees and meadow plants which will enhance and protect this important habitat. Instructions for the execution of such work should be included in the Proposed Plan for clean-up. • In addition, work to accomplish the re-wilding of Watts Branch is within the requirements of the 2006 Management Plan so can be included in the management of KPS.
P13 - KPS: **Organic Act of 1916**	In compliance with this Act, "NPS does not accept institutional controls that would impair the intended use of the park. For example, NPS would not allow permanent fencing or restrictive signage as an alternative to removal, containment, or treatment of contamination." This plan must clarify how KPS will remain "administratively closed" and still fulfill it's intended use as a "natural resource recreation" area.
P14 - **KPS Alt 3**	"… prohibit construction of higher intensity visitor use areas withing KPS without the installation of clean fill barriers…" This statement implies permission to intensify use in KPS. This is inconsistent with management of a "stable and valuable wildlife habitat." This statement implies accommodation of a use which does not conform to the scope of this document and should be removed.
ARARs: Organic and General Authorities Acts	NPS has a mandate to "ensure non-impairment of national park resources." Implementation of Alt 3 would place additional fill material over significant areas of the park. Further altering the grade from its pre-landfill elevations impairs national park resources and cannot be allowed. There fore, Alt 3 is unacceptable.

	COMMENTS - Proposed Plan for Clean-Up and ARARs
Reference/topic	
ARARs: AP enabling legislation	This statute was enacted to … "prevent pollution of Rock Creek, Potomac and Anacostia River." The TMDLs for Anacostia River includes sediment among Impairments. Alt 3 impedes implementation of stream bank stabilization, reconnection of flood plain and other sediment reduction methods and thus facilitates the pollution of Watts Branch and the Anacostia River. These Acts and the District's responsibilities under the Anacostia WIP would be violated were the implementation of Alternative 3 to be selected for remediation of KPN.
ARARs: DC Flood Hazard Control and EO No 11988	These documents regulate the placement and consideration of impacts of placement of fill in the 100 year flood plain and flood hazard areas. This documents does not address these regulations.
ARARs: Transfer of Administration	Imposition of future use locations are based on assumptions assigned by NPS and used to develop and select the remedial alternatives. The diagram used to assign future use areas was based on existing Park use without regard for future use or physical characteristics of the site including natural resources. This severely limits the ability of the District to make best use of the Park to "*restore and protect the quality and resiliency of the riverine ecosystem, while providing high quality naturalized spaces." Reconsideration of distribution/location of uses and remedial actions by the District should be allowed when the District assumes administrative jurisdiction.*
ARARs: Management Policies 2006 - 4.1.5 Restoration of Natural Systems	"Impacts on natural systems resulting from human disturbances include the introduction of exotic species; the contamination of air, water, and soil; changes to hydrologic patterns and sediment transport; the acceleration of erosion and sedimentation; and the disruption of natural processes. The Service will seek to return such disturbed areas to the natural conditions and processes characteristic of the **ecological zone** in which the damaged resources are situated." Please include the definition of ecological zone in this plan. This statement appears to require re-establishment of existing grades, wetlands, and other elements consistent with reconstruction of natural areas.
Management Zones (p24) **2.3.1.3**	This section defines Planning Team and their function: "Interdisciplinary teams, including park managers and technical experts, will prepare general management plans. Planning teams will work with the park superintendent and regional directors and consult with other park staff , NPS leadership, other agencies with jurisdiction by virtue of law or expertise, other knowledgeable persons, and the public concerning future management of park resources. The superintendent will be involved with all phases of the plan's development. The superintendent and regional director have ultimate responsibility for the contents of the plan, ensuring that there is consistency in direction and decisions between parks with similar resources and values. The regional director is the official responsible for approving general management plans." Please define roles, responsibilities and composition of the Planning Team after the District assumes administrative Jurisdiction of the Park and include this in the Proposed Plan.
Fact Sheet: Presumptive Remedy for CERCLA Municipal Landfill Sites	This document recommends capping *"...unless site specific conditions dictate otherwise".* Conditions at Kenilworth Park specific to this site, given its proximity to the Anacostia River and inclusion of Watts branch, certainly dictate otherwise. Original grades must be restored in order to protect human health and property from flooding and to restore environmental integrity.

CONCLUSIONS:

The physical presence of landfill material under Kenilworth Park insure continued degradation of the natural environment vis a vis the destruction of the flood plains of both Watts Branch and the Anacostia River. This condition caused by the drastic alteration of pre-fill elevations (approximately 20 feet lower than landfill grades) places the adjacent neighborhoods in jeopardy of injury, loss of property and even death from increased flood risk. FEMA has determined that "floods are the most common and widespread of all natural disasters - except fire." (document attached). This park and the surrounding sub-watersheds, including the Watts Branch and Lower Beaverdam Creek, are known to experience increasingly frequent and intense flooding. Kenilworth Marsh is the last remnant of the Anacostia's once vast protective, life giving wetlands. Like the Bladensburg Landfill, this site needs to be reconnected to the Anacostia River.

Reconnection and restoration of the flood plain must be part of remediation plans in order to satisfy the evaluation criteria for "overall protection of human health and the environment." Alternatives 1 through 4 do not satisfy this criteria. In order to satisfy, extensive removal of landfill material is necessary. Alternative 5 is the only proposal which includes significant removal. The extent of removal required to reduce flood risk and halt environmental degradation cannot be determined until conceptual design for implementation of remedial action is developed. However, it can be anticipated - by comparing pre- and post- landfill site contours - the extent of removal indicated in Alternative 5 exceeds the area required to achieve the necessary outcome. The remediation plan must include a provision for extensive removal of landfill material by demarcating an area "not to exceed". This would allow NPS to estimate a maximum cost for this alternative for fill removal and grading only. The cost to restore the wetlands, like the cost to install accommodations for other future uses, would not fall within the requirements of CERCLA so this cost would be born within a separate project. There for, the cost of wetland restoration must be removed from the calculation of cost of remedial action.

Further, KPS in its existing condition has been determined to be of significant benefit to the environment due to the regeneration of habitat which has occurred following previous fill operations. This was recognized in the **Report**. Therefore **KPS** must be protected and stewarded. It must not be subject to capping, to removal of landfill material, or to new construction including the proposed location of the Anacostia Riverwalk Trail. A trail is essential to provide access to this area while protecting the fragile environment. The existing paved road over the existing bridge can be refurbished to serve this function. Any additional access elements must be natural surface trail or reinforced earth with the lightest possible impact to **KPS**.

Because the **Report** and **Proposed Plan** were prepared without benefit of a conceptual master plan for Kenilworth Park - including restoration of environmental assets, protection of existing areas of importance and delineation of areas of future use - the proposed alternatives bear little relation to the existing site conditions and reasonable future use so cannot result in favorable outcomes. Prefered Alternative #3 satisfies none of the Threshold Criteria to fulfill the statutory requirements of CERCLA.We request that Alternatives be refined to address the physical features of the site including habitat, aquatic resources and other natural features. Only then can District Agencies collaboratively determine future use zones which serve the neighborhood, insure public safety and make best advantage of the unique location and qualities that make this Park a treasure.

END OF COMMENTS

Respectfully submitted by:

Anacostia Watershed Community Advisory Committee

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attachments (4):

AWCAC - KPN MANAGEMENT ZONES
EPA Economic Benefits of Wetlands
WWD21_Fact Sheet
EPA FEMA Wetlands_Protecting Life and Property from Flooding

Wetlands and Water: The Facts

We are in a growing water crisis that threatens people and our planet. We use more water than nature can replenish, and are destroying the ecosystem that water and all life depend on most - Wetlands.

What wetlands do

Fresh and saltwater wetlands sustain humanity and nature. They support our social and economic development through multiple services:

Store and clean water

- Wetlands hold and provide most of our fresh water.
- They naturally filter pollutants, leaving water we can safely drink.

Keep us fed

- Aquaculture is the fastest growing food production sector, while inland fisheries alone provided **12 million** tonnes of fish in 2018.
- Rice paddies feed **3.5 billion** people annually.

Underpin our global economy

- Wetlands, the most valuable ecosystem, provide services worth **US $47 trillion** a year.
- More than **one billion** people rely on wetlands for income.

Provide nature a home

- **40%** of the world's species live and breed in wetlands. Annually, about **200 new fish** species discovered in freshwater wetlands.
- Coral reefs are home to **25%** of all species.

Keep us safe

- Wetlands provide protection from floods and storms with each acre of wetland absorbing up to **1.5 million** gallons of floodwater.
- Wetlands help regulate the climate: peatlands store twice as much carbon as forests, with saltmarshes, mangroves and seagrass beds also holding vast amounts of carbon.

We have a finite amount of water and our current use is unsustainable

3 Freshwater Facts

- Only **2.5%** of water on Earth is fresh water, mostly stored in glaciers, ice caps and underground aquifers
- Less than **1%** of freshwater is usable
- Rivers and lakes hold **0.3%** of surface water

Freshwater Consumption

We use 10 billion tons of water every day:

- **70%** used for food cultivation
- **22%** consumed by industry and energy
- Water use increased sixfold in **100 years** and rises by **1%** annually

Water crisis

Population growth, urbanization and consumption patterns have put unbearable pressure on wetlands and the water in them:

- Almost all global freshwater sources are compromised with **82%** of the world's population exposed to high levels of pollution in their water supply.
- **2.2 billion people** don't have safe drinking water with an annual economic cost amounting to **$260 billion**.
- Water equivalent to the annual flow of the Volga River, Europe's longest river, is squandered in **1.3 billion tons** of food wasted from farm to fork each year.
- Water insecurity was a key factor in conflict in at least **45 countries** in 2017.
- **14%** more water is needed to produce **70%** more food by 2050 for **10 billion people**.

Wetland loss impact

Our water consumption means less water for nature. Wetland loss and pollution has intensified a water crisis threatening all life:

- Nearly **90%** of the world's wetlands lost since 1700's, those remaining are disappearing three times faster than forests.
- **25%** of all wetland species and 1 in 3 freshwater species face extinction.
- Climate change is reducing surface and groundwater in already dry regions, resulting in increasing competition for water.

Five solutions

We could have enough water for nature and us if we:

- Stop destroying, start restoring wetlands
- Don't dam rivers or over extract from aquifers
- Address pollution, clean up freshwater sources
- Increase water efficiency, use wetlands wisely
- Integrate water and wetlands into development plans and resource management

South Africa integrating water management

Identifying and understanding the value of 22 strategic water sources fundamental to South Africa's water and economic needs has led to nearly 50 integrated water interventions aiming to increase water quantity, improve water quality and expand economic development. Although the water sources cover only 8% of land area, they provide half the country's surface water that supports 51% of the population and 64% of the economy. Interventions include:

- Integrating wetlands and built infrastructure into water management to better serve Durban and Pietermaritzburg.
- Conserving the Umzimvubu River system from source to sea through restoration and management while supporting economic development.
- Improving water quality of the Berg River supplying water-stressed Cape Town and surrounding agricultural areas exporting 70% of produce to Europe.

UK's model wetland restoration

Europe's largest coastal wetland restoration, a 670-hectare waterscape of saltmarshes, lagoons and mudflats at Wallasea Island, was designed as a long-term flood defence with climate change and rising sea levels in mind. A model nature-based solution with active human management, the wetlands were restored on reclaimed farmland using 3 million tonnes of waste London clay.

The saltmarshes absorb waves, reducing pressure on ancient sea walls, while sluices control water levels within the lagoons enhancing wildlife habitat. The restoration recovers some of the 30,000 ha of Essex saltmarshes lost over 25 years providing £1 billion worth of coastal flood defences in the UK. These saltmarshes also lock up large stores of carbon.

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#RestoreWetlands

World Wetlands Day
2 February 2021
Wetlands and water

Convention on Wetlands 50 YEARS

EPA United States Environmental Protection Agency

Wetlands: Protecting Life and Property from Flooding

Wetland Hydrology and Flood Control

Wetlands are transition zones between uplands and deeper water, unique ecosystems characterized by their hydrology, soils and vegetation. They function like natural tubs, storing flood waters that overflow riverbanks and surface water that collects in depressional areas. In this way, wetlands can help protect adjacent and downstream property from flood damage.

The Federal Emergency Management Agency (FEMA) states that floods are the most common and widespread of all natural disasters—except fire. Most communities in the United States have experienced some kind of flooding. FEMA encourages the use of wetlands for stormwater detention in lieu of, or in conjunction with, traditional structural flood control measures. (Source: FEMA)

How Do Wetlands Help Reduce Flooding?

The effectiveness of wetlands for flood abatement may vary, depending on the size of the area, type and condition of vegetation, slope, location of the wetland in the flood path and the saturation of wetland soils before flooding. A one-acre wetland can typically store about three-acre feet of water, or one million gallons. An acre-foot is one acre of land, about three-quarters the size of a football field, covered one foot deep in water. Three acre-feet describes the same area of land covered by three feet of water. Trees and other wetland vegetation help slow the speed of flood waters. This action, combined with water storage, can actually lower flood heights and reduce the water's destructive potential. (Source: EPA)

The Wetlands Initiative completed an 18-month study, "Flood Damage Reduction in the Upper Mississippi River Basin: An Ecological Means." The study revealed that restoring the 100-year flood zone of the Upper Mississippi five-state watershed could store 39 million acre-feet of floodwater, the volume that caused the Great Flood of 1993, and save over $16 billion in projected flood damage costs.

In Minnesota, an additional study by The Wetlands Initiative noted that flood peaks and damage costs would be decreased by restoring the natural hydrology of the floodplain. The cost of replacing the flood control function of the 5,000 acres of wetlands drained each year in Minnesota alone would be $1.5 million, compared to the potentially millions of dollars lost to flooding. Preserving wetlands in the first place and restoring some of those that have been drained could help reduce future flood losses. (Source: The Wetlands Initiative)

Preserving and protecting coastal wetlands can help reduce storm damage. St. Stanislaus was a boy's Catholic Boarding School over a hundred years old in Bay St. Louis, MS. Located on the beach overlooking the Gulf, it was destroyed by Hurricane Katrina. This picture was taken before the building disintegrated.

Where Wetland

Where Wetlands are Helping

These studies and others indicate that wetlands may play a part in flood abatement. The following examples illustrate how communities across the country are restoring wetlands in order to reduce the threat and costs of flood damage.

Charles River, Massachusetts

Along the Charles River in Massachusetts, the U.S. Army Corps of Engineers (the Corps) has acted to utilize wetlands in preventing flood damage. It was calculated that loss of all wetlands in the Charles River watershed would have caused an average annual flood damage cost of $17 million. The Corps concluded that conserving wetlands was a natural, less expensive solution to controlling flooding than the construction of dikes and dams alone, and they proceeded to acquire 8,103 acres of wetlands in the Charles River basin for flood protection. (Source: U.S. Army Corps of Engineers – Charles River Natural Valley Storage Area)

Horseshoe Park, Colorado

In 1982, an earthen dam on Lawn Lake in Rocky Mountain National Park collapsed, suddenly releasing almost 700 acre-feet of water into the Roaring River. A wall of water 25 to 30 feet high moving at 9 miles per hour rushed downstream and entered Fall River at Horseshoe Park. The Park contained wetlands adjacent to the river, with meadow grasses, reed and dense willow stands. Here the flood wave spread across the broad, flat valley and was slowed by wetland vegetation. The height of the wall of water was reduced to about 10 feet, and the water spread out over the meadow to a width of 1,300 feet. The flood was finally contained by Olympus Dam on Lake Estes, but it had claimed 4 lives and caused $31 million in damage. If not for the wetlands and meadows at Horseshoe Park, the damage would have been much worse. The height and speed of flood waters were reduced by the wetland vegetation, and the damaging flood peak was greatly reduced. (Source: Jarrett and Costa 1984)

Paul McIver

In 1982 these meadows and wetlands at Horseshoe Park in Colorado were hit by a 25 to 30 foot wall of water. The height and speed of the flood waters were reduced by the wetland vegetation, and the damaging flood peak was greatly reduced.

Grand Kankakee Marsh, Indiana

In 1900, the Kankakee Marsh was one of the largest, most ecologically diverse wetlands in the United States. During the 20th century much of the marsh was drained and converted to agricultural use. Channelization of the Kankakee River, which fed the marsh, reduced its length from 250 to 90 miles. As a result, water quality was degraded and flooding increased. An ambitious project was undertaken to address these concerns. The project, featuring diverse partners from all levels of government, private conservation groups and business, was designed to restore over 25,000 acres of wetlands. With a grant from the North America Wetlands Conservation Act and donations of cash and land, 3,000 acres of wetlands have already been restored. Waterfowl populations have increased, water quality is improving and flooding has decreased. (Source: National Park Service, "Floods, Floodplains and Folks", 1996, U.S. Fish and Wildlife Service, Private Lands Office)

Mayview Wetland Project, Pennsylvania

The Pennsylvania Department of Transportation (DOT) completed a wetland restoration project to offset impacts to 32 acres of wetlands that were filled during the construction of Interstate 279 through Southwestern Pennsylvania and the Southern Expressway. The site of the wetland restoration is Mayview, a 65-acre piece of land, flanking Chartiers Creek, a major stream. The creek was subject to frequent, high velocity flooding and constructing wetlands there is helping control these floods. The new wetlands provide flood storage capacity for 63 million gallons of water and serve as an outdoor classroom for nearby schools. The Department of Transportation is seeking funding to restore additional acreage. (Source: National Park Service, "Floods, Floodplains and Folks", 1996)

Prairie Wolf Slough, Illinois

The Middle Fork of the North Branch of the Chicago River flows through an abandoned farm field in the suburbs. The area was identified as the future location for a trail, part of the North

Branch of the Chicago River Open Space Plan designed by the Friends of the Chicago River and Lake County Stormwater Management Commission, a regional open space advocacy organization. By restoring wetlands hydrology, clearing non-native vegetation and planting wetland, prairie and savanna vegetation, the functions and values of the wetlands have been restored. Structures used to drain the area for farming were removed, and a new water control structure was constructed to decrease sedimentation of the river. The result was moderation of stormwater flows which provided the area with flood protection, as well as permanent open space and new environmental education opportunities. (Source: National Park Service, "Floods, Floodplains and Folks", 1996, Friends of the Chicago River)

Vermillion River, South Dakota

The Vermillion River has always flooded. It has a narrow channel and flows slowly, making it "flood prone." Thousands of years ago, this part of South Dakota was scoured by glaciers that carved out shallow depressions which remain today and seasonally fill with water. These "prairie potholes" are intermittent, seasonal wetlands which dot the landscape. They quickly thaw in spring and provide habitat for a multitude of migratory birds and other water fowl.

For hundreds of years, the rain and snow melt in the watershed were held in these wetlands, and runoff across the prairie was slowed. As South Dakota became populated, many prairie potholes were filled to facilitate farming. While these wetlands are small, they are numerous and can hold a significant amount of flood water. As more wetlands were filled, flooding increased.

The Great Flood of 1993 was devastating to the area. To combat future flooding, structural flood controls were put in place, but they were not sufficient. In response to this problem, the National Park Service and the Federal Emergency Management Agency formed a partnership with the South Dakota Division of Emergency Management and Turner-Lincoln-Clay Counties Water Project District. Working together, this coalition assessed the area and condition of the remaining network of potholes. They developed a plan to protect the remaining wetlands and restored some of those that had been filled.
(Source: National Park Service, "Floods, Floodplains and Folks", 1996, The Vermillion River: Managing the Watershed to Reduce Flooding, Federal Emergency Management Agency)

The Special Case of Coastal Wetlands

Wetlands in many locations play an important role in flood protection. Nowhere is this function more important than along coastal areas. Coastal areas are vulnerable to hurricanes and other powerful storms, and the flat coastal terrain means that land and property can be exposed to the full power of these storms. Preserving and reconstructing coastal marshes can help reduce storm damage. Coastal wetlands serve as storm surge protectors when hurricanes or tropical storms come ashore. in the Gulf coast area, barrier islands, shoals, marshes, forested wetlands and other features of the coastal landscape can provide a significant and potentially sustainable buffer from wind wave action and storm surge generated by tropical storms and hurricanes. (Source: Working Group for Post-Hurricane Planning for the Louisiana Coast)

This diagram indicates that wetlands reduce peak stormwater flows. (Source: Kusler 1983)

More Wetlands Mean Less Flooding

These examples illustrate how protecting and restoring wetlands can reduce the destructive potential of flooding. Wetland restoration and preservation is an important component of a comprehensive flood protection strategy. EPA, working with other federal agency partners, is a resource for state and local decision-makers, providing tools and limited funding for development of state wetland programs. Preserving wetlands, along with other flood control measures, can offer a degree of protection against flooding that is often more effective and costs less than a system of traditional dikes and levees. If more communities protect existing wetlands and increase the quantity of wetlands through restoration projects, we will be better protected against the consequences of floods.

EPA843-F-06-001
Office of Water
May 2006

Wetland Resources

On the Internet:

Charles River Natural Valley Storage Area . . . . . www.nae.usace.army.mil/recreati/crn/crnhome.htm
Federal Emergency Management Agency . . . . . www.fema.gov
Friends of the Chicago River . . . . . www.chicagoriver.org
National Park Service . . . . . www.nps.gov
The Wetlands Initiative . . . . . www.wetlands-initiative.org
U.S. Army Corps of Engineers . . . . . www.usace.army.mil

In Print:

Floods, Floodplains and Folks. 1996. National Park Service. Rivers, Trails and Conservation Assistance Program.

Flood Damage Reduction in the Upper Mississippi River Basin—An Ecological Alternative. 2004. Donald L. Hey, et al. The Wetlands Initiative, Chicago, IL. Available at www.wetlands-initiative.org

Jarrett, R.D., and J.E.Costa. 1984. *Hydrology, geomorphology, and dam break modeling of the July 15, 1982 Lawn Lake Dam and Cascade Lake Dam Failures, Larimer County, Colorado: U.S. Geological Survey Professional Paper 1369.*

Johnson, Rex R. 1997. *The Vermillion River: Managing the Watershed to Reduce Flooding.* Clay County Conservation District, Vermillion, SD.

Additional Wetland Resources

For additional information, visit the U.S. EPA's website (www.epa.gov/owow/wetlands/), call the toll-free Wetlands Helpline at 1-800-832-7828 or refer to the sources below.

On the Internet:

"A New Framework for Planning the Future of Coastal Louisiana after the Hurricanes of 2005." January 26, 2006. Working Group for Post-Hurricane Planning for the Louisiana Coast . . . . . www.umces.edu/la-restore
Association of State Floodplain Managers . . . . . www.floods.org
Association of State Wetland Managers . . . . . www.aswm.org
"Reinventing a Flood Control Strategy." 1994. Donald L. Hey and Nancy S. Philippi. The Wetlands Initiative, Chicago, IL. . . . . www.wetlands-initiative.org
Society of Wetland Scientists . . . . . www.sws.org
U.S. National Weather Service . . . . . www.nws.noaa.gov
Wetlands Status and Trends . . . . . http://wetlandsfws.er.usgs.gov

In Print:

Bradley, A.A., K.W. Potter, T. Price, P. J. Cooper, J. Steffen and D. Francz. 1994. Dahl, T.E. 1990. "Wetland losses in the United States: 1780's to 1980's." Washington, DC. U.S. Department of Interior.

"Flood analysis in DuPage County using HSPF," *Proceedings of the Transportation Research Board (TRB) Annual Meeting*, Washington, DC.

Protecting Floodplain Resources, a Guidebook for Communities. June 1996. The Federal Interagency Floodplain Management Task Force.

Shabman, L. 1994. "Responding to the 1993 Flood: The Restoration Option," *Water Resources Update*, University Council on Water Resources, 95, 26-30.

U.S. National Weather Service, 1993, "Update on Midwestern floods, heat and drought in the East: Special Climate Summary," 93/2, Climate Analysis Center.

EPA
United States
Environmental Protection
Agency

Economic Benefits of Wetlands

A wetland is a natural area that is often wet but may not be wet all year round. Wetlands are characterized by their distinctive hydrology, soils and plants. Once regarded as wastelands, wetlands are now recognized as important features of the landscape that provide numerous beneficial services for people and wildlife. The economic value of a wetland is an estimate of the importance, or worth, of one or more of its services to society. Some of these services, or functions, include protecting and improving water quality, supporting the fishing industry, storing floodwaters and providing opportunities for education and recreation. If wetlands are destroyed or damaged, it can be difficult or impossible to replace all of these functions.

Wetlands contribute to the national and local economies by producing resources, enabling recreational activities and providing other benefits, such as pollution control and flood protection. While it can be difficult to calculate the economic value provided by a single wetland, it is possible to evaluate the range of services provided by all wetlands and assign a dollar value. These amounts can be impressive. According to one assessment of natural ecosystems, the dollar value of wetlands worldwide was estimated to be $14.9 trillion. (Source: Costanza et al. 1997) This fact sheet summarizes some of the important ways in which wetlands contribute to the economy.

Drinking Water Quality

Wetlands improve water quality in rivers and streams. they are valuable filters for water that may eventually become drinking water.

Wetlands improve water quality in nearby rivers and streams, and thus have considerable value as filters for future drinking water. When water enters a wetland, it slows down and moves around wetland plants. Much of the suspended sediment drops out and settles to the wetland floor. Plant roots and microorganisms on plant stems and in the soil absorb excess nutrients in the water from fertilizers, manure, leaking septic tanks and municipal sewage. While a certain level of nutrients is necessary in water ecosystems, excess nutrients can cause algae growth that's harmful to fish and other aquatic life. A wetland's natural filtration process can remove excess nutrients before water leaves a wetland, making it healthier for drinking, swimming and supporting plants and animals. For example, the Congaree Bottomland Hardwood Swamp in South Carolina removes a quantity of pollutants from the watershed equivalent to that which would be removed by a $5 million treatment plant. (Source: EPA832-R-93-005)

Flood Control

Flood damages in the U.S. average $2 billion each year, causing significant loss of life and property. (Source: National Oceanic and Atmospheric Administration). Wetlands can play a role in reducing the frequency and intensity of floods by acting as natural buffers, soaking up and storing a significant amount of floodwater. A wetland can typically store about three-acre feet of water, or one million gallons. An acre-foot is one acre of land, about three-quarters the size of a football field, covered one foot deep in water. Three acre-feet describes the same area of land covered by three feet of water. Coastal wetlands serve as storm surge protectors when hurricanes or tropical storms come ashore. In the Gulf coast area, barrier islands, shoals, marshes, forested wetlands and other features of the coastal landscape can provide a significant and potentially sustainable buffer from wind wave action and storm surge generated by tropical storms and hurricanes. (Source: Working Group for Post-Hurricane Planning for the Louisiana Coast) After peak flood flows have passed, wetlands slowly release the stored waters, reducing property damage downstream or inland. One reason floods have become more costly is that over half of the wetlands in the United States have been drained or filled. The loss of more than 64 million acres of wetlands in the Upper Mississippi Basin since the 1780's contributed to high floodwaters during the Great Flood of 1993 that caused billions of dollars in damage. (Source: "Flood Damage Reduction in the Upper Mississippi River Basin—An Ecological

One of the most valuable benefits of wetlands is their ability to store flood waters. Maintaining only 15% of the land area of a watershed in wetlands can reduce flooding peaks by as much as 60%. (Source: The Wetlands Initiative, EPA) (See EPA843-F-06-001, "Wetlands and Flooding.")

Valuation of Wetlands

Although wetlands provide important services to society, these services are typically not sold nor do they have market value. Wetland benefits can be estimated by several standard market and non-market valuation techniques. The three most common are cost-benefit analysis, cost-effectiveness analysis and benefits valuation for compensation for environmental damages. The techniques can be applied whether the change in the environment is an improvement or degradation. (Source: "Economic Valuation of Environmental Benefits")

Alternative", 2004) The damage sustained by the Gulf Coast during Hurricane Katrina could have been less severe if more wetlands along the coast and Mississippi delta had been in place.

Cleaning the Water

Because natural wetlands are so effective at removing pollutants from water that flows through them, engineers and scientists construct systems that replicate some of the functions of natural wetlands.

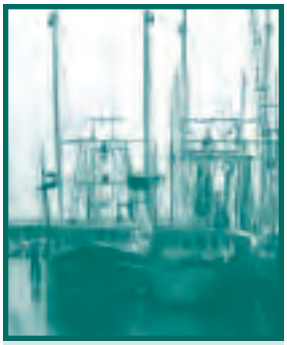
Anneke Davis

Natural wetlands are effective at cleaning the water passing through them. Wetland plants and soils absorb much of the excess nutrients in the water. Wetlands perform this function so well that similar systems are being constructed to treat wastewater.

These constructed treatment wetlands use natural processes involving wetland vegetation, soils and their associated microbial life to improve water quality. They are often less expensive to build than traditional wastewater and stormwater treatment options, have low operating and maintenance expenses and can handle fluctuating water levels. For example, in 1990 city managers in Phoenix, Arizona, needed to improve the performance of a wastewater treatment plant to meet new state water quality standards. After learning that upgrading the plant might cost as much as $635 million, the managers started to look for a more cost-effective way to provide final treatment to the plant's wastewater discharge into the Salt River. A preliminary study suggested that a constructed wetland system would sufficiently clean the discharge water while supporting high-quality wetland habitat for birds, including endangered species, and protecting downstream residents from flooding. All these benefits would be achieved at a lower cost than retrofitting the existing treatment plant. As a result, the 12-acre Tres Rios Demonstration Project began in 1993 with assistance from the Corps of Engineers, the Bureau of Reclamation and EPA's Environmental Technology Initiative and now receives about two million gallons of wastewater per day. This project is still flourishing, serving as a home for thousands of birds and other wildlife. (Source: City of Phoenix) There are hundreds of wastewater treatment wetlands operating in the United States today. (Source: EPA832-R-93-005)

Fisheries

The Nation's wetlands are vital to fish health and thus to the Nation's multi-billion dollar fishing industry. Wetlands provide an essential link in the life cycle of 75 percent of the fish and shellfish commercially harvested in the U.S., and up to 90 percent of the recreational fish catch. Wetlands provide a consistent food supply, shelter and nursery grounds for both marine and freshwater species. Landings of crab, shrimp and salmon were valued at $1,167 billion in 2004. These species are dependent on wetlands for at least part of their life cycles. In 2004 the dockside value of fin fish and shellfish landed in the United States was $3.7 billion and was the basis for the $7.2 billion fishery processing business. U.S. consumers spent an estimated $54.4 billion for fishery products in 2000. (Source: U. S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS))



Wetlands are essential to our multi-billion dollar National commercial fishing industry. Wetlands have an important place in the life cycle of 75 percent of the fish and shellfish commercially landed in U.S. waters.

Recreation

Wetlands are often inviting places for popular recreational activities including hiking, fishing, bird watching, photography and hunting. More than 82 million Americans took part in these activities in 2001, spending more than $108 billion on these pursuits. (Source: USFWS, Ducks Unlimited). For example, over 34 million people went fishing in 2001, spending an average of $1,046 and 16 days each on the water. Anglers spent $14.7 billion in 2001 for fishing trips, $17 billion on equipment and $4 billion for licenses, stamps, tags, land leasing and ownership, membership dues, contributions and magazines. The overall economic impact of recreational fishing is estimated at $116 billion (American Sportfishing Association), and wetlands play a crucial role in the life cycle of up to 90 percent of the fish caught recreationally. In 2001, approximately 3 million people hunted migratory birds, and 6.5 million small mammals that are often

Wetlands are pleasant places for recreational activities like fishing. They may provide a place of natural beauty and solitude that can be enjoyed by persons of all ages who may seldom be exposed to nature.

found in wetlands. They spent more than $2.2 billion, including $111million paid by migratory bird and large game hunters to lease hunting areas and blinds, often located on private property with wetlands. (Source: U. S. Fish and Wildlife Service) Each year nearly $200 million in hunters' federal excise taxes are distributed to state agencies to support wildlife management programs, the purchase of lands open to hunters and hunter education and safety classes. Proceeds from the federal Duck Stamp, a required purchase of migratory water fowl hunters, have purchased more than five million acres of habitat for the refuge system. (Source: Ducks Unlimited) Just watching the wildlife, many of which depend on wetlands, has become a popular pastime. More than 66 million people 16 years old and older--31% of all Americans-- fed, photographed and observed wildlife in 2001 and spent $40 billion on their activities. (Source: U. S. Fish and Wildlife Service)

Wildlife Habitat

Patricia Deege

Many species of wildlife rely on wetlands for their very existence. Wetlands provide mammals, plants, amphibians, reptiles, birds and fish with food, habitat, breeding grounds and shelter. While the diversity of wetland wildlife contributes to many businesses, they are also inherently wonderful to observe.

Diverse species of mammals, plants, insects, amphibians, reptiles, birds and fish rely on wetlands for food, habitat or shelter. Wetlands are some of the most biologically productive natural ecosystems in the world, comparable to tropical rain forests or coral reefs in the number and variety of species they support. Although wetlands make up only about 5 percent of the land area of the lower 48 states, more than one-third of threatened and endangered species live only in wetlands. An additional 20% of the country's threatened and endangered species use or inhabit wetlands at some time in their life. Some species must have a wetland in order to reproduce. Migrating waterfowl rely on wetlands for resting, eating and breeding areas, leading to increased populations. As noted, the appeal of wetlands and the diversity of plant and animal life they attract contribute to or support many businesses. (Source: U.S. Fish and Wildlife Service)

Other Commercial Benefits

Many industries, in addition to the fishing industry, derive benefits or produce products dependent on wetlands. Part of this economic value lies in the variety of commercial products they provide, such as food and energy sources. Rice can be grown in a wetland during part of the year, and the same area can serve as a wildlife habitat for the rest of the year. Some wetland plant species, such as wild rice and various reeds, can be harvested for or used to produce specialty foods, medicines, cosmetics and decorative items. In many coastal and river delta wetlands, haying of wetland vegetation is important to livestock producers. In Europe, reed-growing for building materials is undergoing a revival in some countries as people realize the full potential of reeds as a roofing material. Aesthetically pleasing, thatched roofs are superior insulators to conventional tile roofs, and they have a life span of 25-40 years. (Source: Ramsar) Fur-bearing animals, such as mink, muskrat and beaver, use wetlands during some part of their life cycle. Income can be derived from trapping these furbearers, either by direct sale of their pelts or by leasing wetlands for the fur harvest. The nation's harvest of muskrat pelts alone was worth $124 million in 2004. (Source: U.S. Fish and Wildlife Service) Wetlands also provide employment opportunities, including such positions as surveyor or park ranger. The production of raw materials from wetlands provides jobs to those employed in the commercial fishing, specialty food and cosmetic industries. These are billion dollar industries that depend in part on wetlands to flourish.

In addition to the many ways wetlands provide economic benefits, they offer numerous less tangible benefits as well. These include providing aesthetic value to residential communities, reducing streambank erosion and providing educational opportunities as an ideal "outdoor classroom." By nearly any measure used, it pays to save wetlands.

Did You Know?

- Although wetlands cover only about 5 percent of the land surface in the lower 48 states, they are home to 31 percent of plant species. (U.S. Fish and Wildlife Service)
- In 2002 Louisiana commercial fish landings exceeded 1 billion pounds with a dockside value of $343 million – approximately 30% of the total catch by weight in the lower 49 states. (Source: America's Wetland)
- Rivaling the likes of tropical rainforests and coral reefs, wetlands are among the most fertile, productive ecosystems in the world. (Source: Ramsar)
- Two thirds of all fish consumed worldwide are dependent on coastal wetlands at some stage in their life cycle. (Source: Ramsar)
- Annual fish and seafood production in swamps and marshes worldwide has been estimated at an average of nine tons per square kilometer, 259 hectares or 640

  nest or feed in wetlands.
- Five to seven million migratory waterfowl, including the endangered whooping crane, use wetlands, i.e. prairie potholes, as resting and feeding areas and as an abundant food source. (Source: U.S. Fish and Wildlife Service)

EPA843-F-06-004
Office of Water
May 2006

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Ducks Unlimited . . . . . www.ducks.org

"Economic Valuation of Environmental Benefits" . . . . . www.nemw.org/ERconval.htm

"Economic Valuation of Wetlands: A Guide for Policy Makers and Planners" . . . . . www.ramsar.org

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National Marine Fisheries Service. . . . . www.nmfs.noaa.gov

National Oceanic and Atmospheric Administration. . . . . www.noaa.gov/floods.html

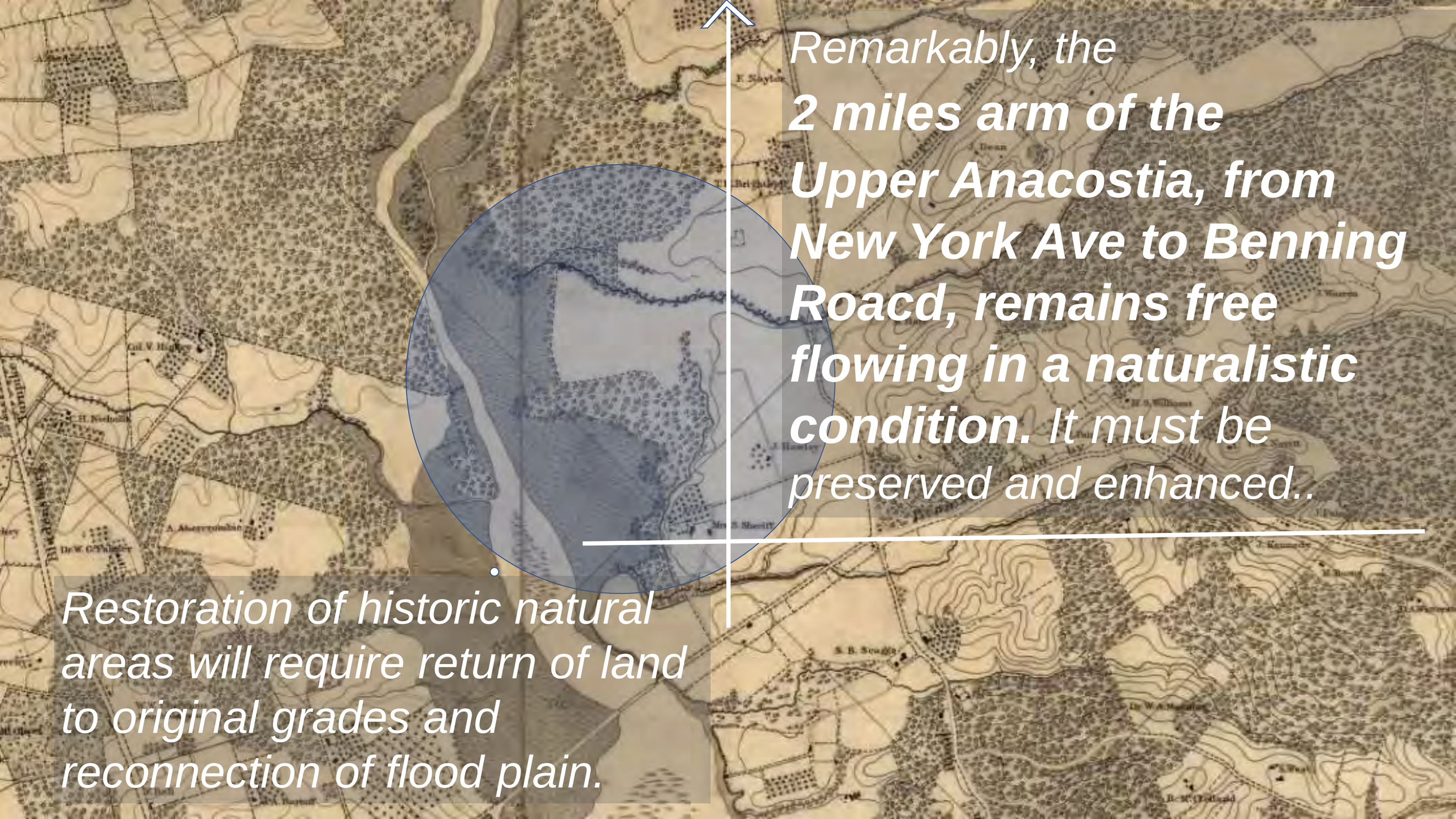
"National Survey of Fishing, Hunting and Wildlife-Associated Recreation" . . . . . www.fws.gov

"Status and Trends of Wetlands in the Conterminous United States 1998 to 2004. . . . . http://wetlandsfws.er.usgs.gov/status_trends/index.html

In Print:

Constanza, R. R., R. d'Arge, R. de Groot, S. Farber, M. Grasso, B. Hannon, K. Limburg, S. Naeem, R.V. O"Neill, J. Paruelo, R.G. Raskin, P. Sutton, and M. van der Belt. 1997. "The value of the world's ecosystem services and natural capital." Nature 387:253-260

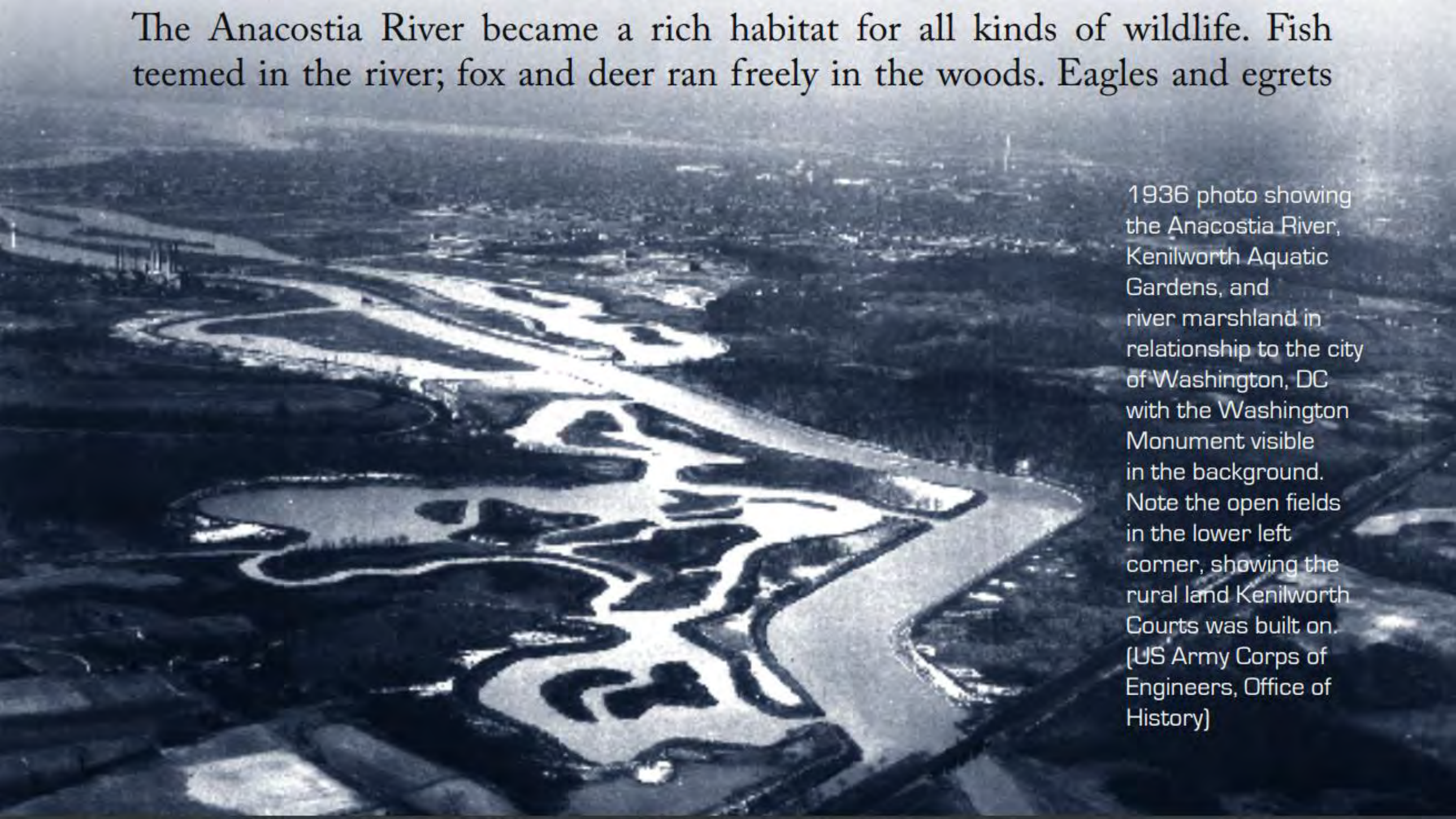
For additional information, visit the U.S. EPA's website (www.epa.gov/owow/wetlands), or call the toll-free Wetlands Helpline at 1-800-832-7828.



Remarkably, the ***2 miles arm of the Upper Anacostia, from New York Ave to Benning Roacd, remains free flowing in a naturalistic condition.*** *It must be preserved and enhanced..*

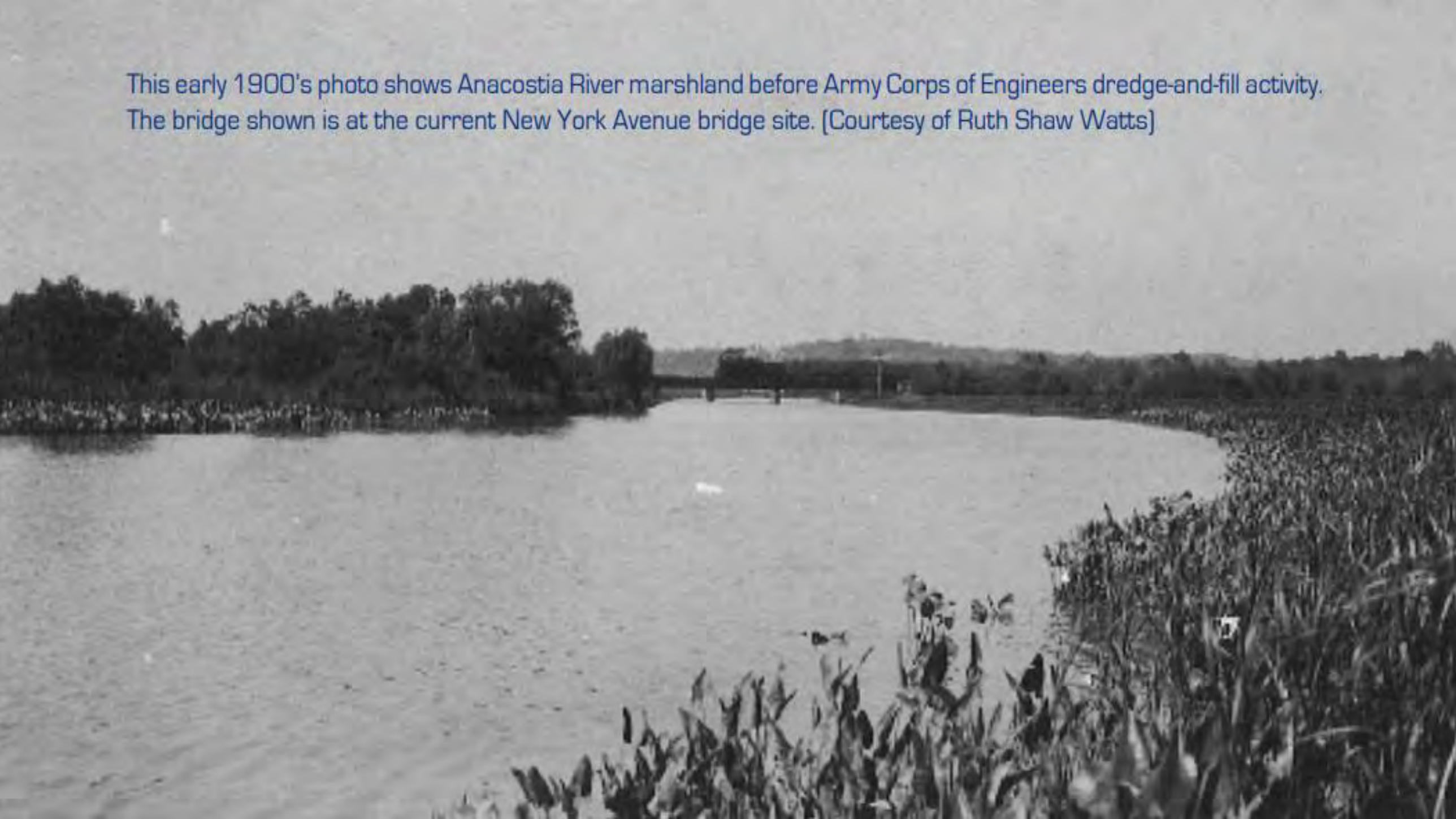
Restoration of historic natural areas will require return of land to original grades and reconnection of flood plain.

The Anacostia River became a rich habitat for all kinds of wildlife. Fish teemed in the river; fox and deer ran freely in the woods. Eagles and egrets



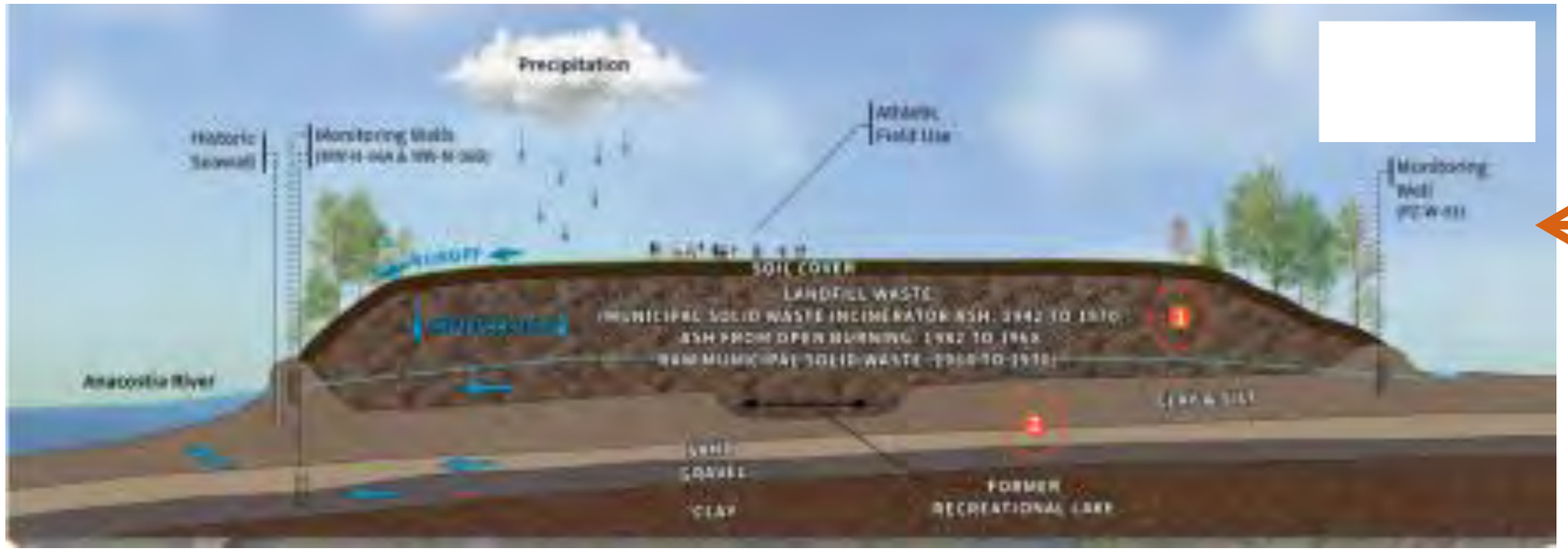
1936 photo showing the Anacostia River, Kenilworth Aquatic Gardens, and river marshland in relationship to the city of Washington, DC with the Washington Monument visible in the background. Note the open fields in the lower left corner, showing the rural land Kenilworth Courts was built on. (US Army Corps of Engineers, Office of History)

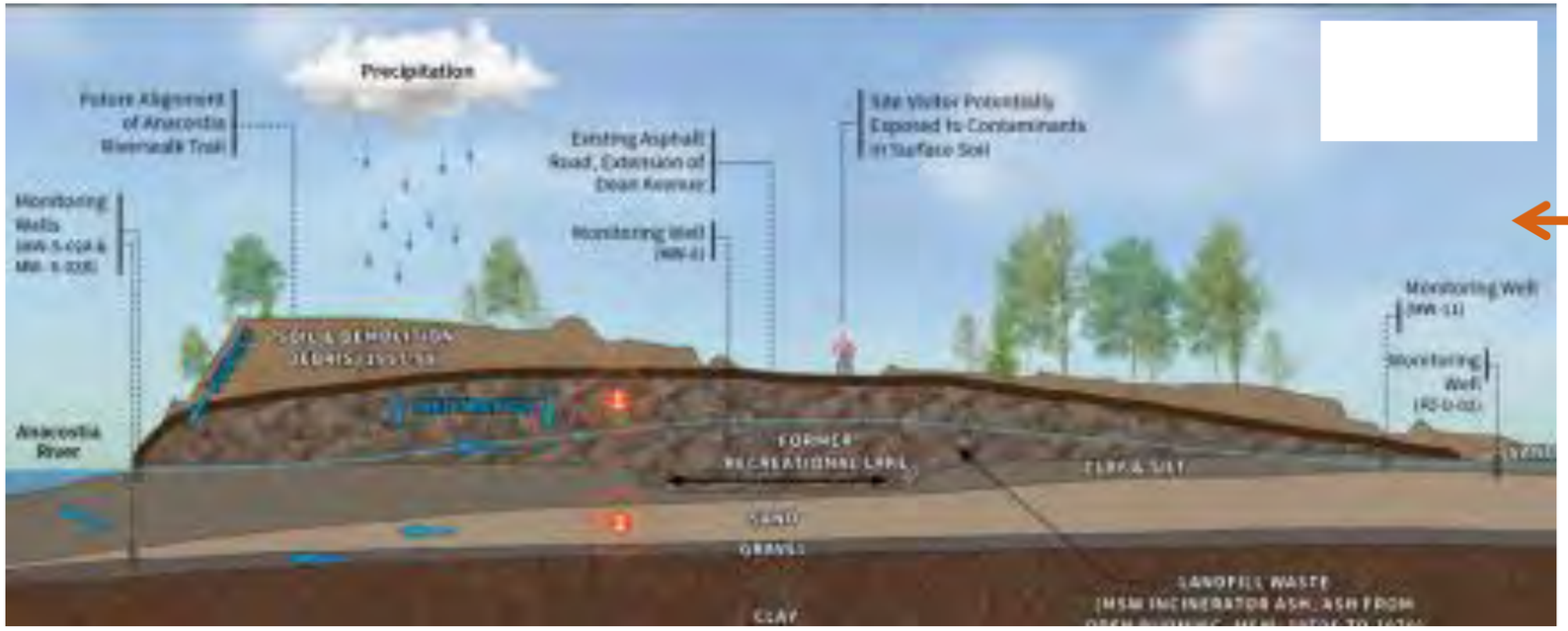
This early 1900's photo shows Anacostia River marshland before Army Corps of Engineers dredge-and-fill activity. The bridge shown is at the current New York Avenue bridge site. (Courtesy of Ruth Shaw Watts)



EXISTING CONDITIONS: MASSIVE AMOUNT OF FILL ADDED

- *DISCONNECTED FLOOD PLAIN - FRAGMENTED NATURAL AREA*





Kenilworth Arm of Anacostia River

approximate elevation of KPN

typical high tide

typical low tide

after decommissioning of landfill and PEPCO Plant

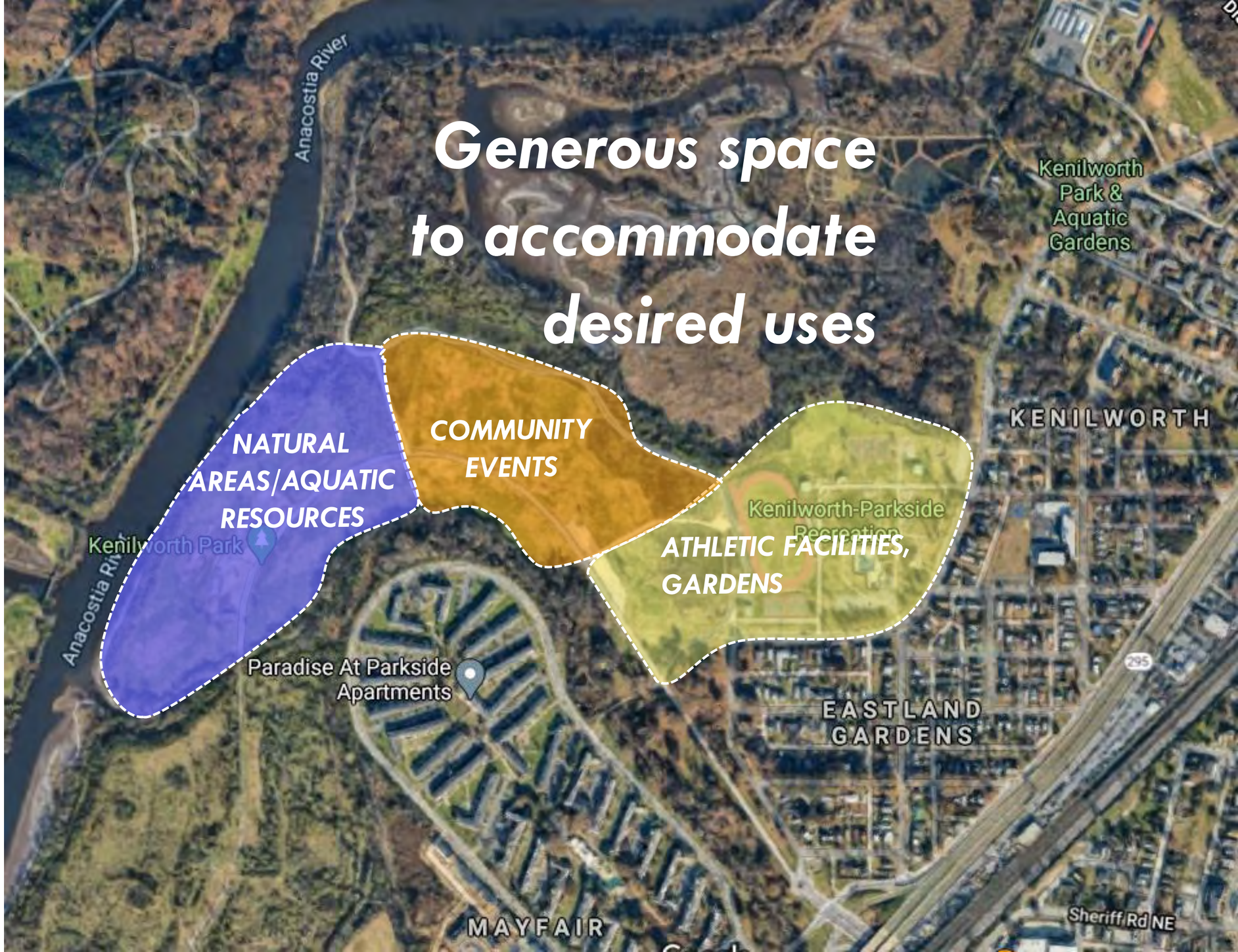
2014

COMPARABLE METROPOLITAN AREA PARKS

BLADENSBURG WETLANDS (ANA 11)

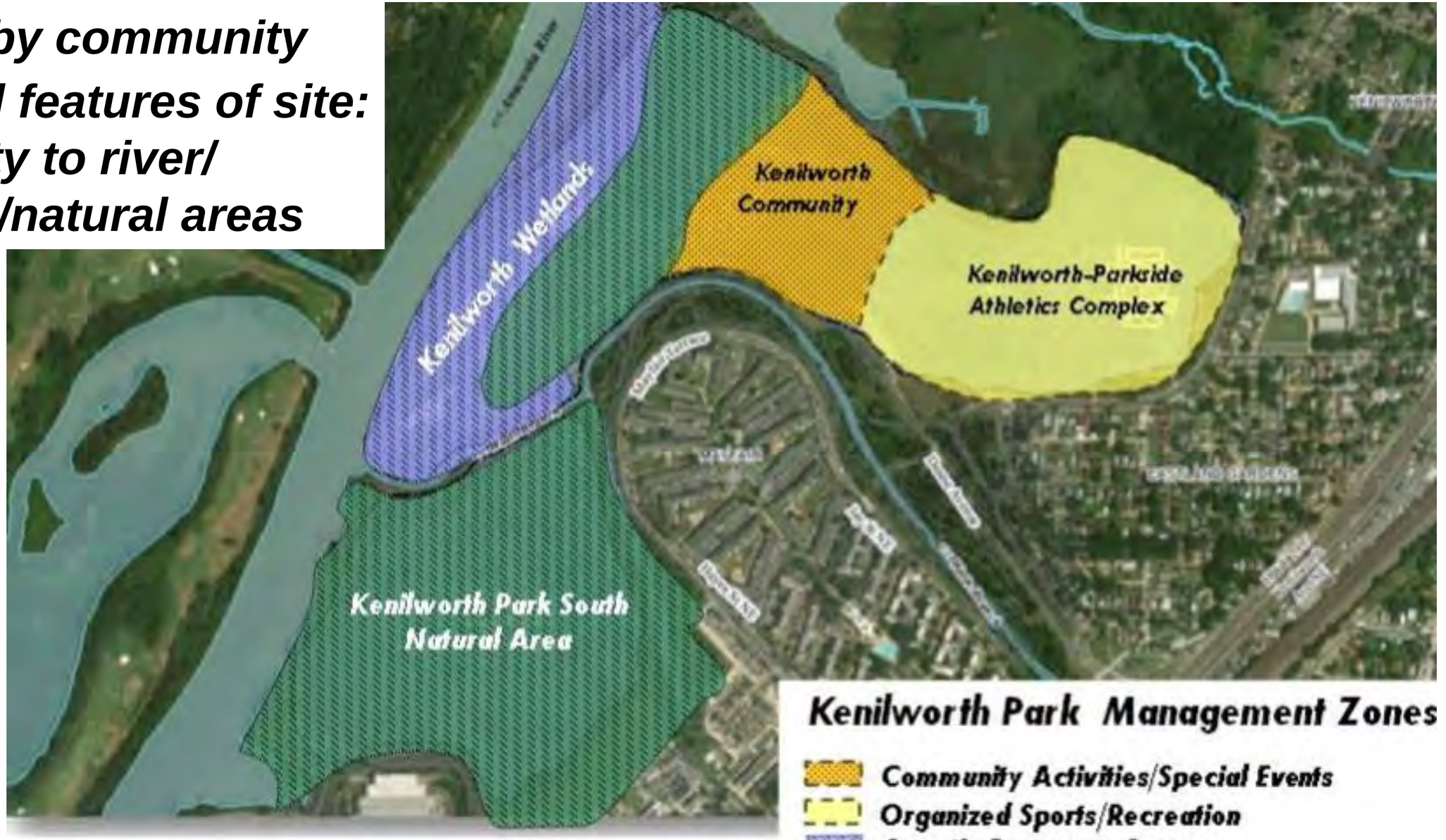
CHUCK BROWN MEMORIAL PARK

RAYMOND A DuFOUR ATHLETIC CENTER

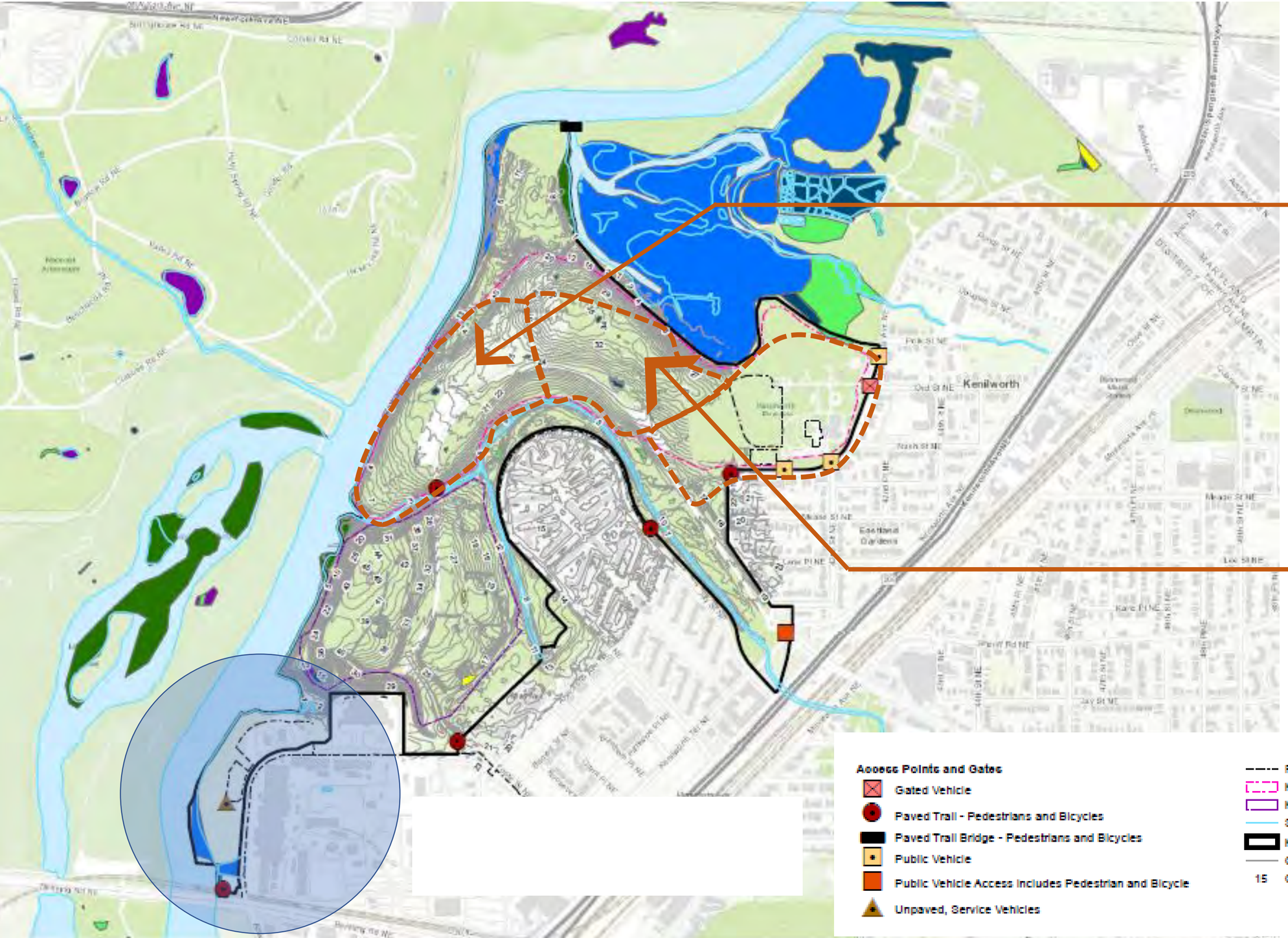


Land use based on:

- ***access by community***
- ***physical features of site: proximity to river/ streams/natural areas***



Requested Alternative 6



Area requires significant grading to reconnect flood plain

REMOVE LANDFILL AND OVERLYING MATERIAL TO ALLOW APPROPRIATE GRADING

Area requires significant grading for transition to adjacent areas

- ***EXAMPLE OF PHASED SITE IMPROVEMENT/REMEDIATION***
- *Locate recreational facilities adjacent to neighborhood*
- *Allow 100% removal of landfill material in hatched area as needed*
- *Improve appearance and Connection to community along Anacostia Ave*

Anacostia Ave

Community Center

complete landfill removal if required

PRIORITY: community assets

Organized sports and recreation, community gardens

ATTACHMENT 20

From: Trey Sherard <trey@anacostiariverkeeper.org>
Sent: Saturday, March 13, 2021 12:01 AM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] Anacostia Riverkeeper comments on Kenilworth Landfill Proposed Cleanup Plan

Donna, thank you for all of the work you've put in on this project but most especially for the truly responsive and transparent way you've worked with us and all the other stakeholders on this phase of public comment. Please find attached our comments on the proposed cleanup plan and as always, feel free to reach out if you have any questions about them.

Trey Sherard
Anacostia Riverkeeper
(910) 200-0788

March 12th, 2021

Donna Davies
National Park Service
1900 Anacostia Drive
Washington, DC, 20020

RE: Anacostia Riverkeeper comments on the Kenilworth Landfill Proposed Cleanup Plan

Anacostia Riverkeeper would like to thank NPS, in particular Donna Davies, for being incredibly responsive and working with us and so many other stakeholders to ensure the continued refinement of public comments on this plan. Early concerns held by Anacostia Riverkeeper about engagement of the communities closest to the site were greatly mitigated by the 30 day extension to allow APACC's additional engagement of residents. We also appreciate the initial comment period being 90 days.

Following the last round of interim responses to comment and the public discussion at the March 5th APACC meeting of those as well as the conceptual plan submitted to you by DOEE, many of Anacostia Riverkeeper's topical concerns have been tentatively laid to rest. However, the fact that so much of the design resulting from this plan is still to be determined leads us to reiterate our concerns here for the record, in the event that the actual outcomes are not as beneficial to the river and those who live and recreate along it as discussed March 5th.

Anacostia Riverkeeper supports a hybrid plan for Kenilworth Park North combining excavation of certain areas with clean fill cover of others. Specifically, we would like to see excavation and removal of landfill material and cover along the southern boundary along Watts Branch, the western boundary along the Anacostia River, and potentially portions of the northern boundary where wetland habitat connections could be made in the future to Kenilworth Marsh and the Kenilworth Aquatic Gardens. In this vein, we whole-heartedly support similar aspects of the plan presented to you by DOEE and shown in the March 5th APACC meeting. To that end, we support alternative 5 if restricted to only the alternatives presented in this proposed plan, but would happily support a hybrid alternative of 5 and 3 if it were provided. We certainly do not wish to see the entirety of Kenilworth Park North excavated as that will be unnecessary for many recreational amenities, particularly if they are located at the eastern end closest to the neighborhoods.We trust that NPS, DOEE, and DPR will continue to work together as closely as promised on the remedial design and look forward to the important information about the various agencies' roles that will be laid out in the transfer agreement still pending.

The remediation of the Kenilworth Landfill is shining opportunity to restore a site mired in environmental racism, and create a public amenity that meaningfully improves both the Anacostia River and the lives of the communities living, working, and playing there.

Trey Sherard
Anacostia Riverkeeper

515 M St. SE, Suite 218, Washington, DC 20003 / 202-863-0158
www.anacostiariverkeeper.org / riverkeeper@anacostiariverkeeper.org

ATTACHMENT 21

From: Radha Neelakantan <radhaneela@gmail.com>
Sent: Saturday, March 13, 2021 10:06 AM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] KPL Proposed Plan Public Comments

Dear Ms. Davies,

I appreciate the opportunity to comment on the November 2020 Plan to address contamination at Kenilworth Park. As a former board member of the DC Audubon Society, I have led birding walks at Kenilworth Park (KP), and regularly go birding there on my own.

Thank you for making plans to address public exposure to the toxins leaching out of the former landfill site. I am writing to mention some areas of concern to the birding community that I hope will be taken into account when finalizing the plans:

- KP has a number of well-established, "no-mow" meadows that contain a mix of native and non-native grasses, forbs and shrubs, a rarity in DC. In season, these meadows support uncommon DC species such as American Kestrel, Grasshopper Sparrow and Blue Grosbeak. American Woodcocks also display herein early spring, and may stay to breed. In addition, these meadows provide important winter habitat for other uncommon bird species, including Merlin, Eastern Meadowlark, Savannah Sparrow and American Tree Sparrow. In migration, they are filled with American Pipits, Palm Warblers and the occasional rarity like Nelson's Sparrow. Regenerating “old field”, scrub and the Park’s fringing marsh are also extremely important for birds. For this reason, Kenilworth Park is one of the most birded areas of DC, with many birders visiting almost daily. In fact, Kenilworth Park and the adjacent Aquatic Gardens are the second most-visited eBird Hotspot in the District. [eBird hotspots are birding sites of special importance.] To date, almost 7000 eBird Checklists have been submitted for KP/KAG, and 246 species have been recorded there.

  The ongoing Maryland/DC Breeding Bird Atlas Project has identified over 25 confirmed or probable breeding species in this important natural area, in just the first year of surveying. These include: Wood Duck, Killdeer, Green Heron, Cliff Swallow, Marsh Wren and Swamp Sparrow.

  Because KP is such a unique area, the birding community is naturally concerned with actions that could harm or even eliminate vital bird habitat. For example:

- Will the existing no-mow meadow areas be uprooted, with all vegetation removed, in order to cap with fill? This will cause a great deal of likely permanent loss of critical bird habitat. Even replanted, it will take years to recover. Can the remediation be done without disturbing the meadows?

- Ideally, the remediation will not disturb the existing fringing shrub/vine habitat and the marsh.

- KP North also has several small but important wetland/pools that attract shorebirds during migration. We feel these should be left undisturbed as much as possible.

Thank you for taking these comments into account to ensure the protection of Kenilworth Park’s important living resources.

Sincerely,

Radha Neelakantan
DC Audubon Society Board Member 2018-2020

ATTACHMENT 22

From: Frances Raskin <frances.raskin@me.com>
Sent: Friday, March 19, 2021 8:38 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] Fwd: Comments on Proposed Plan for Cleanup of Kenilworth Park Landfill Site

Dear Ms. Davies:

Thank you for the opportunity to submit comments on the November 2020 Proposed Plan for Cleanup of the Kenilworth Park Landfill Site. I am a birder and longtime resident of Washington, DC, and have spent a lot of time at Kenilworth Park.

I understand that NPS intends to pursue alternative 3. While this is the best alternative in terms of cost and long-term benefits, one of my concerns about this alternative is that this plan appears to prioritize sports recreation over all other uses. There are many, many sports fields in Washington, DC and the surrounding areas. Conversely, there are very few natural areas for wildlife, birds, and people to enjoy. The other two natural areas are Rock Creek Park and Theodore Roosevelt Island, both of which are in northwest Washington. The citizens of northeast Washington also deserve a place to spend time in nature.

Over 240 bird species have been recorded in Kenilworth Park, including birds that are scarce elsewhere in DC. Kenilworth Park also is one of the most heavily birded parks in DC. Considering the threats that birds, bees, butterflies, and other wildlife is facing, it is my hope that NPS will prioritize conservation in the remediation and restoration of Kenilworth Park. Below, I provide some background on the birds that frequent and/or breed in Kenilworth Park and suggestions for ensuring that they continue to thrive in the park.

In Kenilworth Park South, American Woodcocks perform their aerial breeding displays in the grassy meadow on both sides of the path. After performing their aerial displays, the birds land in the path and call to attract mates. They perform at sunset and sunrise throughout the month of March. Improving the bike path will lead to a dramatic increase in bicyclists, which will negatively impact this shy and rapidly declining species. American woodcock populations have fallen steadily since the early 1970s, and Kenilworth Park South is one of only two places in DC where these unique birds perform their breeding displays.

In Kenilworth Park North, the no-mow areas attract sparrow species that are rare elsewhere in the city, including Grasshopper, Clay-colored, Vesper, American Tree, and Field Sparrows. It is important to maintain this habitat to help these species, all of which have declining populations. Many of these species are experiencing dramatic population declines due to loss of habitat, pesticides, global warming, and hazards while migrating (city lights). Grasshopper Sparrows have experienced a 72 percent population decline since 1966. These no-mow

areas are the only “meadow” habitat in Washington, DC, and it is my hope that NPS will preserve the existing habitat and create new native plant meadows as part of the restoration.

Other species of conservation concern that have been recorded regularly in Kenilworth Park North include Eastern Meadowlark (77 percent population decline since 1970), Black-billed Cuckoo (68 percent population decline since 1970), Yellow-billed Cuckoo (52 percent population decline since 1966), Chimney Swift (67 percent population decline since 1970), Bobolink (53 percent population decline since 1970) and American Pipit (30 percent decline since 1970). Kenilworth Park is one of the only places in the city to see many of these species, particularly grassland species like Grasshopper Sparrow, Eastern Meadowlark, and Bobolink.

Last year, many birders enjoyed watching two pairs of American Kestrels hunting in the fields in the southwestern section of Kenilworth Park North (where a large parking lot shows on the Alternative 3 map). In this area, the trees along the river are filled with migrating warblers and other neotropical migrants in the spring and early summer. This would be an excellent area to create a native meadow to support these Kestrels and the other birds that rely on the habitat that Kenilworth Park provides. This parking lot and “existing sports fields” are never used by anyone other than birders, and thus it would be an excellent area to restore to native plant species.

Extending the riverwalk trail through the southwestern section of Kenilworth Park North would be detrimental to the migrating warblers and the American Kestrels. American Kestrel populations have declined 50 percent in 50 years. The installation of the paved bike trail through the northern corner of Kenilworth Park (the wooded area between the track and Kenilworth Aquatic Gardens) transformed an area that provided excellent habitat for neotropical migrants to a zone with few bird species due to the disturbances from the many bicyclists who speed through on the path. It would be a shame to see NPS again destroy a refuge for migrating birds in the southwestern area of Kenilworth Park North (along the Anacostia River) by extending the Anacostia Riverwalk Trail without limiting bicycle access. Many bicyclists fly by so fast (often riding two or three abreast) that they pose a hazard to birders and pedestrians.

Our native birds require natural areas and native plants to survive and, as noted above, many are facing steep population declines. NPS should do everything possible to ensure their continued presence in DC. It is my hope that NPS will prioritize native plants over Bermuda grass, exotic trees, and other plants that do not support our native birds and wildlife. There are opportunities to provide native plant buffers along the bike paths and south of Deane Avenue (across the road from the main fields). Native plants are essential for bees, butterflies, and birds. It also is my hope that NPS will give nature and equal footing with other forms of recreation, primarily sports.

Thank you again for the opportunity to provide these comments.

Frances Raskin
333 F Street NE
Washington DC 20002
(202) 330-1742

ATTACHMENT 23

Donna Davies
CERCLA Project Manager
484-663-1043

From: Davies, Donna L <Donna_Davies@nps.gov>
Sent: Friday, April 23, 2021 4:42 PM
To: Kirsten Gresk <kirsten.gresk@gmail.com>
Cc: Mcginty, Sean P <sean_mcginty@nps.gov>
Subject: Re: [EXTERNAL] From NPS.gov: Clarity on hazard of kenilworth park - family has visited frequently

Dear Kirsten,

As a follow-up to my earlier email, this email includes more information about how the human health risk assessment was completed at Kenilworth Park and addresses concerns you raised over your recent visits to the park. Based on extensive sampling and analysis of soil, water, and soil gas, NPS concluded that the potential exposure risk to visitors is inconsequential and that there is no need to close or restrict access to the open fields you visited to social distance.

NPS prepared the risk assessments (human health and ecological) at Kenilworth as part of environmental investigations completed pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Under CERCLA, risk assessments are completed to determine if contaminants in the environment are present at levels that may pose a health risk and if cleanup of a site is needed. The explanation below is intended to

provide you with a general understanding of the human health risk assessment process. Documentation of the risk assessments completed for the Kenilworth Park Landfill Site can be found in the 2007 and 2008 Remedial Investigation reports and the 2019 Remedial Investigation Addendum report which are available here: https://www.nps.gov/nace/learn/management/kplsh.htm.

Human health risk assessments follow the four-step process outlined below:

Hazard Identification: The first step of the risk assessment process is to identify which chemicals are present in soil, air, and water. NPS collected samples from each of these media at Kenilworth Park and had them analyzed by laboratories to identify what potential contaminants are present and at what concentrations. Understanding the concentrations of contaminants is important because the health risk from exposure to a contaminant depends on its concentration in the environment. For the contaminants found at Kenilworth, which are also present in the urban environment outside of the park, low concentrations and relatively infrequent visitor exposure are not harmful to human health.

Exposure Assessment: The second step of the human health risk assessment process is the exposure assessment, which evaluates who may be exposed to contaminants ("receptors"), and how they could be exposed ("exposure pathways"). The Kenilworth Park Landfill risk assessment evaluated a park visitor who could come into contact with contaminants in surface soil (soil within the upper 12 inches of the ground surface) during typical park activities like walking, running or playing sports. Visitors could potentially be exposed to contaminants in surface soil through direct contact on the skin, by the transfer of soil on one's hands to one's mouth, or by inhaling contaminated dust. These are the most relevant exposure pathways for a park visitor. Although contaminants have been detected in other media such as groundwater, a park visitor is not expected to encounter these media. The risk assessment considered an exposure condition where a person who grows up in the neighborhood visits the park almost daily through childhood and extending into adulthood. The risk assessment calculations assume that the child/adult visitor could be exposed to contaminants in soil for two hours per day, 350 days per year for 30 years. These are very conservative (health-protective) estimates of exposure. Also, the risk assessment conservatively assumed that contaminated soil is bare (unpaved and not vegetated). Most of the park is covered with vegetation and the trails are mostly paved or gravel; these coverings reduce the potential exposure to contaminants found in surface soil.

Toxicity Assessment: This third step of the risk assessment process identifies published information about the potential health effects of various contaminants that will be used to assess risk. Toxicological information is obtained from the US Environmental Protection Agency (EPA) and other federal or state agencies. Toxicologists often use the expression "the dose makes the poison". What this means is that often environmental contaminants are non-toxic at lower concentrations and with less frequent exposure. The higher the concentrations and more frequent the exposure, the higher the potential for toxic effect.

Risk Characterization: The last step of the risk assessment process is the risk characterization. This step compares the information from the exposure assessment step to the toxicity information to calculate a "risk estimate". For all contaminants except for lead, two types of risk estimates are calculated: a hazard index, which evaluates non-cancer effects (like liver or kidney damage), and excess cancer risk, which evaluates the incidence of contracting cancer (above and beyond typical cancer rates) specifically resulting from exposure to contaminants at a site. Exposures to lead are evaluated by estimating a theoretical blood lead level in a young child using an EPA model, and comparing that estimated number to an upper blood lead limit set by the Centers for Disease Control. It is important to note that all of these risk estimates are not actual measurements of cancer incidence rates or other health effects; instead, these estimates are used only as a tool to determine the need for cleanup of a site.

The Kenilworth Park Landfill risk assessment concluded that a long-term, year-round visitor at Kenilworth Park (exposed to soil at the conservative exposure rates identified above - two hours per day, 365 days for 30 years) would have a 1 in 32,000 increased chance of

contracting cancer over the course of their lifetime as a result of exposure to contaminants in surface soil. For perspective, the average person in the United States has a 1 in 3 chance of contracting cancer over the course of their lifetime as a result of diet, genetics or other factors. Similar conservative assumptions about year-round exposure were used to evaluate noncancer effects, such as developmental issues related to lead.

As you might gather from the description above, the assumptions for exposure are highly protective and do not represent the typical park user. The increased risk of contracting cancer or other adverse health effect as a result of exposure to contaminants in soil is very low, even using these very conservative exposure scenarios (21,900 hours of exposure). Because your family's exposure was much lower (15-20 days over the year) than the frequency used in the risk assessment (350 days a year), your potential risks would be approximately 15-20 times lower than those estimated (assuming you and your family continue visiting at this frequency for 30 years).

As you are aware, risk to children from exposure to lead is of particular concern. Lead is found throughout urban environments due to the historical use of leaded gasoline and application of lead-based paint. Lead can also be found indoors in household dust, old paint and sometimes in drinking water due to lead solder and lead pipes. The levels of lead detected in surface soils at Kenilworth Park do not represent a significant exposure pathway to visitors, including children, particularly when compared to other urban and household sources. You noted in your email that you frequently wiped and sanitized hands before eating any food. Continuing the habit of frequent hand-washing, is the most effective thing you can do to limit you and your children's exposure to lead after spending time in any outdoor urban environment, including Kenilworth Park.

Risk Management: Under the regulations that govern how CERCLA is implemented (The National Oil and Hazardous Substance Pollution Contingency Plan; or NCP), there is a range of acceptable long-term cancer risks that can be adopted for making cleanup decisions. Although the starting point for site cleanup, referred to as the "Point of Departure", is 1 excess cancer risk in one million, the acceptable range under the NCP is 1 in ten thousand to 1 in one million. Although the risk posed by contaminants at Kenilworth Park (1 in 32,000) is within this acceptable risk range, NPS adopted the lowest end of the range (1 in one million) to determine the need to cleanup and for developing cleanup goals at the park.

If you have any further questions please contact me.

Donna Davies

CERCLA Project Manager

484-663-1043

From: Kirsten Gresk <kirsten.gresk@gmail.com>

Sent: Wednesday, April 21, 2021 11:53 AM

To: Davies, Donna L <Donna_Davies@nps.gov>

Cc: Mcginty, Sean P <sean_mcginty@nps.gov>

Subject: Re: [EXTERNAL] From NPS.gov: Clarity on hazard of kenilworth park - family has visited frequently

Hi Donna,

Thank you very much for the follow up.

Kirsten

On Apr 21, 2021, at 11:46 AM, Davies, Donna L <Donna_Davies@nps.gov> wrote:

Hi Ms. Lynch,

The NPS risk assessors are working on a response to address your specific concerns. I expect their assessment to be will completed in the next few days.

Donna Davies
CERCLA Project Manager
484-663-1043

From: Kirsten Gresk <kirsten.gresk@gmail.com>
Sent: Wednesday, April 21, 2021 9:34 AM
To: Kirsten Gresk <kirsten.gresk@gmail.com>
Cc: Davies, Donna L <Donna_Davies@nps.gov>; Mcginty, Sean P <sean_mcginty@nps.gov>
Subject: Re: [EXTERNAL] From NPS.gov: Clarity on hazard of kenilworth park - family has visited frequently

Hi Donna,

Just wanted to follow up on my questions below. Any additional information you can provide would be most helpful.

Thank you,
Kirsten Lynch

> On Apr 15, 2021, at 8:59 AM, Kirsten Gresk <kirsten.gresk@gmail.com> wrote:
>
> Hi Donna and Sean -
>
> Thank you so much for your response and thank you in advance for the future follow up you mentioned with more detail. I also wrote to DOEE with the following message that I think better captures my concerns and has more detail. I have shared it below for you.
>
> I have read most of the materials, and that has alleviated a little bit of concern, but I'm still not totally understanding the specific exposure my family has taken on and if its something we need to asses/look into health

wise.

I actually didn't know at all that the park was under analysis, all of this was new to me over the weekend when I looked up detail on the park. We had been going so frequently, but other than looking the park up on google maps, had never thought to look it up for more detail as all we were looking for were fields that were good for running around and social distancing.

You will see in my note below that we frequented the park more like 15 times not 25 times, I verified via pictures we took while there.

Thank you very much for your time and attention to my concerns, really appreciate it.

Email to DOEE:
I am writing to see who I may be able to speak with regarding the toxicity of kenilworth park north. My family and I just learned that the park is still considered toxic, despite no signage at the park. I have looked up and read some information on this since I found this out and would really like more information. My concern mostly stems from my family's risk specifically having been there many times.

This is very concerning for the health of my family as we have frequented the park about 15 times for 2-3 hours each time the past year. Many of the times I was pregnant(!!), all 15 times my husband, myself, and our 3 year old daughter were there. The last time we went (yesterday) our second daughter was with us and she is 2 weeks old. We started going there from a tip online that said the park is good for social distancing during covid, so that is why we went so many times. I found out the park was still considered toxic yesterday.

When we went to the park, we played in the field, kicking a ball or running around, had picnics in the grass, played other games, took rocks and gravel and threw them in puddles , etc. most of our time was spent directly in the grass, typically the side closest to the running track, but at times we would run up and down the large field. A couple times we did use the bike trails, but afterward would have a picnic in the grass. From what I read online there are soil contaminants and I know my 3 year old definitely came home with dirt under her nails some times due to scraping up gravel and rocks and we of course got muddy shoes on occasion so had contact with the soil for sure. Our daughter did lay directly or sit directly in the grass many times. We did always wipe hand sanitize hands before eating, but I'm not sure how much that will mitigate our risk. We do not plan on going back to the park.

It dawned on me that there were never very many people there despite the expanse of open fields. So I looked up the park yesterday and was extremely concerned at what I found with the park still being considered toxic. I would never had taken my family there had I known.

What I would like to know is what the calculated risk is that my family took and how concerned we should be. Should we get lead tests? Should we get other tests for other toxic substances to see if our exposure is an issue for the toxic substances that are in the soil there? My husband has already had cancer once so things like this are of high alert for us.

I'd like to take whatever measures we can to understand how we can better know what health risks may be a result of our time at the park due to the contaminants in the soil and water there.

If someone with greater knowledge on the park's toxicity could contact me that would be most appreciated

Kirsten

> On Apr 14, 2021, at 4:22 PM, Davies, Donna L <Donna_Davies@nps.gov> wrote:
>
> Good afternoon Ms. Gresk,
>
> I'm very sorry learning about the history of Kenilworth Park Landfill caused you concern. As you may know, NPS is addressing the Kenilworth Park Landfill Site in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Human health risk is assessed as part of the CERCLA process. This step has been completed at the Kenilworth Park Landfill Site and it was determined that it was not necessary to close the park to visitors.
>
> I want to provide a more complete response to how risk is assessed under CERCLA and I also want to address the specific concerns you outlined in your email below; therefore, I will provide a more detailed response to your email in the coming days.

I also wanted to provide a link to the NPS Kenilworth Park Landfill Site
webpage. https://www.nps.gov/anac/learn/management/kpls.htm

In addition to providing details on the site history and environmental investigations completed, this webpage also explains the CERCLA process. You can review additional information explaining the risk assessment process under the Want to Know More? section of the webpage.

I will be in touch in the coming days, if you have any additional questions, please email me or Sean McGinity who is cc'd on this email and is the public information officer for National Capital Parks East (NACE). NACE is the park unit where Kenilworth Park Landfill is located.

Donna Davies
CERCLA Project Manager
484-663-1043

From: no-reply@nps.gov <no-reply@nps.gov>
Sent: Sunday, April 11, 2021 8:59 AM
To: Davies, Donna L <Donna_Davies@nps.gov>
Subject: [EXTERNAL] From NPS.gov: Clarity on hazard of kenilworth park - family has visited frequently

Email submitted from: kirsten.gresk@gmail.com at /anac/learn/management/kpls.htm

Use kirsten.gresk@gmail.com to reply to this message

Category: Safety

Good morning - I understand you may be able to help me obtain some information on the risk of kenilworth park. My family has visited the fields adjacent to the track and bike path at kenilworth park about 20-25 times for 2-3 hours at a time in the last calendar year. We saw a tip online that it had open fields and was good for social distancing during covid, so we were excited to find it. Come to find out yesterday, when it dawned on me that it was a little odd not many people frequented the fields, to look up more information on the park. I so wish I had done this last year!!! I was horrified to find out the park was a landfill and still considered toxic. Our 3.5 year old has been with us over the year every time we have gone. I have gone several times while pregnant. We just had a baby 2 weeks ago and she came with us yesterday. I've found some information on risk but I don't totally understand it in terms of how often we have been to the park. I'm very concerned we have put our family in harms way in a big way and I'm concerned on cancer risk, learning disabilities, other health concerns, lead exposure etc. would you be able to provide more clarity on the risk we took on? We had no idea this park/fields were considered toxic. We have not seen a sign saying not to go on the fields or we would never have gone there and spent so much time there. We also biked on the trails a few times but then would go to the field to have a picnic lunch. The bike trails are very popular. With covid, we always wiped and sanitized hands before eating any food, if that were to help. I am unsure if it's potential consumption of soil, just being at the park with anything that may waft up that is buried or other that is the concern, or something else. I am not sure if we need to get tested for lead or other exposure to make sure we take action or if that is not needed based on our frequency to the park. Thank you for any information you can provide to this concerned mother. I really appreciate it. Any data or risk assessment or information understanding how often we have been would be great. I just wish we had known sooner. Thanks again, Kirsten Lynch Kirsten.gresk@gmail.com 202-766-4265 We would go play games, kick a ball, fly a kite,

ATTACHMENT 24

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1- National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

MEMORANDUM

TO: Administrative Record for the Kenilworth Park Landfill Site

FROM: Kenilworth Park Landfill Contaminated Site Team (CST):
Donna Davies, National Park Service (NPS) Project Manager
Jonathan Ordway, VHB (NPS Contractor)
Jeffrey Johnson, Department of the Interior Legal Lead

DATE: July 15, 2022

CC: Shawn Mulligan, Lead, NPS Environmental Compliance and Cleanup Division

RE: DOEE Comments on Proposed Plan for Cleanup of the Kenilworth Park Landfill Site

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The purpose of this memorandum is to convey responses to comments on the Kenilworth Park Landfill (KPL) Proposed Plan letter received from the District of Columbia (District) Department of Energy and Environment (DOEE). DOEE submitted those comments in the attached letter, dated February 15, 2021

The DOEE comment letter is divided into the following four sections:

1. Polychlorinated Biphenyl (PCB) Analyses and Data Gaps
2. Additional Applicable or Relevant and Appropriate Requirements (ARARs)
3. Reasonably Anticipated Future Use
4. Institutional Control Plan

Each section of DOEE's letter includes at least one comment and one recommendation. DOEE's comments (and, in some cases, recommendations) associated with each section are presented in italics below, followed by NPS's response to each comment.

1.0 POLYCHLORINATED BIPHENYL (PCBS) ANALYSES AND DATA GAPS

Although not referred to as a comment, the preamble text for the PCB Analysis and Data Gaps section included in DOEE's letter contains comments for which NPS has provided responses (presented below).

DOEE Preamble Comment:

To date, the concentrations of PCBs at Kenilworth Park Landfill-North (KPN) have been assessed using total Aroclor analyses. Although these analyses can be accurate when one un-weathered Aroclor is present at above-detection level concentrations, EPA Method 8082 generally lacks the sensitivity and resolution of EPA Method 1668. At KPN, it has been shown Aroclors are present in soil and historical groundwater samples. Furthermore, PCBs in the landfill would be decades old and may be highly weathered, and non-Aroclor PCBs are present in incinerated waste. These conditions can result in inaccurate assessment of total PCB concentrations using EPA Method 8082. Because of the evolving understanding of PCB distribution movement in the environment, coupled with better laboratory analyses and field investigation techniques, we request that NPS perform a limited field investigation that includes PCB congener analyses for surface soil and groundwater data gaps, as described below.

NPS Response:

NPS collaborated with DOEE to identify data gaps after the 2007 and 2008 Remedial Investigation (RI) Reports were published, and completed additional investigations to fill those data gaps. The results of those additional investigations are detailed in the RI Addendum Report released by NPS in June 2019 (JCO 2019). DOEE reviewed the RI Addendum Report and, on August 20, 2019, provided the attached letter to NPS that documents concurrence with the conclusions of the report. DOEE's letter stated the following:

> "*The data gaps identified following completion of the 2007/2008 RIs have been filled. The nature and extent of contamination at the Site has been characterized such that associated human health and ecological exposure risks can be adequately quantified."*

NPS also concluded in the DOEE-reviewed RI Addendum Report that PCBs are not present in or migrating to groundwater at the Site. This conclusion was based on data reported from laboratory analysis of multiple samples collected from the 31 groundwater monitoring wells installed at Kenilworth Park North (KPN). PCBs were only detected in one well (MW-10N) during one groundwater sampling event (conducted March 2006). The 2006 sample was collected using a bailer, which was still common practice at the time; however, that sampling protocol is no longer the preferred or recommended method for collecting groundwater samples. That method can cause soil or waste particles to mobilize into the water column, collecting those particles as part of the sample. Chemicals adsorbed or otherwise contained within the solid particles included in the sample will be reported in the analytical results; however, such particles generally do not naturally migrate through groundwater. Therefore, the result that is reported from a sample that contains solids does not reliably characterize the conditions of groundwater at that location.

As outlined in U.S. Environmental Protection Agency (EPA)-published guidance, the current standard protocol for collecting groundwater samples is low-stress (low-flow) purging and sampling. This technique has become standard practice because it does not mobilize solids around the well, thereby collecting samples that more accurately assess concentrations of chemicals migrating through the subsurface. PCBs were not detected in any groundwater monitoring well sampled using the low-flow method. Therefore, NPS believes that the detection of PCBs in one groundwater sample collected using a sampling technique that is known to impact sample quality and representativeness cannot be used to support a conclusion that PCBs are present in, or migrating to, groundwater.

NPS does not consider the nature and extent of PCBs in soil or groundwater at KPN to represent a data gap; however, NPS does not object to collection of additional samples for analysis of PCBs by Method 1668 (PCB congener analysis) during the remedial design phase. NPS acknowledges that PCB congener

analysis will reduce inherent uncertainty associated with investigating environmental conditions and will support comparisons between PCBs found in surface soil and nearby sediment.

DOEE Comment

As stated in the Proposed Plan, PCBs were measured in some surface soil samples at levels that may pose unacceptable human health risk under certain conditions. It does not appear that PCBs were tested for surface soil cap material at KPN that goes right up to the River, Watts Branch, and in the recent fill area. Given this data gap, it should be assumed that the existing cap soil is also contaminated unless proven otherwise. Alternative 3, the Preferred Alternative, does not include capping of all surface soil areas that are yet to be characterized for the presence of PCBs.

DOEE Recommendation

DOEE recommends collection and analyses of surface soils in areas that have not previously been tested to assure that the Preferred Alternative protects against PCB transport to the River via surface water runoff. This includes recent fill areas and areas that lead down to the River. PCBs should be tested for total congeners (not total Aroclors). After these results are known, the design of the Preferred Alternative may need to be adjusted to include additional capping.

NPS Response

The boundaries of the clean soil barrier/cap will be established in the final design prepared during the remedial design phase. These boundaries will be based on the District's final plans for KPN (i.e., within areas of proposed high-frequency and intensity-activities such as athletic fields).

NPS is not opposed to performing additional sampling and analysis to assess the overland flow runoff migration pathway. This additional analysis can also be performed during the remedial design phase and the results can be used to prepare the final design. If analytical results from the planned sampling indicate that additional measures are needed, those measures would be supplementary to the proposed clean soil barrier. To the extent additional remedial measures are necessary, they would be selected through an explanation of significant differences (ESD) or a Record of Decision (ROD) amendment.

DOEE Comment

Sediment samples (total Aroclor analyses) were collected from the Anacostia River, Kenilworth Marsh, and Watts Branch. PAHs, PCBs, and lead were reported in some of these sediment samples, including at a PCB hotspot in the River adjacent to the Site. Groundwater quality investigations undertaken at the Site since 2013 also did not include PCB congener analyses, which are a contaminant of concern for the Anacostia River Sediment Project Interim Record of Decision (ROD). DOEE views the lack of PCB congener data for wells that border the River, Watts Branch, and the Kenilworth Marsh to the north to be a data gap.

DOEE Recommendation

To provide more robust evidence that KPN is not a source of actionable levels of PCBs via groundwater to the River, DOEE recommends installing passive samplers[1] in select monitoring wells located along the Anacostia River, Watts Branch, and Kenilworth Marsh. The passive samplers should be analyzed for PCB

[1] DOEE informed NPS that they no longer recommend the use of passive samplers but will incorporate other methods to further assess PCB concentrations in groundwater.

congeners. If actionable levels of PCB congeners are determined to be discharging to the River, the Preferred Alternative will require additional modification.

DOEE does not believe that the technology of a cap as discussed in Alternative 3 will be substantively changed through the recommended sampling and also understands that the above recommended sampling can be completed during the design phase (pre-investigative) of the project. DOEE recommends opportunities to proceed to the ROD and remedial design while addressing the data gaps be pursued.

NPS Response

As noted in the response to DOEE's Preamble comment above, NPS does not consider the assessment of PCBs in groundwater to be a significant data gap, but does not object to DOEE's proposed sampling during the remedial design phase.

2.0 ADDITIONAL APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs)

DOEE Comment

NPS did not include the District's Critical Areas - Wetland and Stream Regulations (21 DCMR Chapters 25 & 26) when compiling ARARs, and the Proposed Plan did not recognize existing wetlands at KPN. According to the DC Wetlands Registry, ten wetlands totaling approximately 0.5 acres exist within the footprint of the cap proposed under Alternative 3. The District's Wetland and Stream Regulations requires avoidance and minimization of permanent wetland and stream impacts and mitigation for unavoidable impacts.

DOEE Recommendation

DOEE recommends adding the District's Critical Areas - Wetland and Stream Regulations (21 DCMR Chapters 25 & 26) the to the list of ARARs for the Site. In accordance with the Clean Water Act Section 404/401 and the District Wetland and Stream Regulations, all wetlands and streams within the project are required to be delineated. A jurisdictional determination with the U.S. Army Corps of Engineers will be necessary. Both federal and District wetland regulations require avoidance and minimization of permanent wetland and stream impacts, and mitigation will be required for any unavoidable impacts.

NPS Response

According to the District's website,[2] Chapters 25 and 26 did not become effective until May 2021, after DOEE's comment letter was received and after the Proposed Plan was published and publicly released (November 2020). NPS solicited input from the District on ARARs, and these Chapters were not identified. NPS will add 21 DCMR Chapters 25 and 26 to the final ARARs table to be included with the ROD. The boundaries of the clean soil barrier presented in the different alternatives presented in the Proposed Plan were conceptual in nature and were developed to support feasibility-level costs for alternative comparisons (i.e., within 30% below and 50% above actual). Any additional wetlands delineation and potential mitigation that is required will be considered during the remedial design phase.

3.0 REASONABLY ANTICIPATED FUTURE USE

DOEE Comment

[2] https://www.dcregs.dc.gov/Common/NoticeDetail.aspx?NoticeId=N107304

NPS did not fully consider the range of reasonably anticipated future uses that the District intends for KPN. Numerous District plans prioritize future uses of KPN beyond recreation, including flood risk reduction, wetland restoration, and habitat for Species of Greatest Conservation Need (SGCN). These uses should be accommodated in the Preferred Alternative, in addition to recreation.

The following District plans establish goals or identify actions that inform the reasonably anticipated future uses of KPN:

- *Climate Ready DC: Identifies neighborhoods along Watts Branch, including affordable housing units within Parkside at Paradise and the historic Mayfair Mansions located directly adjacent to the Site, as Priority Planning Areas based on vulnerability to climate change.*
- *Resilient DC: Identifies the transfer of KPN to the District as an opportunity to align ongoing and planned investments to achieve community objectives and lower flood risk.*
- *Sustainable DC 2.0: Establishes the goal of planting and maintaining an additional 150 acres of wetlands and creating or restoring a minimum of 200 acres of meadow habitat in the District.*
- *District Hazard Mitigation Plan: Establishes the goal of planting and maintaining an additional 140 acres of wetlands along the Anacostia and Potomac Rivers and smaller streams.*
- *Wetland Conservation Plan: Establishes the goal of no net loss and eventual net gain of wetlands.*
- *2015 Wildlife Action Plan: Recognizes that one species (Northern Long-eared Bat) is listed as threatened, and two species (Spotted Turtle, Tri-colored Bat) are candidates for listing under the federal Endangered Species Act, are potentially present at the Site. The Plan also recognizes that the meadow at KPN that falls within the footprint of the proposed cap functions as Critical Habitat Areas for approximately 43 SGCNs and serves as valuable habitat for many common species. It designates the Site as a Conservation Opportunity Area and a potential area for wetland restoration.*
- *Watts Branch Flood Risk Management Study (draft): Led by the DC Silver Jackets, this study assesses current and future flood risk vulnerability using updated hydraulic models and identifies strategies for addressing flood problems in Watts Branch using a holistic approach. One solution identified within KPN is to enlarge the culvert and bridge opening of Deane Ave. A follow-on study is planned to develop concept plans for specific flood reduction projects, including any additional mitigation areas, pending FEMA grant funding award. The draft study was provided to DC Silver Jackets members in December 2020 and will be finalized in 2021.*

DOEE Recommendation

DOEE recommends considering reasonably anticipated future uses of KPN identified in the above plans in developing its Preferred Alternative.

To reduce flood risk associated with sea level rise and more intense storm events, as well as increase the acreage of wetlands in the District, DOEE recommends not capping 21 acres along Watts Branch and the Anacostia River (shown in green on Figure 1). After KPN is transferred to the District and the remedy is implemented and separate from the CERCLA process, DOEE intends to restore tidal wetlands to this area. As part of the remedy, DOEE therefore recommends implementing institutional controls that would limit area access and prohibit organized sports, recreation, special events, and construction of higher intensity visitor use features in order to address human health risk prior to any wetland restoration efforts. Institutional controls could be a combination of existing natural barriers, newly installed natural

barriers, and signage for the public, as determined suitable through a survey of the site. DOEE would ensure that any tidal wetland restoration addresses human health risk. This area was selected because it falls within the 100- and 500-year floodplain. Further, it is directly adjacent to Parkside at Paradise and the Mayfair Mansions, two developments comprising more than 1,000 housing units that support lower-income residents with backing from the U.S. Department of Housing and Urban Development that are located within the 100-year floodplain. The District would incorporate the future alignment of the Anacostia Riverwalk Trail into the wetland restoration through elevated boardwalks and other design solutions.

Limited meadow habitat exists in the District. To reduce impacts on SGCNs and minimize net loss of habitat at KPN, DOEE recommends not capping approximately 3.5 acres of meadow habitat in KPN (shown in orange on Figure 1), and instead implementing institutional controls to limit access in order to conserve critical meadow habitat for SGCNs. This area was selected because its location adjacent to similar habitat in the Resource Management Area (boundary shown on Figure 1) would provide an area of unfragmented, critical habitat that would support the territory needs of SGCNs. It could take more than 10 years after a cap is installed for native vegetation to become re-established and again provide high-value habitat, leading to loss of some SGCN species and population reductions in other SGCNs currently found at the site. The uncapped meadow area could still be utilized for passive recreation. Institutional controls discussed in the following section would address human health risk by prohibiting more active recreation from occurring in the uncapped meadow. The boundaries of the uncapped area could potentially be adjusted based on further PCB sampling as well as consideration of additional wildlife monitoring and community input during the planning process for the site. DOEE also recommends additional safeguards to minimize impacts to SGCNs in the meadow areas that will be capped, including relocating SGCNs to the uncapped areas of the Site, timing the implementation of the selected remedy to account for SGCN behavior, and developing a planting plan to introduce native plants.

NPS Response

During the remedial investigation/feasibility study phases, the District provided NPS with conceptual plans for the future use of KPN. These conceptual plans were sufficient for NPS to develop and assess alternatives, but they did not include the planned restoration projects that were described by DOEE in its comments on the Proposed Plan. NPS's Selected Remedy incorporates the preliminary land-use configurations for KPN submitted by the District with its comments on the Proposed Plan. NPS modified the clean soil barrier boundaries to align with the District's preliminary plans to restore wetlands along Watts Branch and the Anacostia River and maintain a 3.5-acre meadow on KPN (see Figure 2 of the Responsiveness Summary). The final boundaries for the clean soil barrier will be determined during the remedial design phase and will be based on the District's final plans for KPN.

4.0 INSTITUTIONAL CONTROL PLAN

DOEE Comment

The District and NPS will need to negotiate the Institutional Control Plan for the Site that will spell out institutional controls for capped areas at the Site. Institutional controls (e.g., signage, un-mowed and vegetated areas to prevent access) will also be specified to keep people off uncapped areas in critical wildlife areas and Resource Management Area. Any actions the District takes to support restoration, flood risk reduction, and/or recreation will address human health risks posed by the Site.

NPS Response

An Institutional Control Plan for KPN will be developed during the remedial design phase of the CERCLA process. NPS looks forward to collaborating with the District to develop this plan.

REFERENCES

JCO. 2019. Remedial Investigation Addendum Report, Kenilworth Park Landfill, National Capital Parks – East, Washington, D.C. June.

Attachment: February 15, 2021 DOEE Letter

Donna Davies
NPS CERCLA Project Manager

February 15, 2021

RE: Comments on Proposed Plan for Cleanup of the Kenilworth Park Landfill Site

Dear Ms. Davies,

Thank you for the opportunity to comment on National Park Service's (NPS) Proposed Plan for Kenilworth Park Landfill (KPL) (the Site). The following comments were prepared by the District of Columbia Department of Energy and Environment (DOEE) and have been discussed with the Department of Parks and Recreation (DPR) and District Department of Transportation (DDOT), agencies which are also engaged in restoration and activation of the Anacostia River and its environs. Please find our summary comments below by general topic, supported by the attached figure and specific comments to the Proposed Plan text. Please note that DOEE comments on the 2020 Revised Feasibility Study (FS) report are also submitted under this cover.

Polychlorinated biphenyl (PCBs) Analyses and Data Gaps

To date, the concentrations of PCBs at Kenilworth Park Landfill-North (KPN) have been assessed using total Aroclor analyses. Although these analyses can be accurate when one un-weathered Aroclor is present at above-detection level concentrations, EPA Method 8082 generally lacks the sensitivity and resolution of EPA Method 1668. At KPN, it has been shown Aroclors are present in soil and historical groundwater samples. Furthermore, PCBs in the landfill would be decades old and may be highly weathered, and non-Aroclor PCBs are present in incinerated waste. These conditions can result in inaccurate assessment of total PCB concentrations using EPA Method 8082. Because of the evolving understanding of PCB distribution movement in the environment, coupled with better laboratory analyses and field investigation techniques, we request that NPS perform a limited field investigation that includes PCB congener analyses for surface soil and groundwater data gaps, as described below.

> **Comment**: As stated in the Proposed Plan, PCBs were measured in some surface soil samples at levels that may pose unacceptable human health risk under certain conditions. It does not appear that PCBs were tested for surface soil cap material at KPN that goes right up to the River, Watts Branch, and in the recent fill area. Given this data gap, it should be assumed that the existing cap soil is also contaminated unless proven otherwise. Alternative 3, the Preferred Alternative, does not include capping of all surface soil areas that are yet to be characterized for the presence of PCBs.
>
> **Recommendation:** DOEE recommends collection and analyses of surface soils in areas that have not previously been tested to assure that the Preferred Alternative protects against PCB transport to the River via surface water runoff. This includes recent fill areas and areas that lead down to the River. PCBs should be tested for total congeners (not total Aroclors). After these results are known, the design of the Preferred Alternative may need to be adjusted to include additional capping.

Comment: Sediment samples (total Aroclor analyses) were collected from the Anacostia River, Kenilworth Marsh, and Watts Branch. PAHs, PCBs, and lead were reported in some of these sediment samples, including at a PCB hotspot in the River adjacent to the Site. Groundwater quality investigations undertaken at the Site since 2013 also did not include PCB congener analyses, which are a contaminant of concern for the Anacostia River Sediment Project Interim Record of Decision (ROD). DOEE views the lack of PCB congener data for wells that border the River, Watts Branch, and the Kenilworth Marsh to the north to be a data gap.

Recommendation: To provide more robust evidence that KPN is not a source of actionable levels of PCBs via groundwater to the River, DOEE recommends installing passive samplers in select monitoring wells located along the Anacostia River, Watts Branch, and Kenilworth Marsh. The passive samplers should be analyzed for PCB congeners. If actionable levels of PCB congeners are determined to be discharging to the River, the Preferred Alternative will require additional modification.

DOEE does not believe that the technology of a cap as discussed in Alternative 3 will be substantively changed through the recommended sampling and also understands that the above recommended sampling can be completed during the design phase (pre-investigative) of the project. DOEE recommends opportunities to proceed to the ROD and remedial design while addressing the data gaps be pursued.

Additional Applicable or Relevant and Appropriate Requirements (ARARs)

The Preferred Alternative must meet all federal and state (District) environmental statutes, regulations, and other requirements identified as appliable or relevant and appropriate to the circumstances at the Site, unless a waiver is granted.

Comment: NPS did not include the District's Critical Areas - Wetland and Stream Regulations (21 DCMR Chapters 25 & 26) when compiling ARARs, and the Proposed Plan did not recognize existing wetlands at KPN. According to the DC Wetlands Registry, ten wetlands totaling approximately 0.5 acres exist within the footprint of the cap proposed under Alternative 3. The District's Wetland and Stream Regulations requires avoidance and minimization of permanent wetland and stream impacts and mitigation for unavoidable impacts.

Recommendation: DOEE recommends adding the District's Critical Areas - Wetland and Stream Regulations (21 DCMR Chapters 25 & 26) the to the list of ARARs for the Site. In accordance with the Clean Water Act Section 404/401 and the District Wetland and Stream Regulations, all wetlands and streams within the project are required to be delineated. A jurisdictional determination with the U.S. Army Corps of Engineers will be necessary. Both federal and District wetland regulations require avoidance and minimization of permanent wetland and stream impacts, and mitigation will be required for any unavoidable impacts.

Reasonably Anticipated Future Use

According to EPA guidance,[1] the Preferred Alternative must recognize reasonably anticipated future uses for the Site. Sources and types of information that EPA uses in determining reasonably anticipated future uses include comprehensive community master plans, natural resources information, location of

[1] EPA, Land Use in the CERCLA Remedy Selection Process, (May 25, 1995) (OSWER 9355.7-04) ("EPA 1995 Guidance").

on-site or nearby wetlands, and proximity of a site to a floodplain, proximity of a site to critical habitats of endangered or threatened species, among others.[2]

Comment: NPS did not fully consider the range of reasonably anticipated future uses that the District intends for KPN. Numerous District plans prioritize future uses of KPN beyond recreation, including flood risk reduction, wetland restoration, and habitat for Species of Greatest Conservation Need (SGCN). These uses should be accommodated in the Preferred Alternative, in addition to recreation.

The following District plans establish goals or identify actions that inform the reasonably anticipated future uses of KPN:

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- Sustainable DC 2.0: Establishes the goal of planting and maintaining an additional 150 acres of wetlands and creating or restoring a minimum of 200 acres of meadow habitat in the District.
- District Hazard Mitigation Plan: Establishes the goal of planting and maintaining an additional 140 acres of wetlands along the Anacostia and Potomac Rivers and smaller streams.
- Wetland Conservation Plan: Establishes the goal of no net loss and eventual net gain of wetlands.
- 2015 Wildlife Action Plan: Recognizes that one species (Northern Long-eared Bat) is listed as threatened, and two species (Spotted Turtle, Tri-colored Bat) are candidates for listing under the federal Endangered Species Act, are potentially present at the Site. The Plan also recognizes that the meadow at KPN that falls within the footprint of the proposed cap functions as Critical Habitat Areas for approximately 43 SGCNs and serves as valuable habitat for many common species. It designates the Site as a Conservation Opportunity Area and a potential area for wetland restoration.
- Watts Branch Flood Risk Management Study (draft): Led by the DC Silver Jackets, this study assesses current and future flood risk vulnerability using updated hydraulic models and identifies strategies for addressing flood problems in Watts Branch using a holistic approach. One solution identified within KPN is to enlarge the culvert and bridge opening of Deane Ave. A follow-on study is planned to develop concept plans for specific flood reduction projects, including any additional mitigation areas, pending FEMA grant funding award. The draft study was provided to DC Silver Jackets members in December 2020 and will be finalized in 2021.

Recommendation: DOEE recommends considering reasonably anticipated future uses of KPN identified in the above plans in developing its Preferred Alternative.

To reduce flood risk associated with sea level rise and more intense storm events, as well as increase the acreage of wetlands in the District, DOEE recommends not capping 21 acres along Watts Branch and the Anacostia River (shown in green on **Figure 1**). After KPN is transferred to the District and the remedy is implemented and separate from the CERCLA process, DOEE intends to restore tidal wetlands to this area. As part of the remedy, DOEE therefore recommends implementing institutional controls that would limit area access and prohibit organized sports, recreation, special events, and construction of higher intensity visitor use features in order to address human health risk prior to any wetland restoration efforts. Institutional controls could be a combination of existing natural barriers, newly installed natural barriers, and signage for the public, as determined suitable

[2] EPA 1995 Guidance p. 5.

through a survey of the site. DOEE would ensure that any tidal wetland restoration addresses human health risk. This area was selected because it falls within the 100- and 500-year floodplain. Further, it is directly adjacent to Parkside at Paradise and the Mayfair Mansions, two developments comprising more than 1,000 housing units that support lower-income residents with backing from the U.S. Department of Housing and Urban Development that are located within the 100-year floodplain. The District would incorporate the future alignment of the Anacostia Riverwalk Trail into the wetland restoration through elevated boardwalks and other design solutions.

Limited meadow habitat exists in the District. To reduce impacts on SGCNs and minimize net loss of habitat at KPN, DOEE recommends not capping approximately 3.5 acres of meadow habitat in KPN (shown in orange on **Figure 1)**, and instead implementing institutional controls to limit access in order to conserve critical meadow habitat for SGCNs. This area was selected because its location adjacent to similar habitat in the Resource Management Area (boundary shown on **Figure 1**) would provide an area of unfragmented, critical habitat that would support the territory needs of SGCNs. It could take more than 10 years after a cap is installed for native vegetation to become re-established and again provide high-value habitat, leading to loss of some SGCN species and population reductions in other SGCNs currently found at the site. The uncapped meadow area could still be utilized for passive recreation. Institutional controls discussed in the following section would address human health risk by prohibiting more active recreation from occurring in the uncapped meadow. The boundaries of the uncapped area could potentially be adjusted based on further PCB sampling as well as consideration of additional wildlife monitoring and community input during the planning process for the site. DOEE also recommends additional safeguards to minimize impacts to SGCNs in the meadow areas that will be capped, including relocating SGCNs to the uncapped areas of the Site, timing the implementation of the selected remedy to account for SGCN behavior, and developing a planting plan to introduce native plants.

Institutional Control Plan

The District and NPS will need to negotiate the Institutional Control Plan for the Site that will spell out institutional controls for capped areas at the Site. Institutional controls (e.g., signage, un-mowed and vegetated areas to prevent access) will also be specified to keep people off uncapped areas in critical wildlife areas and Resource Management Area. Any actions the District takes to support restoration, flood risk reduction, and/or recreation will address human health risks posed by the Site.

Best,

Tommy Wells
Director

ATTACHMENT

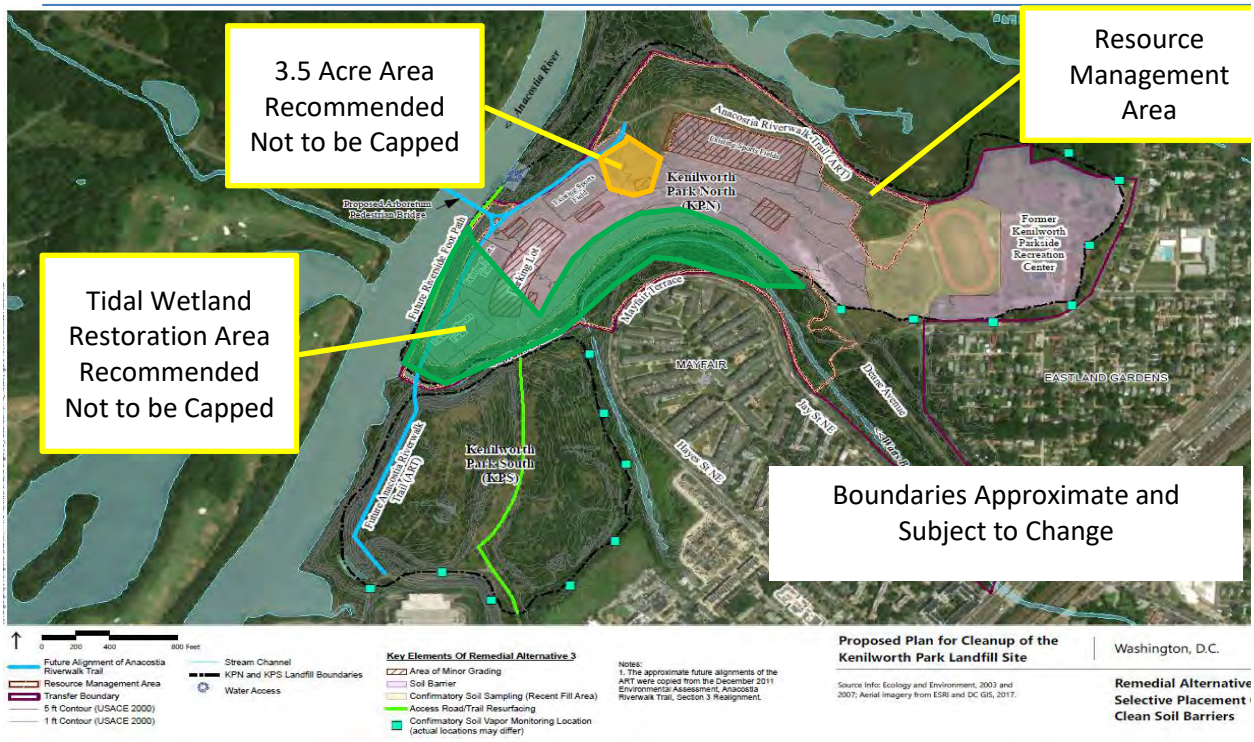

Figure 1: Proposed Adjustments to Alternative 3 to Support Future Uses

ATTACHMENT 25

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1- National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

MEMORANDUM

TO: Administrative Record for the Kenilworth Park Landfill Site

FROM: Kenilworth Park Landfill Contaminated Site Team (CST):
Donna Davies, National Park Service (NPS) Project Manager
Jonathan Ordway, VHB (NPS Contractor)
Jeffrey Johnson, Department of the Interior (DOI) Legal Lead

DATE: July 15, 2022

CC: Shawn Mulligan, Lead, NPS Environmental Compliance and Cleanup Division

RE: DOEE Comments on Proposed Plan for Cleanup of the Kenilworth Park Landfill Site

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The purpose of this memorandum is to convey responses to comments on the Kenilworth Park Landfill (KPL) Feasibility Study (FS) Addendum Report received from the District of Columbia (District) Department of Energy and Environment (DOEE) on October 20, 2020.

In their comments to the FS Addendum Report, DOEE expresses an opinion that there are "specific elements that are missing in the FS Addendum that are needed to be compliant with the United States Environmental Protection Agency [EPA] Remedial Investigation/Feasibility Study Guidance (EPA 1988). These elements are not thought to change the overall evaluation as stated in Section 7 of the FS Addendum that indicates 'Alternative 3 meets the seven threshold and balancing criteria at the lowest cost.' "

DOEE's comments on Section 7 and Table 7 from the FS Addendum Report are presented in italics below, followed by NPS responses.

DOEE Comment 1:

Alternative 1, being "No Action" is implementable and should not be presented as "Not Applicable."

NPS Response:

From relevant EPA guidance, the criteria for implementability are as follows: "Ability to construct and operate the technology; reliability of the technology; ease of undertaking additional remedial actions if necessary; monitorability; administrative feasibility – coordination with other agencies; availability/ capacity of treatment/disposal facilities; availability of personnel, equipment, and materials; and availability of technology."

Because the No Action alternative involves no technology, institutional controls or other measures, NPS considered implementability criteria not to apply.

DOEE Comment 2:

Alternatives 4 and 5 can meet the short-term effectiveness criteria if instituted carefully. The NPS preference to limit impacts to natural resources is a modifying criteria and should be discussed in a section that describes the modifying criteria. If Alternatives 4 and 5 fail to meet the applicable requirements of the Organic Act, then these alternatives are Not Compliant with this ARAR and should be indicated as such in the table in Section 7.

NPS Response 2:

NPS included an updated version of the detailed evaluation summary table from the FS Addendum Report in the KPL Site Record of Decision (ROD). In response to this comment, NPS revised the short-term effectiveness evaluation to a ranking of "low" for Alternative 4 and "lowest" for Alternative 5. These rankings are based on the extended construction duration required to implement these alternatives and the associated risks to the community, park workers, and the environment during implementation.

DOEE Comment 3:

Section 7.4 "Reduction of Toxicity, Mobility, or Volume Through Treatment" indicates that all alternatives are not applicable. This is not the case as this evaluation is applicable and is a requirement in EPA (1988). The text should state that the alternatives do not provide any treatment therefore toxicity, mobility and volume reduction through treatment. The colorized table in this section can be revised for these balancing criteria to remove "not applicable" as all the options do not meet the statutory preference for selecting remedial actions that employ treatment technologies that permanently and significantly reduce toxicity, mobility, or volume of the hazardous substances. Table 7 and the in-text table, as written can confuse the reader with regard to evaluation against these criteria.

NPS Response 3:

In response to this comment, NPS revised the detailed evaluation summary included in the ROD to indicate "None Provided," to explain the reduction in toxicity, mobility, or volume through treatment.

DOEE Comment 4:

There is no comparative analysis between alternatives. The response that the table provides a comparative analysis can be confusing to the reader. For example, the table shows all Alternatives except Alternative 1 as equally implementable, which is unlikely. The comparison in this section should compare these alternatives and state which are easier and which are more difficult to apply.

NPS Response 4:

In response to this comment, NPS revised the comparative analysis of alternatives table in the ROD to indicate relative rankings for each of the non-cost balancing criteria (long-term effectiveness and permanence, short-term effectiveness, and implementability).

Attachment: October 20, 2020 DOEE Letter

Remediation and Site Response Program **Toxic Substances Division**

Date: **October 2, 2020**

To: **Donna Davies (National Park Service [NPS]), Jon Ordway (Vanasse Hangen Brustlin [VHB])**

From: **Ray Montero (District of Columbia Department of Energy and Environment [DOEE])**

Subject: **Reponses to NPS Comments on the Revised Feasibility Study Addendum Report, Kenilworth Park Landfill Site Anacostia Park Washington, D.C., July 2020, Draft**

The National Park Service (NPS) submitted a Draft Feasibility Study Addendum Report (FS Addendum) for the Kenilworth Park Landfill Site, Anacostia Park, Washington, D.C. to the District of Columbia Department of Energy and Environment (DOEE) on July 29, 2020. DOEE reviewed that document and provided comments to the FS Addendum to NPS on August 25, 2020. On September 21, 2020 DOEE received responses to our comments on the FS Addendum from NPS. This memorandum documents specific elements that are missing in the FS Addendum that are needed to be compliant with the United States Environmental Protection Agency (USEPA) Remedial Investigation/Feasibility Study Guidance (EPA 1988). These elements are not thought to change the overall evaluation as stated in Section 7 of the FS Addendum that indicates “Alternative 3 meets the seven threshold and balancing criteria at the lowest cost.”

Section 7 of the FS Addendum (“COMPARATIVE ANALYSIS OF ALTERNATIVES “) provides colorized table that is intended to indicate which remedial alternatives meet the two threshold criteria and the five balancing criteria. DOEE makes the following observations on this table and Table 7:

1. Alternative 1, being “No Action” is implementable and should not be presented as “Not Applicable.”

2. Alternatives 4 and 5 can meet the short-term effectiveness criteria if instituted carefully. The NPS preference to limit impacts to natural resources is a modifying criteria and should be discussed in a section that describes the modifying criteria. If Alternatives 4 and 5 fail to meet the applicable requirements of the Organic Act, then these alternatives are Not Compliant with this ARAR and should be indicated as such in the table in Section 7.

3. Section 7.4 “Reduction of Toxicity, Mobility, or Volume Through Treatment” indicates that all alternatives are not applicable. This is not the case as this evaluation is applicable and is a requirement in EPA (1988). The text should state that the alternatives do not provide any treatment therefore toxicity, mobility and volume reduction through treatment. The colorized table in this section can be revised for these balancing criteria to remove “not applicable” as all the options do not meet the statutory preference for selecting remedial actions that employ treatment technologies that permanently and significantly reduce toxicity, mobility, or volume of the hazardous substances. Table 7 and the in-text table, as written can confuse the reader with regard to evaluation against these criteria.

4. There is no comparative analysis between alternatives. The response that the table provides a comparative analysis can be confusing to the reader. For example, the table shows all Alternatives except Alternative 1 as equally implementable, which is unlikely. The comparison in this section should compare these alternatives and state which are easier and which are more difficult to apply.

The DOEE does not believe that the observations, discussed herein, affect the conclusions of the Draft FS; however, we are concerned that this document could be subject to criticism under further review, as compared to the Environmental Protection Agency guidance.

References

U.S. Environmental Protection Agency (EPA), 1988. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, EPA/540/G-89/004. October.

ATTACHMENT 26

From: sturner@cleanwater.org <sturner@cleanwater.org>
Sent: Wednesday, February 24, 2021 4:55 PM
To: Davies, Donna L <Donna_Davies@nps.gov>
Cc: apacc@groups.io <apacc@groups.io>; akiima <akiima@apriceconsulting.com>; nick.kushner@dc.gov <nick.kushner@dc.gov>
Subject: [EXTERNAL] Questions for March 5th Meeting

Hello Donna, I hope this email finds you well.

Attached is a compiled list of generated questions from miscellaneous community stakeholders among the APACC network. My apologies for being behind schedule in sending this list but I wanted to make sure that I gave several opportunities for folks to send questions and I hadn't gotten a big response as of last Friday. Not all of the questions are relevant to the preferred clean-up options but I wanted to give you a full list of the community stakeholder generated questions to respond to.

As per our conversation, I just wanted to confirm that the plan of action is for you and your CERCLA team to respond to the list of questions in written form and then give a brief presentation at the **March 5th APACC** meeting that will further address each of the questions in the compiled list with opportunity for Q & A? Nick Kushner also said that he will make himself available at that meeting to support responding to questions related to future planning that fall outside of the scope of CERCLA clean-up alternative but please do try and respond to as many of the questions that are within you and the contractor's scope of understanding. I will circulate the written response to the APACC listserv prior to the meeting, have a link available at the March 5th meeting to the written response, and I will try and post to our APACC webpage.

Thank you again for working together with us and being open to a thorough community stakeholder process. This effort and energy has not gone unnoticed and appreciated. 😊

Best,
Stacia Turner (they/them)
Chesapeake Regional Director
Clean Water Action/Clean Water Fund
1444 Eye Street NW, Suite 400
Washington DC 20005
C: (480)390-2152
sturner@cleanwater.org

ANACOSTIA PARK & COMMUNITY COLLABORATIVE

APACC Collected Community Questions Concerning Proposed Clean-up for Kenilworth Park

What methane gas tests have been conducted on KPN to assess the current status of landfill off gassing on site? Are additional tests scheduled from now into the implementation phase of the cleanup?

What recent testing has been done to assess potential groundwater contamination of pcbs and other landfill pollutants, and at what intervals in the timeline of this project?

What technical assessments have been made to ensure that soil caps would not impact land settlement at the site in the future?

How would soil caps impact the potential for ball fields at the site in the future? What sorts of additional remediation and institutional controls would have to happen for active recreational development?

What is the plan for the proposed stakeholder engagement in the clean-up alternative design phase?

The February 1 Interim Response to Public Comments states under Theme 4: "...if the District decides to create wetlands, or incorporate another land use such as meadows in a portion of KPN, this can be included in the remedial design phase of the CERCLA process to accommodate a different configuration of land use**." Can you please provide some context for how the District's plan might influence NPS's CERCLA review and plan from a process and timing standpoint?**

Can any form of river edge/riparian buffer restoration happen with this option (preferred clean-up alternative)?

Can trees be planted in the portions of the site that are former landfill without compromising the integrity of the existing and intended remediation?

Can any footers/future foundation work be installed (after implementation of the preferred clean-up alternative?

Wont this remediation (preferred clean up alternative) wipe out the possibility of community farms/gardens on the site?

Will signage or other forms of communication be posted during the implementation of the proposed clean-up to notify community of potential health risks associated with construction in the landfill area?

How will the CERCLA team ensure that best management practices are incorporated in the design and implementation of the clean up as it relates to abating polluted soil erosion and green stormwater management pollution into the Anacostia?

ANACOSTIA PARK & COMMUNITY COLLABORATIVE

Can you detail the timeline of the process from record of decision, design of cleanup implementation plan and land transfer to the district responsibility?

What improvements to the site, in terms of facilities (bathrooms, pavilions, paved areas, planting) are possible for each proposed remediation method?

If KPS remains undisturbed, will it be permissible to remove invasive plants and plant additional trees and meadow plants?

To comply with the Organic Act of 1916, NPS does not accept institutional controls that would impair the intended use of the park. For example, NPS would not allow permanent fencing or restrictive signage as an alternative to removal, containment, or treatment of contamination. How will access to KPS be handled given there remains some hazard?

Who will be involved in the NRDA Process and how is it related to CERCLA in terms of content, timing and administration?

What involvement will NPS have with decisions regarding Kenilworth Park once administration Is transferred to the District?

To what agency specifically will administration of KPN be given?

Watts Branch is in desperate need of rewilding/restoration. This tributary floods regularly causing property damage and impediments to access. The Sediment it carries is damaging the Anacostia. When administration of KPN is turned over to the District, who will be responsible for this stream since one bank will be under NPS administration and the other in the District? Will restoration of the stream be carried out before or as part of the remediation?

Is there a possibility for transfer of the land now serving as NPS maintenance yard south of KPS to be administratively transferred to the District?

Please explain the difference between the different types of barriers being proposed: Soil barrier with pre-excavation – does this mean all the landfill material will be removed? Can structures requiring foundations be installed? Can trees and deep rooted plans be planted? Soil barrier without pre excavation - does this mean no landfill material will be excavated? Can structures requiring new foundations be installed? Can trees be planted? Will the soil barrier be impermeable?

Is Kenilworth a lined dump? That is, was any type of barrier put in place before land filling, dumping, burning, etc began?

Once administration of KPN is transferred, will the District be able to set the hours of operations? Will NPS Police have jurisdiction? Will DCPD have jurisdiction? Will the land still be under the jurisdiction of congress?

ANACOSTIA PARK & COMMUNITY COLLABORATIVE

What studies have the team undertaken to analyze the potential impacts of sea level rise on each alternative? What impact will prolonged inundation have on soil barriers proposed?

Why was only one small area on the east end of KPN considered for soil barrier with pre-excavation?

The change of grades due to landfilling and capping have made adjacent land vulnerable to flooding and create ongoing damage to the environment via degradation of both Watts Branch and the Anacostia. Complete removal of landfill material and restoration of pre fill elevations will correct this. How will other means of remediation address this serious problem?

United States Department of the Interior

National Capital Parks-East
NATIONAL PARK SERVICE
Interior Region 1- National Capital Area
1900 Anacostia Drive, S.E.
Washington, D.C. 20020

MEMORANDUM

TO: Administrative Record

FROM: Donna Davies, National Park Service (NPS)
CERCLA Project Manager
Kenilworth Park Landfill Site

DATE: March 4, 2021

CC: Tara Morrison, NPS, National Capital Parks – East (NACE), Superintendent
Michael Commisso, NPS, NACE, Chief Resource Management
Sean McGinty, NPS, NACE, Public Information Officer

RE: NPS Responses to Anacostia Park and Community Collaborative (APACC) Questions
Kenilworth Park Landfill Site

On February 24, 2021, the Anacostia Park and Community Collaborative (APACC) submitted questions to the National Park Service (NPS) related to the Kenilworth Park Landfill Site and proposed cleanup plan. APACC compiled these questions from miscellaneous community stakeholders among the APACC network. The questions and NPS responses are provided in the table below.

On March 5, 2021, NPS will participate in the APACC Steering Committee Meeting to discuss the questions and NPS's responses.

NPS Responses to APACC Questions Kenilworth Park Landfill Site March 4, 2021		
No.	**Comment**	**Response**
1.	What methane gas tests have been conducted on KPN to assess the current status of landfill off gassing on site? Are additional tests scheduled from now into the implementation phase of the cleanup?	NPS completed a landfill gas survey in 2009 that included sampling and analysis for methane in 27 locations. Soil gas samples were collected within the former landfill footprint and at the landfill perimeter to assess the potential for landfill gas migration. The study concluded that there was no risk of methane migration into areas outside of the landfill; however, the concentrations of methane within a few areas of the landfill could be high enough to pose a risk to excavation workers who may dig into the landfill to install buried utilities (water or sewer). Details of the methane sampling are presented in the 2012 Feasibility Study report. As noted in the Feasibility Study Addendum Report, NPS included the completion of perimeter sampling for methane before, during, and after the remedial action as an activity to be completed as a precautionary measure as part of alternative 3. NPS considers the risk landfill gas migration off site to be very low based on the 2009 findings. It is also noted that methane generation from landfills decreases over time as the decomposition of organic waste reaches completion.
2.	What recent testing has been done to assess potential groundwater contamination of pcbs and other landfill pollutants, and at what intervals in the timeline of this project?	Figure 2 in the Proposed Plan provides a summary of all investigations completed at the Site to date. As detailed in this figure, multiple rounds of groundwater samples have been collected from the site since 1998. In 2013, NPS initiated a Supplemental Groundwater Study (documented in the 2019 Remedial Investigation Addendum Report). This study included installation of 20 new monitoring wells. As part of the study, in 2014 NPS collected groundwater samples from the newly

NPS Responses to APACC Questions Kenilworth Park Landfill Site March 4, 2021		
No.	**Comment**	**Response**
		installed and previously existing wells. In 2017, NPS collected two additional rounds of groundwater samples. Over the course of the investigations completed at the site, groundwater was analyzed for PCB aroclors, volatile organic compounds, semi-volatile organic compounds, pesticides, dioxins & furans, and metals. PCB Aroclors were not detected in any groundwater sample collected since 2014. The Remedial Investigation Addendum Report provides summaries of all groundwater investigations completed at the site to date. Review of results reported from these investigations indicate that hazardous substances are not migrating through groundwater and impacting adjacent surface waters. The studies also indicate that groundwater quality underlying the site is stable and not changing over time.
3.	What technical assessments have been made to ensure that soil caps would not impact land settlement at the site in the future?	Between approximately 2 and 7 feet of soil were placed over the waste when the landfill was closed and there is very little evidence of differential settlement. Placement of the soil barrier is not likely to cause additional settlement, but this will be evaluated as part of the remedial design and will be monitored after closure. In the unlikely event differential settlement occurs additional soil can be used to level the ground as needed. Differential settlement can occur in landfills because the organic material in the waste decomposes and shrinks over time; however, because the landfill was closed 50 years ago, most of the organic material has likely been decomposed reducing the chance that significant settlement will occur in the future.

NPS Responses to APACC Questions Kenilworth Park Landfill Site March 4, 2021		
No.	**Comment**	**Response**
4.	How would soil caps impact the potential for ball fields at the site in the future? What sorts of additional remediation and institutional controls would have to happen for active recreational development?	As explained in the Feasibility Study Addendum report and the Proposed Plan, the purpose of the clean soil barrier is to allow for development of ball fields. The soil barrier (or cap) is intended to be a new clean soil surface for future ball fields that will support natural grass turf for the playing surfaces where applicable. The institutional controls will be required for any recreational development that includes digging. These controls, which are already in place as part of NPS's health and safety plans, include notifying construction workers of possible risks posed by the Site including potential to encounter contaminated material, methane gas, and unexploded ordnances while digging. Any contractor that will be performing excavation at the Site must prepare a health and safety plan prior to the start of any activity that involves digging. The plan must identify potential hazards associated with the activity and outline the mitigation steps to be taken to address these hazards. No additional institutional controls are required for active recreational development.
5.	What is the plan for the proposed stakeholder engagement in the clean-up alternative design phase?	Community engagement is an important part of the CERCLA process. NPS will assess the effectiveness of the community engagement activities prior to the start of the remedial design phase. The results of NPS's assessment will be reflected in a revised Kenilworth Park Landfill Site Community Involvement Plan (CIP) (current version available on NPS's Kenilworth Park Landfill webpage). The revised CIP will be made available to the public prior to the start of the remedial design phase. The revised CIP will reflect NPS's refined understanding of successful community outreach efforts taken during the Proposed Plan phase and an updated list of stakeholders.

NPS Responses to APACC Questions Kenilworth Park Landfill Site March 4, 2021		
No.	**Comment**	**Response**
		Following completion of the final remedial design, NPS is also required to issue a community update. Because the District will plan the future development and manage Kenilworth Park North it will be important for NPS to collaborate with the District in future community outreach and stakeholder engagement efforts.
6.	The February 1 Interim Response to Public Comments states under Theme 4: "...if the District decides to create wetlands, or incorporate another land use such as meadows in a portion of KPN, this can be included in the remedial design phase of the CERCLA process to accommodate a different configuration of land use." Can you please provide some context for how the District's plan might influence NPS's CERCLA review and plan from a process and timing standpoint?	The next phase of the CERCLA process after the Record of Decision (ROD) is the remedial design. It is NPS's goal for the ROD to be signed by the end of 2021. NPS anticipates that administrative jurisdiction of Kenilworth Park North will be transferred to the District after the ROD is signed. NPS will remain the CERCLA lead agency with oversight responsibilities for the CERCLA response action; however, after the ROD is issued the District will likely be responsible for preparing the remedial design and implementing the cleanup. The timing and schedule for the remedial design and starting of the field work to complete the field work needed to implement the selected remedy depend on many variables including when the ROD is issued and when the U.S. and District sign a settlement agreement. The settlement agreement will outline the final agreed upon U.S. and District responsibilities and roles for future work at the Site.
7.	Can any form of river edge/riparian buffer restoration happen with this option (preferred clean-up alternative)?	River edge/riparian buffer restoration is possible under NPS's preferred alternative 3. On February 15, 2021, the District Department of Energy and Environment (DOEE) provided NPS a letter with comments on the Proposed Plan. The DOEE letter included a recently developed conceptual layout for Kenilworth Park North that would include a tidal wetland restoration area along the river where there is no sea wall and along the tidal

NPS Responses to APACC Questions Kenilworth Park Landfill Site March 4, 2021		
No.	**Comment**	**Response**
		portion of Watts Branch. Under this conceptual layout, these areas would not be developed for sports fields or public gatherings and would therefore not require the clean soil barrier. DOEE's comment letter indicated that the conceptual layout was developed after NPS released the Proposed Plan with input from the Department of Parks and Recreation (DPR) and the Department of Transportation (DDOT). NPS understands DPR intends to undertake a planning process to further develop and select the ultimate configuration for Kenilworth Park North. The planning process will include public involvement.
8.	Can trees be planted in the portions of the site that are former landfill without compromising the integrity of the existing and intended remediation?	Trees can be planted in portions of the site that were formerly used as a landfill without compromising the integrity of the remediation. Currently, trees are growing over formerly landfilled portions of the site with no issues. Modern landfill closures do not allow for trees to grow because the engineered capping systems are designed to keep water from percolating into the underlying waste and creating a groundwater contamination problem. Studies completed during the Remedial Investigation showed that groundwater contamination due to water percolating through the waste is not causing a problem that would require remediation and therefore an impermeable capping system is not required. With no engineered cap, trees can be allowed to grow over the landfill.
9.	Can any footers/future foundation work be installed (after implementation of the preferred clean-up alternative?	Foundations and footers for structures can be installed at the site. Precautions would be necessary to protect workers during digging for foundations and to manage any waste that would

NPS Responses to APACC Questions Kenilworth Park Landfill Site March 4, 2021		
No.	**Comment**	**Response**
		be removed during excavation. Also, any future buildings built over the landfill with enclosed spaces would need to be designed so that landfill gas cannot enter these enclosed spaces and build up. Including foundation ventilation in construction is relatively standard and does not add significantly to the building costs.
10.	Wont this remediation (preferred clean up alternative) wipe out the possibility of community farms/gardens on the site?	The clean soil barrier is intended for areas where visitors would come into direct contact with surface soil on a regular basis, like playing soccer or football. Community gardens and farms could be incorporated into the park's design; however, they would require raised bed types of gardens with imported clean soil so that gardeners do not come into contact with potentially contaminated soil that will remain on the site.
11.	Will signage or other forms of communication be posted during the implementation of the proposed clean-up to notify community of potential health risks associated with construction in the landfill area?	As with any construction site, temporary signs and barriers may be required to keep the public away from potentially dangerous construction activities. The dangers would primarily be from trucks and heavy equipment. The contractor would also be required to have personnel on site who watch the equipment movements and oversee site safety. As part of the remedial design, plans will be prepared to outline the steps the contractor must take to identify and mitigate potential risks and hazards to workers, park visitors, and the environment associated with each activity that will occur during the remedial action.
12.	How will the CERCLA team ensure that best management practices are incorporated in the design and implementation of the clean up as it relates to abating polluted soil erosion and green stormwater management pollution into the Anacostia?	Table 3 of the 2020 Feasibility Study Addendum Report includes a list of "Action-Specific Applicable or Relevant and Appropriate Requirements" (ARARs). ARARs consist of laws and regulations that need to be followed when implementing a CERCLA cleanup. Both federal and District requirements are listed in the ARARs table that relate to stormwater management and

NPS Responses to APACC Questions Kenilworth Park Landfill Site March 4, 2021		
No.	**Comment**	**Response**
		identify “best management practices” to prevent soil erosion and sedimentation. The action-specific ARARs will be incorporated into plans prepared during the remedial design.
13.	Can you detail the timeline of the process from record of decision, design of cleanup implementation plan and land transfer to the district responsibility?	NPS expects the ROD to be issued in 2021; however, the ROD must undergo an extensive review and approval process; therefore, this is just an estimate. The transfer of administrative jurisdiction of Kenilworth Park North to the District will likely coincide with the execution of a settlement agreement between the United States and the District. NPS also anticipates this settlement agreement to be executed this year. The U.S. and District are still negotiating their future relationship and roles with respect to future work to be completed at the Site. It is likely that the District (Department of Energy and Environment [DOEE] will prepare the remedial design documents (e.g. draft engineering drawings, work plans, etc.) and submit them to NPS for review. NPS and DOEE have technical teams that have a history of productively working together at this and other sites; therefore, we believe this relationship will allow the Site to continue to progress through the cleanup process. Additional specific details on the project’s timeline cannot be estimated at this time.
14.	What improvements to the site, in terms of facilities (bathrooms, pavilions, paved areas, planting) are possible for each proposed remediation method?	Facilities such as bathrooms, pavilions, paved areas and planting can be incorporated into the design for Alternatives 3 and 4 or can be added after the cleanup is completed. Note that under Alternative 3, improvements to Kenilworth Park South would be limited to installation of the planned Anacostia Riverwalk Trail extension – no bathrooms, pavilions or other paved areas are planned for Kenilworth Park South. Alternative 5 includes complete removal of the former landfill and

NPS Responses to APACC Questions Kenilworth Park Landfill Site March 4, 2021		
No.	**Comment**	**Response**
		returning it to the marsh-like condition prior to landfill development. Improvements such as those listed in this comment would not be possible under Alternative 5.
15.	If KPS remains undisturbed, will it be permissible to remove invasive plants and plant additional trees and meadow plants?	Removal of invasive plants and planting native meadow plants and trees will be permissible under the proposed plan for Kenilworth Park South. Health and safety plans will be prepared that will outline precautions for workers who encounter the soil.
16.	To comply with the Organic Act of 1916, NPS does not accept institutional controls that would impair the intended use of the park. For example, NPS would not allow permanent fencing or restrictive signage as an alternative to removal, containment, or treatment of contamination. How will access to KPS be handled given there remains some hazard?	No unacceptable risk was identified for visitors engaged in activities that will be permitted within Kenilworth Park South such as walking, jogging, cycling, or bird watching. The future use of Kenilworth Park South is controlled by the General Management Plan for Anacostia Park. NPS is required to manage Kenilworth Park South in accordance with the GMP, and the GMP requires that Kenilworth Park South be devoted to natural resources recreation – in other words, it must be maintained in its natural state for passive recreational uses, such as those identified above.
17.	Who will be involved in the NRDA Process and how is it related to CERCLA in terms of content, timing and administration?	The NRDA process is the responsibility of the natural resource trustees. For the Anacostia River these trustees include NPS, U.S. Fish and Wildlife Service (FWS), National Oceanic and Atmospheric Administration (NOAA), and the District. The trustee council is currently discussing whether to address the river and river-side sites as a whole or on a site-by-site basis. The trustees will conduct a natural resource damage assessment (NRDA) that will attempt to identify and measure injury to, destruction of, or loss of natural resources caused by releases of hazardous substances (including temporary loss of use). The trustees may then bring a claim against the Site's Potentially Responsible Parties (PRPs) for natural resource

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		damages, and they may use any damages recovered to restore natural resources. In practice, the NRDA process almost always comes after the response action because the trustees' claim is limited to the residual damages that remain after implementation of any remedial action. The NRDA process and the response action are governed by separate sets of regulations.
18.	What involvement will NPS have with decisions regarding Kenilworth Park once administration Is transferred to the District?	The future relationship and roles of the United States and the District in future site activities are currently being negotiated. This relationship will be described in an executed settlement agreement. NPS believes the District will implement the remedy with NPS oversight.
19.	To what agency specifically will administration of KPN be given?	It's our understanding (based on conversations with the District) that the District's Department of Parks and Recreation (DPR) will be the District agency with responsibility for the planning and management of Kenilworth Park North. It is also our understanding that DPR will work with DOEE on issues related to management of natural resources of Kenilworth Park North.
20.	Watts Branch is in desperate need of rewilding/restoration. This tributary floods regularly causing property damage and impediments to access. The Sediment it carries is damaging the Anacostia. When administration of KPN is turned over to the District, who will be responsible for this stream since one bank will be under NPS administration and the other in the District? Will restoration of the stream be carried out before or as part of the remediation?	Watts Branch will not be addressed as part of the remediation. However, DOEE administers a highly successful stream restoration program and has already restored an upstream stretch of Watts Branch. NPS will support and work with DOEE on any stream restoration project planned for Watts Branch.

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21.	Is there a possibility for transfer of the land now serving as NPS maintenance yard south of KPS to be administratively transferred to the District?	There are currently no plans to transfer the Kenilworth Maintenance Yard to the District. The yard is bordered by NPS-managed land)portions of Anacostia Park) to the north and south.
22.	Please explain the difference between the different types of barriers being proposed: Soil barrier with pre-excavation – does this mean all the landfill material will be removed? Can structures requiring foundations be installed? Can trees and deep rooted plans be planted? Soil barrier without pre excavation - does this mean no landfill material will be excavated? Can structures requiring new foundations be installed? Can trees be planted? Will the soil barrier be impermeable?	A soil barrier with pre-excavation involves removal of surface soil by the same thickness as the clean soil barrier to be placed. For example, if a soil barrier is to be installed in the areas around the existing and former community center facilities, the District may want to keep the ground elevation as it is. So, to install a 1-foot thick clean soil barrier, 1 foot of existing soil would need to be removed first. No landfill waste would be removed as part of the CERCLA response action except under Alternative 5, which would include complete landfill removal. Structures with foundations can be installed but plans will be required to identify risks to workers and outline safety precautions. Plans will also be required to manage excavated material to prevent the potential spread of contamination and to dispose of excavated material in accordance with applicable laws and regulations. Trees and deep-rooted plants can be planted following similar worker safety precautions required for all digging activities. The soil barrier will not be impermeable. The purpose is to prevent direct contact with the underlying soil where contaminants are present.

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23.	Is Kenilworth a lined dump? That is, was any type of barrier put in place before land filling, dumping, burning, etc began?	There is no liner below the Kenilworth Park Landfill. The landfill was developed and closed (1942 to 1970) before the use of liners became a standard engineering practice and a regulatory requirement. Based on the groundwater sampling results, the natural silt and clay layer present below the landfill waste has likely limited the downward migration of contaminants.
24.	Once administration of KPN is transferred, will the District be able to set the hours of operations? Will NPS Police have jurisdiction? Will DCPD have jurisdiction? Will the land still be under the jurisdiction of congress?	The District will set the hours of operation for Kenilworth Park North. After transfer of the property the Metropolitan Police Department (MPD – the District's police force) will have primary jurisdiction over Kenilworth Park North; however, the U.S. Park Police (USPP) will have concurrent jurisdiction. Under D.C. law, USPP has the same jurisdictional authority for law enforcement purposes, such as making arrest, as MPD. As a practical matter, this means that when someone calls 911, the call will get routed to MPD, but USPP can make an arrest if they happen to respond to the incident or already in the area. On the last part of this question, Kenilworth Park North will continue to be federally owned property, so Congress will continue to have constitutional authority over it.
25.	What studies have the team undertaken to analyze the potential impacts of sea level rise on each alternative? What impact will prolonged inundation have on soil barriers proposed?	No studies were undertaken to analyze the potential impacts of sea level rise on each alternative. The proposed clean soil barrier will be installed in upland areas where the District is most likely to develop and expand athletic facilities. Based on the preliminary land use configuration presented by DOEE in their February 15, 2021 comment letter, the areas used for sports fields and public gatherings are about 20 feet in elevation above the high water line of the Anacostia River.
26.	Why was only one small area on the east end of KPN considered for soil barrier with pre-excavation?	The pre-excavation activity was proposed in areas where the District may require the post-remediation ground surface to be at the same elevation it is currently, rather than raising it 1 foot

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		with a soil barrier. The proposed plan is conceptual and was developed to support a high-level cost analysis between the alternatives. Details regarding where the soil barrier will be placed and whether any pre-excavation will be required will be addressed as part of the remedial design, which will be based on the District's intended future use of the park.
27.	The change of grades due to landfilling and capping have made adjacent land vulnerable to flooding and create ongoing damage to the environment via degradation of both Watts Branch and the Anacostia. Complete removal of landfill material and restoration of pre fill elevations will correct this. How will other means of remediation address this serious problem?	The purpose of the CERCLA remedial action is to identify and mitigate risk to human health and the environment associated with the release of hazardous substances. Addressing any negative impact the landfill has had on local drainage patterns or flooding is outside the scope of the CERCLA process.

ATTACHMENT

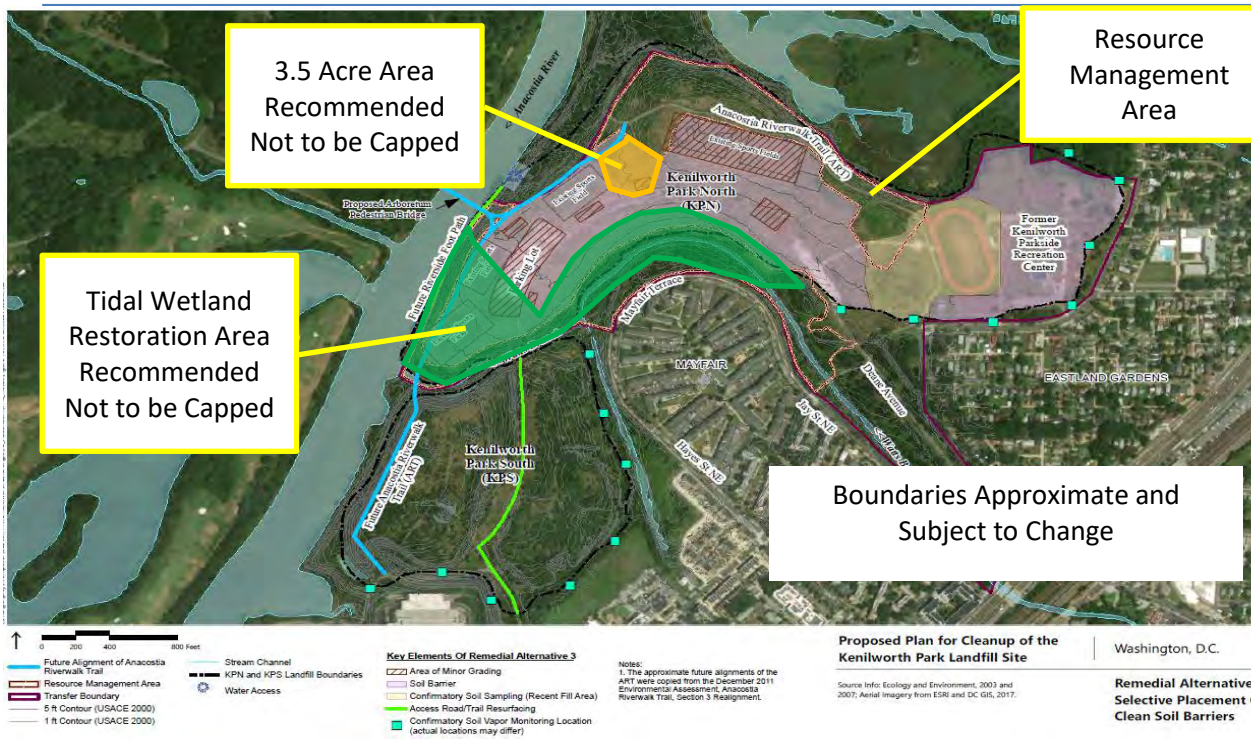

Figure 1: Proposed Adjustments to Alternative 3 to Support Future Uses