



## Board of Directors

CHAIR: ANNEMARGARET CONNOLLY  
*Weil, Gotshal & Manges LLP*

VICE CHAIR: DEBORAH CHOLLET  
*Mathematica Policy Research, Inc.*

VICE CHAIR: WILLIAM STEIN  
*Hughes Hubbard & Reed LLP.*

TREASURER: HANK BROTHERS  
*Housing & Community Development Lawyer*

Secretary: LORELIE MASTERS  
*Hunton Andrews Kurth LLP*

PAST CHAIR: JON BOUKER  
*Arent Fox LLP*

AT-LARGE: VICTOR BONETT  
*Amazon*

AT-LARGE: BETH HALPERN  
*Hogan Lovells US LLP*

CHANELL AUTREY  
*Target Corporation*

MICHELE BLACCKWELL  
*Uber*

KATHERINE S. BRODERICK  
*UDC - David A. Clarke School of Law*

AMANDA BUTLER-JONES  
*Akin Gump Strauss Hauer & Feld LLP*

PATRICK CAMPBELL  
*Millbank*

KENDRICK CURRY  
*Pennsylvania Avenue Baptist Church*

PETER DENTON  
*Stephoe & Johnson LLP*

JEFFREY HANDWERKER  
*Arnold & Porter LLP*

KAREN HARDWICK  
*Washington Gas*

MATTHEW HEGRENESS  
*Covington & Burling LLP*

APERAN NWORA  
*DC Water*

GARY RATNER  
*Citizens for Effective Schools, Inc.*

CHRIS WRIGHT  
*Harris, Wiltshire & Grannis LLP*

STEVEN STANTON  
*Credibility International*

JAMIE UNDERWOOD  
*Latham & Watkins LLP*

SHOMARI WADE  
*Greenberg Traurig, LLP*

JOSH WYNER  
*The Aspen Institute*

*Affiliations listed only for identification purposes*

August 9, 2023

Dev Murali, Anacostia Sediment Remedial Project Manager  
Department of Energy & Environment  
1200 First Street NE  
Washington, DC 20002

cc: Gretchen Mikeska, Anacostia Coordinator

## Re: DC Appleseed Comments on DOEE's Baseline/Performance Monitoring Plan for the Anacostia River Sediment Project

Dear Mr. Murali,

The DC Appleseed Center for Law and Justice ("DC Appleseed") is a non-profit, non-partisan organization that aims to make the District a better place to live and work through litigation, teamwork, and advocacy. For more than 20 years, DC Appleseed has supported the restoration of the Anacostia River, as well as equitable growth and development in surrounding communities. We are writing to offer comments on the District's Department of Energy and Environment ("DOEE") proposed Baseline/Performance Monitoring Plan ("Plan"), including a spreadsheet with more detailed comments indexed to the Plan page number. We appreciate the opportunity to comment.

### I. General Comments

In general, we believe that the Plan is a helpful step forward for the cleanup of contaminated sediments in the Anacostia River. While acknowledging the importance and quality of the document overall, we suggest several potential improvements.

We recommend that DOEE revise the Plan to:

1. Include enforceable benchmarks, specifically numerical contaminant targets tied in a comprehensible manner to sediment and fish tissue monitoring results;
2. Add a reasonable and estimated timeline for completion, including a construction completion target date;
3. Increase sediment sampling frequency to annual rather than triennial sampling;
4. Require sediment re-sampling with new collection points after major flood events;
5. Require profile imaging for areas where carbon amendments are to be used in remediation; and
6. Coordinate with sediment sampling at other environmental remediation locations along the River, and use such data to supplement the DC program.

#### **1. Enforceable Benchmarks.**

DOEE has chosen adaptive management as its remedial approach in the District. To avoid wide-scale and costly dredging of sediments, DOEE chose an innovative approach with potentially cheaper remedial efforts such as the use of carbon amendments to reduce PCB concentrations in sediment. DC Appleseed and other community groups have repeatedly commented that there need to be benchmarks to demonstrate that these alternative methods in fact work to reduce PCB concentrations in sediment and, by extension, in the fish and invertebrate populations.

The United States Environmental Protection Agency's ("EPA") Office of Superfund Remediation and Technology Innovation, and the Office of Research Development concur with local advocates regarding the need for clear benchmarks and triggers. Their guide, "Adaptive Site Management – A Framework for Implementing Adaptive Management at Contaminated Sediment Superfund Sites" released in June 2022 states the following:

The adaptive site management plan should be clear on the timing for data evaluation and management decisions. These are critical timepoints for stakeholder involvement. Establishing the evaluation and decision timepoints provides certainty that performance will be evaluated and that additional actions will be conducted, if necessary, based on progress towards objectives.<sup>1</sup>

<sup>1</sup> United States Environmental Protection Agency Office of Superfund Remediation and Technology Innovation, "Adaptive Site Management – A Framework for Implementing Adaptive Management at Contaminated Sediment Superfund Sites" (June 2022), 9, available online at [chrome-](https://www.epa.gov/superfund/adaptive-site-management-a-framework-for-implementing-adaptive-management-at-contaminated-sediment-superfund-sites)

Similarly, the EPA's 2017 Contaminated Sediments Directive also recommends that a strong adaptive management plans include clear metrics that:

- a. Specify key indicators (i.e., monitored parameters that are tied to the remedial action objectives),
- b. Select specific trigger criteria (i.e., concentrations and timeframes) of those key indicators that might trigger a change in the remedy, and
- c. Specify the specific actions based on attainment or non-attainment of trigger criteria.<sup>2</sup>

We strongly recommend that DOEE revise the Plan to include numerical target concentration benchmarks in sediment and in fish tissue linked to certain dates. If the innovative remedial methods fail to make reasonable further progress, as defined by numerical reductions in contamination, that failure should trigger specific additional remedial steps by the Potentially Responsible Parties (PRPs), likely including capping and dredging areas where inadequate improvement occurs.

Without these benchmarks, it will be difficult for the public to judge whether in fact these new methods work, or if Adaptive Management is simply another name for Monitored Natural Attenuation (MNA), where minimal remedial work is completed. The River sediment may remain PCB-contaminated without such benchmarks, and the fish and shellfish unsafe to consume long past the time they could have been remedied with conventional methods. The Plan does not include specific contaminant targets tied to sediment and fish tissue PCB concentrations. It should.

## **2. Timeline Needed.**

So far, DOEE has moved with reasonable speed to study the Anacostia River sediments, choose a remedial approach, and start the remedial process. Most superfund cleanups, however, have a "construction completion" estimated date, but currently, there is no specified completion time.

---

extension://efaidnbmnnnibpcajpcglclefindmkaj/https://semspub.epa.gov/work/HQ/100003040.pdf (last visited on 8.3.2023).

<sup>2</sup> Memorandum of Mathy Stanslaus, United States Environmental Protection Agency Office of Land and Emergency Management Directive 9200.1-130 (Jan. 9, 2017), 9, available online at chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://semspub.epa.gov/work/HQ/196834.pdf (last visited on 8.3.2023).

While recognizing DOEE's good work to date, the public needs to see a reasonable "construction completion" date, similar to what would be the case if large-scale dredging were the chosen remedy. In this case, we recommend that DOEE provide two estimated dates: one date, not more than 15 years from now, by which date the sediment PCB concentrations have reached target concentrations, as well as a second date, not more than 20 years from now, by which time fish tissue concentrations have reached concentrations where the fish are safe to consume. In this fashion, the public will know whether DOEE and the potentially responsible parties have indeed carried out their commitments to clean up the PCBs and restore the river to "fishable, swimmable" condition. Under the federal Clean Water Act, the goal of a fishable, swimmable river should have been achieved by 1983, which was thirty years ago.

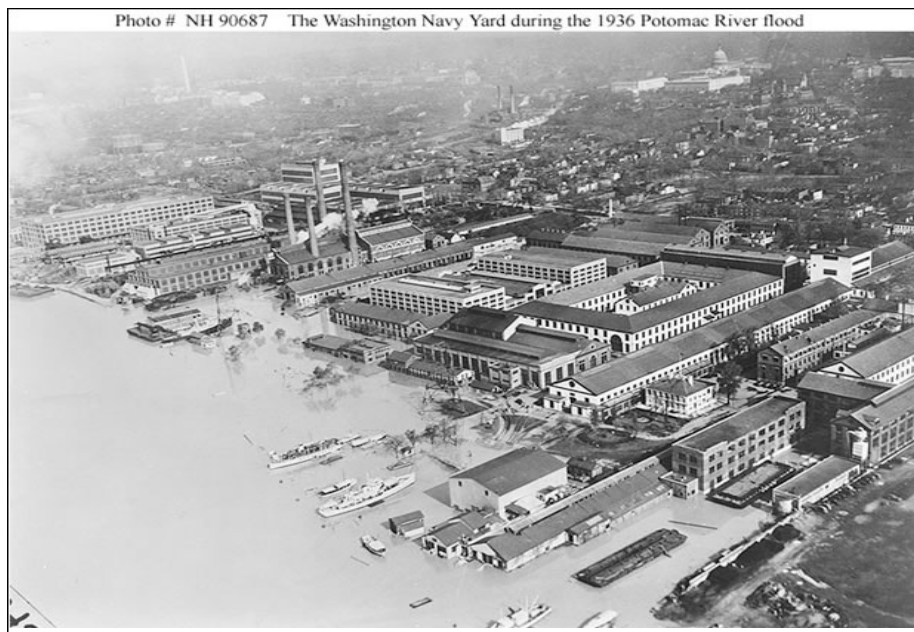
### **3. Sampling Frequency.**

The Plan provides for fish tissue and sediment sampling every three years. While it is reasonable to set biological monitoring for three-year intervals, we recommend sediment sampling be required every year in order to track changes in sediment contaminant concentrations and locations more rigorously, particularly given the large area addressed in this effort.

### **4. Sampling to Adjust Baselines after Major Floods.**

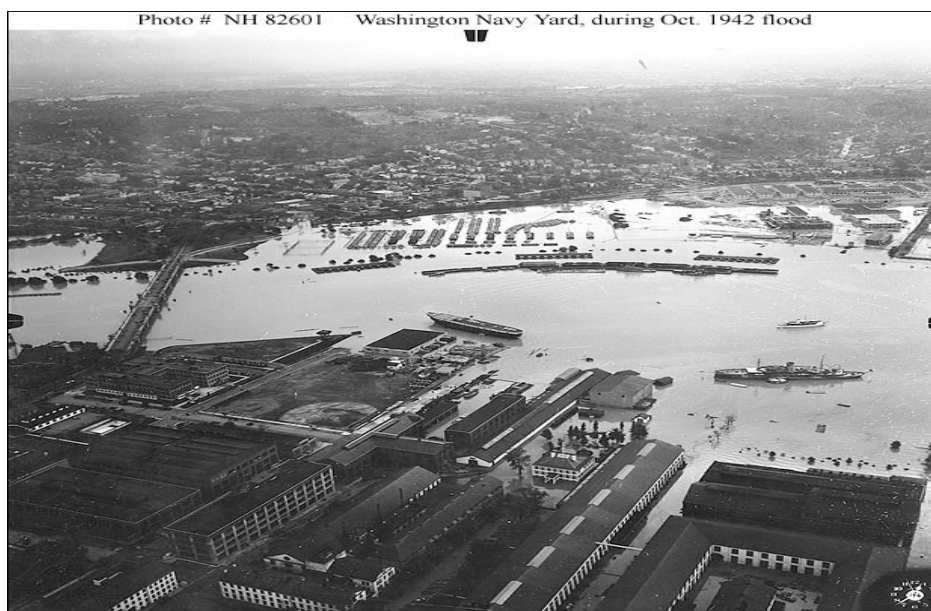
The Anacostia, like all rivers, periodically floods. When it does, particularly in very large storm events, the water moves existing sediments and dumps more into the system. As noted in the National Capital Planning Commission "Report on Flooding and Stormwater in Washington, DC" (2006), there have been major floods associated with hurricanes, snowmelt, and increasingly with short intense bursts of rain, sometimes more than four or five inches of rain in an hour. These have included hurricanes (Isabel (2003), Agnes (1972), Diane (1955), Connie (1955), and Hazel (1954), the record-setting March 1936 and 1942 floods, and cloudburst-style precipitation in July 2019 and other occasions. Climate change may increase the frequency and intensity of extreme rainfall events.

Given the likely occurrence of one or more of these high flow, high volume sediment events, we recommend that the re-sampling of sediment occur within three months, if possible, after any such storm event. The re-sampling will allow DOEE to determine whether changes in



**Image 1 Source:** U.S. Naval Historical Center Photograph, Washington Navy Yard, 1936, Accessed via <https://www.weather.gov/safety/flood-states-dc#:~:text=%2BRecord%20of%201942%2C%20October%2014%E2%80%9317&text=One%20and%20a%20half%20feet,steps%20of%20the%20Jefferson%20Memorial>

concentrations have occurred because of carbon amendments or from burial or displacement of the contaminated sediment previously sampled. During re-sampling, DOEE should consider taking samples from new collection points, given the likelihood that sediment moved during the storm event. We recommend that the trigger for such resampling be set for circumstances where flow at Bladensburg exceeds the flow expected from the ten-year storm or where observation shows substantial movements of bottom sediments from a storm.



**Image 2 Source:** U.S. Naval Historical Center, Washington Navy Yard, 1942, Accessed via [https://www.weather.gov/safety/flood-states-dc#:~:text=%2BRecord%20of%201942%2C%20October%2014%E2%80%9317&text=One%20and%20a%20half%20feet,steps%20of%20the%20Jefferson%20Memorial%20\(last%20visited%208.3.2023\)](https://www.weather.gov/safety/flood-states-dc#:~:text=%2BRecord%20of%201942%2C%20October%2014%E2%80%9317&text=One%20and%20a%20half%20feet,steps%20of%20the%20Jefferson%20Memorial%20(last%20visited%208.3.2023)).



**Image 3 Source:** Jeff Reed, National Archives, McGowan Theater at the National Archives during Federal Triangle Flash Flood, 2006, Accessed via <https://www.weather.gov/safety/flood-states-dc#:~:text=%2BRecord%20Flood%20of%201942%2C%20October%2014%E2%80%9317&text=One%20and%2>

## **5. Include Profile Imaging for Areas Where Carbon Amendments Are Used.**

We understand that there are remedial plans to use carbon amendments, i.e., specifically prepared carbon material placed with caps over PCB-contaminated sediment. These amendments reportedly have demonstrated promise in speeding up the decomposition of PCBs into more benign compounds, with far less physical disruption of the benthic communities, particularly in wetland areas. In order to see if these innovative treatments live up to their reported promise, we recommend that sediment sampling include profile imaging of treated sediments, so that the physical movement or decomposition of these carbon materials can be more easily tracked over time and location. Given that the river is a dynamic system, this imaging will be particularly important before and after flood events, so that DOEE can easily visualize the movement of these materials in the sediment and water.

## **6. Coordination with Sampling from Other Cleanups.**

The Navy Yard, PEPCO, Washington Gas, and the National Park Service (for the former Kenilworth Dump) are all working to address PCBs and other contaminants, both onshore and in the river

sediment. We recommend that the Plan spell out in more detail how the sampling data from these overlapping efforts will be coordinated and harmonized with the sampling and analytical work in the Plan. The additional data from these other cleanups should help inform and guide the work that DOEE is performing pursuant to the Plan.

## II. Detailed Comments.

The attached spreadsheet includes three pages of specific suggestions and corrections of the Plan. We are happy to respond to DOEE's questions about these comments.

Respectfully submitted,



Vanessa Batters-Thompson  
Executive Director, DC Appleseed Center for Law and Justice

### **Submitted on behalf of DC Appleseed's Anacostia River Project Team:**

Scout Cheeks, DC Appleseed Center for Law and Justice

Tad Deshler, Coho Environmental LLC

Deepen Gagneja, Covington & Burling LLP

Matthew Hegreness, Covington & Burling LLP

Russ Randle, Miles & Stockbridge

Lois Schiffer, Volunteer

Steven F. Stanton, Credibility International LLC, an HKA Company

Note: Affiliations provided for identification purposes only

**DC Appleseed Center for Law and Justice: Comments on DOEE Baseline/Performance Management Plan**

Section	Page	Comment
Executive summary	ES-14	"Recovery of the ARSP" should be "Recovery of the Anacostia River". Recovery is also dependent on adequate source control. Same comment on page 54.
1	1	Footnote 2 refers to DOEE's beneficial use guidance but does not acknowledge the BU guidance is still in draft form and, according to DOEE, an updated version of the Beneficial Use (BU) guidance will be released. We recommend acknowledging in this document that the 2022 document is a draft.
1.1	3	While the study designs for the pre-design investigations (PDI) and remedial design (RD) are necessarily different than the study design for baseline monitoring, the PDI and RD sediment data are relevant for defining baseline conditions. The manner in which the PDI and baseline monitoring datasets can, in combination, be used to define baseline conditions should be described in this document.
1.2	5	Clarify that Stage 4 validation will be conducted on all field samples except rinsate blanks. What are ancillary parameters subject to Stage 2B validation?
2	7	Regarding industrial outfalls, Section 2.2 at pp. 11-12 indicates there are 10 industrial outfalls, not "at least two" as stated here.
2.1	10	Use of scientific notation in Table 2.1 is unnecessary and is likely to create confusion for the public.
2.1	10	In Table 2.1, the selected PRGs for dioxin-like PCBs and total PCBs for 1E-04 are incorrect. They should be 10x the values for 1E-05, or 1.20E-02 and 6.50E+02, respectively.
2.2	11	Does DOEE's expectation that remedies at PECSEs conform with remedies selected for the ARSP study area mean that the PRGs selected for the PECSEs will be equivalent to those provided in Table 2.1 of this document? If not, how will conformation be determined?
3.1	14	The manner in which RAO 4 may be achieved is stated here as a fact (i.e., ...will lead to lower concentrations...) but should be reflected as a hypothesis that will be tested using the data collected according to this plan.
3.2	14	Concentrations of COCs other than total PCB congeners are expected to decrease to the extent these COCs are co-located with total PCBs. If they are not, how will these other COCs be addressed by the interim remedies?
3.2	15	Here and in several other places, the phrase "transitioning from the IROD to a final ROD" is used. We recommend being more explicit about whether or not this means that additional remedial actions will be conducted.
3.2	15	Since this is the first mention of downward trends, which is established as the primary criterion for judging "success," additional detail on what constitutes a trend should be provided here regarding whether the trend needs to be of a specific magnitude or be statistically significant. Downward trends also are dependent on effective source control.
3.2	15	We caution against discussing specific expected SWAC and risk reductions, particularly given the flawed method for calculating risk reductions, as we commented on during our review of the proposed plan.
5.1	24	Determining the extent of natural variability is important for conducting trend analysis. There is a considerable body of historical data that should be evaluated in an attempt to characterize natural variability in the absence of remedial actions. Recent data for porewater, surface water, and forage fish data will also be included in the trend analysis (as indicated in Section 6), but that fact should be mentioned here as well.
5.1.1	24	Will data from EAA polygons be derived from PDI sampling or will these areas be sampled again before remedial action? We recommend making that clear here.
5.2	27	Under Step 5 on Table 5.1, are the "other constituents" that will not be reported other pesticides that could be measured along with chlordane? If so, we recommend stating that explicitly.
5.2	27	Under Step 6 on Table 5.1, toxicity data should be validated, not just verified.



5.3.1	28	A reference should be provided for the 10-sample minimum.
5.3.1	29	Table 5.2 presents the results of the power analysis, but alternate parameters that may have been evaluated are not discussed. Without this information, the reader cannot assess whether the resulting design is indeed optimal. For example, why are the selected power and delta of 80% and 25% considered appropriate? Why was a delta of 50% used for Reach 67 when 25% was used for the other river segments? This table also should indicate the assumed variance of the dataset.
5.3.2	29	It seems premature to assume that the number of sample polygons would be reduced in the future. The manner in which this decision would be made should be described here, using power analysis or other appropriate tools.
6.1.2	30	It is not clear why Washington Channel polygons have been arrayed side-by-side on the eastern and western sides of the channel (Figure 6.3), whereas polygons in the main stem (Figures 6.1 and 6.2), which is of similar width to Washington Channel, have not been.
6.1.2	31	It's not clear how the individual sediment sample locations within each polygon will be selected. "Semi-randomly" is not an adequate explanation. If each polygon is divided into six subsections, then each sample location can be randomly assigned within each subsection, thereby assuring adequate coverage of the polygon.
6.1.2	31	Incremental sampling methodology is not technically infeasible, so this should not be given as a reason not to use this method.
6.1.3	32	Baseline porewater data (and surface water data) are to be evaluated with 2021 and 2022 porewater to evaluate trends. Why isn't a similar approach comparing baseline sediment data to PDI and RD sediment data proposed?
6.1.4	33	The interval between Time 1 and Time 2 is given as two to three years, but what is the interval between confirmation monitoring and Time 1? We recommend specifying this in Table 6.3 and all other relevant locations.
6.2.3	35	What factors are used to determine whether the surface water samplers are placed 25 or 50 cm above the river bottom?
6.2.4	36	Given the multiple variables that can influence COC concentrations in surface water, additional guidance should be provided here about when surface water samples will be collected. Without controlling for some of these variables, the comparability between time periods will be reduced.
6.2.4	36	The caveats about interpreting Time 1 surface water data imply this monitoring will occur immediately after remediation. If this is the plan, why not wait until perturbations associated with the remediation have receded? The timing of sampling should be described here.
6.3.2	37	How was the number of sediment toxicity testing (and bioaccumulation) locations determined? Was it based on a power analysis? Please clarify the method used within the document.
6.3.3	37	The decision to only re-test sediment in Time 1 that was toxic in Time 0 assumes that toxicity will not increase after remedial actions are completed. While this is certainly the goal, without testing some number of the "clean" locations again, there will be no way to confirm this hypothesis. Consider a toxicity study design for Time 1 based also on chemical concentrations in the sediment.
6.4.4	40	Please clarify within document how an "elevated level of COCs" is defined for invertebrate tissue.
6.4.4	40	Reduced concentrations in invertebrate tissue (and fish tissue, see Sections 6.5.4 and 6.6.4) don't necessarily mean that the interim remedial actions were effective. The results also must be evaluated in the context of reference area results.
6.5.4	46	The discussion of forage fish home range is interesting, but it is not clear how this information relates to an adaptive management decision point. Please clarify the relevance of this discussion to the plan.
6.7	51	What is the rationale for sampling surface water in the wet season, when RI results (see Section 6.2.4) indicated COC concentrations were higher in the dry season?

6.9	55	The document states that "DOEE will share any changes to the B/P Monitoring Plan with key stakeholders, including EPA and NPS, along with supporting data and rationale. " We recommend changing the term "stakeholders" to "the public" and publishing any changes to the B/P Monitoring Plan online.
6.9	56	The RAOs all include the phrase "reduce risks," without any associated numerical benchmark. Therefore, it isn't clear what is meant by "meeting" the RAO. Will the determination of whether RAO 1 is met be based on the results of predictions from the food web model or only on measured COC concentrations in game fish?
6.9	56	The bullet regarding the need for additional interim remedial actions seems rather narrowly focused on a "course correction" or clearly elevated concentrations. It is conceivable that the currently planned interim actions will result in progress toward achieving RAOs, but by themselves are insufficient for fully achieving these objectives. In this case, additional remedial actions would be necessary. This possible outcome should be discussed in this section.
7.2	60	We recommend against referring to the B/P dataset as "independent" and "unbiased." The data aren't being collected by a third-party, so are not independent. There are certainly biases to the study design, but hopefully they are known and can be considered during interpretation of the data.
7.2	60	Here and in other locations in the document, "additional remedial actions" and "final ROD" are presented as mutually exclusive events. In actuality, it is typical for a ROD to document the need for remedial action and to describe the alternatives for those actions. We encourage DOEE not to message a final ROD as the end of the process, but rather than an important milestone along the way.
7.2	61	Text indicates that sample numbers could be decreased in Time 2 and subsequent monitoring events. If assumptions used in the power analysis to develop the original study design are not valid (i.e., variability is much higher), then it is conceivable that sample numbers would need to be increased to achieve the same power. This possibility should be increased.
7.2.2	64	Statistical analyses are presented as a "maybe." We recommend that DOEE make a definitive commitment to conduct statistical analyses of all monitoring data.