Public Input on General Electric's June 25, 2021 Revised Floodplain Pre-Design Investigation Work Plan (including Vernal Pools), Reach 5A

July and August 2021

SEMS Doc ID 657191

From: Guidi, Benjamin (DEP)
To: Smith, Christopher; Ziegler, John (DEP)
Cc: Tagliaferro, Dean
Subject: RE: Revised PDI Work Plan for R5A Non-Residential FP Exposure Areas
Date: Monday, July 26, 2021 4:01:46 PM

Hi Chris,

The Department does not have any comments or issues with this submission. GE's revisions seem to cover all the requirements of the CAL pretty comprehensively.

Thank you for touching base on it.

Ben

Benjamin Guidi
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CITY OF PITTSFIELD

DEPARTMENT OF COMMUNITY DEVELOPMENT, CITY HALL, 70 ALLEN STREET, RM 205, PITTSFIELD, MA 01201

MEMORANDUM

To: Dean Tagliaferro, EPA Project Manager Housatonic Site
From: James McGrath, Park, Open Space, and Natural Resource Program Manager
Date: July 29, 2021
Subject: *Comments on GE-Pittsfield/Housatonic River Site Revised Pre-Design Investigation Work Plan for Reach 5A Non-Residential Floodplain*

The City of Pittsfield has reviewed the document referenced above and - working with Skeo under a Technical Assistance Services for Communities (TASC) arrangement with EPA - we offer the following comments:

The sampling approach described in the document relies on the use of spatially interpolated floodplain soil PCB levels and does "factor in habitat community mapping where applicable" (page 11, Section 1.3). However, some potentially unique backwater, active meander and abandoned meander settings were noted as containing a range of elevated PCB concentrations not thoroughly captured in the study design. In addition, some potential sample collection gaps were also noted in upland areas. The City feels that it would be appropriate to address these potential gaps with additional sampling. The potential sample collection gaps are listed below:

- *EA 1*: a potential depositional area immediately west of an active meander (that bends to the west) is lacking new proposed sampling locations (but includes several historical sampling locations). This setting is in a transitional floodplain and encompasses a substantial number of historical sampling sites (that show possible elevated PCB levels, as per information presented in Figure 2-3). However, since this shoreline area is subjected to the effects of scour and flooding, more sampling in this area is recommended.
- *EA 8*: encompasses two types of habitat settings (transitional floodplain forest and hardwood forest/agricultural field). The hardwood forest/agricultural field habitat sampling includes only one new proposed sampling site. It may be appropriate to add another sampling location in the hardwood forest/agricultural field habitat along the shoreline for completeness since, as per the document approach (pdf page 19, second full paragraph): "sampling density was increased nearer to the river because of the

greater likelihood of flooding" and the currently planned sample in this habitat is not in close proximity to the river.

- *EA 10*: there are two potentially unique habitat settings that may require more sampling beyond the new sampling proposed in the work plan. The backwater area in the southwest corner encompasses only historical PCB sampling locations. There are no new proposed locations for the backwater area. In addition, the text states that this EA encompasses the "Massachusetts Audubon Society, Canoe Meadows Wildlife Sanctuary" but it is not shown in Figure 3-9. It would be important to know the location of this important ecological feature within the perimeter of this EA and whether the proposed sampling addresses this feature adequately.
- *EA 18*: encompasses a Core Area 1 habitat setting. There are no historical or proposed samples shown for the central Core Area 1 habitat setting. More sampling may be required to adequately characterize this important ecological setting that is likely to remain in place.
- *EA 19*: encompasses a large Core Area 1 habitat setting. The spatial distribution of sampling in the Core Area 1 habitat setting is sparse in the central areas above and below EA 62. More sampling may be required to characterize this setting adequately.
- *EA 20*: encompasses an abandoned meander (now designated as a backwater area) that occurs immediately next to a Core Area 1 habitat setting. There are no samples proposed for this abandoned meander, which contains soils and sediments with elevated PCB levels, as per Figure 2-3, and there are very few proposed samples for the Core Area 1 habitat setting. These two unique features may require more sampling.

The text states that certain sample spacing efforts were modified to capture flood inundation areas more thoroughly. As stated in the second bullet, page 20, "a minimum of two sample locations were placed in each vernal pool, even if it required locating samples closer than 100 feet apart." For the most part, this strategy was followed. However, several vernal pools appear to have sampling gaps. Since vernal pools are unique aquatic habitats that are heavily influenced by fluctuating surface and groundwater levels, it seems applicable to collect two complete samples (that include both the 0-to-6-inch and 6-to-12-inch depth fractions) during the upcoming sampling efforts. Historical sampling results may have limited usefulness, given the dynamic nature of these pools. The work plan emphasizes that the Revised Final Permit requires that GE conduct more sampling of vernal pools to generate baseline data on the concentrations of total PCBs (pdf page 11, Section 1.3). Therefore, deploying a consistent sampling effort for each pool is recommended. The following potential sampling gaps for vernal pools are noted as follows:

- EA 1: one of the four vernal pools is lacking two proposed sampling locations for both the 0-to-6-inch and 6-to-12-inch depth fractions.
- EA 2: four of the eight vernal pools are lacking two proposed sampling locations for both the 0-to-6-inch and 6-to-12-inch depth fractions.
- EA 5: this EA encompasses part of one vernal pool that is lacking two proposed sampling locations for both the 0-to-6-inch and 6-to-12-inch depth fractions.
- EA 7: one of the seven vernal pools is lacking two proposed sampling locations for both the 0-to-6-inch and 6-to-12-inch depth fractions.

- EA 19: five of the six vernal pools are lacking two proposed sampling locations for both the 0-to-6-inch and 6-to-12-inch depth fractions.
- EA 24: two of the six vernal pools are lacking two proposed sampling locations for both the 0-to-6-inch and 6-to-12-inch depth fractions.
- EA 26: seven of the 10 vernal pools are lacking two proposed sampling locations for both the 0-to-6-inch and 6-to-12-inch depth fractions.
- EA 33: one of the three vernal pools is lacking two proposed sampling locations for both the 0-to-6-inch and 6-to-12-inch depth fractions.

These identified data gaps could be addressed by conducting the vernal pool sampling by acquiring samples from both depth fractions at two locations at each pool during the upcoming sampling program.

The document states that the Revised Final Permit provision requiring the generation of baseline data on the concentrations of total PCBs also requires that GE perform an ecological characterization of the vernal pools, including collection of information on the presence and abundance of animal species, as well as water and soil chemistry (footnote 1, page 11). As per methods described in EPA's *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites* (EPA, 2005), it works well to conduct sampling of biota, soil/sediment and water chemistry concurrently to gain a thorough snapshot-in-time of the exposure and effect conditions in contaminated settings. Co-located spatial and temporal sampling efforts should be considered to possibly gain useful information that may identify the effects of PCB-contaminated soil and sediment on the ecological communities in the vernal pools. The City recommends that co-located sampling be considered in order to understand the relationship between PCB contamination and biotic assemblage characteristics such as species abundance.

The City of Pittsfield has identified an area that would likely qualify as a Frequently Used Subarea in the future. This area - EA 27 - encompasses an area associated with a high-probability future recreational water access. More soil sampling that follows the work plan's strategy for other Frequently Used Areas would be applicable to this setting. In addition, the City also requests that the work plan be updated to incorporate EA27 as a Frequently Used Subarea.

The work plan (and the Revised Final Permit) defines Core Area 1 habitat settings as "areas with the highest quality habitat for species that are most likely to be adversely impacted by PCB remediation activities, most of which species are plants because they are not mobile" (footnote 8, page 21). This consideration emphasizes the need to gain a thorough understanding of the nature and extent of PCB contamination in the Core Area 1 habitat settings. Since these settings may likely be left undisturbed to preserve their ecological value, it would be important to know if the contamination left in place will lend to secondary exposure pathways created by bioaccumulation of the PCBs in the food chain. It may be prudent to understand the full extent of contamination with the completion of co-located biota, surface water and soil/sediment sampling (where available and appropriate).

As mentioned previously, EPA guidance recommends co-located sampling of contaminated media with potentially affected biological media to help determine if bioaccumulation of PCBs is

occurring. Similarly, biological measures such as species abundance and diversity also assist in determining if PCB contamination is related to biological impacts. Further study of the vernal pools and their ecological characteristics is forthcoming in the planned Baseline Restoration Assessment. The City recommends that Core Area 1 habitat setting also be also evaluated with a similar level of study as described for the vernal pools. Furthermore, we request more robust sampling in the Core Area 1 habitat settings to be sure these areas are fully characterized (EAs 18, 19 and 20.)

The PCB concentration maps provided in Figure 2-3 were an in important tool to help determine if the proposed sampling locations captured the range of known PCB concentrations adequately. However, this figure is presented "solely to illustrate the procedure to be used" (footnote 5, page 8) and is based on the 2002 Woodlot habitat survey. It may be useful to overlay this same PCB concentration information on the 2018 Woodlot habitat survey to be sure the proposed sampling captures the spectrum of PCB concentrations within the surveyed Super Habitats completely.

The amount of sampling completed and proposed for Reach 5A is substantial. The work plan proposes strategic sample collection of depth fractions with possible data gaps informed by previous PCB concentration information. This is an acceptable approach that accommodates existing data. However, in settings affected by soil/sediment deposition and movement (i.e., from flooding), the value of historically gained information at a defined depth becomes uncertain. The City is seeking clarification on whether a standard sample collection and analysis of both 0-to-6-inch and 6-to-12-inch depth fractions at each location (instead of conducting strategic sampling to fill historical gaps) would be a more defensible and standard method as compared to the variable approach in the work plan.

Subsection 3.2.2.17, EAs 19 and 62, provides a detailed description of the proposed sampling for EA 19. However, EA 62, which encompasses a part of a vernal pool and three more habitat types, does not encompass any proposed sampling. The work plan states that the additional samples for EA 19 will also provide adequate coverage for EA 62. The work plan should clarify why the sampling coverage from EA 19 is adequate for EA 62 when the remedial action for these separate EAs will likely ultimately differ. It may be prudent to simply sample EA 62 to better understand current PCB conditions at this location.

Finally, Figure 2-2 is an important overview of Reach 5A that defines EA boundaries, Super Habitats and unique EA features. The outline of the 1 milligram per kilogram (mg/kg) PCB isopleth is similar to the boundary of the Frequently Used Subareas and makes these areas difficult to discern. For clarity, the City requests that the Frequently Used Areas are highlighted differently to identify these important areas more clearly.

We appreciate the opportunity to provide comments on plans and studies associated with the Rest of River clean up, and are grateful for the technical assistance provided by Skeo through EPA.

From:	Heidi Ricci
To:	R1Housatonic
Cc:	Tagliaferro, Dean; Smith, Christopher; Scott Campbell; Stephen Hutchinson; Becky Cushing Gop; Tom Lautzenheiser
Subject:	Revised Floodplain Pre-Design Investigation Work Plan (including Vernal Pools), Reach 5A
Date:	Monday, August 16, 2021 3:57:14 PM
Attachments:	image001.png

Dear EPA Housatonic Cleanup Staff Team:

On behalf of Mass Audubon, I submit the following comments on the *Revised Floodplain Pre-Design Investigation Work Plan (including Vernal Pools), Reach 5A.* Reach 5A includes EA10, covering land owned by Mass Audubon at the Canoe River Wildlife Sanctuary.

We request that there be a more robust plan for vernal pool sampling that includes data gathering that will fully characterize PCB impacts to amphibians.

On Figure 3-9, EA10, the Settlement Agreement called for additional sampling not yet reflected on this map. We understand that EPA staff have made specific recommendations for additional sampling locations to address this.

Wetlands in the southeast corner of Canoe Meadows Wildlife Sanctuary are classified in this report as boatable in the Work Plan. This includes Sackett Brook, the large wetland complex on the east side of the Sacred Way Trail, and West Pond and its associated wetlands to the southeast. It was our understanding based on previous conversations with the consultant and EPA staff that some of these areas are actually not boatable. We request clarification.

We support the fact that the study area now includes the sliver of wetland to the east side of the causeway across the wetland southeast of West Pond. However, it appears no samples are proposed in this area. We request that there be at least one sample in this area. Also, this report has much of that wetland classified as boatable, which is questionable.

Thank you for the opportunity to provide comments.

Regards,

Heidi

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Mass Audubon
Policy & Advocacy Team

Housatonic Environmental Action League, Inc.

Raising Awareness – Sharing Knowledge – Bridging Advocates

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August 16, 2021

From:
Housatonic River Initiative
Working for a fishable, swimmable river since 1992
165 Bradley Street
Lee, MA 01238

Along with: Housatonic Environmental Action League, Inc.

To:
Attorney Tim Conway
United States Environmental Protection Agency
sent via email: <conway.tim@epa.gov>

RE: Revised Pre-Design Investigation Work Plan for Reach 5A Non-Residential Floodplain Exposure Areas, June 2021, Housatonic Rest of River

Dear Attorney Conway:
Please accept these comments on behalf of the Housatonic River Initiative, Inc. (HRI) and Housatonic Environmental Action League, Inc. (HEAL).

2.1 Data Summary; Page 5, Paragraph 1

The report states that: *"A number of studies dating back to the late 1980s were conducted to characterize PCB concentrations in floodplain soil".*

The predominant number of the samples are 33 to 19 years old.
These samples are **very old data** and should not be relied upon to give an accurate PCB representation. New samples should be taken to verify whether the older are samples are accurate.

YEARS	HOW OLD	
1988-1998	33 years to 23 years	1000 samples
1998-2002	23 years to 19 years	5000 samples
2005	16 years old	100 samples

Page 5, Paragraph 2

The report states that: *"...The above-described soil data collected within the Rest of River floodplain formed the basis for the floodplain evaluations performed for the*

Housatonic River – Rest of River, Revised Corrective Measures Study Report (RCMS; Arcadis, Anchor QEA, and AECOM 2010). The use of these data (which was previously approved by EPA), including the earlier "historical" floodplain soil samples, was deemed appropriate for the RCMS evaluations because floodplain soils are not as dynamic a medium as surface water or sediment and are ***thus not expected to have significant changes in PCB concentrations over time."*** **[emphasis added]**

Climate change effects have been increasing over time. Floodplains have been extremely more dynamic over the past decade as these changes have their effect. Recent storms have been unusually powerful. Bridges have been destroyed, erosion is widespread, floodplain areas have been underwater with extreme currents, many streams and the river have flooded over their banks. The expectation that the floodplain soils will not change in PCB concentrations over time is inaccurate and useless….especially over 20 to 30 years.

The inter-connection between the floodplain, the river, groundwater, and the aquifer has never been addressed by the EPA. In fact, EPA has ignored the aquifer problem.
Evidence exists that the aquifers are contaminated with PCBs released by General Electric.

In 1981 the City of Pittsfield drilled wells in an attempt to find a clean source of groundwater. The area of the floodplain where the wells are located floods during high water events. The project was abandoned when PCBs were found. The Hill 78 area was a ravine with no liner according to the 1988 Massachusetts Department of Environment Protection Hill 78 Site Assessment. This area is exposed to the groundwater and may have impacts to the aquifer. Years ago one of the Lee paper mills also drilled wells near Woods Pond to find a source of water for paper making. This project was also shut down because of PCBs. The dumping area of the Noble Farm might also be contributing to the aquifer contamination.

Conclusions

The data is old.

Climate change is creating significant….many times extreme…, and increasingly frequent weather impacts.

Thank you for the opportunity to offer comments.

Sincerely,
Tim Gray, HRI
Judy Herkimer, HEAL