Public Input on the following General Electric Documents:

- Conceptual Remedial Design/Remedial Action Work Plan for Reach 6, dated October 31, 2024
- Pre-Design Investigation Summary Report for Reach 6, dated October 31, 2024
- Baseline Restoration Assessment Report for Reach 6, dated October 31, 2024

November 2024 – February 2025

Public Input ended on February 3, 2025

MASSWILDLIFE

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February 3, 2025

Dean Tagliaferro
EPA New England, Region I
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Submitted via email: Tagliaferro.Dean@epa.gov and R1Housatonic@epa.gov

Re: **GE-Pittsfield/Housatonic River Site**
Rest of River (GECD850)
Conceptual Remedial Design/Remedial Action Work Plan for Reach 6
Baseline Restoration Assessment Report for Reach 6
Pre-Design Investigation Report for Reach 6

To Whom it May Concern:

The Massachusetts Division of Fisheries and Wildlife (Division) is responsible for the conservation of freshwater fish and wildlife in the Commonwealth, including but not limited to plants and animals state-listed as endangered, threatened, or of special concern pursuant to the Massachusetts Endangered Species Act (MESA; M.G.L. Ch. 131A) and its implementing regulations (321 CMR 10.00). In fulfilling this role, the Division, through its Natural Heritage and Endangered Species Program, is responsible for administering the MESA as well as the certification of Vernal Pools pursuant to the Wetlands Protection Act regulations (WPA; 310 CMR 10.00). The purpose of the MESA is to conserve and protect state-listed rare species and their habitats and to provide a framework for review of projects or activities proposed within mapped Priority Habitat.

In order to conserve and manage freshwater fish and wildlife resources for the benefit of the citizens of the Commonwealth, the Division also owns and manages over 240,000 acres of conservation land in Massachusetts. The Division manages and provides wildlife-dependent recreational opportunities for the public on Wildlife Management Areas (WMAs), including hunting, fishing, and trapping.

The Division has received and reviewed the Conceptual Remedial Design/Remedial Action Work Plan (RD/RA), Baseline Restoration Assessment (BRA), and Pre-Design Investigation Report for Reach 6 and appreciates the opportunity to provide the following comments regarding impacts to species, their habitats, WMAs, and the public's ability to enjoy the resources under the Division's stewardship. The Division also notes that MESA has been identified as an Applicable and Relevant or Appropriate Requirement (ARAR) by the EPA with respect to Rest of River (ROR) Remediation.

Massachusetts Endangered Species Act (MESA)

The project area contains suitable habitat for a variety of state-listed and other species of conservation concern, including plants, birds, and invertebrates, and the proposed alternative has the potential to adversely impact these species and their habitats. To fully understand the proposed alternative and evaluate the full scope of potential ecological impacts, we request the following additional information.

1. *Evaluate direct, indirect, and short- and long-term ecological impacts of the proposed alternative.*

GE has not provided an evaluation of impacts to state-listed species and their habitats. We understand that GE intends to evaluate potential habitat impacts, and identify mitigation and restoration measures, during final project design. In advance, the Division anticipates that the remedial action work in Reach 6 will have direct and indirect impacts to state-listed species and their habitats, as well as a freshwater mussel Species of Greatest Conservation Need (State Wildlife Action Plan, 2015). The Division notes that the State Wildlife Action Plan is currently being updated, and that the list of species protected under the MESA is also reevaluated regularly. Therefore, other species of conservation concern may be identified in the future and may need to be considered as the project proceeds.

Direct impacts include but are not limited to direct mortality, habitat loss, and disruption of key behaviors (e.g., nesting, breeding, foraging). Immobile species located within and along the edges of Woods Pond, and species that use adjacent floodplain habitats for key behaviors (fish, marsh birds, and butterfly), are especially vulnerable. Indirect impacts can result from introduction of invasive plants and the spread of contaminated sediments downstream, to name a few examples. The duration of impacts will depend on the duration of remedial action work and subsequent restoration of habitats, but also on the life history, longevity, mobility, and status of the species impacted.

Therefore, the Division requests that GE evaluate direct, indirect, and short- and long-term impacts of all aspects of the project on state-listed species as well as other Species of Greatest Conservation Need, including but not limited to hydraulic dredging of Woods Pond and associated components of the RD/RA. The climate resiliency of the proposed plan should be included in this evaluation to help fully evaluate long-term impacts associated with likely changes in hydrology. GE is strongly encouraged to proactively consult with the Division to help streamline this evaluation. Updated pre-construction baseline surveys, using standardized methods as approved by the Division, will be particularly important to evaluate impacts and determine baseline conditions as a reference point for future restoration. However, the Division notes that current conditions may not always represent a suitable reference point, and that – wherever possible – restoration should seek to achieve high-quality habitat for native species as appropriate for each location, including aquatic, wetland, and upland habitats impacted by the project.

The Division notes that the following, additional information will be necessary to fully evaluate impacts and future avoidance, minimization, and mitigation measures.

a) A habitat assessment for state-listed species as well as other Species of Greatest Conservation Need. GE must consult with the Division to confirm what species require habitat assessments. A qualified biologist(s) with extensive field experience working with the subject species must perform the assessment.
b) Pre- (and potentially post-) construction surveys and monitoring for one or more state-listed species, depending on the results of the habitat and impact assessment(s). Surveys will be used to refine potential impacts; design appropriate measures to avoid and minimize impacts; and, if necessary, develop a plan to mitigate for impacts that cannot be avoided. Please note that surveys for state-listed species need to be conducted by a qualified biologist during a specific time or times of year pursuant to a protocol reviewed and approved in advance by the Division.

Once GE has fully evaluated impacts to state-listed species as well as other Species of Greatest Conservation Need, including but not limited to performing necessary habitat assessments and or surveys, GE should consult with the Division to develop plans to avoid and minimize impacts to these species and their habitats. Potential avoidance and minimization measures may include but not be limited to (a) evaluating alternative project footprint configuration/extent to minimize loss of important habitats; (b) implementing Division-approved species protection plans (e.g., time of year restrictions, exclusion measures, surveys, and ongoing monitoring, etc.); and (c) implementing Division-approved, long-term adaptive restoration and monitoring plans to ensure that all habitats temporarily impacted by the project are restored to suitable, high-quality habitats. Finally, once GE has sufficiently evaluated alternatives to avoid and minimize impacts, it should consult with the Division to develop a long-term, net-benefit plan to mitigate for any impacts that cannot be avoided. Mitigation may include, but may not be limited to, permanent protection of suitable habitat, habitat enhancement, conservation research, and/or conservation funding.

George Darey Housatonic Valley Wildlife Management Area

Much of the land and water in Reach 6, including most of the Woods Pond impoundment, is part of the George Darey Housatonic Valley Wildlife Management Area (Darey WMA). The Darey WMA is conserved for wildlife habitat and public recreation. Woods Pond and the associated backwaters are extremely popular with anglers, paddlers, and other outdoor enthusiasts. Anglers particularly target northern pike and largemouth bass both through the ice and in open water. Neither the BRA nor the RA/RD plan adequately address the loss of recreational opportunity.

The work described in the Conceptual RD/RA for Reach 6 will severely disrupt recreational use in the short term during construction and in the longer term due to habitat alteration and loss. Diverse habitat leads to diverse fish community assemblages, including species pursed by recreational angling. The RD/RA describes a post-remediation condition that will be remarkably uniform in available habitat and much less likely to support recreational fishing, resulting in a long-term loss for Massachusetts anglers. Part of the Division's obligation as landowner of the Darey WMA is to provide and protect wildlife-based recreational opportunities. These opportunities will be greatly reduced under the current design plan. GE should evaluate the loss of recreational opportunity and describe mitigation measures to address the

loss. GE should also consult with the Division on ways to improve aquatic habitat in the impoundment and on the Darey WMA.

The Division will continue to review and comment on plans and documents prepared by GE associated with the ROR to assist the EPA in ensuring that impacts to state-listed species, vernal pools, and other habitats are monitored and minimized to the greatest extent practical, facilitate restoration of impacted habitats after work is completed, ensure adequate mitigation for impacts that cannot be avoided, and ensure compliance with Article 97 and the *Open Space Act* and the federal Wildlife and Sport Fish Restoration Acts. The Division also expects to work with the EPA and GE to ensure that unavoidable impacts to state-listed species and their habitats are adequately mitigated consistent with the status of MESA as an ARAR.

If you have any questions about the Division's comments, please contact Dr. Eve Schlüter, Deputy Director, at eve.schluter@mass.gov. The Division appreciates the opportunity to comment.

Sincerely,

Mark S. Tisa, Ph.D., M.B.A.
Director

Cc: Dr. Eve Schlüter, MassWildlife Deputy Director

TOWN OF LEE
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R. Christopher Brittain,
Town Administrator

February 3, 2025

Mr. Dean Tagliaferro
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Dear Mr. Tagliaferro:

PREFACE: In submitting the comments below, we remind the Environmental Protection Agency, the General Electric Corporation (GE), and the courts, both state and federal, that the Town of Lee is extremely dissatisfied with the proposed "remedy" for restoration of the Housatonic River. While EPA embraces "risk assessment" to justify moving forward with this plan, it is, in fact, no remedy at all. No PCBs are being neutralized or destroyed. The PCBs are simply to be redistributed or buried. They remain a danger to the health and safety of the residents of the river corridor, the environment, and to future generations. Reduction of risk is really reduction of cost to GE, penalizing this and future generations for GE's reckless policies over decades. The use of the term "environmental" and "economic justice" ring hollow and will haunt all of us for years to come.

Following, please find comments from the Town of Lee regarding the following GE documents:

- Conceptual Remedial Design/Remedial Action Work Plan for Reach 6
- The Pre-Design Investigation Summary Report for Reach 6
- The Baseline Restoration Assessment Report for Reach 6

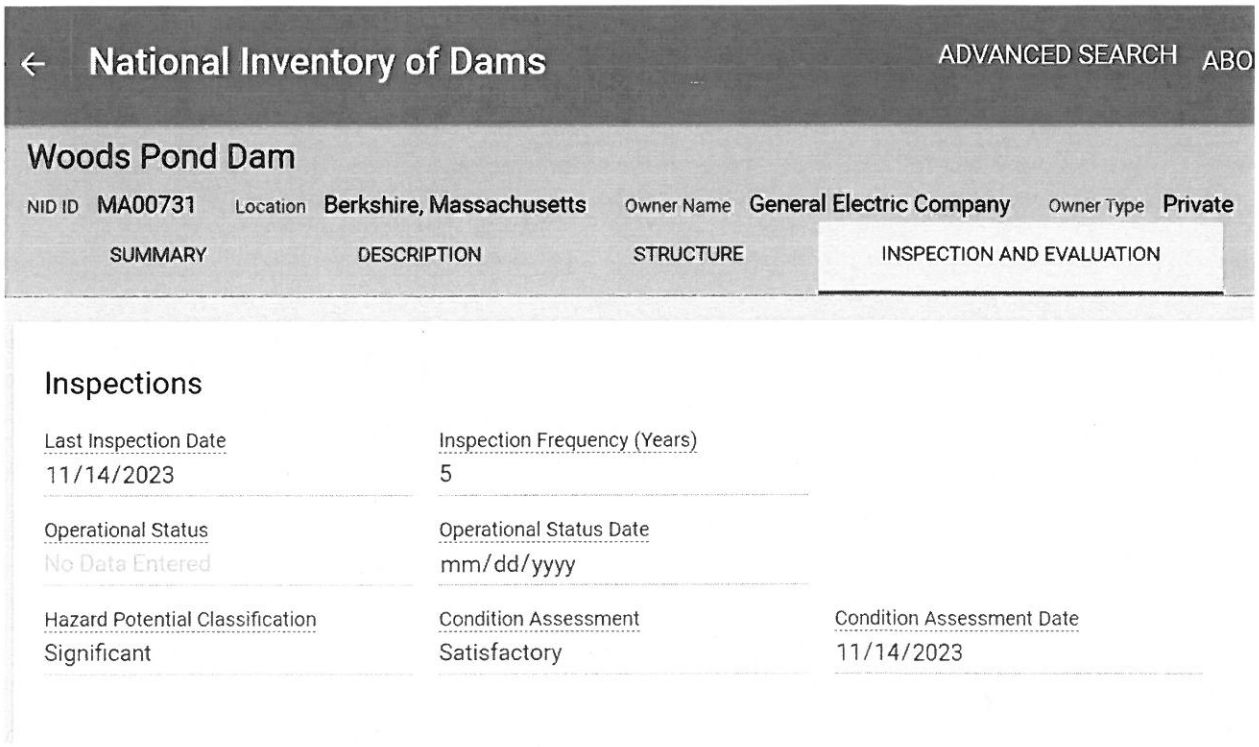
Conceptual Remedial Design/Remedial Action Work Plan for Reach 6

1. The Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 relies on removal of sediments using hydraulic conveyance of slurry material. This method seems like an effective removal effort if slurried material can be managed and maintained within the immediate removal area near Woods Pond. Sediment in eutrophic (nutrient-rich) environments may be significantly anoxic (deficient of oxygen) and burdened with decayed organic matter. The disturbance of these types of sediments can cause decreased oxygen and high turbidity, which may adversely affect downgradient ecosystems. It is difficult to determine how the hydraulic removal process will be contained. Furthermore, it seems possible to draw down water levels in certain features (such as Valley

Mill Pond) resulting in the drying of sediments. The dried material may be more easily accessed and contained.

The Town of Lee asks whether access to and removal of certain areas of contaminated waste materials in Reach 6 could be more easily accomplished if water levels were decreased.

2. Current National Inventory of Dams information (USACE 2024) was reviewed and summarized below
(source: https://nid.sec.usace.army.mil/#/dams/system/MA00731/summary).



The dam's status is as follows:

- Hazard Potential Classification (Significant): Category to indicate the potential hazard to the downstream area resulting from failure or mis-operation of the dam or facilities. It reflects probable loss of human life and impacts on economic, environmental and lifeline interests. The hazard potential does not speak to the condition of the dam or the risk of the dam failing.
- Condition Assessment (Satisfactory): Assessment that best describes the condition of the dam based on available information.
- The last inspection took place on November 14, 2023. Inspection frequency is five years.

The Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 describes various management practices to be put into place that will isolate and control the PCB-contaminated waste. However, there is no mention if the Woods Pond Dam will need any reinforcement or refurbishment to ensure that the integrity of the pond is maintained during Reach 6 remedial action activities.

The Town of Lee requests that EPA determine whether the Final Remedial Design/Remedial Action Work Plan must include an assessment of any Woods Pond Dam reinforcements or best management strategies to ensure the integrity of the dam through the remedial action process.

3. As indicated in the previous comment, GE owns the Woods Pond Dam. The pond's only defined purpose is to retain flood waters. The dam itself is found to impair fish passage (upstream), as summarized in the Reach 6 Baseline Restoration Assessment Report. If the dam were found to require any refurbishment in order to withstand the proposed remedial action activities, it may provide an opportunity to create a fish passage conduit coincident with any dam restructuring. This would further enhance the fisheries resource potential of Woods Pond.

   The Town of Lee requests that EPA require that any future refurbishment of the Woods Pond Dam by GE during this project provide a fish passage feature.

4. The Final Revised Overall Strategy and Schedule for Implementation of the Corrective Measures (Anchor QEA 2022) states that sediment removal in Reach 6 will be conducted in parallel with sediment/soil removal in Reach 5A such that sediment removal in both reaches will be completed at about the same time. However, capping in Reach 6 will be delayed until after all sediment and soil removal, backfill/capping, and placement of sediment amendments have been completed in all upstream remediation units (Reaches 5A, 5B and 5C). This is an appropriate approach to address the bulk of the Rest of River wastes in a timely manner.

   Section II.B.2.e(1)(c) of the Revised Final Permit states that if EPA determines that significant concentrations and depths of PCB-contaminated sediment have accumulated above the engineered cap during post-construction monitoring, the accumulated sediment will be removed in a manner that ensures the integrity of the cap. However, it does not state whether sediments are monitored prior to cap placement. It is possible that PCB-contaminated materials may be disturbed and transported downriver from Reaches 5A, 5B and 5C to Reach 6 before cap placement. It would be prudent to understand whether these materials have re-contaminated the bottom sediments prior to cap placement. In addition, the concentration of PCBs in these sediments may help define the chemical isolation layer component of the cap.

The Town of Lee requests EPA to determine whether the sampling program to be conducted after the completion of the Reach 5A, 5B and 5C remedial action must also determine whether any new contamination has moved to Reach 6 prior to cap construction.

5. The presence of aquatic macrophytes (hereafter "aquatic plants") is recognized as an issue to be addressed in connection with the hydraulic transfer of sediments since these materials can encumber the slurry transport. The plants die-off during winter months when non-woody plant tissue becomes pliable. It may be prudent to begin sediment dredging and slurrying when this material is more manageable.

   The Town of Lee requests that EPA determine whether it is beneficial to begin the hydraulic sediment removal process in the early winter months to minimize the physical encumbrance issues created by the abundant aquatic plants.

6. Section 1.4 describes the proposed remediation approach for the headwaters transition area. As stated in this section, sediment removal and capping in the transition zone will be conducted concurrently with or after the sediment removal and backfilling of Reach 5C. However, for the purposes of calculating sediment disposal volumes, the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 assumes that these wastes will be included in the averaging area with the remainder of Reach 6. Given that it is not clear when the sediment removal and capping in the transition zone will occur, it is also not clear whether this averaging approach is appropriate as the timeframes for removal will differ.

   The Town of Lee asks the EPA to compare estimates of the volumes of waste generated from the transition zone with the volumes of waste produced by Reach 6 if they are not being gathered in the same timeframe.

7. Section 2.6 describes the water withdrawals and uses evaluation. It summarizes the uses of water and requirements associated with these uses, as well as the "proposed methods to minimize/mitigate impacts during implementation of the remedial action." One of the water uses within Reach 6 is associated with the Town of Lenox's wastewater treatment outfall. Such outfalls are routinely burdened with nutrients such as phosphorus that enhance aquatic macrophyte growth. There may be opportunities to amend Woods Pond cap materials with nutrient binding components to assist with the control of nutrients and eventual control of the macrophytes. The Technical Assistance to Services to Communities' (TASC) comments on the Reach 6 Baseline Restoration Assessment Report include further discussion of this comment.

   The Town of Lee requests that GE consider amending cap materials with components that can bind nutrients and perhaps assist in the control of future

aquatic plant growth as part of the cap design. This may be particularly useful for the cap design as the plant roots may compromise the integrity of cap layers.

8. Water management is an important aspect of the Reach 6 remedial action activities. As stated in the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6, it appears that there is a culvert that connects Woods Pond to Valley Mill Pond. However, it is unclear whether and to what extent water is being conveyed in current conditions. However, it is possible that disturbance from the remedial action activities can release transported contaminated materials to downgradient features. Of particular interest is the connection between Woods Pond and Valley Mill Pond. It is assumed that GE will exercise caution during Woods Pond remedial action activities to contain and control disturbed waste materials. However, the forthcoming Final Remedial Design/Remedial Action Work Plan should describe best management practices to be put in place that will control transference of contamination between the ponds.

   The Town of Lee requests that EPA require the forthcoming Final Remedial Design/Remedial Action Work Plan for Reach 6 to include a discussion of water management controls and best management practices to contain contaminated wastes from transferring between Woods Pond and Valley Mill Pond.

9. As mentioned in the previous comment, there is a connection between Woods Pond and Valley Mill Pond. Per the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6, the cap for Valley Mill Pond will be placed immediately after Valley Mill Pond remedial action. Given this schedule of activities, Valley Mill Pond may be capped before remedial actions in Reaches 5B and 5C. With the hydraulic connection between Woods Pond and Valley Mill Pond, there is the potential for resuspended waste from upgradient remedial action activities to deposit on Valley Mill Pond cap. It seems prudent to time the placement of Valley Mill Pond cap to occur concurrent with the Woods Pond cap (upon completion of Reach 5B and 5C remedial action activities).

   The Town of Lee requests that the EPA determine whether the cap for Valley Mill Pond should be placed at the same time as the Woods Pond cap.

10. As specified in the Revised Final Permit performance standard (Section II.B.2.e), remediation in Woods Pond will involve:

    - Removal and engineered capping of sediments in the pond as needed to achieve a post-capping minimum water depth of 6 feet, as measured from the crest of Woods Pond Dam.
    - In nearshore areas, ensuring that the slope from the shore to the 6-foot water depth is as steep as possible while also being stable and not subject to erosion or sloughing.

- In areas with water depth greater than 6 feet prior to remediation, the removal of sufficient sediment to allow for the placement of an engineered cap so the final grade is equal to or deeper than the original grade.

TASC commented on the review of the Reach 6 Baseline Restoration Assessment that these required water depth profiles will eliminate the shallower areas in the pond, which may alter the ability of the pond to recover all baseline functions. It is likely that sedimentation over time will recreate these shallower environments. However, there are certain in-pond features that may not be recovered, such as:

- The pronounced channel through Woods Pond that provides a primary flow pathway;
- Undercut banks, or banks with extensive cover such as overhanging vegetation, and aquatic plants; and
- Variable bottom substrate throughout the pond's footprint.

The Town requests that the EPA investigate any cap design considerations that will help recapture the unique features of the pond that support the diversity of desirable aquatic physical and biological features.

11. Section II.B.2.e(1)(c) of the Revised Final Permit states that if the EPA determines that significant concentrations and depths of PCB-contaminated sediment have accumulated above the engineered cap during post-construction monitoring, the accumulated sediment will be removed in a manner that ensures the integrity of the cap. Compliance with this performance standard raises two issues:

    - Sampling will be required to determine whether accumulated sediments above the cap are contaminated. Methods of sampling are typically destructive to the sediment surface (through the use of a dredge or core device as examples) which, in this scenario would affect the integrity of the cap.
    - If the accumulated sediments are found to be contaminated, then GE will need to remove this material. It is difficult to envision how sediment removal will take place without affecting the integrity of the cap. It seems appropriate that the final cap design includes an assumption that removal may need to occur. Therefore, the cap materials would need to provide a more robust protective layer.

    The Town of Lee requests that EPA direct that the final cap design include a design element to protect the integrity of the cap during both sampling and possible future sediment removal actions.

12. The cap design is to include a "habitat layer" that will be designed to provide functions and values equivalent to the pre-existing surficial sediment substrate. As summarized in the Reach 6 Baseline Restoration Assessment Report and the Pre-Design Investigation Summary Report, the surficial sediment composition throughout Woods Pond is extremely variable. One of the sediment characteristics that is variable is organic content (Table 3-4, Summary of Geotechnical Index Parameter Testing Results by Layer, of the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6). Organic materials are effective PCB binding agents and a possible amendment for the chemical isolation layer component of the cap (Section 2.2.3). It seems potentially beneficial to integrate variable organic matter composition into the cap design to re-create the sediment variability and create a PCB binding capacity to the cap.

    The Town of Lee requests that the EPA determine whether there is any benefit to be varying the organic matter content of the cap design to re-create variability (that mimics current conditions) and to add a PCB binding capacity to the cap.

    The Town of Lee also requests that the EPA have GE describe the capping process, including how it works and where it can and cannot be used.

13. A comprehensive bathymetry identifies the presence of a historic (pre-impoundment) "relatively pronounced channel through Woods Pond, which provides a primary flow pathway". This flow will be disturbed as a result of the pond remedial action activities but may eventually return to its pre-existing path. It is not clear whether the proposed cap design includes an assumption to control erosion caused by future preferential flow paths through the pond, or how GE proposes to cap areas where this is a current.

    The Town of Lee asks that the EPA determine whether the proposed cap design will address the potential scouring power of the water current that will eventually be reestablished through Woods Pond, probably where the pronounced channel currently exists.

14. The erosion protection layer is to include a bioturbation layer. Bioturbation is the movement of sediments by the activities of aquatic organisms. Comments capturing TASC concerns surrounding bioturbation are provided in the Reach 6 Baseline Restoration Assessment review. The Reach 6 Baseline Restoration Assessment Report does not include information describing the current benthic macroinvertebrate community. This represents a possible data gap of information needed to assess the characteristics of the bioturbation layer.

    The Town of Lee asks EPA to determine whether current information describing the benthic macroinvertebrate community is needed to fully address bioturbation for the erosion protection layer.

15. The resurgence of the invasive aquatic plants upon completion of the remedial action may be a potential concern. The root zone of these plants is poorly understood and could impact cap integrity. As previously commented, it seems important to maintain the integrity of the cap over time by implementing controls on the resurgence of these species. At a minimum it would be helpful to understand whether aquatic plant roots will pose a risk to the integrity of the cap. An evaluation of root zone depths may be an important consideration to the final cap design.

    The Town of Lee requests that GE consider aquatic plant root zone characteristics as part of the final cap design.

16. The proposed non-residential floodplain Exposure Area soil removal efforts seem to be minor in their scope and volume. As shown in Figure 4 (pdf page 196), Non-Residential Floodplain Preliminary Remediation Areas (Exposure Area 58) and Figure 5, Non-Residential Floodplain Preliminary Remediation Areas (Exposure Area 59), and summarized in Table 4-4 (Removal Area and Volume Estimates and Post-Remediation Exposure Point Concentrations for Non-Residential Floodplain Exposure Areas and Subareas Requiring Remediation), a total removal area of 398 square feet of soil with a volume of 14 cubic yards of soil are to be removed from Exposure Area 58 and Frequently Used Subarea (FUSA) 59 to achieve the appropriate protective performance standard. The remaining exposure areas do not have any planned remedial action activities. Contaminated areas within certain exposure zones align with support areas, offering opportunities to coordinate remedial actions with support area construction. In addition, there is an exposure area with contaminated soils along the Woods Pond shoreline that does not have any proposed remedial action activity, although it appears to be at risk of exposing underlying contaminated soils due to wave action erosion and Woods Pond remedial action impacts. A summary of recommendations and concerns for each non-residential exposure area is below.

    - Exposure Area 56 (Figure 2a, PCB Evaluations for Floodplain Soil) encompasses an area with significant PCBs from 0 to 0.5 foot of soils (shown in panel B of Figure 2a). This area does not encompass an area proposed for remedial action but is located close to the proposed Woods Pond Rail Spur and Proposed Woods Pond Loading/Unloading Area (Figure 5-3, Proposed Shoreline Support Facility, Woods Pond Rail Spur and Upland Disposal Facility Location). It may be useful to protect the high contamination area from physical disturbance with the addition of erosion control features.

    - Exposure Area 58 (Figure 2c, PCB Evaluations for Floodplain Soil) encompasses an area with significant PCBs in the 0 to 1 foot range (shown in panel D of Figure 2c). This area is located close to the conceptual shoreline support facility (Figure 3-1, Appendix E, Hydraulic Transport

Evaluation for Reach 6) to be used for the management of hydraulic waste operations in Woods Pond. It seems appropriate to remove the contaminated shoreline soils before support area construction or to encapsulate this contaminated area, thereby eliminating future disturbance created by the use of the support area.

- Exposure Area 59 (Figure 2d, PCB Evaluations for Floodplain Soil) encompasses a contaminated area (shown in panels B, C and D, Figure 2d) that occurs at the beginning of the outfall channel of Woods Pond. There is no proposed remedial action activity for this part of the exposure area but there is a removal area proposed for the FUSA Exposure Area 59 (Figure 5, Non-Residential Floodplain Preliminary Remediation Areas). The contaminated area next to Woods Pond within Exposure Area 59 seems to represent an exposed location where disturbance is likely to occur from the Woods Pond remedial action activities. It seems appropriate to protect this shoreline area from erosion of riverbank soils, which could in turn expose the underlying PCB-contaminated soil.

The Town of Lee requests that remedial actions for the above-listed non-residential exposure areas be amended or included as part of the support area construction and other removals to help protect contaminated areas from being disturbed and eroded during remedial action activities.

17. The non-residential soil remedial action efforts are designed to protect for human health exposure related to direct human contact with floodplain soils. The original human health risk assessment largely assumed exposures related to recreator activity. Now that the Revised Transportation and Disposal Plan has been developed, a considerable amount of Rest of River Remedial Action construction worker activity is now proposed in certain exposure areas, as follows:

    - Exposure Area 58 and Exposure Area 59 are likely to encompass significant worker activity related to the proposed Woods Pond support area that is to be constructed and operated in close proximity to these exposure areas and will address hydraulic conveyance of sediments from the pond.

    - Exposure Area 60, Exposure Area 60a and Exposure Area 56 are in close proximity to the Woods Pond rail spur.

    - Exposure Area 58 encompasses components of the hydraulic pipeline.

    - The Revised Transportation and Disposal Plan incorporates the use of rail as a substantial component to the transportation of waste. The existing railroad may need to amend its right of way, which would involve earthwork within certain exposure areas throughout the Rest of River. There is the potential

for workers to be exposed to surface and subsurface soils from these exposure areas.

It may be appropriate to revisit the site's original human health risk assessment to ensure that these worker exposure scenarios include adequate exposure area performance standards, or that the site's Health and Safety Plan considers whether any more worker protections are needed in these areas.

The Town of Lee requests that workers associated with the proposed Reach 6 remedial action activities be protected adequately against existing exposure area-specific PCB concentrations.

18. The document states that the conceptual design will be revised to a final design after "supplemental data collection, additional habitat assessment activities, cultural resources investigations and additional design evaluations are completed." TASC provided recommendations for more baseline data collection activities as follows:

    - The potential PCB tissue burden in the aquatic plants in Woods Pond and Valley Mill Pond represents a data gap. It is recommended that samples of co-located sediment and aquatic plants be collected from each pond during the growing season. It is also recommended that the depth of the plant root zone be measured at the time of sample collection. In addition, surveys of benthic macroinvertebrates at the time of plant and sediment sample collection can assist with the understanding of existing bioturbation conditions.

    - There may be small areas where comprehensive baseline surveys were not conducted, and now encompass important features associated with the hydraulic pipeline (and other transportation-related features). The area to the north of Woods Pond through to the Upland Disposal Facility should be comprehensively evaluated. The definitive placement of the hydraulic pipeline remains uncertain. Therefore, this entire area should be evaluated.

    The Town of Lee requests that EPA and/or GE gather samples of aquatic plant (and co-located sediment along with benthic macroinvertebrates) and conduct additional baseline studies between Woods Pond and the Upland Disposal Facility to address potential data gaps.

19. Aquatic plants are recognized in this plan as capable of encumbering the slurry transport. Since these plants may have accumulated PCBs, they may qualify as waste to be managed.

    The Town of Lee requests that the prevalent aquatic plants in Woods Pond be sampled for total PCB content to determine whether bioaccumulation has occurred and the plant material qualifies as waste requiring proper disposal.

20. Figure 3-3 shows the proposed Woods Pond sediment waste characterization sampling locations (provided in Appendix F, the Supplemental Data Collection Work Plan for Reach 6). The sampling seems to be spatially weighted in the shallow areas of the pond. There is a gap in the area that is the deepest portion of the pond (Figure 3-3, Reach 6 Topographic and Bathymetric Survey Data) in the grid spaces H-I, 7-8; H-I, 6-7; and G-H, 3-4.

    The Town of Lee requests that there be proposed sediment waste characterization sampling locations gathered from the above listed deeper areas.

21. Figure 3-4 (Appendix F) shows the proposed supplemental Woods Pond probing and geotechnical investigation locations. The transects capture river stations 574+00 through 581+00. However, there are no transects proposed for river stations 582+00 and 583+00, which likely capture the deepest collected sediment areas.

    The Town of Lee requests to add river stations 582+00 and 583+00 to the proposed supplemental sediment probing transects.

22. Figures 4-3a and 4-3b provide conceptual dredge prism cross-sections for Woods Pond. These figures help reviewers understand the specific volume and area of sediment that needs to be removed during a dredging project. It defines the boundaries of the dredging area, including the required depth and any allowable over depth. It would also be useful if a profile depicting the PCB occurrence (a depth interpretation of the Thiessen polygon information) could be layered with this information to understand conceptually the magnitude of the PCB removal effort.

    The Town of Lee requests that Figure 4-3a and Figure 4-3b be amended to also display PCB occurrence within the depicted prisms.

23. The Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 mentions a baseline and a construction monitoring program that is in place to monitor Reach 6 remedial action impacts during construction (Section 2.4). It is not clear if the baseline and construction monitoring program is final or if the community will have an opportunity to review the plan. If there is an opportunity to review the plan, it may be appropriate to recommend the use of passive sampling devices that sample PCB occurrence in surface water over time. Passive samplers have emerged as an attractive alternative to active water sampling methods as the former accumulate PCBs, represent time-weighted average concentrations, and can easily be shipped and deployed (Lohmann, R. et al. 2023 and EPA 2024).

The Town of Lee requests an opportunity to review the Construction Monitoring Plan and if there is a use to deploying passive PCB samplers to measure PCB transport through a Rest of River remediation unit during remedial action efforts.

The Pre-Design Investigation Summary Report for Reach 6

1. The Pre-Design Investigation Summary Report for Reach 6 is a concise summary of current field surveys, sediment and floodplain soil PCB characterization. The concurrent Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 provides a more robust narrative describing historical data results as compared to the summary report. For instance, Appendix A from the Conceptual Remedial Design/Remedial Action Work Plan summarizes the historical data usability assessment as well as spatially weighted PCB information for Valley Mill Pond. The Pre-Design Investigation Summary Report for Reach 6 provides only current sediment PCB information gathered from the 2023 sampling (Table 1). Since all available PCB information for Valley Mill Pond is historical, the Pre-Design Investigation Summary Report for Reach 6 does not contain any data for this feature.

   Similarly, Appendix B of the Conceptual Remedial Design/Remedial Action Work Plan provides a complete summary of historical floodplain soil data, while the Pre-Design Investigation Summary Report for Reach 6 provides information for 2023 sampling (Table 2). It seems important to provide all available data used for the Conceptual Remedial Design/Remedial Action Work Plan in one summary report. This will give reviewers a complete database from which to follow the remedial decision process.

   The Town of Lee requests that the entire database relied on for the Reach 6 remedial design/remedial action can be provided in a single document.

2. TASC previously commented on the use of total PCB analysis versus PCB congener analysis in the review of Reach 5A documents. The Rest of River Performance Standards are based on measurements of total PCBs. Total PCBs can be calculated as the sum of all Aroclors found in a sample (Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1262 and 1268 must all be evaluated) or may be calculated as a sum of congeners if PCB congener analysis is conducted. Results from the Aroclor analysis will strictly show analysis of Aroclor mixture detections, while congener analysis provides results for all PCB congeners. Total PCB concentrations based on a summed total concentration from congeners will typically yield greater concentrations, as compared to Aroclor analysis results since all possible PCB congeners are accounted for.

   The 2021 Pre-Design Investigation Work Plan for Reach 5A Sediment and Riverbanks (Anchor QEA and AECOM 2021) states:

"The remaining portion of the homogenized bulk sediment samples that are not used for ex situ porewater analysis will be sent to the analytical laboratory for analysis of PCBs by both congener Method 1668 and Aroclor Method 8082, as well as for analysis of total and dissolved organic carbon (TOC and DOC). Contaminant transport modeling to support cap design will be performed on a homolog-specific basis, to explicitly account for differences in the transport properties of each homolog. The paired Aroclor and congener PCB results in this data set will provide the data necessary to develop a relationship that can be used to convert the larger sediment Aroclor PCB data set (described in Section 3.3.2) to homolog concentrations that can be used in the cap design model evaluations" (§ of Anchor QEA and AECOM 2021).

There is no mention of paired Aroclor and congener PCB analysis for Reach 6 sediments. Furthermore, there is no mention if there is an understanding of the relationship between total PCB results and congener results as part of the Reach 6 engineered cap design. The PCB partition analysis described in the Conceptual Remedial Design/Remedial Action Work Plan is based on the results of the Reach 5A sediment and porewater PCB congener analysis. This extrapolation of Reach 6 PCB partitioning using Reach 5A results seems to represent a possible data gap. It may be appropriate to collect co-located sediment and porewater samples from Reach 6 (Woods Pond) for analysis of total PCBs and congener PCB content.

The Town of Lee asks the EPA to determine whether use of Reach 5A PCB partition coefficients is appropriate for the Reach 6 cap design, or if there is a need to collect Reach 6-specific information

3. As per Statement of Work Section 4.2.3.2, all pre-design investigation summary reports are to provide a summary of validated data, including a discussion of any quality assurance/quality control issues with the data, associated data validation and laboratory data reports. The Pre-Design Investigation Summary Report for Reach 6 does provide summaries of data validation results. However, there is a brief mention of the split samples collected by the EPA (Section 2.3.3, Results):

   "The validated 2023 pre-design investigation PCB data collected by GE are summarized by exposure area in Table 3 in Appendix C. PCB analytical results from split samples collected by the EPA, along with the corresponding GE sample results, are summarized in Table 4 in Appendix C. As discussed further in Section 2.4, the EPA split sample results were incorporated into the calculations of total PCB EPCs [exposure point concentrations] described in that section."

Review of the EPA split data analysis summaries provided in Table 2 and Table 4 of Appendix C identified substantially diverging results. Examples of differing split analysis results for sediment and floodplain soils are provided below.

Appendix C. Table and Sample Identifier	GE (µg/kg)	EPA (µg/kg)
Summary of 2023 Reach 6 Pre-Design Investigation Sediment EPA PCB Split Sample Results (Aroclor-1260) (Table 2, pdf page 228)		
SE-574-00-C	5,080	1,000J
SE-574-00-E	488	120J
SE-578-99-W	31,100	2,600J
SE-D-E-4-S	4,560	280
Summary of 2023 Reach 6 Pre-Design Investigation Floodplain EPA PCB Split Sample Results (Aroclor-1260) (Table 4, pdf page 341)		
EA56-AG-12	79.2J	64
EA56-AH-14-15	26.5J	ND
EA56-AS-34	5,130	780J
EA56-AZ-20	3,200	590J
J = estimated value. ND = compound analyzed for but not detected above the detection limit. µg/kg = microgram per kilogram		

The Town of Lee urges the EPA to investigate whether the discrepancies between GE's and the EPA's split sample analysis, which differ by a magnitude, indicate a significant quality assurance/quality control data issue. This enormous problem highlights an inability to use analytics to manage mitigation efforts and raises serious concerns about how concentrations to be placed in the UDF will be determined and monitored.

The Baseline Restoration Assessment Report for Reach 6

1. The Baseline Restoration Assessment Report for Reach 6 Report provides a detailed baseline ecological inventory and assessment of pre-remediation conditions and functions of the affected habitats in Reach 6. This information will serve as the foundation for meeting the restoration performance standards. The data presented in this document captures conditions of a watershed contaminated by polychlorinated biphenyls. Using these measures as "baseline" conditions means that the restored conditions will ultimately reflect an impacted natural setting. Available and upcoming PCB data can identify habitat areas with

low contamination levels, suitable as a baseline for post-remediation comparison.

The Town of Lee requests that the data presented in the report be sorted to characterize the habitat conditions associated with low PCB concentrations, thereby setting the restoration goals more appropriately to natural (i.e., unaffected by contamination) setting conditions.

2. The Baseline Restoration Assessment Report for Reach 6 provides a summary of the foundational physical, chemical and biological data that will help define whether restoration of disturbed areas in the Rest of River achieves performance standards. The performance standards, as described in Section 1.3 of the document and in the Revised Final Permit, Section II.B.1.c.(1), are to:

"(a) Implement a comprehensive program of restoration measures that address the impacts of the Corrective Measures on all affected ecological resources, species and habitats, including, but not limited to, riverbanks, riverbed, floodplain, wetland habitat and the occurrence of threatened, endangered or state-listed species and their habitats; and

(b) Return such areas to pre-remediation conditions (e.g., the functions, values, characteristics, vegetation, habitat, species use and other attributes), to the extent feasible and consistent with the remediation requirements."

While the report does provide a robust amount of historical and recent baseline data, it does not identify or describe suitable "measures" to define whether performance standard (b) has been met. It seems appropriate that all the data gathered to characterize the physical/biological attributes affected, including measurements of species composition, density, percent cover and structural components, could be compiled to identify quantifiable biological endpoints (parameters that can be quantified by measurements such as species richness, diversity and density) indicative of an ecosystem's function and health. For instance, aquatic plant density and diversity in the shallower portions of Reach 6 may be a suitable "measure" to determine the success of achieving performance standard (b).

The Town of Lee requests that the Reach 6 Baseline Restoration Assessment Report for Reach 6 identify suitable, quantifiable, measures/biological endpoints to use in determining successful achievement of the performance standard of "returning areas disturbed by remediation activities to pre-remediation conditions." Specifically, the Town of Lee requests that GE apply the Society for Ecological Restoration's International Principles & Standards for the Practice of Ecological Restoration, 2nd Edition to establish clear restoration outcomes, and guide implementation and aftercare.

3. The Baseline Restoration Assessment Report for Reach 6 was provided concurrently with the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6. Findings from the Baseline Restoration Assessment Report for Reach 6 characterize Woods Pond as having a diversity of aquatic habitat types, with some general characteristics as follows (as summarized pdf pages 33 through 37):

   - Water depths range from about 0.5 feet to 16 feet, with an average depth of 2 feet to 3 feet.
   - Sediment thickness ranges substantially throughout Woods Pond with a deeper pool in the southeastern section and a minimal thickness near the dam.
   - A deeper portion on the southeast side of the pond has a maximum depth greater than 14 feet (appears to be the remnants of a separate pond that occurred along the east side of the original Housatonic River channel prior to the impounded conditions created by the Woods Pond Dam circa 1880).
   - Areas of channelized flow (typically submerged channels below the normal pool water level) results in deeper conditions in various locations.
   - There is a pronounced channel across Woods Pond from northeast to southwest that provides a primary flow pathway and appears to be in the location of the historical Housatonic River channel that existed prior to construction of the dam.
   - The outlet channel contains deeper conditions with sufficient flow to limit sedimentation of fine-grained deposits and aquatic plant colonization. As a result, aquatic plant growth is greatly reduced.

   These above-listed features lend to the valuable functions provided by Woods Pond (refer to Section 3.4, Reach 6 Aquatic Habitat Functional Assessment, pdf page 42). The unique and diverse assemblage of aquatic habitats in the pond have value. The removal action at Woods Pond will likely result in a more homogenous bathymetry because it involves dredging and redistributing sediment. The recontouring of the pond bathymetry may impact the ability to reestablish existing aquatic habitat features. As a result, the functional goals associated with the habitat diversity may not be achieved.

   The Town of Lee asks EPA whether the eventual bathymetry of Woods Pond is expected to provide appropriate future performance goals for biological recovery. The Town of Lee also requests two to three profile maps that illustrate GE's intended final bathymetry that illustrates how the recontouring of the pond with support habitat diversity.

4. Section 3.4 describes the aquatic habitat functional assessment. The biological functions are described as: "Due to the range of substrate types, vegetative cover, and depth features, this area provides a range of functional uses for many fish and invertebrate species." The placement of a cap in Woods Pond will effectively eliminate the "range of substrate types" to a single type. It is likely

that, over time, natural sediment deposition will revitalize the diversity of substrate types. However, the time required to achieve this goal may be substantial, especially because the cap placement for Woods Pond will not be completed until all other upgradient Rest of River reaches are remediated (5A, 5B and 5C).

The Town of Lee asks EPA whether the functional biological goals are expected to be achieved in the performance standard required timeframe, given that the bottom substrates are to be capped.

5. The status of aquatic plants that are referenced routinely in the Conceptual Remedial Design/Remedial Action Reach 6 Work Plan and the Baseline Restoration Assessment Report for Reach 6 is an issue to be addressed for the hydraulic transfer of sediments since these materials can encumber the slurry transport. These plants have been in contact with sediments potentially contaminated with PCBs and possibly have accumulated these contaminants into their tissue. The bioaccumulation of PCBs in aquatic plants seems poorly understood, with minimal research information readily available. However, PCB behavior in the aquatic environment has shown trends to accumulate in a variety of food-chain components (excerpt from Eisler 1986 below). The aquatic vegetation should be sampled and analyzed to determine if it is free of PCBs. If it is not, then this material should be included as part of the wastes to be managed.

   > From Eisler 1986 (https://semspub.epa.gov/work/05/930004.pdf): "Transfer of PCBs on microparticulate materials and into phytoplankton is well documented, as is partitioning from aqueous solution into algal lipids (Rohrer et al. 1982). PCBs incorporated into phytoplankton exert inhibitory effects on photosynthesis and cell motility. In addition to direct toxic effects on algae, accumulated PCBs are readily introduced into the aquatic food chain (Rohrer et al. 1982)."

   The Town of Lee requests that the prevalent aquatic plants in Woods Pond be sampled for total PCB content to determine whether bioaccumulation has occurred and the plant material would qualify as waste requiring proper disposal.

6. The Baseline Restoration Assessment Report for Reach 6 presents an abundance of baseline data that captures Reach 6 biological characteristics from historical and recent studies. Recent studies were completed from August through November 2023 and August and September 2024 (Section 3.2.1). There appears to be an absence of baseline data from winter and spring. It is recommended that monitoring continue up until the point when construction begins. Climate changes and significant seasonal variations affecting stream flow and Woods Pond hydrologic conditions are ongoing and need to be monitored. In addition,

this ongoing monitoring would assist in observing the achievement of performance standards.

The Town of Lee requests continued monitoring throughout the Rest of River area to capture ongoing climate and seasonal affected conditions as well as river and pond hydrologic conditions, and to observe achievement of performance standards over time.

7. The evaluation of aquatic habitats in the Baseline Restoration Assessment Report for Reach 6 relies on current and historical information. Descriptions of aquatic species focus on aquatic plants, while the characterization of aquatic animals is largely founded on historic information. As stated in Table 3-1, "Species composition and relative abundance of aquatic macrophytes, fish, benthic habitat/organisms, and other water-using biota" was described by "Consolidation of pre-existing information (from sources below); site reconnaissance and field surveys using Form IMP-1; fish community surveys; incidental wildlife observations." While reliance on historical information is useful for overall characterization of the Reach 6 habitats, there may be data gaps of importance to the Woods Pond cap design, as follows:

    - The Baseline Restoration Assessment Report for Reach 6 does not describe any sediment profile information that would indicate depths of possible benthic macroinvertebrate activity causing bioturbation (the movement of sediments by the activities of aquatic organisms).
    - The report does not include any current information describing the existing benthic macroinvertebrate community, which may include species (such as bivalves) that could cause bioturbation concerns in the future.

    The Town asks the EPA to determine whether the historical information characterizing the benthic macroinvertebrate community is sufficient for defining Reach 6 baseline conditions.

8. The EPA considers bioturbation as a possible mechanism for contaminant transport from deeper sediments to the surface (and ultimately to the overlying water). The EPA recommends that the effects of bioturbation be included as part of contaminated sediment remedies (Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, EPA 2005). With the absence of site-specific bioturbation information, literature-based studies indicate that invertebrates and fish may burrow or feed up to depths of 30 centimeters. Certain bivalve species are known to exceed these depths. The table below provides a summary of bioturbation depths provided in the EPA's 2005 Contaminated Sediment Remediation Guidance for Hazardous Waste Sites.

Sample Depths of Bioturbation Activity (from Highlight 2-33 in EPA 2005 Contaminated Sediment Remediation Guidance for Hazardous Waste Sites).

Organism	Activity Type	Depth	Original Reference
Tubificid worm (Oligochaete)	Burrowing/Feeding	0 to 3 centimeters	Matisoff, Wang and McCall, 1999. Pennak, 1978.
Midge and Mayfly (insects)	Burrowing/Feeding	0 to 15 centimeters	Matisoff and Wang, 2000. Pennak, 1978.
Burbot (fish)	Burrowing	0 to 30 centimeters	Boyer et al., 1990.

The Town of Lee asks EPA whether the amount of information currently characterizing the benthic macroinvertebrate community in Woods Pond is sufficient to determine whether bioturbation will be a concern and thus an important consideration in the eventual Woods Pond cap design.

9. The Baseline Restoration Assessment Report for Reach 6 provides a thorough inventory of aquatic plants. This information will provide foundational understanding of the eventual remedy success in achieving functional endpoints (such as diversity and density of aquatic plants). However, given the propensity for the aquatic environments in Reach 6 to be colonized by aquatic plants, plant root zones may reach into the depth of the cap layer and possibly impair cap integrity or come in contact with remaining PCB contamination. It may be useful to understand the root depths of the species known to occur and to ensure that the proposed cap can withstand the impacts created by this root zone.

   The Town of Lee requests that Reach 6 baseline restoration assessment information includes data on aquatic plant root depths to ensure that the pending cap is not compromised by these species.

10. Figure 1-3 of the Baseline Restoration Assessment Report for Reach 6 shows the habitat zone survey limits. There are possible data gaps in the baseline restoration assessment survey, as follows:

    - Exposure Area 56 has not been surveyed thoroughly to identify habitat zones along the southwest area. EA 56 is shown in Figure 1-2 of the Baseline Restoration Assessment Report for Reach 6. Appendix F of the Reach 6 Conceptual Remedial Design/Remedial Action identifies this area for further sampling due to elevated PCB levels near the 1 milligram per kilogram isopleth. It may be prudent to survey this setting in case the sampling results show PCBs in soil that require removal (refer to Figure 3-2a of Appendix F – Supplemental Data Collection Work Plan for Reach 6 the Reach 6 Conceptual Remedial Design/Remedial Action.

    - Scenario 4 described in the site's Revised Transportation and Disposal Plan is GE's preferred alternative for the transport and disposal of Rest of River wastes. A significant amount of disturbance (from the construction, operation and maintenance of hydraulic wastes from

Woods Pond to the Upland Disposal Facility) and traffic are anticipated in Reach 6. It is likely that certain roads (and possibly rail lines) will require rehabilitation. It may be prudent to conduct a thorough baseline restoration assessment survey beyond the level of information provided in Section 6 of the Baseline Restoration Assessment Report for Reach 6.

The Town of Lee asks whether data gaps in the existing baseline restoration assessment survey fail to capture all anticipated impacts in areas of EA 56 and the area between Woods Pond and the UDF.

11. The abundance of aquatic plants is repeatedly mentioned in all Reach 6 documents. The dominant aquatic plant species are invasive species to be managed in the future. It seems important to measure the successful revegetation of other species of functional value to the pond. The measurement of "preferred" aquatic plants may be a suitable remediation success endpoint in the future.

    The Town of Lee requests EPA determine whether the monitoring of preferred aquatic plant revegetation success could be an additional measurement of Reach 6 remediation success.

12. The Baseline Restoration Assessment Report for Reach 6 identifies a few biological measures (such as plant community diversity and species richness) that would be useful to demonstrate restoration success. In addition to plants, benthic macroinvertebrates are standard in-situ communities that can be relied on to provide a measure of aquatic ecosystem recovery. In addition, the presence or absence of key or indicator species can be reliable measures of successful remedial action, including these possibilities identified by TASC:

    - The wood frog (*Lithobates sylvaticus*)
    - Predacious fish species (such as largemouth bass or pike)
    - Nesting birds such as bank swallows and the belted kingfisher

    The Town of Lee requests EPA to direct GE to include measures of benthic macroinvertebrate communities and the presence/absence of species of interest as part of its measures to determine restoration success.

13. Woody debris is described as an important habitat feature in Reach 6. As stated in, "woody debris both above and below the water line provides structure for invertebrates, fish, amphibians, turtles and several small mammals. Invertebrates seek out woody debris for shelter and for its link to food sources. Predatory fish seek out the same structures for food and shelter, particularly bass and sunfish." Woody debris is a valuable component to the ecosystem and may assist with a more rapid recovery. It would be beneficial for any woody debris waste from other Rest of River remedial action activities to be stockpiled and used for Reach 6 restoration.

The Town of Lee asks that GE to recover and replace woody debris in order to enable restoration of biological functions in Reach 6.

14. Section 7 provides an assessment of rare species in Reach 6. This section relies on information gathered from historical and recent field investigations as well as online databases managed by the U.S. Fish and Wildlife Service and other parties. Given the proximity of Reach 6 features to state parks and other recreation areas, citizen science-based resources may be useful for acquiring more robust species observation lists. For instance, recent queries of eBird identified 181 observed bird species in the area of Woods Pond (Bird List - Woods Pond, Lenox, Berkshire, Massachusetts, United States - eBird Hotspot). There are seven birders who contribute regularly to the eBird observations. The data can identify the presence/absence of protected species. The use of these databases is another method to involve community participation in monitoring of the Rest of River remedial action success.

    The Town of Lee requests that citizen-based observational tools (such as eBird and iNaturalist) be used to provide species observational data, which may be useful in determining the success of biological activity and recovery in the Rest of River area.

15. Section 9.0 of the Baseline Restoration Assessment Report for Reach 6 describes the preliminary identification of degraded habitats and restoration opportunities in Reach 6. The introduction of this section states that the selection of the support facility associated with Woods Pond involved an "alternatives analysis that considered logistical considerations as well as habitat conditions, and has been determined to be the only practicable location to service the hydraulic dredging operation and conveyance operation to transport dredged material to the UDF". It may be useful to the community to understand the alternative areas that were considered as well as the rationale behind the final selection.

    The Town of Lee requests that EPA direct GE to summarize the proposed support area alternative locations and the rationale for the final location selection.

16. The Baseline Restoration Assessment Report for Reach 6 provides an inventory of degraded habitats and certain habitat restoration resources. It is not clear if or how the restoration measures will be implemented. The information in this section is conceptual, with no actual details describing restoration approaches. It seems appropriate to define specific areas to be used for mitigation of known impacts and to outline the steps to be taken to achieve the loss of impacted resource functional values.

    The Town of Lee requests that the document be revised to include a description of how restoration resources will be used in the Final Conceptual Remedial

Design/Remedial Action Reach 6 Work Plan, and to identify degraded habitat areas that could benefit from future restoration efforts if they do not meet performance standards.

17. The resurgence of the invasive aquatic plants upon completion of the remedial action is a likely concern. Appendix F-3 provides an assessment of water chestnut management considerations associated with remedial activities in Woods Pond. This appendix provides a thorough description of possible management approaches, including mechanical harvesting, drawdowns and the use of herbicides. The ultimate remedial action-defined bathymetry of Woods Pond would comprise a deeper profile that will help with the control of these invasive species. However, there may be sources of phosphorous to Woods Pond that could promote growth and resurgence of the invasive species. Research findings indicate that sediment amendments may help control the amount of phosphorous in water (Zehnsdorf et al. 2015). Amending sediment can be a method to control invasive aquatic plants by manipulating the nutrient levels in the sediment. This can indirectly limit the growth of the invasive species by reducing the available nutrients they need to thrive and can be done by adding substances such as aluminum, iron salts or calcium compounds (lime) to bind with phosphorus in the sediment, preventing its uptake by the plants.

    The Town of Lee requests that the Baseline Restoration Assessment Report for Reach 6 be revised in line with research to determine whether sediment amendments are an appropriate method of controlling invasive aquatic species.

18. The remediation of Woods Pond may represent a unique opportunity for GE to mitigate recreational losses during the Rest of River remedial action process. Potential mitigation or reuse opportunities of interest to the community may include the following:

    - Woods Pond lends itself to providing habitat for a variety of fish of potential recreational value. Previous inventories (Woodlot 2002a and b) identified 16 species of fish, including bluegill, yellow perch, brown bullhead, largemouth bass (pdf page 21), pumpkinseed and pike (pdf page 34). These species are typically of value to recreational anglers. Since the pond is to be "recontoured" to achieve the required performance standards, the new bathymetry may lend itself as a preferred habitat for these fish species. Coordination with the Massachusetts Department of Fish and Game may help to determine if establishing a recreational fisheries resource is a possible and appropriate goal.

    - The proposed support area on the south shore of Woods Pond may be of beneficial future reuse as an access point for the community. This feature may be of possible use as a boat launch or fishing platform.

The Town of Lee requests EPA direct GE to discuss potential future uses of Reach 6 features that may be of benefit to the public, and to continue coordination and correspondence with EPA and GE to achieve these goals.

Additional Questions/Comments

- Why doesn't the Revised Final Permit contain Performance Standards specific to the transition zone between Woods Pond proper and Reach 5C?
- Why are there are no prescribed sediment sampling requirements in the Revised Final Permit or the subsequent EPA-approved Final Revised Rest of River Statement of Work (Anchor QEA et al. 2021) to meet the Performance Standards for Reach 6?
- PCBs do not appear to be vertically delineated to 1 ppm at many of the floodplain soil sample locations. Is vertical delineation planned at these locations prior to finalizing the RD/RA Work Plan?
- Please add RME (reasonable maximum exposure) to the abbreviations.
- Total PCB concentrations in floodplain soil samples EA56-AQ-AR-29-30-230927-06-12, EA58-H-I-10-230922-06-12, and possibly EA58-I-8-230925-00-06 appear to be hot spots (i.e., 100x higher than surrounding samples). Will these interpolated polygons be remediated instead of averaged out?

Sincerely,

R. Christopher Brittain
Town Administrator

cc:
His Excellency Donald J. Trump, President of the United States
The Honorable Edward Markey, U.S. Senate
The Honorable Elizabeth Warren, U.S. Senate
The Honorable Richard Neal, U.S. House of Representatives
Her Excellency Maura Healey, Governor of Massachusetts
The Honorable Andrea Joy Campbell, Attorney General of Massachusetts
The Honorable Paul Mark, State Senator
The Honorable Leigh Davis, State Representative, 3rd Berkshire
Select Board, Town of Lee
PCB Advisory Board, Town of Lee

TOWN OF LENOX
6 Walker Street, Lenox, MA 01240
www.townoflenox.com

Jay R. Green, J.D.
Town Manager

February 3, 2025

[VIA EMAIL: tagliaferro.dean@epa.gov]

Mr. Dean Tagliaferro
EPA New England
10 Lyman Street, Suite 2
Pittsfield, MA 01201

RE: Town of Lenox Comments: Conceptual Remedial Design/Remedial Action Work Plan for Reach 6, October 2024

Dear Mr. Tagliaferro:

The purpose of this letter is to convey comments and concerns of the Town of Lenox regarding the remediation of polychlorinated biphenyls (PCBs) in the Housatonic River. Lenox recognizes that, while the remedy selection process is over, the all-important process of implementing the Rest of River permit is in development and planning. As such, it requires the full focus of the Town's attention and that of Region 1.

To that end, the Town of Lenox has engaged Weston & Sampson as an independent third party for the purposes of evaluating various aspects of the Rest of River clean-up. Weston & Sampson has aided the Town in the preparation of the attached memorandum which provides comments on the Conceptual Remedial Design/Remedial Action (RA/RD) Work Plan for Reach 6.

Lenox understands that the report is conceptual, and that additional detail will be provided in the Final RD/RA Work Plan. As described in the attached Memorandum, Lenox requests that the final work plan include:

- Sustainability and resiliency evaluation of the remediation including Engineered Caps to be installed over impacted sediments that are to remain and their ability to withstand 100-year and 500-year rain and flood events.
- That a detailed discussion of the Ambient Air Monitoring Plan be included in the Reach 6 RD/RA Plan. This discussion would include planned monitoring locations during remediation and how these data will be shared with the Towns.

These comments are intended to call EPA's attention to issues important to Lenox. We look forward to seeing progress toward our concerns in these areas.

Thank you in advance for your consideration and we look forward to your favorable response.

Sincerely,

Jay R. Green, J.D.

TOWN OF LENOX
6 Walker Street, Lenox, MA 01240
www.townoflenox.com

Jay R. Green, J.D.
Town Manager

February 3, 2025

[VIA EMAIL: tagliaferro.dean@epa.gov]

Mr. Dean Tagliaferro
EPA New England
10 Lyman Street, Suite 2
Pittsfield, MA 01201

RE: Town of Lenox Comments: Pre-Design Investigation Report for Reach 6, November 2024

Dear Mr. Tagliaferro:

The purpose of this letter is to convey comments and concerns of the Town of Lenox regarding the remediation of polychlorinated biphenyls (PCBs) in the Housatonic River. Lenox recognizes that, while the remedy selection process is over, the all-important process of implementing the Rest of River permit is in development and planning. As such, it requires the full focus of the Town's attention and that of Region 1.

To that end, the Town of Lenox has engaged Weston & Sampson as an independent third party for the purposes of evaluating various aspects of the Rest of River clean-up. Weston & Sampson has aided the Town in the preparation of this letter which provides comments on the Pre-Design Investigation Summary Report for Reach 6.

The Pre-Design Investigation Report is found to be consistent with the requirements of the Revised Final Permit and the requirements described in the Work Plan prepared for this effort. Lenox has no comments on the report.

Sincerely,

Jay R. Green, J.D.

TOWN OF LENOX
6 Walker Street, Lenox, MA 01240
www.townoflenox.com

Jay R. Green, J.D.
Town Manager

February 3, 2025

[VIA EMAIL: tagliaferro.dean@epa.gov]

Mr. Dean Tagliaferro
EPA New England
10 Lyman Street, Suite 2
Pittsfield, MA 01201

RE: Town of Lenox Comments: Baseline Restoration Assessment Report for Reach 6

Dear Mr. Tagliaferro:

The purpose of this letter is to convey comments and concerns of the Town of Lenox regarding the remediation of polychlorinated biphenyls (PCBs) in the Housatonic River. Lenox recognizes that, while the remedy selection process is over, the all-important process of implementing the Rest of River permit is in development and planning. As such, it requires the full focus of the Town's attention and that of Region 1.

To that end, the Town of Lenox has engaged Weston & Sampson as an independent third party for the purposes of evaluating various aspects of the Rest of River clean-up. Weston & Sampson has aided the Town in the preparation of this letter which provides comments on the Baseline Restoration Assessment Report for Reach 6 (AECOM, October 2024)

The Baseline Restoration Assessment (BRA) Report is consistent with the requirements of the Consent Decree and other BRAs prepared and submitted to date. Thus, Lenox has no comments on the form or content of the report.

Sincerely,

Jay R. Green, J.D.

712 Brook Street, Suite 103, Rocky Hill, CT 06067
Tel: 860.513.1473

M E M O R A N D U M

TO:	Jay Green, Town Manager, Lenox, MA
FROM:	Weston & Sampson
DATE:	February 3, 2025
SUBJECT:	Weston & Sampson Review of Conceptual Remedial Design/Remedial Action Work Plan for Reach 6

As requested by the Town of Lenox ("the Town") Weston and Sampson Engineers, Inc. ("Weston & Sampson") has reviewed documents relevant to the Housatonic Rest of River Project provided by the Town ("the review documents"). The documents which were included in our review and comment efforts are:

- ***Conceptual Remedial Design/Remedial Action Work Plan for Reach 6,*** Anchor QEA, October 2024.

To support this technical review, we also referred to the following document for additional information:

- ***Conceptual Remedial Design/Remedial Action Work Plan for Reach 5A***, Anchor QEA, September 28, 2023.
- ***Project Operations Plan,*** Arcadis, Revised November 2024.
- ***Revised Quality of Life Compliance Plan,*** Anchor QEA, November 2024.

In this memorandum, we provide our comments on the Conceptual Remedial Design/Remedial Action (RD/RA) Work Plan for Reach 6. It is understood that this work plan is conceptual and that details will be provided in the Final RD/RA Work Plan for Reach 6.

The conceptual design report indicates that hydraulic dredging has been determined to be feasible for Reach 6 with the exception of the Valley Mill Pond which still needs to be evaluated. The Town requests that this evaluation be included in the Final RD/RA Work Plan so that it may be reviewed prior to implementation of the dredging activities.

Included in the Conceptual RD/RA Work Plan is discussion that climate resiliency and sustainability will be included in the planning of remediation and to mitigate impacts during dredging. The Town requests that the evaluation be expanded to include potentially vulnerable locations to large flooding events (e.g., 100-year and 500-year precipitation and flooding events) following the completion of the remediation and site restoration. The Town is particular concerned with the long-term stability of Engineered Caps that will be constructed over impacted sediments that will remain in place following the completion of dredging activities.

The Revised Quality of Life (QOL) Plan includes discussion of an Ambient Air Monitoring Plan (AAMP) to be implemented during performance of the work associated with dredging. Details for the AAMP are included in the Project Operations Plan (POP) but neither the QOL Plan nor the POP includes a detailed discussion as

to the proposed monitoring locations during dredging operations within Reach 6 or how these data will be shared with the Towns within the ROR remediation area. This is an item of great concern to the residents of Lenox and the Town requests that the Final RD/RA Work Plan include details as to how the AAMP will be implemented during the performance of dredging and how that data will be shared with the public.

The Revised QOL Plan also includes discussion of Noise monitoring and mitigation activities. Pumps used to move the slurry generated during hydraulic dredging can create a constant and loud noise hazard and should be placed within enclosures that mitigate the noise. The Town requests that a discussion of these mitigation efforts also be included in the Final RD/RA Work Plan.

Technical Assistance Services *for* Communities
GE-Pittsfield/Housatonic River Site
Comments on the Conceptual Remedial Design/ Remedial Action Work Plan for Reach 6
January 10, 2025

Contract No.: 68HERH21A0018
Call Order Number: 68HERH22F0082 (14.0.0 OSRTI – Regional & Headquarters TASC/CI Support)
Technical Direction: R1 2.12.14 GE Pittsfield

Technical Assistance Services for Communities
Comments on GE-Pittsfield/Housatonic River Site – Conceptual Remedial Design/Remedial Action Work Plan for Reach 6, October 2024

Introduction

This document provides TASC comments on the GE-Pittsfield/Housatonic River Site – Conceptual Remedial Design/Remedial Action Work Plan for Reach 6. This document is for the Berkshire Regional Planning Commission, the city of Pittsfield, the towns of Lee, Lenox, Stockbridge, Great Barrington and Sheffield, Massachusetts Audubon, the Berkshire Environmental Action Team and other entities to use as they develop comments to share with the U.S. Environmental Protection Agency. TASC does not make comments directly to the EPA on behalf of communities. This document is funded by the EPA's TASC program. The contents do not necessarily reflect the policies, actions or positions of the EPA.

Pursuant to the Revised Resource Conservation and Recovery Act Permit Modification (Revised Final Permit) issued by the EPA to the General Electric Company on December 16, 2020, for the Rest of River portion of the GE-Pittsfield/Housatonic River site, GE developed and submitted a Statement of Work specifying the deliverables and activities that GE will conduct to design and implement the Rest of River Remedial Action. In accordance with that requirement, GE submitted a Final Revised Rest of River Statement of Work on September 14, 2021. Section II.H.6 of the Revised Final Permit and Section 4.3.3.1 of the Final Revised Statement of Work require that GE prepare a Conceptual Remedial Design/Remedial Action Work Plan following completion of pre-design activities and related reporting for each remediation unit. GE prepared a Pre-Design Investigation Summary Report for Reach 6 to summarize the activities and results of the Reach 6 pre-design investigation. In addition, GE prepared a Baseline Restoration Assessment Report for Reach 6, which describes current habitat conditions in Reach 6. The Pre-

Design Investigation Summary Report and Reach 6 Baseline Restoration Assessment Report were submitted concurrently with the Conceptual Remedial Design/Remedial Action Work Plan.

Summary

The October 2024 Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 has 12 sections:

- Introduction
- Reach 6 Performance Standards and Corrective Measures
- Reach 6 Characteristics and Existing Data
- Preliminary Remediation Area Evaluations
- Remedial Design Process and Considerations
- Applicable or Relevant and Appropriate Requirements
- Quality of Life Considerations
- Sustainability Considerations
- Summary and Preliminary Evaluation of River Water Withdrawals and Uses
- Supplemental Data Collection
- Remedial Design Schedule
- References

The purpose of the Conceptual Remedial Design/Remedial Action Work Plan is to present preliminary design information for the remediation of sediment and floodplain soil within Reach 6 of the Rest of River. Because cap placement in Reach 6 is anticipated to occur about five or six years after the sediment and floodplain soil removal (after completion of remediation in all upstream remediation units (Reaches 5A, 5B and 5C)), the Conceptual Remedial Design/Remedial Action Work Plan describes only the design activities required to support sediment and floodplain soil removal components of the remedy in Reach 6. The Conceptual Remedial Design/Remedial Action Work Plan will be followed by a Final Remedial Design/Remedial Action Work Plan for Reach 6 for the same sediment and floodplain soil remediation. After the performance of more pre-design investigation activities pertinent to capping in the future, an addendum to the Final Remedial Design/Remedial Action Work Plan will be prepared to address the capping component of the Reach 6 remedy, about two years prior to the anticipated completion of capping in Reach 5C.

The conceptual design provided in the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 focuses on Woods Pond proper, the outlet channel and the Reach 6 floodplain. Sediment removal in the headwaters transition zone portion of Reach 6 will not be conducted concurrently with the sediment removal in other proportion of Reach 6. Instead, sediment removal and capping in that transition zone will be conducted concurrently with or after the sediment removal and backfilling for Reach 5C and prior to capping in Woods Pond. In addition, GE has included Valley Mill Pond as part of the scope of the conceptual design for Reach 6. Valley Mill Pond is an approximately 4.6-acre pond located on the eastern side of the river, immediately south of Woods Pond Dam. While technically located in Reach 7A, the pond is hydraulically connected to Reach 6 through a diversion channel that bypasses the dam. Given the

pond's location and hydraulic connection to Reach 6, GE determined that it is appropriate to include this area as part of the Reach 6 remediation unit rather than deferring it to future remediation activities to be performed in Reach 7. If it is determined that capping will be a component of the remedy in Valley Mill Pond, the design of that cap will be provided in the Final Remedial Design/Remedial Action Work Plan for Reach 6 (not in the future work plan addendum that will include the cap design for Woods Pond).

The Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 represents a compilation of pre-design investigation results for polychlorinated biphenyl sample analysis from historical and current sediment, and floodplain soil (residential and non-residential) investigations, as well as sitewide studies, including the Reach 6 Baseline Restoration Assessment Report, cultural resources assessments, water withdrawal and climate change documents addressing conditions in Reach 6. The document provides a robust amount of information that is dependent on concurrently and previously summarized information. The document represents design activities that are about 30% complete (Statement of Work, pdf page 62). A "30% completion status" represents a key point in time in the Reach 6 remedial design/remedial action process for community review and involvement. At this critical point, it is imperative to bring forth foundational issues such as possible reuse features to be part of the Woods Pond remediation strategy and coordination with ongoing transportation and disposal design aspects. Several TASC comments were made to capture opportunities where the community could contribute valuable recommendations to the eventual Final Remedial Design/Remedial Action Work Plan.

In general, the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 fulfills the requirements set forth in the Statement of Work and Revised Final Permit. As part of this review, TASC compared elements of the Conceptual Remedial Design/Remedial Action Work Plan to the following documents and associated TASC comment reviews:

- AECOM, 2024. Housatonic River Reach 6 Baseline Restoration Assessment Report.
- AECOM, 2023. GE-Pittsfield/Housatonic River Site, Rest of River, Phase 1B Cultural Resources Survey Work Plan for Reach 6.
- Anchor QEA and Arcadis, 2023. Housatonic River – Rest of River. Pre-Design Investigation Summary Report for Reach 5A Non-Residential Floodplain Exposure Areas.
- Anchor QEA, LLC, 2022. Sustainability and Climate Adaptation Plan.
- Anchor QEA, LLC, 2022. Water Withdrawal and Uses Plan for the Rest of River Remedial Action.
- Anchor QEA and AECOM, 2023. GE-Pittsfield/Housatonic River Site. Vernal Pool Pilot Study Work Plan.

TASC comments focus on the following general topics:

- Opportunities to connect and coordinate proposed remedy actions with proposed support area construction.
- Woods Pond cap design.

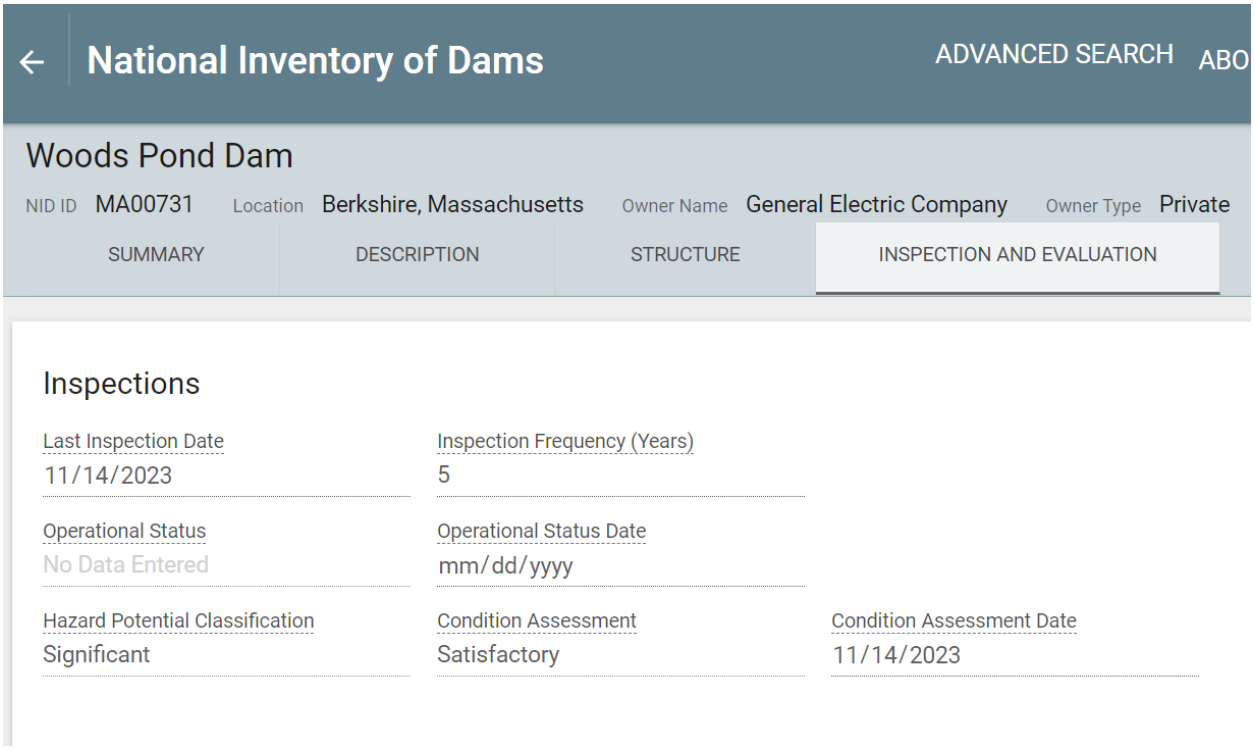
- More data needs identified by TASC based on the review of the PCB information for all media.
- Opportunities for coordination with the community to benefit GE, the EPA and the community.

TASC Comments

1. The Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 relies on removal of sediments using hydraulic conveyance of slurry material. This method seems like an effective removal effort if slurried material can be managed and maintained within the immediate removal area from Woods Pond. The disturbance of sediment in eutrophic (nutrient-rich) environments may be significantly anoxic (deficient of oxygen) and burdened with decayed organic matter. The disturbance of these types of sediments can cause decreased oxygen and high turbidity that may adversely affect downgradient ecosystems. It is difficult to determine how the hydraulic removal process will be contained. Furthermore, it seems possible to draw down water levels in certain features (such as Valley Mill Pond) resulting in the drying of sediments. The dried material may be more easily accessed and contained.

   The community may want to ask the EPA if accessing certain areas of contaminated waste materials in Reach 6 would be more easily accomplished if water levels were decreased, thereby allowing for easier access and removal.

2. Current National Inventory of Dams information (USACE 2024) was reviewed and summarized below (source: https://nid.sec.usace.army.mil/#/dams/system/MA00731/summary).



The dam's status is as follows:

- Hazard Potential Classification (Significant): Category to indicate the potential hazard to the downstream area resulting from failure or mis-operation of the dam or facilities. It reflects probable loss of human life and impacts on economic, environmental and lifeline interests. The hazard potential does not speak to the condition of the dam or the risk of the dam failing.
- Condition Assessment (Satisfactory): Assessment that best describes the condition of the dam based on available information.
- The last inspection took place on November 14, 2023. Inspection frequency is five years.

The Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 describes various management practices to be put into place that will isolate and control the PCB-contaminated waste. However, there is no mention if the Woods Pond Dam will need any enforcement or refurbishment to ensure that the integrity of the pond is maintained during Reach 6 remedial action activities.

The community may want to ask the EPA if the Final Remedial Design/Remedial Action Work Plan will include an assessment of any Woods Pond Dam reinforcements or best

management strategies to ensure the integrity of the dam through the remedial action process.

3. As indicated in the previous comment, GE owns the Woods Pond dam. The pond's only defined purpose is to retain flood waters. The dam itself is found to impair fish passage (upstream), as summarized in the Reach 6 Baseline Restoration Assessment Report. If the dam were found to require any refurbishment in order to withstand the proposed remedial action activities, it may provide an opportunity to create a fish passage conduit coincident with any dam restructuring. This would further enhance the fisheries resource potential of Woods Pond.

   The community may want to ask the EPA if any future refurbishment of the Woods Pond Dam would provide an opportunity to include a fish passage feature.

4. The Final Revised Overall Strategy and Schedule for Implementation of the Corrective Measures (Anchor QEA 2022) states that sediment removal in Reach 6 will be conducted in parallel with sediment/soil removal in Reach 5A such that sediment removal in both reaches will be completed at about the same time. However, capping in Reach 6 will be delayed until after all sediment and soil removal, backfill/capping, and placement of sediment amendments have been completed in all upstream remediation units (Reaches 5A, 5B and 5C). This is an appropriate approach to address the bulk of the Rest of River wastes in a timely manner.

   Section II.B.2.e(1)(c) of the Revised Final Permit states that if the EPA determines that significant concentrations and depths of PCB-contaminated sediment have accumulated above the engineered cap during post-construction monitoring, the accumulated sediment will be removed in a manner that ensures the integrity of the cap. However, it does not describe if sediments are monitored prior to cap placement. It is possible that PCB-contaminated materials may be disturbed and transported downriver from Reaches 5A, 5B and 5C to Reach 6 during remediation. It would be prudent to understand if these materials have re-contaminated the bottom sediments prior to cap placement. In addition, the concentration of PCBs in these sediments may help define the chemical isolation layer component of the cap.

   The community may want to ask the EPA if the sampling program to be conducted after the completion of the Reach 5A, 5B and 5C remedial action will be used to determine if any contamination has moved to Reach 6 prior to cap construction.

5. The aquatic macrophytes (aquatic vegetation) are recognized as an issue to be addressed for the hydraulic transfer of sediments since these materials can encumber the slurry transport. The plants transition to senescence (die off) during winter months when the plant tissue degrades and becomes very pliable. It may be prudent to begin sediment slurrying when this material may be more manageable.

The community may want to ask the EPA if it is beneficial to begin the hydraulic sediment removal process in the early winter months to minimize the physical encumbrance issues created by the abundant aquatic plants.

6. Section 1.4 (pdf page 21) describes the proposed remediation approach for the headwaters transition area. As stated in this section, sediment removal and capping in the transition zone will be conducted concurrently with or after the sediment removal and backfilling for Reach 5C. However, for the purposes of calculating sediment disposal volumes, the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 assumes these wastes will be included in the averaging area with the remainder of Reach 6. Given that it is not clear when the sediment removal and capping in the transition zone will occur, it is not clear if this averaging approach is appropriate, given that the time periods for removal will differ.

   The community may want to ask the EPA if it is appropriate to estimate volumes of waste generated from the transition zone with the volumes of waste being produced by Reach 6 if they are not being gathered in the same timeframe.

7. Section 2.6 (pdf page 32) describes the water withdrawals and uses evaluation. It summarizes the uses of water and requirements associated with these uses, as well as the "proposed methods to minimize/mitigate impacts during implementation of the remedial action." One of the water uses within Reach 6 is associated with the town of Lenox's wastewater treatment outfall. Such outfalls are routinely burdened with nutrients such as phosphorus that enhance aquatic macrophyte growth. There may be opportunities to amend Woods Pond cap materials with nutrient binding components to assist with the control of nutrients and eventual control of the macrophytes. TASC's comments on the Reach 6 Baseline Restoration Assessment Report include further discussion of this comment.

   The community may want to ask the EPA if GE would consider amending cap materials with components that can bind nutrients and perhaps assist in the control of future aquatic plant growth as part of the cap design. This may be particularly useful for the cap design as the plant roots may compromise the integrity of cap layers.

8. Water management is an important aspect of the Reach 6 remedial action activities. As stated in the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6, it appears there is a culvert that connects Woods Pond to Valley Mill Pond. However, it is unclear whether and to what extent water is being conveyed in current conditions (pdf page 41). However, it is possible that disturbance from the remedial action activities can release transported contaminated materials to downgradient features. Of particular interest is the connection between Woods Pond and Valley Mill Pond. It is assumed that GE will exercise caution during Woods Pond remedial action activities to contain and control disturbed waste materials. However, the forthcoming Final Remedial Design/Remedial Action Work Plan should describe best management practices to be put in place that will control transference of contamination between the ponds.

The community may want to ask the EPA if the forthcoming Final Remedial Design/Remedial Action Work Plan for Reach 6 will include a discussion of water management controls and best management practices to contain contaminated wastes from transferring between Woods Pond and Valley Mill Pond.

9. As mentioned in the previous comment, there is a connection between Woods Pond and Valley Mill Pond. Per the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6, the cap for Valley Mill Pond will be placed immediately after Valley Mill Pond remedial action (pdf page 54). Given this schedule of activities, Valley Mill Pond may be capped before remedial actions in Reaches 5B and 5C. With the hydraulic connection between Woods Pond and Valley Mill Pond, there is the potential for resuspended waste from upgradient remedial action activities to deposit on Valley Mill Pond cap. It seems prudent to time the placement of Valley Mill Pond cap to occur concurrent with the Woods Pond cap (upon completion of Reach 5B and 5C remedial action activities).

   The community may want to ask the EPA if the cap for Valley Mill Pond should be placed at the same time as the Woods Pond cap.

10. A town of Lenox wastewater treatment plant outfall is located along the western shore of the Woods Pond outlet channel. Section 9.2.5 Identification of Permitted Discharges to the River says that based on available online records for active National Pollutant Discharge Elimination System permit holders, the town of Lenox wastewater treatment plant is the only active permit holder in Reach 6. Section 9.3, Evaluation of Potential Impacts on River Water Uses (pdf page 102), states that:

    > "The final design will evaluate whether the WWTP discharge would need to be temporarily diverted during remediation activities in that area. As part of the supplemental data collection program, GE will meet with the Town of Lenox to discuss details associated with the WWTP discharge and potential impacts and mitigative measures to be performed during remediation. During that outreach, GE will determine whether the design for the WWTP discharge specifies the use of any scour protection at the discharge point. Based on the outcome of that outreach, further evaluation will be conducted during final design to determine whether the engineered cap erosion protection layer to be placed near the discharge will require larger stone or an alternate erosion protection design (e.g., concrete matting) to prevent scour from the discharge."

    This is an important coordination since the discharge permit requires whole effluent toxicity testing that includes the collection of dilution water upgradient of the point discharge. The dilution water requirements are below (source is the EPA: https://www.epa.gov/sites/default/files/2019-06/documents/draftma0100935permit.pdf). Any disturbance created by GE's remedial action activities may affect the outcome of this required parameter. Furthermore, the discharge permit may rely on a mixing zone (or zone of dilution) that needs to be maintained at the point of discharge release.

IV. DILUTION WATER: A grab sample of dilution water used for acute toxicity testing shall be collected from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. In the case where an alternate dilution water has been agreed upon an additional receiving water control (0% effluent) must also be tested. If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a hardness, pH, conductivity, alkalinity, organic carbon and total suspended solids similar to that of the receiving water may be substituted AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S).

The community may want to ask the EPA if GE has considered town of Lenox discharge permit requirements as part of the Reach 6 water withdrawal and uses process, and how the remedial action may impact discharge requirements.

11. As specified in the Revised Final Permit performance standard (Section II.B.2.e), pdf page 32, remediation in Woods Pond will involve:

    - Removal and engineered capping of sediments in the pond as needed to achieve a post-capping minimum water depth of 6 feet, as measured from the crest of Woods Pond Dam.
    - In nearshore areas, the slope from the shore to the 6-foot water depth is to be as steep as possible while also being stable and not subject to erosion or sloughing.
    - In areas with water depth greater than 6 feet prior to remediation, sufficient sediment will be removed to allow for the placement of an engineered cap so the final grade is equal to or deeper than the original grade.

    TASC commented on the review of the Reach 6 Baseline Restoration Assessment that this required bathymetry will eliminate the shallower areas in the pond, which may alter the ability of the pond to recover all baseline functions. It is likely that sedimentation over time will recreate these shallower environments. However, there are certain in-pond features that may not be recovered, such as:

    - The pronounced channel through Woods Pond that provides a primary flow pathway.
    - Undercut banks, or banks with extensive cover such as overhanging vegetation, woody debris and submerged macrophytes.
    - Variable bottom substrate throughout the pond's footprint.

    The community may want to ask the EPA if there are any cap design considerations that will help recapture the unique features of the pond that support the diversity of aquatic functions.

12. Section II.B.2.e(1)(c) of the Revised Final Permit states that if the EPA determines that significant concentrations and depths of PCB-contaminated sediment have accumulated above the engineered cap during post-construction monitoring, the accumulated sediment will be removed in a manner that ensures the integrity of the cap. Compliance with this performance standard raises two questions:

    - Sampling will be required to determine whether accumulated sediments above the cap are contaminated. Methods of sampling are typically destructive to the sediment surface (through the use of a dredge or core device as examples) which (in this scenario) would affect the integrity of the cap.
    - If the accumulated sediments are found to be contaminated, then GE will need to remove this material. It is difficult to envision how sediment removal will take place without affecting the integrity of the cap. It seems appropriate that the final cap design includes an assumption that removal may need to occur. Therefore, the cap materials would need to provide a more robust protective layer.

    The community may want to ask the EPA if the final cap design needs to include a design element to protect the integrity of the cap as a result of both sampling and possible future sediment removal actions.

13. The cap design is to include a "habitat layer" that will be designed such that it provides functions and values equivalent to the pre-existing surficial sediment substrate. As summarized in the Reach 6 Baseline Restoration Assessment Report and the Pre-Design Investigation Summary Report, the surficial sediment composition throughout Woods Pond is extremely variable. One of the sediment characteristics that is variable is organic content (Table 3-4, Summary of Geotechnical Index Parameter Testing Results by Layer, pdf page 37 of the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6). Organic materials are effective PCB binding agents and a possible amendment for the chemical isolation layer component of the cap (Section 2.2.3, pdf page 27). It seems potentially beneficial to integrate variable organic matter composition into the cap design to re-create the sediment variability and create a PCB binding capacity to the cap.

    The community may want to ask the EPA if there is any benefit to be gained by varying the organic matter content to the cap design to re-create variability (that mimics current conditions) and also add a PCB binding capacity to the cap.

14. A comprehensive bathymetry identifies the presence of a historic (pre-impoundment) "relatively pronounced channel through Woods Pond, which provides a primary flow pathway" (pdf page 16). These flows will be disturbed as a result of the pond remedial action activities, but the flow may eventually return to its pre-existing path. It is not clear if the proposed cap design includes an assumption to control erosion caused by future preferential flow paths through the pond.

    The community may want to ask the EPA if the proposed cap design will address the potential scouring power of water current that will eventually be reestablished through Woods Pond, likely where the current pronounced channel exists.

15. Section 2.2.3 (pdf page 27) describes the general characteristics that define the layers of the engineered cap design. The erosion protection layer is expected to prevent erosional forces such as wind-generated waves and ice. Woods Pond and Valley Mill Pond appear to be used for water storage. The bank-full conditions are affected by storm events and occasional drawdowns. It is not clear if factors such as water drawdowns and sediment drying are necessary factors to consider as part of the erosion protection layer design.

    The community may want to ask the EPA if factors associated with pond water drawdown should be considered as part of the erosion protection layer design.

16. The erosion protection layer (as described on pdf pages 28 and 29) is to include a bioturbation layer. Comments capturing TASC concerns surrounding bioturbation are provided in the Reach 6 Baseline Restoration Assessment review and are summarized herein. The Reach 6 Baseline Restoration Assessment Report does not include information describing the current benthic macroinvertebrate community. This represents a possible data gap of information needed to assess the characteristics of the bioturbation layer.

    The community may want to ask the EPA if current information describing the benthic macroinvertebrate community is needed to fully scope the requirements to address bioturbation for the erosion protection layer of the engineered cap design.

17. The resurgence of the invasive aquatic macrophytes upon completion of the remedial action may be a potential concern. The root zone of these plants is poorly understood and could impact cap integrity. As previously commented upon, it seems important to implement controls to the resurgence of these species throughout time to maintain the integrity of the cap. At a minimum it would be helpful to understand if aquatic plant roots will pose a risk to the integrity of the cap. An evaluation of root zones may be an important consideration to the final cap design.

    The community may want to ask the EPA if GE could consider aquatic plant root zone characteristics as part of the final cap design.

18. GE is to conduct a pilot study on vernal pools using either traditional excavation and restoration techniques or amendments such as activated carbon (Section 2.3.2, pdf page 30). The results will determine the appropriate remediation of vernal pools to meet applicable performance standards (Section II.B.3.b.(1) of the Revised Final Permit, pdf page 54). It seems that the results of these pilot studies may have some usefulness in the formulation of the chemical isolation layer of the engineered cap.

    The community may want to ask the EPA if the results of the vernal pool pilot studies would provide any useful information for the design of the final engineered cap.

19. The proposed non-residential floodplain Exposure Area soil removal efforts seem to be minor in their scope and volume. As shown in Figure 4 (pdf page 196), Non-Residential

Floodplain Preliminary Remediation Areas (Exposure Area 58) and Figure 5 (pdf page 197), Non-Residential Floodplain Preliminary Remediation Areas (Exposure Area 59), and summarized in Table 4-4 (Removal Area and Volume Estimates and Post-Remediation Exposure Point Concentrations for Non-Residential Floodplain Exposure Areas and Subareas Requiring Remediation, pdf page 58), a total removal area of 398 square feet of soil with a volume of 14 cubic yards of soil are to be removed from Exposure Area 58 and Frequently Used Subarea (FUSA) 59 to achieve the appropriate protective performance standard. The remaining exposure areas do not have any planned remedial action activities. The contaminated areas within certain exposure areas coincide with settings to be used as support areas where there may be opportunity to accomplish the remedial action efforts in coordination with support area construction. In addition, there is an exposure area with contaminated soils along the Woods Pond shoreline that does not have any proposed remedial action activity, but appears to be at risk of exposing underlying contaminated soils due to wave action erosion and Woods Pond remedial action impacts. A summary of recommendations and concerns for each non-residential exposure area is below.

- Exposure Area 56 (Figure 2a, PCB Evaluations for Floodplain Soil, pdf page 188) encompasses an area with significant PCBs from 0 to 0.5 foot of soils (shown in panel B of Figure 2a, pdf page 188). This area does not encompass an area proposed for remedial action but is located close to the proposed Woods Pond Rail Spur and Proposed Woods Pond Loading/Unloading Area (Figure 5-3, Proposed Shoreline Support Facility, Woods Pond Rail Spur and Upland Disposal Facility Location, pdf page 140). It may be useful to protect the high contamination area from physical disturbance with the addition of erosion control features.

- Exposure Area 58 (Figure 2c, PCB Evaluations for Floodplain Soil, pdf page 190) encompasses an area with significant PCBs in the 0 to 1 foot range (shown in panel D of Figure 2c, pdf page 190). This area is located close to the conceptual shoreline support facility (Figure 3-1, Appendix E, Hydraulic Transport Evaluation for Reach 6, pdf page 522) to be used for the management of hydraulic waste operations in Woods Pond. It seems appropriate to remove the contaminated shoreline soils before support area construction or to encapsulate this contaminated area, thereby eliminating future disturbance created by the use of the support area.

- Exposure Area 59 (Figure 2d, PCB Evaluations for Floodplain Soil, pdf page 191) encompasses a contaminated area (shown in panels B, C and D, Figure 2d, pdf page 191) that occurs at the beginning of the outfall channel of Woods Pond. There is no proposed remedial action activity for this part of the exposure area but there is a removal area proposed for the FUSA Exposure Area 59 (Figure 5, Non-Residential Floodplain Preliminary Remediation Areas, pdf page 197). The contaminated area next to Woods Pond within Exposure Area 59 seems to represent an exposed location where disturbance is likely to occur from the Woods Pond remedial action activities. It seems appropriate to protect this shoreline area from erosion of riverbank soils, which could in turn expose the underlying PCB-contaminated soil.

The community may want to ask the EPA if remedial actions for certain areas within the non-residential exposure areas can be amended or addressed as part of the support area construction and other removals, or to help protect contaminated areas from being disturbed and eroded during remedial action activities.

20. The non-residential soil remedial action efforts are designed to protect for human health exposure related to direct human contact with floodplain soils. The original human health risk assessment largely assumed exposures related to recreator activity. Now that the Revised Transportation and Disposal Plan has been developed, a considerable amount of Rest of River Remedial Action construction worker activity is now proposed in certain exposure areas, as follows:

    - Exposure Area 58 and Exposure Area 59 are likely to encompass significant worker activity related to the proposed Woods Pond support area that is to be constructed and operated in close proximity to these exposure areas and will address hydraulic conveyance of sediments from the pond.

    - Exposure Area 60, Exposure Area 60a and Exposure Area 56 are in close proximity to the Woods Pond rail spur.

    - Exposure Area 58 encompasses components of the hydraulic pipeline.

    - The Revised Transportation and Disposal Plan incorporates the use of rail as a substantial component to the transportation of waste. The existing railroad may need to amend its right of way, which would involve earthwork within certain exposure areas throughout the Rest of River. There is the potential for workers to be exposed to surface and subsurface soils from these exposure areas.

    It may be appropriate to revisit the site's original human health risk assessment to be sure these worker exposure scenarios are addressed adequately with the exposure area performance standards, or that the site's Health and Safety Plan addresses any more worker protections needed in these areas.

    The community may want to ask the EPA if workers associated with the proposed Reach 6 remedial action activities will be protected adequately against existing exposure area-specific PCB concentrations.

21. The document states that the conceptual design will be revised to a final design after "supplemental data collection, additional habitat assessment activities, cultural resources investigations and additional design evaluations are completed." TASC provided recommendations for more baseline data collection activities as follows:

    - The potential tissue burden of PCBs in the dominant aquatic macrophytes throughout Woods Pond and Valley Mill Pond represents a data gap. This comment, along with supporting information describing PCB bioaccumulation potential for aquatic plants, was also provided in the Reach 6 Baseline Restoration Assessment Report. It is

recommended that samples of co-located sediment and aquatic macrophytes be collected from each pond during the growing season. It is also recommended that the depth of the plant root zone be measured at the time of sample collection. In addition, surveys of benthic macroinvertebrates at the time of plant and sediment sample collection can assist with the understanding of existing bioturbation conditions.

- There may be small areas where comprehensive baseline surveys were not conducted, and now encompass important features associated with the hydraulic pipeline (and other transportation-related features). The area to the north of Woods Pond through to the Upland Disposal Facility should be comprehensively evaluated as a conservative approach. The definitive placement of the hydraulic pipeline remains uncertain. Therefore, this entire area should be evaluated.

The community may want to ask the EPA if it is appropriate to gather aquatic macrophyte (and co-located sediment along with benthic macroinvertebrates) samples and conduct additional baseline studies between Woods Pond and the Upland Disposal Facility to address potential data gaps.

22. In continuation with the previous comment, the aquatic macrophytes are recognized as an issue to be addressed for the hydraulic transfer of sediments since these materials can encumber the slurry transport. It should be noted that these plants may have accumulated PCBs and, if accumulation has occurred, the plants may qualify as waste to be managed.

    The community may want to ask the EPA if the prevalent aquatic macrophytes in Woods Pond should be sampled for total PCB content to determine if bioaccumulation has occurred and if the plant material qualifies as waste requiring proper disposal.

23. Figure 3-3 (pdf page 565) shows the proposed Woods Pond sediment waste characterization sampling locations (provided in Appendix F, the Supplemental Data Collection Work Plan for Reach 6). The sampling seems to be spatially weighted in the shallow areas of the pond. There is a gap in the area that is the deepest portion of the pond (Figure 3-3, Reach 6 Topographic and Bathymetric Survey Data, pdf page 125) in the grid spaces H-I, 7-8; H-I, 6-7; and G-H, 3-4.

The community may want to ask the EPA if there should be proposed sediment waste characterization sampling locations gathered from the above listed deeper areas.

24. Figure 3-4 (Appendix F; pdf page 566) shows the proposed supplemental Woods Pond probing and geotechnical investigation locations. The transects capture river stations 574+00 through 581+00. However, there are no transects proposed for river stations 582+00 and 583+00, which likely capture the deepest collected sediment areas.

    The community may want to ask the EPA if it would be appropriate to add river stations 582+00 and 583+00 to the proposed supplemental sediment probing transects.

25. Figures 4-3a and 4-3b (pdf pages 133-134) provide conceptual dredge prism cross-sections for Woods Pond. These figures help reviewers understand the dredge prism. It would also be useful if a profile depicting the PCB occurrence (a depth interpretation of the Thiessen polygon information) could be layered with this information to understand conceptually the magnitude of the PCB removal effort.

    The community may want to ask the EPA if Figure 4-3a and Figure 4-3b can be amended to include an understanding of PCB occurrence within the depicted prisms.

26. The Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 mentions a baseline and a construction monitoring program that is in place to monitor Reach 6 remedial action impacts during construction (Section 2.4, pdf page 30). It is not clear if the baseline and construction monitoring program is final or if the community will have an opportunity to review the plan. If there is an opportunity to review the plan, it may be appropriate to recommend the use of passive sampling devices that sample PCB occurrence in surface water over time. Passive samplers have emerged as an attractive alternative to active water sampling methods as they accumulate PCBs, represent time-weighted average concentrations, and can easily be shipped and deployed (Lohmann, R. et al. 2023 and EPA 2024).

    The community may want to ask the EPA if there will be an opportunity to review the Construction Monitoring Plan and if there is a use to deploying passive PCB samplers to measure PCB transport through a Rest of River remediation unit during remedial action efforts.

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Technical Assistance Services *for* Communities
GE-Pittsfield/Housatonic River Site
Comments on the Pre-Design Investigation Summary Report for Reach 6
January 10, 2025

Contract No.: 68HERH21A0018
Call Order Number: 68HERH22F0082 (14.0.0 OSRTI – Regional & Headquarters TASC/CI Support)
Technical Direction: R1 2.12.14 GE Pittsfield

Technical Assistance Services for Communities
Comments on GE-Pittsfield/Housatonic River Site – Pre-Design Investigation Summary Report for Reach 6, October 2024

Introduction

This document provides TASC comments on the GE-Pittsfield/Housatonic River – Pre-Design Investigation Summary Report for Reach 6. This document is for the Berkshire Regional Planning Commission, the city of Pittsfield, the towns of Lee, Lenox, Stockbridge, Great Barrington and Sheffield, Massachusetts Audubon, the Berkshire Environmental Action Team, and other entities to use as they develop comments to share with the U.S. Environmental Protection Agency. TASC does not make comments directly to the EPA on behalf of communities. This document is funded by the EPA's TASC program. The contents do not necessarily reflect the policies, actions or positions of the EPA.

Pursuant to Section II.H.3 of the Revised Resource Conservation and Recovery Act Permit Modification (Revised Final Permit) issued by the EPA to the General Electric Company on December 16, 2020, for the Rest of River portion of the GE-Pittsfield/Housatonic River site, GE developed and submitted a Statement of Work specifying the deliverables and activities that it will conduct to design and implement the Rest of River Remedial Action. In accordance with that requirement, GE submitted a Final Revised Rest of River Statement of Work on September 14, 2021. GE submitted the Pre-Design Investigation Work Plan for Reach 6 to the EPA on November 3, 2022. That work plan described GE's proposed pre-design investigation field surveys and sampling and analysis program for sediment and floodplains soils in Reach 6. In a letter dated March 2, 2023, the EPA conditionally approved the work plan and required that GE submit a revision to that plan. On May 1, 2023, GE submitted the Revised Pre-Design Investigation Work Plan for Reach 6, which addressed the EPA's conditions. The EPA conditionally approved that revised plan on June 20, 2023. GE initiated pre-design investigation field activities in August 2023 and substantially completed those activities by November 2023.

Summary

The Pre-Design Investigation Summary Report for Reach 6 has four sections:

- Introduction
- Summary of Pre-Design Investigations
- Concurrent Submittals and Upcoming Activities
- References

The Pre-Design Investigation Summary Report for Reach 6 summarizes the results of the work conducted in accordance with the Revised Reach 6 Preliminary Design Investigation Work Plan and the approved modification to the floodplain soil sampling locations.

TASC Comments

The Pre-Design Investigation Summary Report for Reach 6 represents a compilation of recent pre-design investigation results for polychlorinated biphenyl sample analysis from field surveys, sediment and floodplain soil investigations in Reach 6. The document provides a concise amount of information that is also summarized by the concurrently submitted Conceptual Remedial Design/Remedial Action Work Plan for Reach 6. In general, the report fulfills the requirements set forth within the Statement of Work and Revised Final Permit. TASC also reviewed the previously provided TASC comments for the November 2022 Pre-Design Investigation Work Plan for Reach 6 and the September 2023 Pre-Design Investigation Summary Report for Reach 5A Sediment and Riverbanks as part of this review. TASC comments focus on questions pertaining to data summary completeness, and possible questions to raise regarding the use of Aroclor mixture results versus congener-specific results to calculate total PCBs and the results of split samples collected by GE and the EPA.

Specific TASC comments are below.

1. The Pre-Design Investigation Summary Report for Reach 6 is a concise summary of current field surveys, sediment and floodplain soil PCB characterization. The concurrent Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 provides a more robust narrative describing historical data results as compared to the summary report. For instance, Appendix A from the Conceptual Remedial Design/Remedial Action Work Plan summarizes the historical data usability assessment as well as spatially weighted PCB information for Valley Mill Pond. The Pre-Design Investigation Summary Report for Reach 6 provides only current sediment PCB information gathered from the 2023 sampling (Table 1, pdf page 53). Since all available PCB information for Valley Mill Pond is historical, the Pre-Design Investigation Summary Report for Reach 6 does not contain any data for this feature.

   Similarly, Appendix B of the Conceptual Remedial Design/Remedial Action Work Plan provides a complete summary of historical floodplain soil data, while the Pre-Design Investigation Summary Report for Reach 6 provides information for 2023 sampling (Table 2, pdf page 55). It seems important to provide all available data used

for the Conceptual Remedial Design/Remedial Action Work Plan in one summary report. This will give reviewers a complete database from which to follow the remedial decision process.

The community may want to ask the EPA if the entire database relied on for the Reach 6 remedial design/remedial action can be provided in a single document.

2. TASC previously commented on the use of total PCB analysis versus PCB congener analysis in the review of Reach 5A documents. The Rest of River Performance Standards are based on measurements of total PCBs. Total PCBs can be calculated as the sum of all Aroclors found in a sample (Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260, 1262 and 1268 must all be evaluated) or may be calculated as a sum of congeners if PCB congener analysis is conducted. Results from the Aroclor analysis will strictly show analysis of Aroclor mixture detections, while congener analysis provides results for all PCB congeners. Total PCB concentrations based on a summed total concentration from congeners will typically yield greater concentrations, as compared to Aroclor analysis results since all possible PCB congeners are accounted for.

   The 2021 Pre-Design Investigation Work Plan for Reach 5A Sediment and Riverbanks (Anchor QEA and AECOM 2021) states:

   > *"The remaining portion of the homogenized bulk sediment samples that are not used for ex situ porewater analysis will be sent to the analytical laboratory for analysis of PCBs by both congener Method 1668 and Aroclor Method 8082, as well as for analysis of total and dissolved organic carbon (TOC and DOC). Contaminant transport modeling to support cap design will be performed on a homolog-specific basis, to explicitly account for differences in the transport properties of each homolog. The paired Aroclor and congener PCB results in this data set will provide the data necessary to develop a relationship that can be used to convert the larger sediment Aroclor PCB data set (described in Section 3.3.2) to homolog concentrations that can be used in the cap design model evaluations"* (pdf pages 26 and 27 of Anchor QEA and AECOM 2021).

   There is no mention of paired Aroclor and congener PCB analysis for Reach 6 sediments. Furthermore, there is no mention if there is an understanding of the relationship between total PCB results and congener results as part of the Reach 6 engineered cap design. The PCB partition analysis described in the Conceptual Remedial Design/Remedial Action Work Plan is based on the results of the Reach 5A sediment and porewater PCB congener analysis. This extrapolation of Reach 6 PCB partitioning using Reach 5A results seems to represent a possible data gap. It may be appropriate to collect co-located sediment and porewater samples from Reach 6 (Woods Pond) for analysis of total PCBs and congener PCB content.

   The community may want to ask the EPA if use of Reach 5A PCB partition coefficients is appropriate for the Reach 6 cap design, or if there is a need to collect

Reach 6-specific information. Furthermore, the community may want to ask the EPA if there is a need to collect congener PCB analysis for Reach 6 sediments.

3. As per Statement of Work Section 4.2.3.2 (pdf page 49), all pre-design investigation summary reports are to provide a summary of validated data, including a discussion of any quality assurance/quality control issues with the data, associated data validation and laboratory data reports. The Pre-Design Investigation Summary Report for Reach 6 does provide summaries of data validation results. However there is a brief mention of the split samples collected by the EPA (Section 2.3.3, Results, pdf page 19):

   > "The validated 2023 pre-design investigation PCB data collected by GE are summarized by exposure area in Table 3 in Appendix C. PCB analytical results from split samples collected by the EPA, along with the corresponding GE sample results, are summarized in Table 4 in Appendix C. As discussed further in Section 2.4, the EPA split sample results were incorporated into the calculations of total PCB EPCs [exposure point concentrations] described in that section."

   Review of the EPA split data analysis summaries provided in Table 2 (pdf page 228) and Table 4 (pdf page 341) of Appendix C identified substantially diverging results. Examples of differing split analysis results for sediment and floodplain soils are provided below.

Appendix C. Table and Sample Identifier	GE (µg/kg)	EPA (µg/kg)
Summary of 2023 Reach 6 Pre-Design Investigation Sediment EPA PCB Split Sample Results (Aroclor-1260) (Table 2, pdf page 228)		
SE-574-00-C	5,080	1,000J
SE-574-00-E	488	120J
SE-578-99-W	31,100	2,600J
SE-D-E-4-S	4,560	280
Summary of 2023 Reach 6 Pre-Design Investigation Floodplain EPA PCB Split Sample Results (Aroclor-1260) (Table 4, pdf page 341)		
EA56-AG-12	79.2J	64
EA56-AH-14-15	26.5J	ND
EA56-AS-34	5,130	780J
EA56-AZ-20	3,200	590J
J = estimated value. ND = compound analyzed for but not detected above the detection limit. µg/kg = microgram per kilogram		

The community may want to ask the EPA if the diverging results between GE and the EPA's split sample analysis represents a quality assurance/quality control data concern.

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Technical Assistance Services *for* Communities
GE-Pittsfield/Housatonic River Site
Comments on the Baseline Restoration Assessment Report for Reach 6
January 10, 2025

Contract No.: 68HERH21A0018
Call Order Number: 68HERH22F0082 (14.0.0 OSRTI – Regional & Headquarters TASC/CI Support)
Technical Direction: R1 2.12.14 GE Pittsfield

Technical Assistance Services for Communities
Comments on the GE-Pittsfield/Housatonic River Site – Baseline Restoration Assessment Report for Reach 6, October 2024

Introduction

This document provides TASC comments on the GE-Pittsfield/Housatonic River – Baseline Restoration Assessment Report for Reach 6. This document is for the Berkshire Regional Planning Commission, the city of Pittsfield, the towns of Lee, Lenox, Stockbridge, Great Barrington and Sheffield, Massachusetts Audubon, the Berkshire Environmental Action Team and other entities to use as they develop comments to share with the U.S. Environmental Protection Agency. TASC does not make comments directly to the EPA on behalf of communities. This document is funded by the EPA's TASC program. The contents do not necessarily reflect the policies, actions or positions of the EPA.

Pursuant to the Revised Resource Conservation and Recovery Act Permit Modification (Revised Final Permit) issued by the EPA to the General Electric Company on December 16, 2020, for the Rest of River portion of the GE-Pittsfield/Housatonic River site, GE submitted a Baseline Restoration Assessment Work Plan on December 22, 2021. On March 31, 2022, the EPA issued a conditional approval letter for that initial Baseline Restoration Assessment Work Plan. Among other conditions, that letter required that GE submit a focused Baseline Restoration Assessment Work Plan for Reach 5A of the Rest of River and then submit a separate general revised Baseline Restoration Assessment Work Plan that would cover Reaches 5B through 8. GE submitted a Revised Reach 5A Baseline Restoration Assessment Work Plan on July 14, 2022. The EPA approved that work plan on July 18, 2022. GE subsequently initiated data collection for the Reach 5A Baseline Restoration Assessment, which took place from July 2022 through June 14, 2023. On February 19, 2024, GE submitted the Revised Reach 5A Baseline Restoration Assessment Report. The EPA approved the report on March 5, 2024.

In accordance with the EPA's conditional approval letter of the initial Baseline Restoration Assessment Work Plan dated March 31, 2022, GE submitted a Revised Baseline Restoration Assessment Work Plan for the Rest of River Reaches 5B through 8 on August 2, 2022. It covered the remediation units in those reaches, including both sitewide conditions applicable to those remediation units and the remediation unit-specific conditions in them. On December 22, 2022, the EPA issued a conditional approval letter for that work plan, requiring modifications to be addressed in a further Revised Work Plan for Reaches 5B through 8. GE submitted the Revised Baseline Restoration Assessment Work Plan for Reaches 5B through 8 on February 20, 2023. The EPA approved that Work Plan on March 8, 2023. The Revised Baseline Restoration Assessment Work Plan noted that, upon completion of the baseline restoration assessment survey activities described therein, GE would submit a Baseline Restoration Assessment Report for Reaches 5B through 8.

The Final Revised Overall Strategy and Schedule for Implementation of the Corrective Measures provided that the sediment removal in Reach 6, which includes Woods Pond, as well as floodplain soil removal in Reach 6, will be conducted in parallel with sediment/soil removal in Reach 5A such that sediment/soil removal in both reaches will be completed at about the same time, although capping in Reach 6 will be delayed until after all remedial activities have been completed in all upstream remediation units. As a result, GE advanced the performance of the pre-design investigation of Reach 6 before the pre-design investigations for Reaches 5B and 5C, and conducted that pre-design investigation in accordance with a Revised Reach 6 Pre-Design Investigation Work Plan submitted to the EPA on May 1, 2023, and conditionally approved by the EPA on June 20, 2023.

The results of that pre-design investigation are in a pre-design investigation summary report for Reach 6 and a Conceptual Remedial Design/Remedial Action Work Plan has been developed for Reach 6. Both documents were submitted concurrently with the Baseline Restoration Assessment for Reach 6 on October 31, 2024. Similarly, the Baseline Restoration Assessment for Reach 6 was advanced prior to the other work provided for in the Revised Reach 5B-8 Baseline Restoration Assessment Work Plan. On August 30, 2024, GE submitted a formal request to submit a separate Baseline Restoration Assessment Report for Reach 6 concurrently with the Pre-Design Investigation Summary Report and Conceptual Remedial Design/Remedial Action Work Plan for Reach 6. The EPA approved that request in a letter dated September 12, 2024. Accordingly, GE submitted a separate Baseline Restoration Assessment Report for Reach 6 in October 2024.

Summary

The October 2024 Baseline Restoration Assessment Report for Reach 6 has 10 sections:

1. Introduction and Objectives
2. Overview of Approach for Reach 6 Baseline Restoration Assessment
3. Baseline Restoration Assessment of Reach 6 Aquatic Habitats
4. Baseline Restoration Assessment of Reach 6 Floodplain Habitats (excluding Vernal Pools)
5. Baseline Restoration Assessment of Reach 6 Vernal Pool Habitats

6. Baseline Restoration Assessment of Reach 6 Support Areas
7. Assessment of Rare Species in Reach 6
8. Invasive Species in Reach 6
9. Preliminary Identification of Degraded Habitats and Restoration Opportunities in Reach 6
10. References

The Reach 6 Baseline Restoration Assessment is intended to provide a detailed baseline ecological inventory and assessment of pre-remediation conditions and functions of the affected habitats in Reach 6 and thus to serve as the foundation for meeting the restoration performance standards set forth in Section II.B.1.c.(1) of the Revised Final Permit as applicable to this reach. The conditions and features identified in the Baseline Restoration Assessment Report for Reach 6 are also going to be used in concert with engineering considerations to locate access roads and staging areas in areas with lower habitat values, where practicable.

TASC Comments

The Baseline Restoration Assessment Report for Reach 6 represents a compilation of ecological data gathered from historical and recent investigations to provide a detailed baseline ecological inventory of pre-remediation conditions and functions of the affected habitats in Reach 6. The document provides a robust amount of information that will be useful for determining if restoration performance standards are achieved after the completion of remedial activities. In general, the report fulfills the requirements set forth in the Statement of Work and the Revised Final Permit. TASC previously reviewed and commented on the Reach 5A Baseline Restoration Assessment and found that certain comments from this previous review also apply to the Baseline Restoration Assessment for Reach 6. These comments are provided below, along with new comments that focus on potential data gaps that help define the Woods Pond aquatic ecology. In addition, since the Baseline Restoration Assessment Report for Reach 6 was released for review concurrently with the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6, TASC generated several comments that address shared concerns across the two documents.

1. The Baseline Restoration Assessment Report for Reach 6 Report provides a detailed baseline ecological inventory and assessment of pre-remediation conditions and functions of the affected habitats in Reach 6. This information will serve as the foundation for meeting the restoration performance standards. The data presented in this document captures conditions of a watershed contaminated by polychlorinated biphenyls. Using these measures as "baseline" conditions means that the restored conditions will ultimately reflect an impacted natural setting. Available and forthcoming PCB data could help identify portions of habitat areas that have low levels of contamination, which would be more appropriate to use as a baseline for the performance standard used for comparison with the after-remediation data.

   The community may want to ask the EPA if the data presented in the report could be sorted to characterize the habitat conditions associated with low PCB concentrations, thereby setting the restoration goals more appropriately to natural (unaffected by contamination) setting conditions.

2. The Baseline Restoration Assessment Report for Reach 6 provides a summary of the foundational physical, chemical and biological data that will help define whether restoration of disturbed areas in the Rest of River achieves performance standards. The performance standards, as described in Section 1.3 of the document (pdf page 16) and in the Revised Final Permit, Section II.B.1.c.(1), on pdf page 21, are to:

   (a) Implement a comprehensive program of restoration measures that address the impacts of the Corrective Measures on all affected ecological resources, species and habitats, including, but not limited to, riverbanks, riverbed, floodplain, wetland habitat and the occurrence of threatened, endangered or state-listed species and their habitats; and

   (b) Return such areas to pre-remediation conditions (e.g., the functions, values, characteristics, vegetation, habitat, species use and other attributes), to the extent feasible and consistent with the remediation requirements.

   While the report does provide a robust amount of historical and recent baseline data, it does not identify or describe suitable "measures" to define whether performance standard (b) has been met. It seems appropriate that all the data gathered to characterize the physical/biological attributes affected, including measurements of species composition, density, percent cover and structural components, could be compiled to identify quantifiable biological endpoints (parameters that can be quantified by measurements such as species richness, diversity and density) indicative of an ecosystem's function and health. For instance, aquatic macrophyte density and diversity in the shallower portions of Reach 6 may be a suitable "measure" to determine the success of achieving performance standard (b).

   The community may want to ask the EPA if the Reach 6 Baseline Restoration Assessment Report for Reach 6 should identify suitable, quantifiable measures/biological endpoints to be used to determine the success of achieving the performance standard of "returning areas disturbed by remediation activities to pre-remediation conditions."

3. The Baseline Restoration Assessment Report for Reach 6 was provided concurrently with the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6. Findings from the Baseline Restoration Assessment Report for Reach 6 characterize Woods Pond as having a diversity of aquatic habitat types, with some general characteristics as follows (as summarized pdf pages 33 through 37):

   - Water depths range from about 0.5 feet to 16 feet, with an average depth of 2 feet to 3 feet.
   - Sediment thickness ranges substantially throughout Woods Pond with a deeper pool in the southeastern section and a minimal thickness near the dam.
   - A deeper portion on the southeast side of the pond has a maximum depth greater than 14 feet (appears to be the remnants of a separate pond that occurred along the east side of the original Housatonic River channel prior to the impounded conditions created by the Woods Pond Dam circa 1880).

- Areas of channelized flow (typically submerged channels below the normal pool water level) results in deeper conditions in various locations.
- There is a pronounced channel across Woods Pond from northeast to southwest that provides a primary flow pathway and appears to be in the location of the historical Housatonic River channel that existed prior to construction of the dam.
- The outlet channel contains deeper conditions with sufficient flow to limit sedimentation of fine-grained deposits and aquatic plant colonization. As a result, aquatic macrophyte growth is greatly reduced.

These above-listed features lend to the valuable functions provided by Woods Pond (refer to Section 3.4, Reach 6 Aquatic Habitat Functional Assessment, pdf page 42). The unique and diverse assemblage of aquatic habitats in the pond have value. The profile of Woods Pond after the removal action will yield a more homogenous bathymetry. The recontouring of the pond bathymetry may impact the ability to reestablish existing aquatic habitat features. As a result, the functional goals associated with the habitat diversity may not be achieved.

The community may want to ask the EPA if the eventual bathymetry of Woods Pond is expected to provide appropriate future performance goals for biological recovery.

4. Section 3.4 (pdf page 42) describes the aquatic habitat functional assessment. The biological functions are described on pdf page 44: "Due to the range of substrate types, vegetative cover, and depth features, this area provides a range of functional uses for many fish and invertebrate species." The placement of a cap in Woods Pond will effectively eliminate the "range of substrate types" to a single type. It is likely that, over time, natural sediment deposition will revitalize the diversity of substrate types. However, the time required to achieve this goal may be substantial, especially because the cap placement for Woods Pond will not be completed until all other upgradient Rest of River reaches are remediated (5A, 5B and 5C).

   The community may want to ask the EPA if the functional biological goals are anticipated to be achieved in the performance standard required timeframe, given that the bottom substrates are to be capped.

5. The status of aquatic macrophytes (aquatic vegetation) that are referenced routinely in the Conceptual Remedial Design/Remedial Action Reach 6 Work Plan and the Baseline Restoration Assessment Report for Reach 6 is recognized as an issue to be addressed for the hydraulic transfer of sediments since these materials can encumber the slurry transport. These plants have been in contact with sediments potentially contaminated with PCBs and possibly have accumulated these contaminants into their tissue. The bioaccumulation of PCBs in aquatic plants seems poorly understood, with minimal research information readily available. However, PCB behavior in the aquatic environment has shown trends to accumulate in a variety of food-chain components (excerpt from Eisler 1986 below). The aquatic vegetation should be sampled and analyzed to determine if it is free of PCBs. If it is not, then this material should be included as part of the wastes to be managed.

From Eisler 1986 (https://semspub.epa.gov/work/05/930004.pdf): "Transfer of PCBs on microparticulate materials and into phytoplankton is well documented, as is partitioning from aqueous solution into algal lipids (Rohrer et al. 1982). PCBs incorporated into phytoplankton exert inhibitory effects on photosynthesis and cell motility. In addition to direct toxic effects on algae, accumulated PCBs are readily introduced into the aquatic food chain (Rohrer et al. 1982)."

The community may want to ask the EPA if the prevalent aquatic macrophytes in Woods Pond should be sampled for total PCB content to determine if bioaccumulation has occurred and if the plant material qualifies as waste requiring proper disposal.

6. The Baseline Restoration Assessment Report for Reach 6 presents an abundance of baseline data that captures Reach 6 biological characteristics from historical and recent studies. Recent studies were completed from August through November 2023 and August and September 2024 (Section 3.2.1, pdf page 29). There appears to be an absence of baseline data from winter and spring. It is recommended that monitoring continue up until the point when construction begins. Climate changes and significant seasonal variations affecting stream flow and Woods Pond hydrologic conditions are ongoing and need to be monitored. In addition, this ongoing monitoring would assist in observing the achievement of performance standards.

   The community may want to ask the EPA if continued monitoring throughout the Rest of River area can occur in order to capture ongoing climate and seasonal affected conditions as well as river and pond hydrologic conditions, and to observe achievement of performance standards over time.

7. The evaluation of aquatic habitats in the Baseline Restoration Assessment Report for Reach 6 relies on current and historical information. Descriptions of aquatic species focus on aquatic plants, while the characterization of aquatic animals is largely founded on historic information. As stated in Table 3-1, pdf page 99, "Species composition and relative abundance of aquatic macrophytes, fish, benthic habitat/organisms, and other water-using biota" was described by "Consolidation of pre-existing information (from sources below); site reconnaissance and field surveys using Form IMP-1; fish community surveys; incidental wildlife observations." While reliance on historical information is useful for overall characterization of the Reach 6 habitats, there may be data gaps of importance to the Woods Pond cap design, as follows:

   - The Baseline Restoration Assessment Report for Reach 6 does not describe any sediment profile information that would indicate depths of possible benthic macroinvertebrate activity causing bioturbation (the movement of sediments by the activities of aquatic organisms).
   - The report does not include any current information describing the existing benthic macroinvertebrate community, which may include species (such as bivalves) that could cause bioturbation concerns in the future.

The community may want to ask the EPA if the historical information characterizing the benthic macroinvertebrate community is sufficient for the purposes of defining Reach 6 baseline conditions.

8. Bioturbation is the movement of sediments by the activities of aquatic organisms. The EPA considers bioturbation as a possible mechanism for contaminant transport from deeper sediments to the surface (and ultimately to the overlying water). The EPA recommends that the effects of bioturbation be included as part of contaminated sediment remedies (Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, EPA 2005). With the absence of site-specific bioturbation information, literature-based studies indicate that invertebrates and fish may burrow or feed up to depths of 30 centimeters. Certain bivalve species are known to exceed these depths. The table below provides a summary of bioturbation depths provided in the EPA's 2005 Contaminated Sediment Remediation Guidance for Hazardous Waste Sites.

Sample Depths of Bioturbation Activity (from Highlight 2-33 in EPA 2005 Contaminated Sediment Remediation Guidance for Hazardous Waste Sites).

Organism	Activity Type	Depth	Original Reference
Tubificid worm (Oligochaete)	Burrowing/Feeding	0 to 3 centimeters	Matisoff, Wang and McCall, 1999. Pennak, 1978.
Midge and Mayfly (insects)	Burrowing/Feeding	0 to 15 centimeters	Matisoff and Wang, 2000. Pennak, 1978.
Burbot (fish)	Burrowing	0 to 30 centimeters	Boyer et al., 1990.

The community may want to ask the EPA if the amount of information characterizing the benthic macroinvertebrate community can determine if bioturbation will be a pathway of concern and an important consideration for the eventual Woods Pond cap design.

9. The Baseline Restoration Assessment Report for Reach 6 provides a thorough inventory of aquatic macrophytes. This information will provide foundational understanding of the eventual remedy success in achieving functional endpoints (such as diversity and density of aquatic plants). However, given the propensity for the aquatic environments in Reach 6 to be colonized by aquatic plants, plant root zones may reach into the depth of the cap layer and possibly impair cap integrity or come in contact with remaining PCB contamination. It may be useful to understand the root depths of the species known to occur and to ensure that the proposed cap can withstand the impacts created by this root zone.

   The community may want to ask the EPA if the Reach 6 baseline restoration assessment information includes any data that describes aquatic plant root depths, to be sure the pending cap is not compromised by the recurrence of these species.

10. Figure 1-3 of the Baseline Restoration Assessment Report for Reach 6 (pdf page 146) shows the habitat zone survey limits. There are possible data gaps in the baseline restoration assessment survey, as follows:

- Exposure Area 56 has not been surveyed thoroughly to identify habitat zones along the southwest area. EA 56 is shown in Figure 1-2 (pdf page 145) of the Baseline Restoration Assessment Report for Reach 6. Appendix F of the Reach 6 Conceptual Remedial Design/Remedial Action identifies this area for further sampling due to elevated PCB levels near the 1 milligram per kilogram isopleth. It may be prudent to survey this setting in case the sampling results show PCBs in soil that require removal (refer to Figure 3-2a of Appendix F – Supplemental Data Collection Work Plan for Reach 6 the Reach 6 Conceptual Remedial Design/Remedial Action, pdf page 561).
- Scenario 4 described in the site's Revised Transportation and Disposal Plan is GE's preferred alternative for the transport and disposal of Rest of River wastes. A significant amount of disturbance (from the construction, operation and maintenance of hydraulic wastes from Woods Pond to the Upland Disposal Facility) and traffic are anticipated in Reach 6. It is likely that certain roads (and possibly rail lines) will require rehabilitation. It may be prudent to conduct a thorough baseline restoration assessment survey beyond the level of information provided in Section 6 of the Baseline Restoration Assessment Report for Reach 6.

The community may want to ask the EPA if there are possible data gaps in the existing baseline restoration assessment survey that capture all anticipated impacts in areas of EA 56 and the area between Woods Pond and the UDF.

11. The abundance of aquatic plants is repeatedly mentioned in all Reach 6 documents. The dominant aquatic plant species are invasive species to be managed in the future. It seems important to measure the successful revegetation of other species of functional value to the pond. The measurement of "preferred" aquatic plants may be a suitable remediation success endpoint in the future.

    The community may want to ask the EPA if the monitoring of preferred aquatic plant revegetation success is a suitable additional measurement of Reach 6 remediation success.

12. The Baseline Restoration Assessment Report for Reach 6 identifies a few biological measures (such as plant community diversity and species richness) that would be useful to demonstrate restoration success. In addition to plants, benthic macroinvertebrates are standard in-situ communities that can be relied on to provide a measure of aquatic ecosystem recovery. In addition, the presence/absence of key or indicator species can be reliable measures of successful remedial action accomplishment. TASC identified a few possibilities:
    - The wood frog (*Lithobates sylvaticus*)
    - The occurrence of predacious fish species (such as largemouth bass or pike)
    - Nesting birds such as bank swallows and the belted kingfisher

    The community may want to ask the EPA if GE will include measures of benthic macroinvertebrate communities and the presence/absence of species of interest as part of its measures to determine restoration success.

13. Woody debris is described as an important habitat feature in Reach 6. As stated on pdf page 44, "woody debris both above and below the water line provides structure for invertebrates, fish, amphibians, turtles and several small mammals. Invertebrates seek out woody debris for shelter and for its link to food sources. Predatory fish seek out the same structures for food and shelter, particularly bass and sunfish." Woody debris is a valuable component to the ecosystem and may assist with a more rapid recovery. It would be beneficial for any woody debris waste from other Rest of River remedial action activities to be stockpiled and used for Reach 6 restoration.

    The community may want to ask the EPA if GE plans to recover and replace the woody debris in order to enable restoration of biological functions in Reach 6.

14. Section 7 (pdf page 81) provides an assessment of rare species in Reach 6. This section relies on information gathered from historical and recent field investigations as well as online databases managed by the U.S. Fish and Wildlife Service and other parties. Given the proximity of Reach 6 features to state parks and other recreation areas, citizen science-based resources may be useful for acquiring more robust species observation lists. For instance, recent queries of eBird identified 181 observed bird species in the area of Woods Pond (Bird List - Woods Pond, Lenox, Berkshire, Massachusetts, United States - eBird Hotspot). There are seven birders who contribute regularly to the eBird observations. The data can identify the presence/absence of protected species. The use of these databases is another method to involve community participation in monitoring of the Rest of River remedial action success.

    The community may want to ask the EPA if citizen-based observational tools (such as eBird and iNaturalist) could be used to provide species observational data that may be useful in determining the success of biological activity and recovery in the Rest of River area.

15. Section 9.0 (pdf page 90) of the Baseline Restoration Assessment Report for Reach 6 describes the preliminary identification of degraded habitats and restoration opportunities in Reach 6. The introduction of this section states that the selection of the support facility associated with Woods Pond involved an "alternatives analysis that considered logistical considerations as well as habitat conditions, and has been determined to be the only practicable location to service the hydraulic dredging operation and conveyance operation to transport dredged material to the UDF" (pdf page 90). It may be useful to the community to understand the alternative areas that were considered as well as the rationale behind the final selection.

    The community may want to ask the EPA if GE could summarize the proposed support area alternative locations and the rationale for the final location selection.

16. The Baseline Restoration Assessment Report for Reach 6 provides an inventory of degraded habitats and certain habitat restoration resources. It is not clear if or how the restoration measures will be implemented. The information in this section is conceptual, with no actual details describing restoration approaches. It seems appropriate to define

specific areas to be used for mitigation of known impacts and to outline the steps to be taken to achieve the loss of impacted resource functional values.

The community may want to ask the EPA if the document could be revised or if the Final Conceptual Remedial Design/Remedial Action Reach 6 Work Plan could include a description of how restoration resources are to be used and to include a determination of degraded habitat areas that could be used for future mitigation of habitats unable to meet restoration performance standards.

17. The resurgence of the invasive aquatic macrophytes upon completion of the remedial action may be a potential concern. Appendix F-3 provides an assessment of water chestnut management considerations associated with remedial activities in Woods Pond. This appendix provides a thorough description of possible management approaches, including mechanical harvesting, drawdowns and the use of herbicides. The ultimate remedial action-defined bathymetry of Woods Pond would comprise a deeper profile that will help with the control of these invasive species. However, there may be sources of phosphorous to Woods Pond that could promote growth and resurgence of the invasive species. Research findings indicate that sediment amendments may help control the amount of phosphorous in water (Zehnsdorf et al. 2015). Amending sediment can be a method to control invasive aquatic plants by manipulating the nutrient levels in the sediment. This can indirectly limit the growth of the invasive species by reducing the available nutrients they need to thrive, and can be done by adding substances such as aluminum, iron salts or calcium compounds (lime) to bind with phosphorus in the sediment, preventing its uptake by the plants.

    The community may want to ask the EPA if the Baseline Restoration Assessment Report for Reach 6 could be revised to research and determine if sediment amendments are a possible method to control invasive aquatic species.

18. The remediation of Woods Pond may represent a unique opportunity for GE to mitigate recreational losses during the Rest of River remedial action process. Potential mitigation or reuse opportunities of interest to the community may include:
    - Woods Pond lends itself to providing habitat for a variety of fish of potential recreational value. Previous inventories (Woodlot 2002a and b) identified 16 species of fish, including bluegill, yellow perch, brown bullhead, largemouth bass (pdf page 21), pumpkinseed and pike (pdf page 34). These species are typically of value to recreational anglers. Since the pond is to be "recontoured" to achieve the required performance standards, the new bathymetry may lend itself as a preferred habitat for these fish species. Coordination with the Massachusetts Department of Fish and Game may help to determine if establishing a recreational fisheries resource is a possible and appropriate goal.
    - The proposed support area on the south shore of Woods Pond may be of beneficial future reuse as an access point for the community. This feature may be of possible use as a boat launch or fishing platform.

The community may wish to consider potential future uses of Reach 6 features that may be of benefit to the public, and to continue coordination and correspondence with the EPA and GE to achieve these goals.

19. The Valley Mill Pond is addressed throughout the Baseline Restoration Assessment Report for Reach 6. This pond originally served as a water impoundment for a now-abandoned hydropower installation. The water can still flow out of the pond during periods of high water via a rubble spillway that returns water to the Housatonic River (footnote 14, pdf page 45). This pond appears to have limited natural features due to the manmade conditions and surrounding development. Since this pond may be subjected to waste removal, it seems that this setting lends itself to use as a setting for mitigation and reuse opportunities.

    The community may want to ask the EPA if GE would consider possible future reuse of this area to the benefit of mitigating impacts to similar aquatic settings and provision of a natural feature of value to the public.

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From: Holly Hardman
To: R1Housatonic
Subject: RE: General Electric Company (GE) plan for Reach 6 of the Housatonic Rest of River
Date: Saturday, February 1, 2025 11:13:18 PM

February 1, 2025

RE: General Electric Company (GE) plan for Reach 6 of the Housatonic Rest of River

Dear Laura Draper and Region 1 EPA,

I attended the GE/EPA Rest of River Zoom meeting on Jan. 15 with great interest. Unfortunately, GE Senior Project Manager Kevin Mooney provided attendees with a partial plan for Reach 6.

The Reach 6 project planners appear to be following what amounts to an irresponsible and unscientific approach. There are significant unknowns.

But what is known?

1. It is known that vulnerable toxic loads, like the planned PCB UDF, should not be placed adjacent to and over an aquifer.

2. It is known that the measurements that GE and the EPA have been using to assure the public of the relative safety of the PCBs as they are dredged and moved are inadequate. GE wants the public to believe that the PCB volatility will be at acceptable levels for human and environmental safety. I have learned that scientists in the field disagree. GE and EPA claim that levels in kg are acceptable, while others say that the measurements for safety must be much smaller -- in pico grams.

3. Another known: The Rest of River plan for a toxic dump in Lee was the result of a plan made in secret that went against the known will of the people. The will of the people remains the same. The majority do not want another toxic dump in our region.

4. The EPA is working in the best interest of GE and not the citizens of the Berkshires, who have had to live (and die) along a highly toxic river that GE polluted with PCBs.

Going forward, please encourage GE to move any dredged PCBs out of state to a sanctioned disposal site in line with the 2016 plan — a site that does not threaten a nearby population, like the people of Lee and Lenox, or fragile natural resources, like the aquifer that lies adjacent to and under the planned UDF site.

Why would anyone at the EPA who purports to care about the environment dedicate their working days, and ultimately their career, to this plan?

Despite my current cynicism, I have high hopes that soon enough alternative technologies can offer an acceptable plan for PCB remediation. And I applaud Region 1 EPA for sponsoring

outreach for alternate technologies.

Ultimately, all dredged PCBs need to be moved out of state, and GE needs to pay the monetary cost, a cost that is nothing compared to the harm GE has done to human health and natural resources in central and southern Berkshire County.

We are in dangerous times. Do all you can to save the environment. Don’t be party to the environment's further demise.

Sincerely,

Holly Hardman

--
Holly Hardman
[redacted]
Great Barrington, MA. [redacted]
[redacted]

January 28th 2025

Regarding: The Rest of the Housatonic Cleanup Initiative.

To the EPA and whomever it may concern,

I have written a previous letter to you voicing my concerns about the clean-up of the Housatonic River. Although the plans for this undertaking have since changed, I do not believe they have changed enough.

It is widely thought that G.E. should be held accountable for contaminating the beautiful Housatonic River decades ago with their poisonous PCBs. Although G.E. says they are committed to the clean-up; I take issue with the way they are going about it. I do not believe they are working on solving the problem in good faith. It is well known that G.E. is a successful business with very large profits. They are known to be innovators with the products they create. Why then do they insist on being cheap with their responsibility to clean up the river? Yes, they did change their plans on the use of more Hydraulics and rail as opposed to trucks, but this seems to me to be just tossing red meat to some angry people. Why do we in Berkshire County have to live with their dirty PCBs in a dump in the woods of a cozy neighborhood that is built over an aquafer? Can't they use their innovating powers to find a way to destroy their dirty PCBs once and for all? It has been reported that research has already been started by other sources and companies that has only been mentioned in the vaguest of terms by G.E.

G.E. offered some money, and it was behind closed doors they got their way to put a dump in Lee on some land that they bought years ago. Now, as a sign of appeasing some upset citizens in some towns, they are planning to reduce trucking in the towns of Lenox and Stockbridge. However, they plan to set up a truck/train staging area in the quiet, working-class town of Housatonic (on land they bought years ago). This will result in noisy trucks and trains carrying dirty PCBs through the sleepy roads of the village at all hours for many years. Housatonic does not deserve this treatment from a bully.

I think it is time for G.E., with the EPA's prompting, to begin being genuine and thoughtful, and treat the Berkshire residents, and especially the people of Housatonic, with respect. In short, come up with a better plan that leaves Housatonic alone.

Sincerely,
Sue Turner
[redacted].
Lenox, Ma

From: Valerie Andersen
To: R1Housatonic
Subject: Comments on Reach 6: Woods Pond. General Electric Sampling is Inadequate
Date: Friday, January 17, 2025 2:09:16 PM

Valerie Andersen
[redacted]
Pittsfield, MA [redacted]
Email: [redacted]
January 17, 2025

RE: Comments on GE's Plan for Remediation of Reach 6 Woods Pond: Questions About the Reliability of Testing Data Taken by Ge in 2023

Dear Regulators:

I am a resident of Pittsfield, Massachusetts and a member of the EPA/GE Citizens Coordinating Council. I am submitting comments regarding GE's plan for remediation of Reach 6 – Woods Pond Area in Lenox.

It is astounding that General Electric asserts that 98% of the PCB contamination in Woods Pond consists of "lower level" contamination so that almost all of removed contamination qualifies for disposal in the toxic waste dump down the road in Lee, Massachusetts. A meager 8,600 cubic yards, or 2 percent of the contamination will be sent to a licensed TSCA landfill out of state.

General Electric bases this action on sediment sampling it conducted in October 2023. However, its sampling data is suspect and warrants further scrutiny by EPA and or outside third parties. The Citizens Coordinating Council has been repeatedly told by EPA that huge amounts of PCB pollution has traveled downstream from the General Electric plant and collected in Woods Pond. In fact, EPA and GE have justified only a minimal clean up of the river below the Woods Pond dam because so much of it has been stopped by the dam in Woods Pond. For example, we have been told repeatedly that no clean up needs to occur in Connecticut because most of the PCBs were captured in Woods Pond. Now General Electric contends only lower levels of the contaminant is contained in Woods Pond! If, in fact, Woods Pond dam did not trap the waste, then a more robust clean up below the dam and into Connecticut should be conducted. GE can't have it both ways.

What's more, the 2023 sampling data provided by GE did not even cover the area near Woods Pond Dam that was previously sampled by the EPA. Look at page 40 of the October 31, 2024 letter to EPA (Josh Fontaine) from GE (Robert Gibson) (https://semspub.epa.gov/work/01/652550.pdf) That document shows high levels of PCBs in one sample on the left side of the channel to the dam. No sample on this channel is taken nearer to the dam. Nor is any sample taken at the dam. Therefore, no accurate sampling has been conducted near or at the Woods Pond Dam. This failure by GE demonstrates the need for EPA to require General Electric to conduct further testing or to hire an independent contractor to conduct more reliable tests, including all along the dam and the channel leading to it.
Again if, in fact, Woods Pond dam did not trap the waste, then a more robust clean up below the dam and into Connecticut should be conducted. GE can't have it both ways.

In addition, the method of averaging levels of contamination to determine which areas of

pollution should be shipped out of state encourages General Electric to fudge the data to avoid added costs of shipping the toxic waste out of state. For example, it would be easy to include a sample of high contamination with lower levels to make a lower average number to avoid costs. The averaging method should be rejected outright. However, independent sampling should be conducted in a way to avoid the incentive of fudging numbers through averaging.

Sincerely,

Valerie A. Andersen