Public Input on General Electric's Baseline Restoration Assessment Report for Housatonic River Reaches 5B and 5C, dated February 28, 2025

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TOWN OF LEE

32 Main Street, Lee, MA 01238

www.lee.ma.us

R. Christopher Brittain,

Town Administrator

April 17, 2025

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

Dear Mr. Tagliaferro,

Following, please find comments from the Town of Lee regarding The Baseline Restoration Assessment Report for Reaches 5B and 5C.

1. The results in the Baseline Restoration Assessment Report for Reaches 5B and 5C indicate that these two reaches provide resources with substantial ecological value. The abundance and diversity of species and habitats is well documented in the report. This setting sets a foundation for potential mitigation opportunities that would be valuable. As noted in Section 5.2 (pdf page 51), which describes backwater habitat investigations, Reaches 5B and 5C encompass areas where backwaters have been created as a result of abandoned meander-created scars and oxbows. There are also a significant number of potential vernal pools in both reaches (Section 7, pdf page 76). A review of aerial maps (for instance, Figure 1-2, pdf page 204) shows that there are more meander areas (now dry) in Reaches 5B and 5C. Future management of water flows could revitalize these settings as backwater habitats or vernal pools.

The Town would like to know from the EPA if there are valuable mitigation opportunities in Reaches 5B and 5C that could benefit the entire Rest of River remediation and mitigation process.

2. The Revised Final Permit requires remediation of the riverbanks in Reach 5B (but not in Reach 5C), which requires that GE "evaluate PCB data, erosion potential, adjacent floodplain removal (if any), constructability issues and likelihood of future downstream transport at such concentrations should such banks erode, and based on these factors, consider supplemental riverbank removal and propose any further action consistent with its evaluation" (pdf

pages 27-28 of the Revised Final Permit). The Baseline Restoration Assessment Report for Reaches 5B and 5C does not mention any studies on riverbank erosion. Erosion characteristics are of critical importance in understanding potential future riverbank contamination releases to the river. The community has expressed concern about possible flooding and scouring of riverbank (and upland area) releases. Furthermore, report conclusions drawn from the EPA's 2006 modeling observed soil profiles indicative of repeated flooding and associated sediment deposition (Section 4.1.3, pdf page 38). The Baseline Restoration Assessment Report for Reaches 5B and 5C should indicate whether Reach 5B riverbanks have been studied to assess erosion potential.

The Town would like to know if riverbanks in Reach 5B are being studied to determine the potential for erosion (similar to efforts completed for Reach 5A).

3. Section II.B.2.b of the Revised Final Permit (pdf page 27) states that riverbed sediment in Reach 5B is associated with each discrete sample, with a total polychlorinated biphenyl concentration greater or equal to 50 milligrams per kilogram in the surficial top foot of sediment will be removed and the excavation backfilled. Following excavation and backfilling in these areas (if applicable), enhanced monitored natural recovery (EMNR) will be implemented throughout the remainder of Reach 5B. EMNR methods will include placement of an amendment such as activated carbon or other comparable materials to be proposed by GE and approved by the EPA. This permit requirement for Reach 5B raises two questions/concerns:

a. As per the EPA's 2005 monitored natural recovery guidance: "Evaluation of MNR should be usually based on site-specific data, including multiple lines of evidence such as decreasing trends of contaminant levels in fish, in surface water and in sediment." These monitoring methods are largely captured by permit requirements. However, it seems prudent to also include quantifiable measures of biological recovery such as benthic macroinvertebrate community measures of diversity and density.

b. The possible use and effectiveness of organic carbon (and other amendments) is to be researched as part of the vernal pool pilot study. Although habitat conditions vary from vernal pools to river settings, the vernal pool pilot study may offer learning opportunities that could inform the Reach 5B amendment selection process.

The Town would like to know if the Reach 5B EMNR areas should rely on quantitative measures of ecological communities (such as benthic macroinvertebrates) as an additional measure of remediation success, and if the eventual Reach 5B MNR amendment selection could be assisted by the results of the ongoing vernal pool pilot studies.

4. The Rest of River remediation approach is founded on Reach-defined Remediation Units. Remediation efforts will begin with Reach 5A and progress downgradient. In certain instances, there are necessary overlaps to streamline efforts to help control elements of time and cost (for instance, sediment removals for Reach 5A are concurrent with Reach 6 sediment removals). This 'blending' of reaches is demonstrated further in the overlap of Reach 6 with Reach 5C. As stated in Section 1.3 of the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 (October 2024) (pdf page 18) where the conceptual design focuses on Woods Pond, the outlet channel and the Reach 6 floodplain. As a result, sediment removal in the headwaters transition zone portion of Reach 6 will not be conducted concurrently with the sediment removal in other portions of Reach 6. Instead, sediment removal and capping in the transition zone will be conducted concurrently with or after sediment removal and backfilling for Reach 5C, and prior to capping in Woods Pond.

The blending of remedial action activities among Reaches is well supported. This approach raises the question of whether baseline restoration inventories necessarily need to be defined by the limits of a Reach designation. It may be appropriate to blend Baseline Restoration Assessment measures among Reaches to design appropriate restoration goals. This approach seems valuable and applicable since Reaches 5B and 5C include valuable ecological settings. It would be a positive approach to use Reach 5B and 5C baseline conditions as Reach 5A endpoints.

The Town would like to know if blending Baseline Restoration Assessment results from ecologically valuable reaches (such as Reach 5B and Reach 5C) to apply to, for example, Reach 5A restoration goals would be appropriate.

5. Reaches 5B and 5C are characterized as having aquatic macrophyte beds in near-shore areas. Aquatic macrophytes (aquatic vegetation) are routinely referenced in the Conceptual Remedial Design/Remedial Action Reach 6 Work Plan and the Baseline Restoration Assessment Report for Reach 6 as an issue to be addressed in relation to the hydraulic transfer of sediments, as these materials can impede slurry transport. TASC commented on the possible issue that these plants may have bioaccumulated PCBs (refer to Eisler, 1986 and previous TASC comments). Therefore, the vegetation should be sampled and analyzed to determine if it is free of PCBs. If it is not, then this material should be addressed as a waste to be managed. Furthermore, certain species of aquatic macrophytes are invasive and require proactive management. The Baseline Restoration Assessment Report for Reaches 5B and 5C characterizes this component in broad terms of the natural setting that could be an important consideration in the upcoming remedial action and remedial design.

The Town would like to know if the prevalent aquatic macrophytes should be sampled for total PCB content to determine if bioaccumulation has occurred. The Town also requests that the Baseline Restoration Assessment for Reaches 5B and 5C be revised to include a more thorough characterization of these plants throughout Reaches 5B and 5C.

6. Section 9 summarizes an assessment of invasive species. Blue-green algae blooms, or cyanobacteria blooms, are a growing concern along the East Coast, particularly in freshwater and estuarine areas, and can cause ecological and human health issues. These blooms can include species that produce toxins. The Commonwealth of Massachusetts (mass.gov) provides websites dedicated to understanding these algae species, which can occupy aquatic settings similar to those settings in Reaches 5B and 5C (www.mass.gov/algae-blooms and https://www.mass.gov/guides/cyanobacterial-harmful-algal-blooms-cyanohabs-water). It may be prudent to include monitoring of these species since they may occur in response to habitat disturbance created by remedial action activities, and may be detrimental to achieving suitable restoration goals.

The Town requests to include species of algae associated with cyanobacteria blooms.

7. Section 11 of the Baseline Restoration Assessment Report for Reaches 5B and 5C describes forthcoming supplemental Baseline Restoration Assessment activities and anticipated schedules. The text in this section is limited. It appears that this document should have identified data gaps where appropriate and outlined the next steps to address these gaps. For instance, there appears to be a lack of 'young-of-year' fish tissue data. Furthermore, the majority of the baseline information was collected during drought conditions (Section 3.2.2.1, pdf page 23). It is difficult to determine whether there is sufficient information from previous studies to fill these potential data gaps.

The Town requests that the Baseline Restoration Assessment Report for Reaches 5B and 5C be revised to describe any identified data gaps and next steps more thoroughly.

8. The Baseline Restoration Assessment Report for Reaches 5B and 5C presents evaluations of benthic macroinvertebrate communities in most habitats, with the exception of backwaters habitats. This component of the ecological setting is important and valuable for measuring the success of remediation.

The would like to know if there is a need to gather information on the benthic macroinvertebrate communities for Reach 5B and 5C backwater habitats.

9. TASC previously commented on the Reach 5A Baseline Restoration Assessment Report and raised the concern that the data presented in the document capture conditions of a watershed contaminated by PCBs. As a result, if the reach is to be restored to these baseline conditions, the restored conditions will ultimately reflect an impacted natural setting. Reaches 5B and 5C encompass robust natural settings with substantial ecological value. Perhaps the 'baseline' conditions of Reaches 5B and 5C provide a suitable baseline for Reach 5A (and any other Reach with impaired natural settings that are less robust than Reaches 5B and 5C).

The Town would like to know if the data presented in the Reaches 5B and 5C Baseline Restoration Assessment Report could be applied to other Reaches that are more impacted, such as Reach 5A.

10. The Baseline Restoration Assessment Report for Reaches 5B and 5C 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 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 Baseline Restoration Assessment Report for Reaches 5B and 5C provides a robust amount of historical and recent baseline data, it does not identify or describe suitable measures to determine whether performance standard #2 has been met. It seems appropriate that all the data for a given habitat type could be compiled to identify biological endpoints (parameters that can be quantified through measurements such as species richness, diversity and density) indicative of an ecosystem's function and health. For instance, vernal pool function is to support the presence of obligate and facultative wildlife species such as amphibians, fairy shrimp and other species. Therefore, TASC identified a potential, suitable vernal pool measure to determine the success of achieving performance standard #2 would be "the presence of vernal pool indicator species such as fairy shrimp, woods turtle and other species (identified based on vernal pool specific baseline species that occur) …".

The Town would like to know if the Reaches 5B and 5C Baseline Restoration Assessment Report should be revised to 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."

11. Section 3.1.5, pdf page 21, of the Baseline Restoration Assessment Report for Reaches 5B and 5C describes example area evaluations completed in 2010. Two of six example areas occur in Reaches 5B and 5C and provide considerable information on historical ecological conditions and functions. It may be useful to utilize these example areas for current and future monitoring, given the strong historical foundation of data. If possible, permanent sampling/field measurement locations or plots could be established for routine monitoring data gathering to measure and observe restoration over time.

The Town would like to know if there is any value or possibility of using the Reaches 5B and 5C example areas as static areas for current and future monitoring.

12. The Baseline Restoration Assessment Report for Reaches 5B and 5C presents an abundance of baseline data that captures a spectrum of seasonal conditions. However, it is recommended that monitoring continue up until the point when construction begins. Climate changes and significant seasonal variations affecting stream flow are ongoing and need to be monitored.

The Town requests that continued monitoring throughout the Rest of River area can capture ongoing climate and seasonal affected conditions to river flows and observe achievement of performance standards over time.

13. It will take time to monitor the achievement of Reaches 5B and 5C performance standards. Habitats such as the riverine habitat lend themselves to the creation of quantified measurement tracking by river mile. For instance, Section 3.2.2 of the Baseline Restoration Assessment Report for Reaches 5B and 5C describes the Rapid Bioassessment Protocol physical habitat survey completed for three riverine stations in Reach 5B and for five stations for Reach 5C (pdf page 23). The measured changes in physical, chemical and biological features (as summarized in the RBP data collection efforts) could be tracked over time to determine how successfully achievement of performance standards are accomplished by river mile. GE may want to construct a river mile-based tracking system that manages all quantified measures for the riverine habitat to present results on an annual basis and be able to determine precisely the areas that may need restoration amendment.

The Town would like to know if the EPA if GE plans on tracking physical, chemical and biological measurement changes by definable location (such as river mile) to enable the observation of restoration success or amendment needs over time.

14. The Baseline Restoration Assessment Report for Reaches 5B and 5C identifies a few biological measures (such as plant community diversity and species richness) that would be useful in demonstrating restoration success. In addition to plants, benthic macroinvertebrates (as identified in Section 3.2.3, pdf pages 26 to 28) may be useful communities for measuring restoration, and there are species of interest or sensitive species of value that can serve as indicators of restoration success. TASC identified a few possibilities, such as:

- State-listed clubtail dragonflies (rapids clubtail; Phanogomphus quadicolor and spine-crowned clubtail Hylogomphys abbreviates).
- State-listed (Core area 1 plant species) Wapato (Sagittara cuneata).
- Previous state-listed Triangle floater mussel.
- The occurrence of predacious fish species (such as largemouth bass or pike).
- Nesting birds such as bank swallows and the belted kingfisher.
- The presence/absence, and successful reproduction of Mink.
- The presence of preferred aquatic macrophyte species (such as waterweed and broadleaf cattail).

The Town requests to include measures of the presence/absence of species of interest as part of its measures to determine restoration success.

Sincerely,

R. Christopher Brittain
Town Administrator

cc:

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

Technical Assistance Services *for* Communities
GE-Pittsfield/Housatonic River Site Comments on the Baseline Restoration Assessment Report for Housatonic River Reaches 5B and 5C
April 4, 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 Housatonic River Reaches 5B and 5C, February 2025

Introduction

This document provides TASC comments on the Baseline Restoration Assessment Report for Housatonic River Reaches 5B and 5C. 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 Final Revised Rest of River Statement of Work on September 14, 2021, specifying the deliverables and activities that GE will conduct to design and implement the Rest of River Remedial Action. Section II.B.1.c.(2)(a) of the Revised Permit requires that GE conduct and submit a work plan for a Baseline Restoration Assessment of areas that will be affected by the Rest of River Remedial Action. In 2021, GE submitted a Baseline Restoration Assessment Work Plan. GE submitted a Revised Reach 5A Baseline Restoration Assessment Report in 2024. In 2022, GE submitted a Revised Baseline Restoration Assessment Work Plan for Reaches 5B through Reach 8. From April 2023 to November 2024, GE conducted the Baseline Restoration Assessment for Reaches 5B and 5C in accordance with the Revised Reaches 5B-8 Baseline Restoration Assessment Work Plan. On November 22, 2024, GE submitted a request to the EPA to submit a

separate Baseline Restoration Assessment Report for Reaches 5B and C, rather than combine these reaches with Reach 7 and 8, as previously proposed.

Summary

The Baseline Restoration Assessment Report for Housatonic River Reaches 5B and 5C has 12 sections:

1. Introduction and Objectives
2. Overview of Approach for Reaches 5B and 5C Baseline Restoration Assessment
3. Baseline Restoration Assessment of Riverine Habitats in Reaches 5B and 5C
4. Baseline Restoration Assessment of Riverbank Habitats in Reaches 5B and 5C
5. Baseline Restoration Assessment of Backwater Habitats in Reaches 5B and 5C
6. Baseline Restoration Assessment of Floodplain Habitats in Reaches 5B and 5C (Excluding Vernal Pools)
7. Baseline Restoration Assessment of Vernal Pool Habitats in Reaches 5B and 5C
8. Assessment of Rare Species in Reaches 5B and 5C
9. Assessment of Invasive Species in Reaches 5B and 5C
10. Preliminary Identification of Degraded Habitats and Restoration Opportunities in Reaches 5B and 5C
11. Supplemental Baseline Restoration Assessment Activities and Anticipated Schedule
12. References

The Baseline Restoration Assessment Report for Reaches 5B and 5C provides a detailed baseline ecological inventory and assessment of pre-remediation conditions and functions of the affected habitats in Reaches 5B and 5C 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 Permit, as applicable to those reaches. Reaches 5B and 5C are on separate tracks. However, they have been evaluated together in the Baseline Restoration Assessment Report given the inter-relationship of their habitats and to avoid duplication.

TASC Comments

The Baseline Restoration Assessment Report for Reaches 5B and 5C represents a compilation of ecological data gathered from historical and current investigations to provide a detailed baseline ecological inventory of pre-remediation conditions and functions of the affected habitats. The document provides a substantial amount of information that will be useful in determining whether 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 Revised Final Permit. TASC also has several concerns with the report, discussed below.

TASC previously commented on the Housatonic River Reach 5A Baseline Restoration Assessment Report, which also provides a detailed baseline ecological inventory and assessment of pre-remediation conditions and functions of the affected habitats in Reach 5A. TASC has similar concerns about the Baseline Restoration Assessment Report for Reaches 5B and 5C. Therefore, several TASC comments overlap across both reports. TASC comments focus on the

ecological value of the habitats in Reaches 5B and 5C, and how these settings may be useful to be used as 'baseline' for other impacted Reaches. TASC also commented on the usefulness of determining quantifiable measures to help determine remediation success.

1. The results in the Baseline Restoration Assessment Report for Reaches 5B and 5C indicate that these two reaches provide resources with substantial ecological value. The abundance and diversity of species and habitats is well documented in the report. This setting sets a foundation for potential mitigation opportunities that would be valuable. As noted in Section 5.2 (pdf page 51), which describes backwater habitat investigations, Reaches 5B and 5C encompass areas where backwaters have been created as a result of abandoned meander-created scars and oxbows. There are also a significant number of potential vernal pools in both reaches (Section 7, pdf page 76). A review of aerial maps (for instance, Figure 1-2, pdf page 204) shows that there are more meander areas (now dry) in Reaches 5B and 5C. Future management of water flows could revitalize these settings as backwater habitats or vernal pools.

   The community may want to ask the EPA if there are valuable mitigation opportunities in Reaches 5B and 5C that could benefit the entire Rest of River remediation and mitigation process.

2. The Revised Final Permit requires remediation of the riverbanks in Reach 5B (but not in Reach 5C), which requires that GE "evaluate PCB data, erosion potential, adjacent floodplain removal (if any), constructability issues and likelihood of future downstream transport at such concentrations should such banks erode, and based on these factors, consider supplemental riverbank removal and propose any further action consistent with its evaluation" (pdf pages 27-28 of the Revised Final Permit). The Baseline Restoration Assessment Report for Reaches 5B and 5C does not mention any studies on riverbank erosion. Erosion characteristics are of critical importance in understanding potential future riverbank contamination releases to the river. The community has expressed concern about possible flooding and scouring of riverbank (and upland area) releases. Furthermore, report conclusions drawn from the EPA's 2006 modeling observed soil profiles indicative of repeated flooding and associated sediment deposition (Section 4.1.3, pdf page 38). The Baseline Restoration Assessment Report for Reaches 5B and 5C should indicate whether Reach 5B riverbanks have been studied to assess erosion potential.

   The community may want to ask the EPA if riverbanks in Reach 5B are being studied to determine the potential for erosion (similar to efforts completed for Reach 5A).

3. Section II.B.2.b of the Revised Final Permit (pdf page 27) states that riverbed sediment in Reach 5B is associated with each discrete sample, with a total polychlorinated biphenyl concentration greater or equal to 50 milligrams per kilogram in the surficial top foot of sediment will be removed and the excavation backfilled. Following excavation and backfilling in these areas (if applicable), enhanced monitored natural recovery (EMNR) will be implemented throughout the remainder of Reach 5B. EMNR methods will include placement of an amendment such as activated carbon or other comparable materials to be

proposed by GE and approved by the EPA. This permit requirement for Reach 5B raises two questions/concerns:

a. As per the EPA's 2005 monitored natural recovery guidance: "Evaluation of MNR should be usually based on site-specific data, including multiple lines of evidence such as decreasing trends of contaminant levels in fish, in surface water and in sediment." These monitoring methods are largely captured by permit requirements. However, it seems prudent to also include quantifiable measures of biological recovery such as benthic macroinvertebrate community measures of diversity and density.

b. The possible use and effectiveness of organic carbon (and other amendments) is to be researched as part of the vernal pool pilot study. Although habitat conditions vary from vernal pools to river settings, the vernal pool pilot study may offer learning opportunities that could inform the Reach 5B amendment selection process.

   The community may want to ask the EPA if the Reach 5B EMNR areas should rely on quantitative measures of ecological communities (such as benthic macroinvertebrates) as an additional measure of remediation success, and if the eventual Reach 5B MNR amendment selection could be assisted by the results of the ongoing vernal pool pilot studies.

4. The Rest of River remediation approach is founded on Reach-defined Remediation Units. Remediation efforts will begin with Reach 5A and progress downgradient. In certain instances, there are necessary overlaps to streamline efforts to help control elements of time and cost (for instance, sediment removals for Reach 5A are concurrent with Reach 6 sediment removals). This 'blending' of reaches is demonstrated further in the overlap of Reach 6 with Reach 5C. As stated in Section 1.3 of the Conceptual Remedial Design/Remedial Action Work Plan for Reach 6 (October 2024) (pdf page 18) where the conceptual design focuses on Woods Pond, the outlet channel and the Reach 6 floodplain. As a result, sediment removal in the headwaters transition zone portion of Reach 6 will not be conducted concurrently with the sediment removal in other portions of Reach 6. Instead, sediment removal and capping in the transition zone will be conducted concurrently with or after sediment removal and backfilling for Reach 5C, and prior to capping in Woods Pond.

   The blending of remedial action activities among Reaches is well supported. This approach raises the question of whether baseline restoration inventories necessarily need to be defined by the limits of a Reach designation. It may be appropriate to blend Baseline Restoration Assessment measures among Reaches to design appropriate restoration goals. This approach seems valuable and applicable since Reaches 5B and 5C include valuable ecological settings. It would be a positive approach to use Reach 5B and 5C baseline conditions as Reach 5A endpoints.

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   The community may want to ask the EPA if the prevalent aquatic macrophytes should be sampled for total PCB content to determine if bioaccumulation has occurred. The community may also want to ask the EPA if the Baseline Restoration Assessment for Reaches 5B and 5C should be revised to include a more thorough characterization of these plants throughout Reaches 5B and 5C.

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   The community may want to ask the EPA if monitoring should include species of algae associated with cyanobacteria blooms.

7. Section 11 of the Baseline Restoration Assessment Report for Reaches 5B and 5C describes forthcoming supplemental Baseline Restoration Assessment activities and anticipated schedules. The text in this section is limited. It appears that this document should have identified data gaps where appropriate and outlined the next steps to address these gaps. For instance, there appears to be a lack of 'young-of-year' fish tissue data. Furthermore, the majority of the baseline information was collected during drought conditions (Section 3.2.2.1, pdf page 23). It is difficult to determine whether there is sufficient information from previous studies to fill these potential data gaps.

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   The community may want to ask the EPA if there is a need to gather information on the benthic macroinvertebrate communities for Reach 5B and 5C backwater habitats.

9. TASC previously commented on the Reach 5A Baseline Restoration Assessment Report and raised the concern that the data presented in the document capture conditions of a watershed contaminated by PCBs. As a result, if the reach is to be restored to these baseline conditions, the restored conditions will ultimately reflect an impacted natural setting. Reaches 5B and 5C encompass robust natural settings with substantial ecological value. Perhaps the 'baseline' conditions of Reaches 5B and 5C provide a suitable baseline for Reach 5A (and any other Reach with impaired natural settings that are less robust than Reaches 5B and 5C).

   The community may want to ask the EPA if the data presented in the Reaches 5B and 5C Baseline Restoration Assessment Report could be applied to other Reaches that are more impacted, such as Reach 5A.

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    > (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 Baseline Restoration Assessment Report for Reaches 5B and 5C provides a robust amount of historical and recent baseline data, it does not identify or describe suitable measures to determine whether performance standard #2 has been met. It seems appropriate that all the data for a given habitat type could be compiled to identify

biological endpoints (parameters that can be quantified through measurements such as species richness, diversity and density) indicative of an ecosystem's function and health. For instance, vernal pool function is to support the presence of obligate and facultative wildlife species such as amphibians, fairy shrimp and other species. Therefore, TASC identified a potential, suitable vernal pool measure to determine the success of achieving performance standard #2 would be "the presence of vernal pool indicator species such as fairy shrimp, woods turtle and other species (identified based on vernal pool specific baseline species that occur) …".

The community may want to ask the EPA if the Reaches 5B and 5C Baseline Restoration Assessment Report should be revised to 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."

11. Section 3.1.5, pdf page 21, of the Baseline Restoration Assessment Report for Reaches 5B and 5C describes example area evaluations completed in 2010. Two of six example areas occur in Reaches 5B and 5C and provide considerable information on historical ecological conditions and functions. It may be useful to utilize these example areas for current and future monitoring, given the strong historical foundation of data. If possible, permanent sampling/field measurement locations or plots could be established for routine monitoring data gathering to measure and observe restoration over time.

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    The community may want to ask the EPA if continued monitoring throughout the Rest of River area can capture ongoing climate and seasonal affected conditions to river flows and observe achievement of performance standards over time.

13. It will take time to monitor the achievement of Reaches 5B and 5C performance standards. Habitats such as the riverine habitat lend themselves to the creation of quantified measurement tracking by river mile. For instance, Section 3.2.2 of the Baseline Restoration Assessment Report for Reaches 5B and 5C describes the Rapid Bioassessment Protocol physical habitat survey completed for three riverine stations in Reach 5B and for five stations for Reach 5C (pdf page 23). The measured changes in physical, chemical and biological features (as summarized in the RBP data collection efforts) could be tracked over time to determine how successfully achievement of performance standards are accomplished by river mile. GE may want to construct a river mile-based tracking system that manages all quantified measures for the riverine habitat

to present results on an annual basis and be able to determine precisely the areas that may need restoration amendment.

The community may want to ask the EPA if GE plans on tracking physical, chemical and biological measurement changes by definable location (such as river mile) to enable the observation of restoration success or amendment needs over time.

14. The Baseline Restoration Assessment Report for Reaches 5B and 5C identifies a few biological measures (such as plant community diversity and species richness) that would be useful in demonstrating restoration success. In addition to plants, benthic macroinvertebrates (as identified in Section 3.2.3, pdf pages 26 to 28) may be useful communities for measuring restoration, and there are species of interest or sensitive species of value that can serve as indicators of restoration success. TASC identified a few possibilities, such as:

    - State-listed clubtail dragonflies (rapids clubtail; *Phanogomphus quadicolor* and spine-crowned clubtail *Hylogomphys abbreviates*).
    - State-listed (Core area 1 plant species) Wapato (*Sagittara cuneata*).
    - Previous state-listed Triangle floater mussel.
    - The occurrence of predacious fish species (such as largemouth bass or pike).
    - Nesting birds such as bank swallows and the belted kingfisher.
    - The presence/absence, and successful reproduction of Mink.
    - The presence of preferred aquatic macrophyte species (such as waterweed and broadleaf cattail).

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

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TASC Contact Information

Technical Advisor
Karmen King
(970) 852-0036
kking@skeo.com

Project Manager/Technical Advisor
Kirby Webster
(802) 227-7290
kwebster@skeo.com

Program Manager
Tiffany Reed
(847) 786-8767
treed@skeo.com

Skeo Co-CEO and Director of Finance and Contracts
Briana Branham
(434) 226-4284
bbranham@skeo.com

TASC Quality Control Monitor
Bruce Engelbert
(703) 953-6675
bengelbert@skeo.com

MASSWILDLIFE

DIVISION OF
FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

April 18, 2025

Dean Tagliaferro
EPA New England, Region I
5 Post Office Square
Boston, MA 02109-3912
Submitted via email to: Tagliaferro.Dean@epa.gov and R1Housatonic@epa.gov

Re: **GE-Pittsfield/Housatonic River Site**
Rest of River (GECD850)
Baseline Restoration Assessment Report for Reaches 5B and 5C

To Whom it May Concern:

The Massachusetts Division of Fisheries and Wildlife (Division) appreciates the opportunity to comment regarding the Baseline Restoration Assessment Report for Reach 5B and 5C (BRAR). The Division is responsible for the conservation of inland fish and wildlife in the Commonwealth including endangered plants and animals. In fulfilling this role, the Division, through its Natural Heritage and Endangered Species Program (NHESP), is responsible for administering the Massachusetts Endangered Species Act (MGL c. 131A) and its implementing regulations (321 CMR 10.00) (MESA) as well as the certification of vernal pools pursuant to the Wetlands Protection Act Regulations (310 CMR 10.00) (WPA). We note 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.

NHESP appreciates the extensive work that GE and its consultants conducted to provide a detailed ecological assessment of Reaches 5B and 5C; in particular, the BRA of Vernal Pool Habitats (Section 7), the Assessment of Rare Species (Section 8), the Assessment of Invasive Species (Section 9), and the Preliminary Identification of Degraded Habitats and Restoration Opportunities (Section 10). The NHESP is still reviewing Sections 7, 9 and 10 of the BRAR and may provide comments on these sections at a later time. At this time, NHESP has reviewed the Assessment of Rare Species and would like to offer the following comments.

First, the BRAR does not provide information regarding the survey protocols used to guide its field investigations or the qualifications of the biologist(s) who surveyed for state-listed species. This information was also not provided in the Baseline Restoration Assessment Work Plan (2022), and NHESP has no record of GE or its consultants contacting NHESP to discuss these issues prior to undertaking field surveys.

NHESP notes that state-listed species are rare and often difficult to find and identify. As a result, all biologists proposing to conduct surveys for state-listed species must be highly qualified, with extensive prior experience surveying for and identifying the target species or group of species. In general, survey protocols and subsequent field investigations must be sufficient to fully evaluate the specific locations

and timing of habitat use, spatial distribution, and abundance of state-listed species within all suitable habitats of a project area sufficient to: a) evaluate direct and indirect impacts to listed species and their habitats; b) evaluate opportunities for avoiding and or minimizing impacts; c) inform development of post-remediation restoration plans; and d) inform development of an appropriate long-term net benefit conservation and management plan to mitigate for any impacts that cannot be avoided or minimized. As a result, NHESP typically requires that survey protocols and the resume(s) of field biologists (detailing all relevant experience surveying for and identifying the relevant listed species) be submitted for review and approval prior to the start of field investigations. As this was not done prior to conducting field investigations for state-listed species, NHESP requests that both survey protocols and the resume(s) of the field biologists be provided for review to determine if additional baseline field data collection is needed.

Second, NHESP appreciates and thanks GE for not including maps of species habitats or the location(s) of state-listed species observed during field investigations within the BRAR. However, NHESP has not received a survey report documenting the findings of the state-listed species surveys that occurred and so is unable to comment on the findings. Therefore, we request that GE send NHESP a comprehensive survey report detailing all survey results, including but not limited to where surveys for each species occurred, which biologist(s) surveyed for each species, where each state-listed species was observed (including maps and GIS shapefiles), photographs of species observations and their habitats, how many individual target species were observed (a count if possible, an estimate if not), and all other relevant information. In addition, all observations of state-listed species should be submitted to NHESP through Heritage Hub (www.mass.gov/heritagehub). Once we receive this report and all observations are submitted through Heritage Hub, NHESP will review and provide additional comments to assist EPA in ensuring that impacts to state-listed species and their habitats are fully evaluated.

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 and facilitate restoration of impacted habitats after work is completed. 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 this letter, please contact me at jesse.leddick@mass.gov or 508-389-6386.

Sincerely,

Jesse Leddick
Assistant Director
Natural Heritage and Endangered Species Program