



Andrew T. Silfer
Leader, Pittsfield/Housatonic River

General Electric Company
Global Operations – Environment, Health & Safety
1 Plastics Avenue
Pittsfield, MA 01201
T 518-937-7257 and 413-553-6602
andrew.silfer@ge.com

Via Electronic Mail

January 31, 2022

Mr. Dean Tagliaferro
EPA Project Coordinator
U.S. Environmental Protection Agency
c/o HDR, Inc.
10 Lyman Street, Suite 2
Pittsfield, MA 01201

**Re: GE-Pittsfield/Housatonic River Site
Rest of River (GECD850)
Overall Strategy and Schedule for Implementation of the Corrective Measures**

Dear Mr. Tagliaferro:

In accordance with Section II.H.2 of the Revised Final RCRA Permit for the Rest of River area, the approved Final Revised Rest of River Statement of Work, and subsequent discussions between GE and EPA, enclosed for EPA's review and approval is GE's *Overall Strategy and Schedule for Implementation of the Corrective Measures* for the Rest of River.

Please let me know if you have any questions about this submission.

Very truly yours,

Andrew T. Silfer, P.E.
GE Project Coordinator

Enclosure

Cc: (via electronic mail)
Christopher Smith, EPA
Richard Fisher, EPA
Joshua Fontaine, EPA
Tim Conway, EPA
John Kilborn, EPA
Christopher Ferry, ASRC Primus
Thomas Czelusniak, HDR Inc.
Scott Campbell, Taconic Ridge Environmental
Izabella Zapisek, Taconic Ridge Environmental
Michael Gorski, MassDEP
Elizabeth Stinehart, MassDEP

John Ziegler, MassDEP
Ben Guidi, MassDEP
Michelle Craddock, MassDEP
Jeffrey Mickelson, MassDEP
Mark Tisa, MassDFW
Jonathan Regosin, MassDFW
Betsy Harper, MA AG
Traci Iott, CT DEEP
Susan Peterson, CT DEEP
Graham Stevens, CT DEEP
Lori DiBella, CT AG
Molly Sperduto, USFWS
Mark Barash, US DOI
Ken Finkelstein, NOAA
James McGrath, City of Pittsfield
Michael Coakley, PEDA
Melissa Provencher, BRPC
Christopher Ketchen, Town of Lenox
Town Administrator, Lee
Town Manager, Great Barrington
Town Administrator, Stockbridge
Town Administrator, Sheffield
Andrew Thomas, GE
Kevin Mooney, GE
Matthew Calacone, GE
Michael Werth, Anchor QEA
Mark Gravelding, Arcadis
Dennis Lowry, AECOM
James Bieke, Sidley Austin
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GE Internal Repository



January 2022
GE-Pittsfield/Housatonic River Site



Overall Strategy and Schedule for Implementation of the Corrective Measures

January 2022
GE-Pittsfield/Housatonic River Site

Overall Strategy and Schedule for Implementation of the Corrective Measures

Prepared for
General Electric Company
1 Plastics Avenue
Pittsfield, Massachusetts 01201

Prepared by
Anchor QEA, LLC
290 Elwood Davis Road
Liverpool, New York 13088

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ABBREVIATIONS

AC	activated carbon
BMP	Baseline Monitoring Plan
BRA	Baseline Restoration Assessment
CD	Consent Decree
CDEEP	Connecticut Department of Energy and Environmental Protection
EA	Exposure Area
EPA	U.S. Environmental Protection Agency
FSP/QAPP	Field Sampling Plan/Quality Assurance Project Plan
GE	General Electric Company
HASP	Health and Safety Plan
IMM Plan	Inspection, Monitoring, and Maintenance Plan
Mass Audubon	Massachusetts Audubon Society
MassDEP	Massachusetts Department of Environmental Protection
OSS	Overall Strategy and Schedule
PCB	polychlorinated biphenyl
PDI	pre-design investigation
POP	Project Operations Plan
QOL	Quality of Life
RCRA	Resource Conservation and Recovery Act
RD/RA	Remedial Design/Remedial Action
ROR	Rest of River
RPM	Regional Project Manager
SOW	Statement of Work
T&D	Transportation and Disposal
TBD	to be determined
UDF	Upland Disposal Facility

1 Introduction and Purpose

1.1 Background

On December 16, 2020, pursuant to the 2000 Consent Decree (CD) for the GE-Pittsfield/Housatonic River Site (EPA/GE 2000), the U.S. Environmental Protection Agency (EPA) issued to the General Electric Company (GE) a final revised modification of GE's Resource Conservation and Recovery Act (RCRA) Corrective Action Permit (Revised Permit) for the Housatonic Rest of River (ROR) (EPA 2020). The ROR is defined as that portion of the Housatonic River and its backwaters and floodplain (excluding Actual/Potential Lawns as defined in the CD) located downstream of the confluence of the East and West Branches of the Housatonic River (the Confluence). The Revised Permit set forth a Remedial Action selected by EPA to address polychlorinated biphenyls (PCBs) in the ROR.

The Revised Permit required GE to develop and submit a Statement of Work (SOW) specifying the deliverables and activities that GE will conduct to design and implement the ROR Remedial Action. In accordance with that requirement, after receipt of EPA's comments on an earlier version, GE submitted a Final Revised SOW on September 14, 2021 (Anchor QEA et al. 2021), and EPA approved it on September 16, 2021 (EPA 2021).¹

The Revised Permit also required GE, in Section II.H.2, to develop and submit an Overall Strategy and Schedule (OSS) document to present its overall strategy for implementing the ROR Remedial Action. Specifically, it required that submittal to address: a) coordination of sediment, riverbank, and floodplain remediation; b) sequence of remediation; c) GE's project management and organizational structure, including roles and responsibilities; and d) lines of communication among GE, EPA, and state and local entities. The Revised Permit further required the OSS submittal to include a project implementation schedule. The Final Revised SOW and EPA's approval letter for it specified in more detail the items to be included in the OSS document. This document constitutes the required OSS submittal.

1.2 Scope of Overall Strategy and Schedule Document

In accordance with Section 4.1 of the Final Revised SOW and subsequent communications with EPA, this OSS document includes the following:

- A description of the project management structure, including a description of GE's project organizational structure, roles, and responsibilities; lines of communication among GE, EPA,

¹ Although the Revised Permit is currently being appealed by other parties to the EPA Environmental Appeals Board, GE agreed in a February 10, 2020, Settlement Agreement to submit the SOW and, subject to approval by EPA, to perform the investigation and design work specified in the SOW as contractual obligations under that agreement, unless and until EPA issues a further revised permit that is not substantially similar to the current Revised Permit.

and state and local entities; and references to the outreach and public participation requirements specified in the Revised Permit;

- Definitions of the proposed Remediation Units (previously referred to as Remediation Areas in the Final Revised SOW) into which the ROR will be divided for the purposes of implementing the ROR Remedial Action, including the rationale for selection of those units;
- A description of how the sediment, riverbank, and floodplain remediation components will be coordinated within a Remediation Unit containing more than one such component;
- A description of how the pre-design and design support investigations, remedial design, and remedial action activities for the Remediation Units will be sequenced and implemented;
- A revised project implementation schedule like that in Section 6 of the Final Revised SOW; and
- Flow charts showing the planned sequencing of deliverables and data collection activities that need to be completed prior to the start of remediation activities

1.3 Site Description

The ROR area consists of the portion of the Housatonic River and its backwaters and floodplain (excluding portions of certain residential properties) downstream of the Confluence (located approximately two miles downstream from the GE facility in Pittsfield, Massachusetts). The ROR area is shown in Figure 1-1 and identified according to river reach designations established by EPA. Subreaches within Reaches 5 through 8 are shown in Figure 1-2. The ROR reaches and subreaches are as follows (from upstream to downstream):

- Reach 5, from the Confluence downstream to Woods Pond (the first significant impoundment). This reach is further divided into the following subreaches:
 - Reach 5A (Confluence to the Pittsfield Wastewater Treatment Plant)
 - Reach 5B (Pittsfield Wastewater Treatment Plant to Roaring Brook)
 - Reach 5C (Roaring Brook to the start of Woods Pond)

Reach 5 also contains several backwater areas adjacent to the Housatonic River, particularly in the more downstream portion of the reach (these backwaters are sometimes referred to as Reach 5D in past project documents but not in the Revised Permit).

- Reach 6, Woods Pond
- Reach 7, Woods Pond Dam to Rising Pond (the next significant impoundment). This reach is further divided into the following subreaches:
 - Reach 7A (Woods Pond Dam to the Columbia Mill Dam Impoundment)
 - Reach 7B (Columbia Mill Dam Impoundment)

- Reach 7C (Former Eagle Mill Dam Impoundment)
- Reach 7D (Former Eagle Mill Dam to the Willow Mill Dam Impoundment)
- Reach 7E (Willow Mill Dam Impoundment)
- Reach 7F (Willow Mill Dam to the Glendale Dam Impoundment)
- Reach 7G (Glendale Dam Impoundment)
- Reach 7H (Glendale Dam to Rising Pond)
- Reach 8, Rising Pond
- Reach 9, Rising Pond Dam to the Massachusetts/Connecticut border
- Reach 10, Massachusetts/Connecticut border to Falls Village Dam
- Reach 11, Falls Village Dam to Cornwall Bridge
- Reach 12, Cornwall Bridge to Bulls Bridge Dam
- Reach 13, Bulls Bridge Dam to Bleachery Dam
- Reach 14, Bleachery Dam to Shepaug Dam (Lake Lillinonah)
- Reach 15, Shepaug Dam to Stevenson Dam (Lake Zoar)
- Reach 16, Stevenson Dam to Lake Housatonic Dam (Lake Housatonic)
- Reach 17, Lake Housatonic Dam to Long Island Sound

Section 2 of the *Housatonic River – Rest of River, Corrective Measures Study Proposal* (Arcadis BBL and QEA 2007) provided a more detailed description of the ROR area, including: 1) characteristics and landmarks associated with the river reaches; and 2) watershed, river, and floodplain characteristics. It also provided a summary of the nature and extent of PCBs in sediment, surface water, floodplain and riverbank soil, and biota, as well as a conceptual site model indicating that the highest concentrations and greatest mass of PCBs are found in Reaches 5 and 6—also known as the Primary Study Area—with considerably lower concentrations downstream of Woods Pond Dam.

1.4 Format of Overall Strategy and Schedule

The remainder of this OSS is organized into the following four sections:

- Section 2 presents a description of the project management structure and communications that will be used to implement the corrective measures, including references to the outreach and public participation requirements specified in the Revised Permit.

- Section 3 presents the proposed approach to dividing the ROR into separate Remediation Units for the purposes of implementing the remedial design and construction of the corrective measures.
- Section 4 presents an updated schedule for submittal of the requisite deliverables required by the Revised Permit and the Final Revised SOW.
- Section 5 presents and describes flow charts showing the planned sequencing of deliverables and data collection activities that need to be conducted prior to construction in the first Remediation Unit (Reach 5A).

2 Project Management Structure and Communications

GE's designated Project Coordinator (Andrew T. Silfer) will serve as GE's main point of contact with EPA; the Massachusetts Department of Environmental Protection (MassDEP); the Connecticut Department of Energy and Environmental Protection (CDEEP); and local entities for the ROR project, including local municipalities (City of Pittsfield and the Towns of Lenox, Lee, Great Barrington, Sheffield, and Stockbridge [the Towns]) and the Massachusetts Audubon Society (Mass Audubon). GE's Project Coordinator will be responsible for leading all formal communications with and submittals to those parties. GE's Alternate Project Coordinators (Kevin Mooney and Matt Calacone) will support GE's Project Coordinator in these communications. GE will provide notice to EPA, as required by Section II.J of the Revised Permit, of any changes to GE's designated Project Coordinator or GE's Alternate Project Coordinators. GE will also retain consultants and contractors to support and implement the various pre-design, design, construction, and monitoring phases of the response actions.

Unless otherwise specified, GE's Project Coordinators will coordinate with and direct reports, notices, or other submissions required under the Revised Permit to the following EPA and state Project Coordinators: Dean Tagliaferro (EPA), Michael Gorski (MassDEP), Mark Tisa (Massachusetts Department of Fish and Game), and Susan Peterson (CDEEP) or another designated Project Coordinator for Connecticut. There are several EPA Regional Project Managers (RPMs) who serve as EPA leads/points of contact for various ROR areas of responsibility, including Christopher Smith, Richard Fisher, and Joshua Fontaine. EPA's project attorneys are Timothy Conway and John Kilborn. GE's Project Coordinators will also coordinate as appropriate with local representatives from the Towns, the City of Pittsfield, and Mass Audubon pursuant to the requirements for coordination with these local entities described in the Revised Permit, the February 10, 2020, Settlement Agreement (noted above), and the Final Revised SOW.

Periodic meetings and conference calls among GE, EPA, and other entities described above will be scheduled as needed to discuss the status of ongoing efforts, upcoming events, and deliverables and to resolve any project-related issues that arise. GE will coordinate with EPA and other entities to schedule such meetings and conference calls, as necessary, to provide updates on the project schedule and discuss project deliverables. In addition, GE will also perform the public outreach activities required by the Revised Permit and described in the Final Revised SOW, including, but not limited to, outreach associated with biota consumption advisories and water withdrawals and uses, and outreach and coordination with land/property owners at or near areas affected by sampling, remediation, and/or transportation and disposal activities.

In addition, in accordance with the CD, GE will continue to prepare and submit monthly reports to provide information relating to the progress of the required work under the CD, including descriptions of the actions taken and planned under the CD.

3 Approach to Implementation of Remedial Action

3.1 Conceptual Approach

The Remedial Action prescribed by the Revised Permit includes remediation, as necessary, of sediments (including backwaters), riverbank soils, and floodplain soils (including vernal pools) over an area covering approximately 30 river miles. It includes active remediation of: 1) sediments (including backwaters) within Reaches 5 through 8, with the exception of the flowing subreaches in Reach 7 (i.e., Reaches 7A, 7D, 7F, and 7H); 2) riverbank soils within Reaches 5A and 5B; and 3) floodplain soils (including vernal pools) in portions of Reaches 5 through 8. Based on the scale of the required remediation activities, the remedial design and remedial action process is anticipated to take a number of years to complete. Given these circumstances, the remedial design and remedial action will be implemented using a phased approach.

3.2 Definition of Remediation Units

As noted above, the ROR will be segmented into separate Remediation Units to manage the workflow and schedule in a phased approach. Although specific details related to final remediation quantities and means and methods and other details have yet to be determined and will be further developed during remedial design, this section provides a description of the planned Remediation Units and a general overview of the sequence in which the remediation activities are anticipated to be performed.

The proposed Remediation Units are described below and are listed in the order in which pre-design investigation (PDI) and remedial design activities will be conducted. Figure 3-1 presents the general sequence and estimated construction durations for implementation of remediation in each of the Remediation Units.² The following descriptions follow the order in which the Remediation Units will be addressed, but the specific descriptions of which activities in a given Remediation Unit will be performed concurrently with activities in other Remediation Units are subject to revision based on discussions between GE and EPA as the project progresses:

- **Reach 5A:** As described in the Final Revised SOW, Reach 5A will be the first Remediation Unit to be addressed because it is the most upstream reach in the ROR, and pre-design work for Reach 5A is underway for this reach. Remediation in Reach 5A will include removal and capping of sediments in the riverbed and remediation of associated backwaters, riverbank

² Note that removal and capping durations shown in Figure 3-1 are approximate and are based on estimated volumes and reach-specific production rates for Alternative SED 9 from Table 3-6 of the *Housatonic River – Rest of River, Revised Corrective Measures Study Report* (Arcadis et al. 2010). These estimated construction durations are provided here solely for illustrative purposes and were used to form the basis for the sequencing of remediation described in this section. More precise estimates of construction duration will be determined during remedial design.

soils, and floodplain soils (including those at residential properties, non-residential floodplain areas, and vernal pools) to the extent required by the Revised Permit criteria.

Remedial design information for sediments, riverbanks, and floodplain soils in Reach 5A will be presented collectively in a single Conceptual Remedial Design/Remedial Action (RD/RA) Work Plan and a single Final RD/RA Work Plan, and remediation will be performed concurrently for those media so as to share construction infrastructure (e.g., access roads and staging areas) to the extent feasible. Vernal pools in Reach 5A are on a somewhat different track, given the need for a vernal pool pilot study as described in the Permit. As discussed in the Final Revised SOW, to the extent practicable, implementation of that pilot study will be conducted during the initial year or years of the overall remediation work in Reach 5A, and the results will be reported in a Vernal Pool Pilot Study Summary Report. Following EPA approval of that report, a separate addendum to the RD/RA Work Plans for Reach 5A will be developed to address remediation of the remaining vernal pools in Reach 5A, as necessary.

- Reaches 5C/6 (Woods Pond): This Remediation Unit includes sediments, associated backwaters, and floodplain soils (including vernal pools) in Reaches 5C and 6 that meet the Revised Permit requirements for remediation. These two reaches have been combined into a single Remediation Unit because it is anticipated that sediments in both reaches (including the adjacent backwaters that require removal, if any) will be removed and transported using a hydraulic dredging and/or hydraulic pumping approach (if feasible), with material from these areas pumped directly to the Upland Disposal Facility (UDF) or its support area for processing/dewatering. This will be the second Remediation Unit to be addressed because it represents a relatively large volume of sediment removal that can be performed concurrently with sediment capping activities in Reach 5A, as shown in Figure 3-1. Sediment and soil removal in Reaches 5C/6 will be initiated during the latter part of completion of the sediment and soil removal activities in Reach 5A, as also shown in Figure 3-1. Capping in Reaches 5C/6 will not be initiated until sediment removal activities in both upstream Reaches 5A and 5B have been completed.

PDI activities for this Remediation Unit will be specified in a PDI Work Plan, which will be submitted approximately three years prior to the anticipated completion of sediment/soil removal activities (not including capping) in Reach 5A. A single PDI Work Plan will be prepared that includes all media in this Remediation Unit (sediments, backwaters, and floodplain soils, including vernal pools). Similarly, remedial design information for all media will be presented collectively in single Conceptual and Final RD/RA Work Plans. As with Reach 5A, construction will be performed concurrently for sediments and floodplain soils in this Remediation Unit so as to share construction infrastructure to the extent feasible.

- Reach 5B: Remediation in this reach will include excavation of sediments containing PCBs greater than 50 parts per million and placement of backfill in the excavated areas; placement of activated carbon (AC) over the entire reach; and remediation of backwaters (if any), riverbank soils, and floodplain soils (including vernal pools) that require remediation under the Revised Permit criteria. Sediment excavation and AC placement activities, as well as riverbank, floodplain soil, and vernal pool remediation, in Reach 5B will be performed after completion of capping activities in Reach 5A and concurrently with sediment and soil excavation in Reaches 5C/6 (see Figure 3-1). Remediation work in Reach 5B is anticipated to be relatively short and is anticipated to be completed while remediation work in Reaches 5C/6 is still ongoing.

PDI activities for this Remediation Unit will be triggered by EPA's approval of the final PDI Summary Report for Reaches 5C/6. A single PDI Work Plan will be prepared that includes all media in this Remediation Unit (sediments, backwaters, riverbank soils, and floodplain soils, including vernal pools). Similarly, remedial design information for all media will be presented collectively in single Conceptual and Final RD/RA Work Plans. As with the preceding Remediation Units, construction in Reach 5B will be performed concurrently for all media so as to share construction infrastructure to the extent feasible.

- Reach 7: The next Remediation Unit covers portions of Reach 7. Remediation in this unit will include remediation of sediments within the four impoundments in Reach 7—namely, the Columbia Mill Impoundment (Reach 7B), the Eagle Mill Impoundment (Reach 7C), the Willow Mill Impoundment (Reach 7E), and the Glendale Impoundment (Reach 7G)—to the extent required by the Revised Permit. It will also include remediation of backwaters within Reach 7 (if any), floodplain soils within the designated Exposure Areas in the Reach 7 floodplain, and identified vernal pools in that floodplain insofar as such remediation is required under the Revised Permit criteria. Sediment remediation within the Reach 7 impoundments will include sediment removal and either backfilling or capping, as well as the removal of two dams (Columbia Mill Dam and Former Eagle Mill Dam). The sediment excavation activities in these impoundments, as well as any necessary soil removal in the Reach 7 floodplain (as well as vernal pool remediation if necessary), will commence following completion of sediment and soil excavation in the Reaches 5C/6 Remediation Unit and is anticipated to be performed concurrently with capping in that upstream reach (see Figure 3-1). Removal of the Columbia Mill Dam and the Former Eagle Mill Dam will commence following completion of sediment removal in these impoundments and may be performed concurrently with capping in the two impoundments where the dams will remain (Figure 3-1).

PDI activities for this Remediation Unit will be specified in a PDI Work Plan, which will be submitted approximately two years prior to the anticipated completion of sediment/soil removal activities (not including capping) in Reaches 5C/6. A single PDI Work Plan will be

prepared that includes all media in this Remediation Unit (sediments, backwaters, floodplain soils in Exposure Areas, and vernal pools), as well as any data needed to support required dam removal activities. Similarly, remedial design information for all media, as well as dam removal activities, will be presented collectively in single Conceptual and Final RD/RA Work Plans. Construction in Reach 7 will be performed concurrently for all media so as to share construction infrastructure to the extent feasible.

- Reach 8 (Rising Pond): Reach 8 will be the last Remediation Unit to be addressed as it is the farthest downstream. Remediation in Rising Pond will include sediment removal and capping/backfilling to the extent required by the Revised Permit criteria. The sediment excavation in Rising Pond is anticipated to be performed after completion of sediment and soil removal activities in Reach 7, and capping/backfilling in Reach 8 will be performed after the removal activities in that reach have been completed (see Figure 3-1).

PDI activities in this area will be triggered by EPA's approval of the final PDI Summary Report for Reach 7. There will be one PDI Work Plan, one Conceptual RD/RA Work Plan, and one Final RD/RA Work Plan for Reach 8.

3.3 Coordination of Activities

For each of the five Remediation Units described above, implementation of the remedial activities will follow a stepwise process that generally includes the following:

- Pre-design activities, which include pre-design sampling and other investigations, engineering data collection, and treatability studies, where applicable;
- Remedial design, which includes the preparation of both Conceptual and Final RD/RA Work Plans and various other Remediation Unit-specific documents and plans, as described in the Final Revised SOW;
- Contractor procurement to select the remediation contractors that will perform the remedial construction activities; and
- Remedial activities

In addition to these Remediation Unit-specific steps, the Permit requires the development, submittal, and approval of numerous site-wide plans before remediation can begin.

Prior to the start of construction in the first Remediation Unit (Reach 5A), the UDF will be designed and constructed as described in the Revised Permit and Final Revised SOW. UDF PDI activities will be performed in accordance with the *Pre-Design Investigation Work Plan for Upland Disposal Facility*, submitted on November 24, 2021, to collect data needed to support design and construction of the UDF. Using data collected in the PDI, GE will prepare a Conceptual Design Plan and Final Design Plan

for the UDF, as described in the Final Revised SOW. The UDF will be constructed after approval of the UDF Final Design Plan.

Where remediation of multiple media will be conducted within a Remediation Unit (i.e., any combination of sediment, backwaters, riverbank soils, and floodplain soils, including vernal pools), the remediation for all media will be designed and constructed concurrently within each Remediation Unit (with a special provision for vernal pools in Reach 5A, as discussed above). This collective design and construction approach will be undertaken to allow concurrent remediation and restoration of adjacent remedial areas (i.e., transitions between sediments and riverbank soils and between adjacent riverbanks and floodplain areas requiring remediation) and to allow sharing of construction infrastructure (i.e., temporary access roads and staging/support areas) that will be needed to support the remediation.

As described in Section 3.2, a single PDI Work Plan will be prepared for all media in each Remediation Unit (except for Reach 5A, where several PDI work plans have already been prepared and submitted separately for residential and non-residential floodplain properties, and in-river sediments, backwaters, and riverbanks). Also, remedial design information for all media (i.e., sediment, backwaters, riverbanks, floodplain soils, and vernal pool) within each Remediation Unit (including Reach 5A) will be presented collectively in single Conceptual and Final RD/RA Work Plans, with an addendum to those work plans for Reach 5A to be submitted to address remediation of the vernal pools that were not covered by the vernal pool pilot study.

4 Updated Schedule of Deliverables

A summary of the schedule for ROR deliverables was presented in Table 6-1 of the Final Revised SOW. An updated version of that schedule is provided in Table 4-1 below. This revised schedule includes updates to schedule information that have occurred since EPA approval of the Final Revised SOW, revisions based on discussions with EPA and further review of both the necessary deliverables and timing for them, and schedule information for Remediation Units downstream of Reach 5A.

Like the schedule in the Final Revised SOW, the time frames presented in Table 4-1 are generally in calendar months or years and have been estimated based upon anticipated level of effort at the time of preparation of this OSS. Because there is uncertainty associated with the schedule for several tasks that are out of GE's control, such as seasonal constraints and EPA review periods, most of the key deliverables and design activities have a proposed schedule for submittal that is relative to key prior milestones and other conditions. Also, because of that uncertainty, alternate time frames may be proposed by GE (for review and approval by EPA) if dictated by future conditions. It should be noted that any tasks that are being managed by EPA have not been included in this schedule. Periodic meetings will be scheduled between EPA and GE to discuss the status of ongoing efforts and deliverables, resolve any project issues that may arise, and discuss any proposed modifications to the deliverables and schedule described in this SOW.

**Table 4-1
Updated Summary of Schedule for Submittal of Deliverables**

Deliverable ^a		Schedule ^b	
Overall Strategy and Schedule document		Being submitted on January 31, 2022	
Pre-Design	UDF	UDF PDI Work Plan	Submitted on November 24, 2021
		UDF PDI Summary Report	60 days after the last groundwater gauging event or concurrently with UDF Final Design, whichever is later
		Addendum to UDF PDI Summary Report	30 days after receipt of results from the last groundwater quality sampling event
	Site-Wide Plans/Reports	Interim Baseline Monitoring Work Plan	Submitted on January 10, 2022
		Baseline Monitoring Plan (BMP)	Submitted to EPA on June 12, 2017; to be revised and resubmitted within 3 months after conceptual agreement between EPA and EPA on scope of the baseline monitoring program
		Rest of River FSP/QAPP	3 months after EPA approval of BMP
		Updated Rest of River HASP	3 months after EPA approval of BMP
		Baseline Restoration Assessment (BRA) Work Plan	Submitted on December 16, 2021
		Initial BRA Report (including focused assessment for Reach 5A)	Per schedule in BRA Work Plan (as it may be revised), but no later than date of submittal of Conceptual RD/RA Work Plan for Reach 5A
		Restoration Criteria Report	2 months after EPA approval of Initial BRA Report
		Supplemental Phase IA Cultural Resources Assessment Work Plan	Submitted on January 17, 2022
		Supplemental Phase IA Cultural Resources Assessment Report	Per schedule in the Supplemental Phase IA Cultural Resources Assessment Work Plan

		Deliverable ^a		Schedule ^b	
Pre-Design (cont.)	Site-Wide Plans/Reports (cont.)	Water Withdrawal and Uses Plan		September 16, 2022 (12 months after EPA approval of Final Revised SOW)	
	PDI Plans and Reports Specific to Each Remediation Unit	Reach 5A	PDI Work Plan for Reach 5A Floodplain Residential Properties	Submitted to EPA on August 15, 2018, and July 9, 2020, with Addendum on March 31, 2021; approved on April 20, 2021	
			PDI Summary Report for Reach 5A Floodplain Residential Properties	Submitted on December 27, 2021	
			PDI Work Plan for Reach 5A Floodplain Non-Residential EAs	Second Revised PDI Work Plan submitted on November 19, 2021; approved on December 13, 2021	
			Addendum(a) to PDI Work Plan for Reach 5A Floodplain Non-Residential EAs (if additional sampling required)	To be submitted as needed if/when data gaps are identified	
			PDI Summary Report for Reach 5A Floodplain Non-Residential EAs	60 days after receipt and validation of data collected under Second Revised PDI Work Plan for Reach 5A Non-Residential EAs or per schedule proposed in any addenda thereto	
			PDI Work Plan for Reach 5A Sediment and Banks	Submitted on September 27, 2021; may need revision after receipt of EPA's final conditional approval letter	
			Addendum(a) to PDI Work Plan for Reach 5A Sediment and Banks (if additional sampling required)	To be submitted as needed if/when data gaps are identified	
			PDI Summary Report for Reach 5A Sediment and Banks	60 days after receipt and validation of data collected under PDI Work Plan for Reach 5A Sediment and Banks or per schedule proposed in any addenda thereto	
		Reaches 5C/6	PDI Work Plan for Reaches 5C/6	3 years prior to anticipated completion of sediment/soil removal activities (not including capping) in Reach 5A	
			PDI Summary Report for Reaches 5C/6	Per schedule in the PDI Work Plan for Reaches 5C/6	
		Reach 5B	PDI Work Plan for Reach 5B	4 months after EPA approval of the final PDI Summary Report for Reaches 5C/6	
			PDI Summary Report for Reach 5B	Per schedule in the Reach 5B PDI Work Plan	
		Reach 7	PDI Work Plan for Reach 7	2 years prior to anticipated completion of sediment/soil removal activities (not including capping) in Reaches 5C/6	
			PDI Summary Report for Reach 7	Per schedule in the Reach 7 PDI Work Plan	
		Reach 8	PDI Work Plan for Reach 8	4 months after EPA approval of the final PDI Summary Report for Reach 7	
			PDI Summary Report for Reach 8	Per schedule in the Reach 8 PDI Work Plan	
		Vernal Pool Pilot Study Deliverables	Vernal Pool Selection Proposal		30 days following completion of collection of Reach 5A floodplain soil PCB data
			Vernal Pool Pilot Study Work Plan		4 months after EPA approval of vernal pool selection proposal
	Vernal Pool Pilot Study Summary Report		Per schedule in the Vernal Pool Pilot Study Work Plan		

		Deliverable ^a		Schedule ^b	
Design	UDF	Conceptual Design Plan (including Interim UDF PDI Data Summary)		6 months after start of groundwater elevation monitoring for UDF	
		Final Design Plan		Per schedule in the Conceptual Design Plan for UDF	
		Operation, Monitoring, and Maintenance Plan		Concurrently with submittal of Final Design Plan for UDF	
		Supplemental Information Package for UDF		Per schedule in Final Design Plan for UDF	
		Final Cover/Closure Plan		At least 1 year before anticipated closure of UDF (or a discrete cell thereof)	
	Site-Wide Plans	Off-Site and On-Site Transportation and Disposal (T&D) Plans		Concurrently with Conceptual RD/RA Work Plan for Reach 5A	
		Updated POP (including Construction Monitoring Plan)		15 months after EPA approval of Overall Strategy and Schedule, but no later than date of submittal of Conceptual RD/RA Work Plan for Reach 5A	
		QOL Compliance Plan		September 16, 2023 (24 months after EPA approval of Final Revised SOW), but no later than date of submittal of T&D Plans—see above	
		Adaptive Management Plan		18 months after EPA approval of Overall Strategy and Schedule, but no later than date of submittal of Conceptual RD/RA Work Plan for Reach 5A	
	Plans/Reports Specific to Each Remediation Unit ^c	Reach 5A	Conceptual RD/RA Work Plan		Concurrently with submittal of last PDI Summary Report for Reach 5A
			Phase IB Cultural Resources Survey Work Plan		Concurrently with Conceptual RD/RA Work Plan for Reach 5A
			Phase IB Cultural Resources Survey Report		Per schedule in the Phase IB Cultural Resources Work Plan for Reach 5A
			Phase II Cultural Resources Assessment Work Plan and Report (if necessary)		Per schedule in Phase IB Cultural Resource Survey Report; Phase II Report no later than date of submittal of Final RD/RA Work Plan for Reach 5A
			Final RD/RA Work Plan		Per schedule in Conceptual RD/RA Work Plan for Reach 5A
			Supplemental BRA Report		3 months after completion of supplemental BRA data collection
			Vernal Pool Addendum to RD/RA Work Plans		Following EPA approval of Vernal Pool Pilot Study Summary Report
			Restoration Coordination Plan		Concurrently with or as part of Restoration Plan for Reach 5A (see next entry)
			Restoration Plan		Concurrently with Final RD/RA Work Plan for Reach 5A
		Remediation Supplemental Information Package		Per schedule in Final RD/RA Work Plan	
		Remediation Units Downstream of Reach 5A (Reaches 5C/6, 5B, 7, and 8) ^d	Conceptual RD/RA Work Plan		Concurrently with submittal of the last PDI Summary Report for each Remediation Unit
			Updates to site-wide design plans (listed above) as necessary		Concurrently with Conceptual RD/RA Work Plan for each Remediation Unit
			Phase IB Cultural Resources Survey Work Plan		Concurrently with Conceptual RD/RA Work Plan for each Remediation Unit
			Phase IB Cultural Resources Survey Report		Per schedule in the Phase IB Cultural Resources Survey Work Plan for each Remediation Unit
Phase II Cultural Resources Assessment Work Plan and Report (if necessary)			Per schedule in Phase IB Cultural Resource Survey Report; Phase II Report no later than date of submittal of Final RD/RA Work Plan for each Remediation Unit		
Final RD/RA Work Plan			Per schedule in Conceptual RD/RA Work Plan for each Remediation Unit		

Deliverable ^a			Schedule ^b	
Design (cont.)	Plans/Reports Specific to Each Remediation Unit ^c (cont.)	Remediation Units	Supplemental BRA Report	3 months after completion of supplemental BRA data collection in each Remediation Unit
		Downstream of Reach 5A	Restoration Coordination Plan	Concurrently with or as part of Restoration Plan for each Remediation Unit (see next entry)
		(Reaches 5C/6, 5B, 7, and 8) ^d (cont.)	Restoration Plan	Concurrently with Final RD/RA Work Plan for each Remediation Unit
			Remediation Supplemental Information Package	Per schedule in Final RD/RA Work Plan
	Other Deliverables	Plan for Implementing Future Projects or Work		December 16, 2022 (15 months after EPA approval of Final Revised SOW)
		Model Reevaluation Plan		When update to model is deemed necessary by EPA after consultation with GE
		Monitoring and Maintenance Plans for Non-GE-Owned Dams		September 16, 2022 (12 months after EPA approval of Final Revised SOW), subject to obtaining access agreements
		Sustainability and Climate Adaptation Plan		September 16, 2022 (12 months after EPA approval of Final Revised SOW), but no later than date of submittal of Conceptual RD/RA Work Plan for Reach 5A
Post-Construction	Post-Construction IMM Plans for each Remediation Unit		Include in Final RD/RA Work Plan for each Remediation Unit; to be updated following completion of remediation in that area	
	IMM Plan for monitored natural recovery Reaches		Concurrently with Performance Standards Compliance Plan (see below)	
	UDF Post-Closure Plan		1 year before anticipated closure of UDF (or a discrete cell thereof)	
	Performance Standards Compliance Plan (Site-Wide – for Downstream Transport and Biota Standards)		1 year prior to anticipated completion of remediation in Reach 5	
	Plan for Further Response Actions (Site-Wide)		4 years after initiation of remediation in Reach 5A (to be prepared for first Five-Year Review)	
	Interim Remedial Action Completions Reports (for Remediation Units)		After completion of all remediation activities in a given Remediation Unit (or combination of Remediation Units)	
	Final Remedial Action Completion Report (Site-Wide)		After completion of all remediation activities	

Notes:

- Descriptions of each deliverable are presented in the Final Revised SOW (Anchor QEA et al. 2021).
- All deadlines are subject to revision or extension upon request and EPA approval. In addition, the listed deliverables may be revised and resubmitted in response to EPA directives and/or may be updated later in the process to reflect subsequent information.
- The steps in design may be repeated more than once in the event that it is determined that additional data are necessary to complete the steps.
- Separate RD/RA deliverables will be submitted for each of the downstream Remediation Units.

BMP: Baseline Monitoring Plan

BRA: Baseline Restoration Assessment

EAs: Exposure Areas

FSP/QAPP: Field Sampling Plan/Quality Assurance Project Plan

HASP: Health and Safety Plan

IMM Plan: Inspection, Monitoring, and Maintenance Plan

POP: Project Operations Plan

QOL: Quality of Life

RD/RA: Remedial Design/Remedial Action

SOW: Statement of Work

T&D: Transportation and Disposal

TBD: to be determined

UDF: Upland Disposal Facility

5 Workflow Prior to Start of Remediation

In accordance with EPA's approval of the Final Revised SOW, this section presents flow charts that provide details related to the planned sequencing and precedence of deliverables and data collection activities that need to be completed prior to the start of remediation activities in the first Remediation Unit (Reach 5A). These flow charts are based on the schedule and precedents provided in Table 4-1 in Section 4.

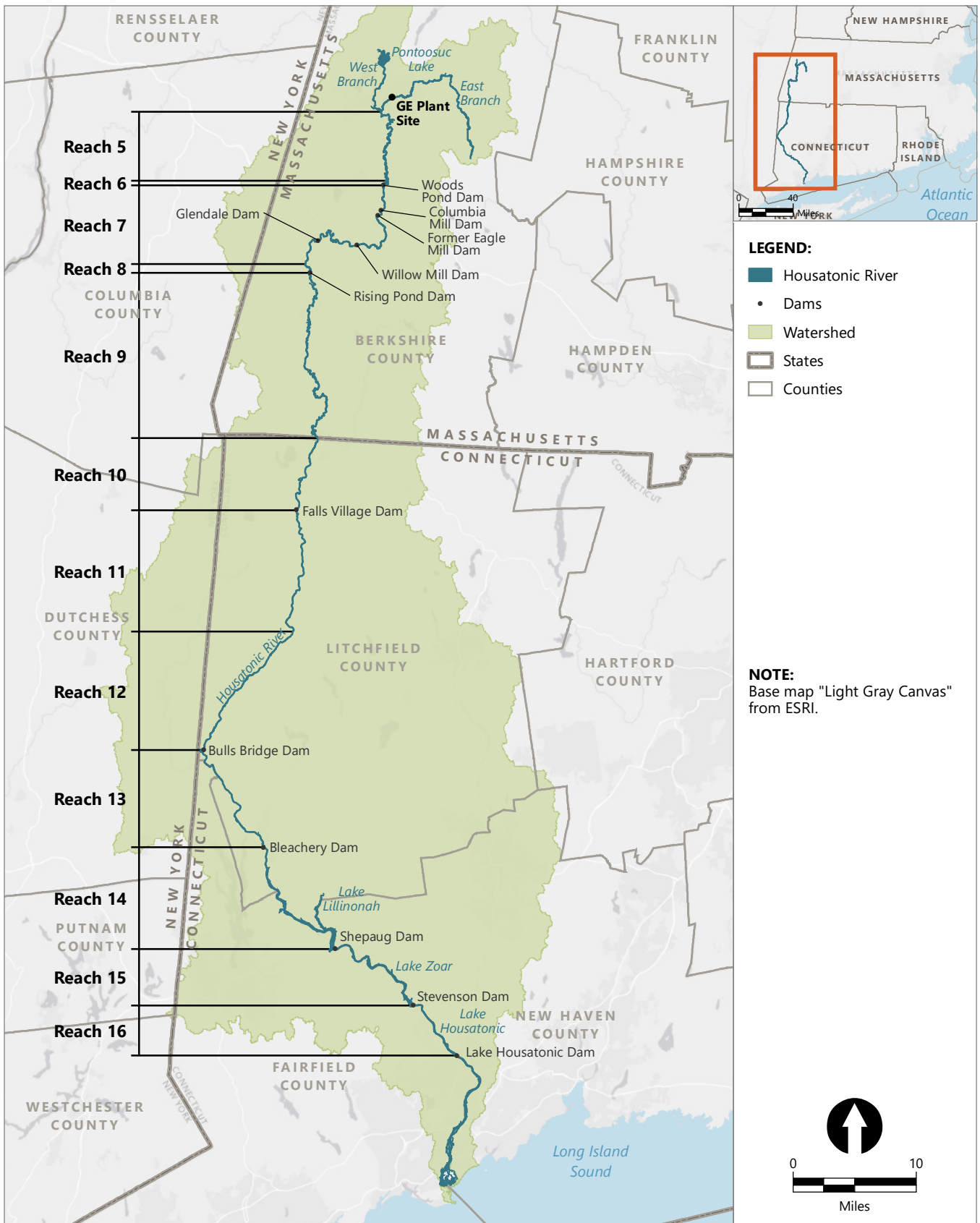
Figure 5-1 is a flow chart showing, in the upper portion, the planned sequence of deliverables and data collection activities necessary for construction of the UDF, which must be completed before remediation can begin in Reach 5A. Figure 5-1 also shows the planned sequence for site-wide pre-design plans and site-wide design deliverables that need to be completed and approved prior to Reach 5A remediation. In this figure, the PDI and design plans/reports specific to Reach 5A are shown as a single box; additional details related to those Reach 5A design deliverables and data collection activities are presented in Figure 5-2.

Figure 5-2 is a flow chart showing the planned sequencing for Reach 5A pre-design and design deliverables and data collection activities that will be necessary before the start of remediation activities in Reach 5A. This includes the planned sequence for implementation of the PDI and other data collection activities (i.e., baseline monitoring, baseline restoration assessment, and cultural resources assessment), and it shows how these data collection activities link to the development of the remedial design plans for Reach 5A.

6 References

- Anchor QEA (Anchor QEA, LLC), AECOM, and Arcadis, 2021. *Final Revised Rest of River Statement of Work*. Prepared for the General Electric Company. September 2021.
- Arcadis, Anchor QEA, and AECOM, 2010. *Housatonic River – Rest of River, Revised Corrective Measures Study Report*. Prepared for the General Electric Company. October 2010.
- Arcadis BBL and QEA (Quantitative Environmental Analysis, LLC), 2007. *Housatonic River - Rest of River, Corrective Measures Study Proposal*. February 2007.
- EPA (U.S. Environmental Protection Agency), 2020. Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River. December 2020.
- EPA, 2021. Letter to: Andrew Silfer, General Electric Company. Regarding: Approval of GE's Final Revised Rest of River Statement of Work, Housatonic Rest of River, GE-Pittsfield/Housatonic River Site. September 16, 2021.
- EPA/GE (General Electric Company), 2000. Consent Decree. United States of America, State of Connecticut, and Commonwealth of Massachusetts v. General Electric Company, Civil Action Nos. 99-30225, 99-30226, 99-30227-MAP, entered by the United States District Court for the District of Massachusetts, Western Division. October 27, 2000.

Figures

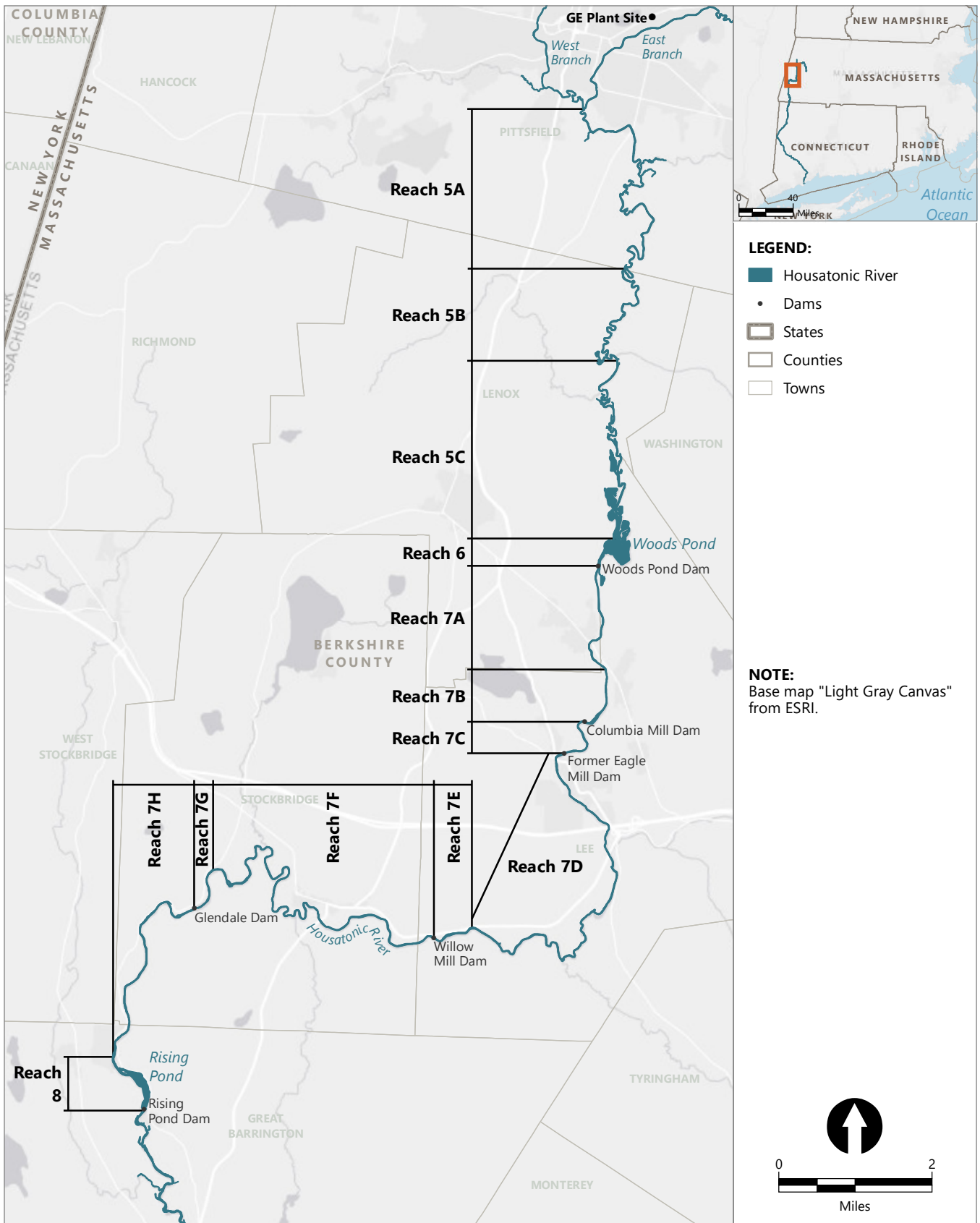


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Figure 1-1
Housatonic River Map

Overall Strategy and Schedule for Implementation of the Corrective Measures
 GE-Pittsfield/Housatonic River Site

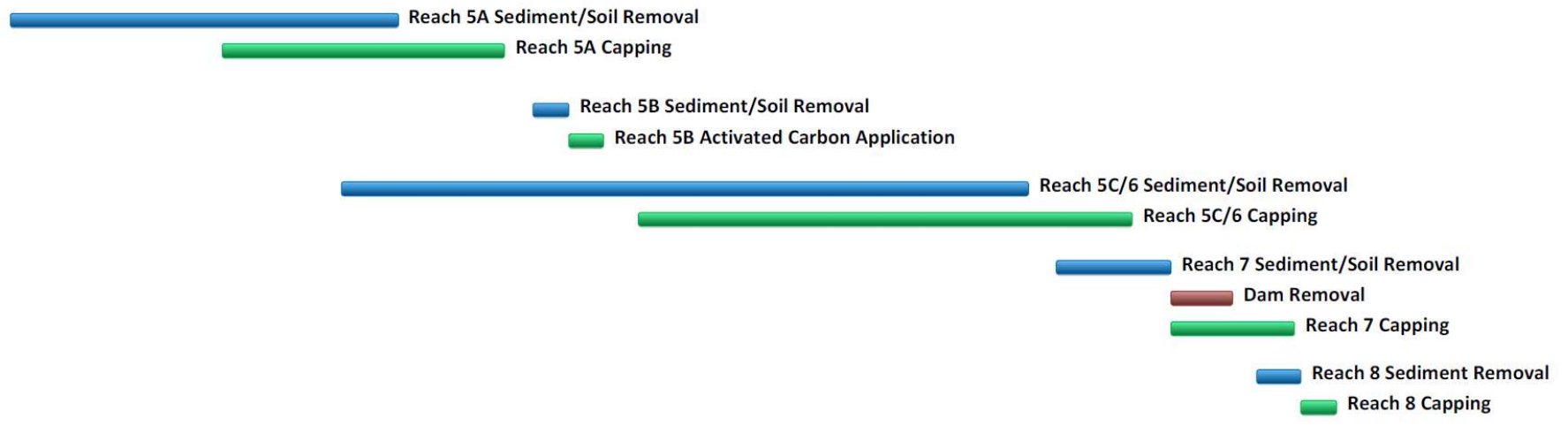


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Figure 1-2
Housatonic River Map (Subreaches in Reaches 5 and 7)
 Overall Strategy and Schedule for Implementation of the Corrective Measures
 GE-Pittsfield/Housatonic River Site

Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 | Year 12 | Year 13



Notes:

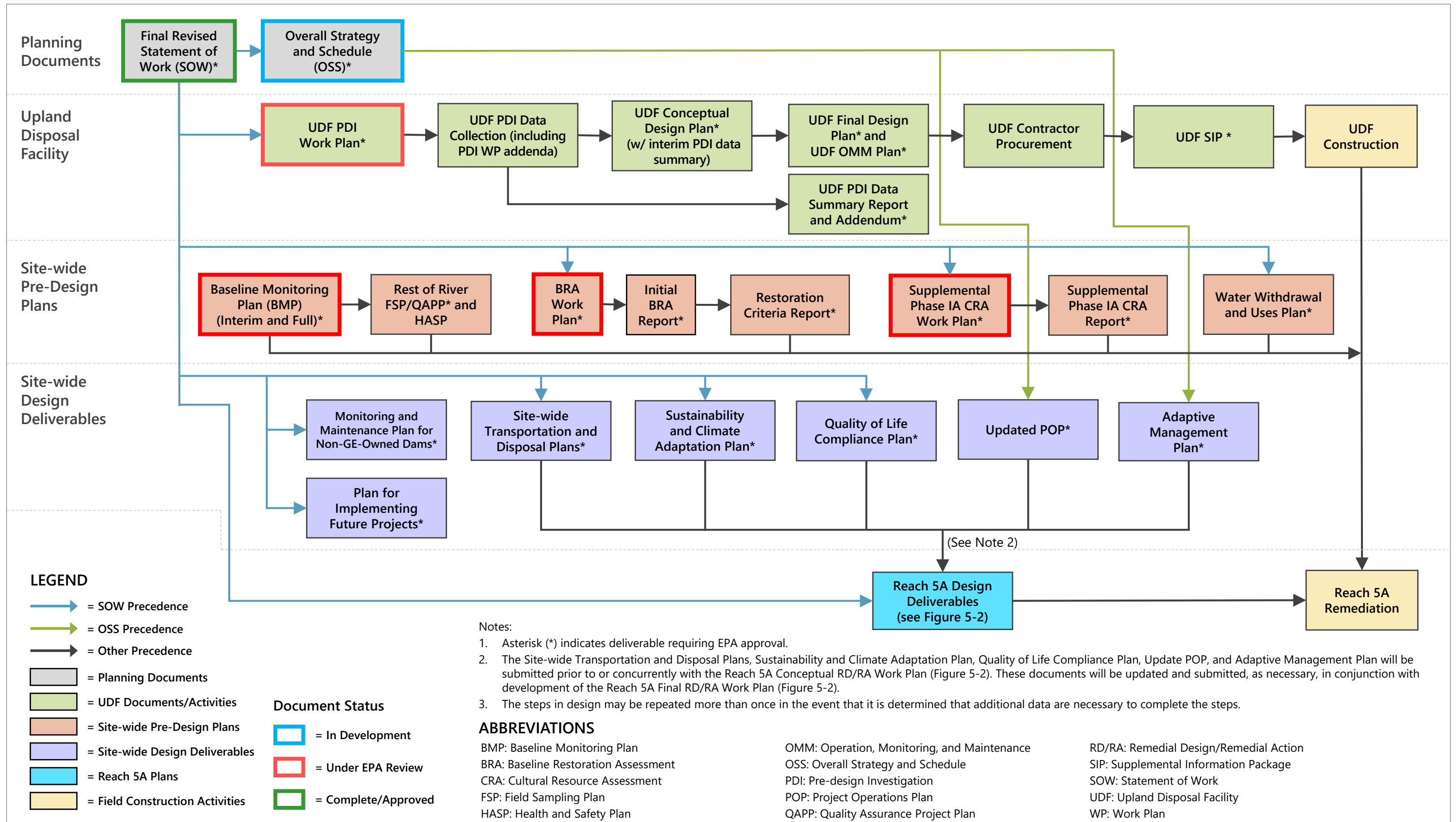
1. The removal and capping durations shown are approximate and are based on estimated volumes and reach-specific production rates for Alternative SED 9 from Table 3-6 of the *Housatonic River – Rest of River, Revised Corrective Measures Study Report* (RCMS Report; Arcadis et al. 2010).
2. The estimated construction durations are provided here solely for illustrative purposes and were used to form the basis for the sequencing of Remediation Units.
3. More precise estimates of construction durations will be determined during remedial design.

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**Figure 3-1
Planned Remediation Unit Sequencing**

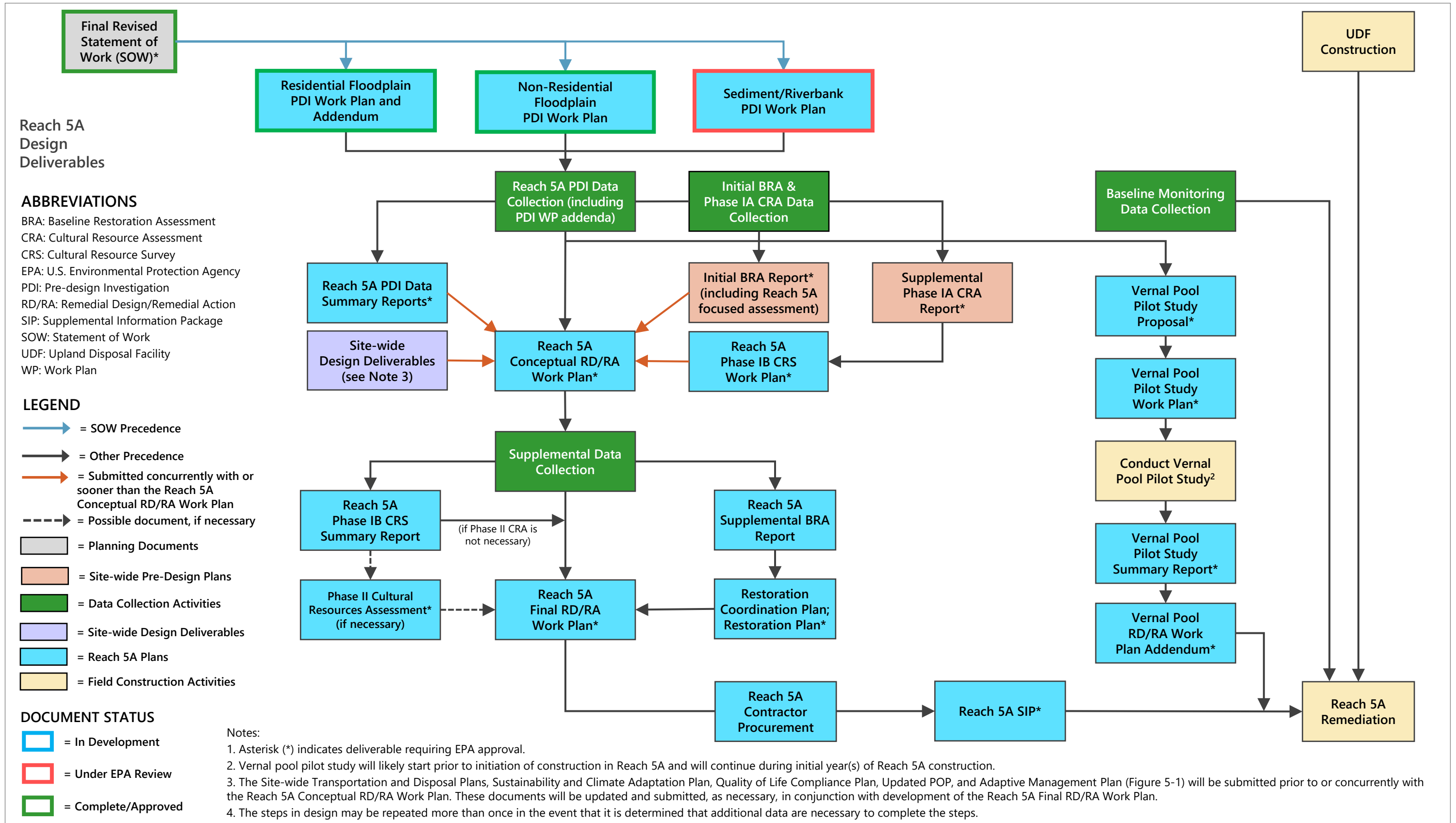
Overall Strategy and Schedule for Implementation of the Corrective Measures
GE-Pittsfield/Housatonic River Site



Last updated: January 31, 2022



Figure 5-1
Reach 5A RD/RA Precedence Flowchart (UDF and Site-Wide Deliverables)
 Overall Strategy and Schedule for Implementation of the Corrective Measures
 GE-Pittsfield/Housatonic River Site



Last updated: January 31, 2022



Figure 5-2
Reach 5A RD/RA Precedence Flowchart (Reach 5A Design Deliverables)
 Overall Strategy and Schedule for Implementation of the Corrective Measures
 GE-Pittsfield/Housatonic River Site