

National Fireworks Site

Hanover/Hanson
January 2024 (Revised)



Agenda

- Introductions.
- MassDEP overview of site history, response actions, current site status, risks, and funding.
 - Superfund and NPL Listing Process.
- Pre-remedial activities leading up to listing.
 - Superfund Remedial Process & Community Involvement.
 - Questions & Answers.

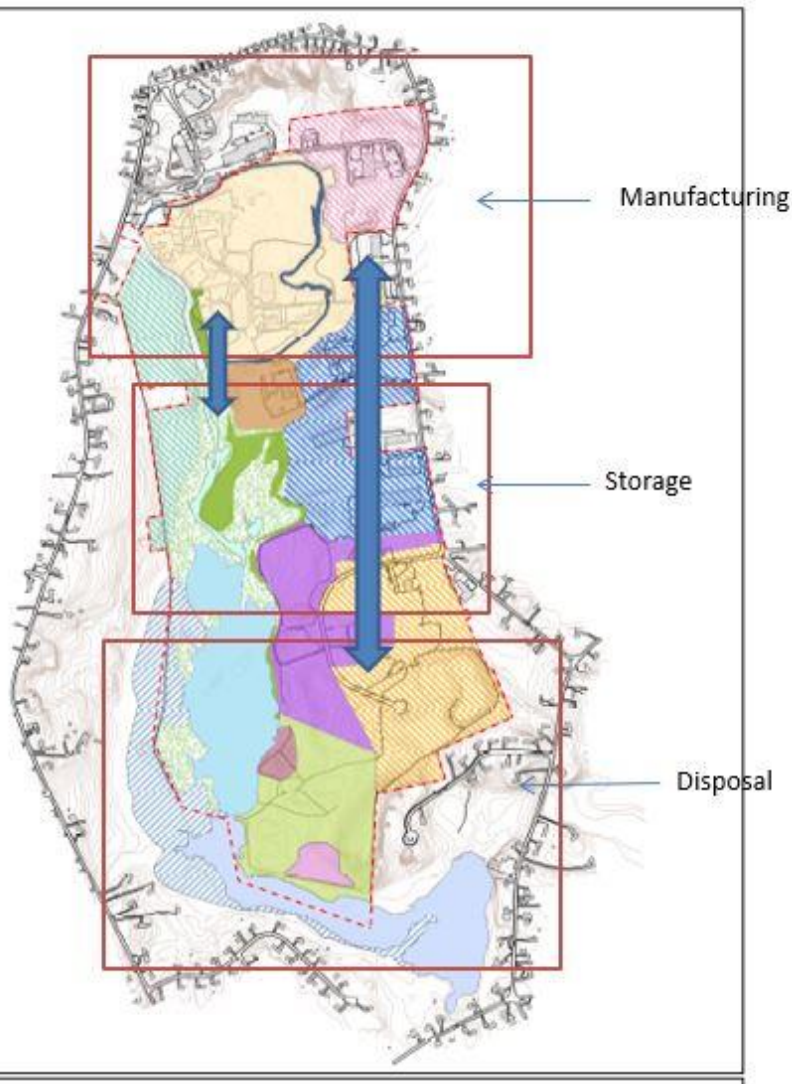


Background



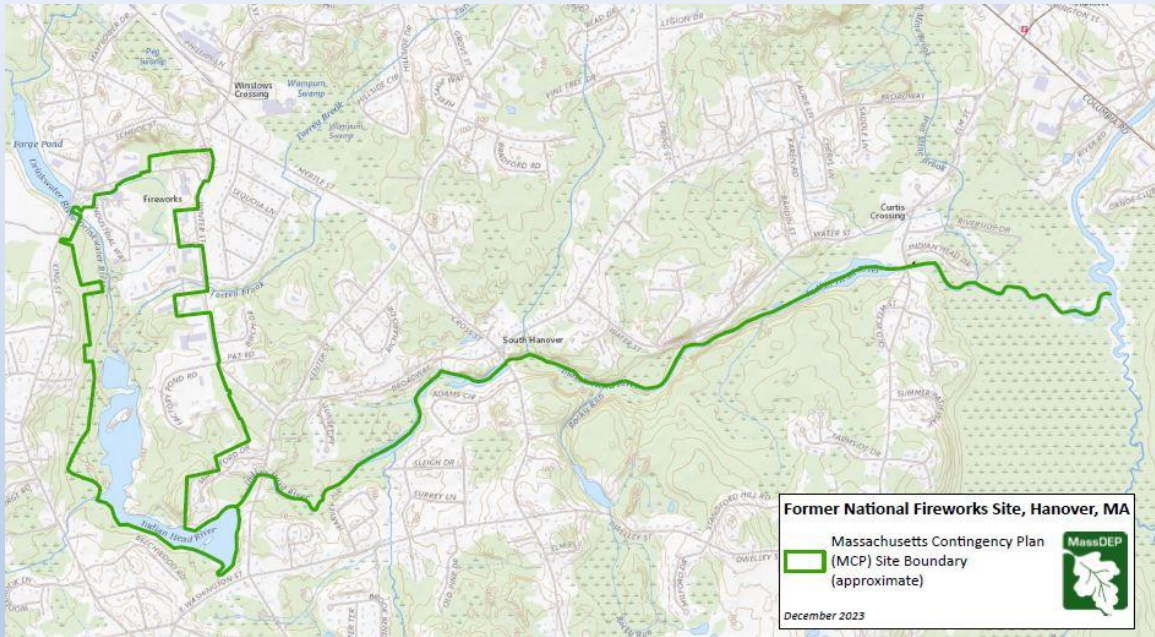
- Historical activities at the site included research, development, manufacture and testing of munitions and pyrotechnics from 1907-1970.
- MassDEP, the Potentially Responsible Parties and the towns have been working toward the same goal for many years – to clean up the Former National Fireworks Site.
- The Site is undergoing assessment and cleanup under the Mass. environmental regulations to identify and address areas of soil, sediment, surface water and groundwater contamination and munitions and explosives. MassDEP is providing direct oversight of the assessment and cleanup.
- Mercury, lead, organic solvents and propellants and explosives were used in the manufacturing operations at the site.
- Mercury has been detected in sediment, soil, groundwater and fish tissue. Lead and other metals as well as volatile organic compounds have been detected in soil, groundwater and sediment.
- Munitions and explosives have been found in soil and in Factory Pond.

Response Actions



- **1986:** EPA required former Site owner Susquehanna Corporation to investigate the southern portion of the Site and to remove drums of chemical waste and other debris.
- **1993-1995:** MassDEP conducted limited sampling of surface water, sediment and fish tissue in streams and ponds at the Site for mercury, lead and metals.
- **1995:** MassDEP identified Kerr-McGee Corporation (Tronox), Massachusetts Institute of Technology, National Coating Corporation, Susquehanna Corporation and the U.S. Department of Defense as potentially responsible parties for environmental contamination at the Site.
- **1997-2005:** Tronox, Massachusetts Institute of Technology and National Coating Corporation (the Cooperating Parties) conducted environmental investigation and risk characterization activities for Site contaminants under the Massachusetts environmental regulations.
- **2005-2009:** The Cooperating Parties identified and evaluated remedial action alternatives to address Site contaminants.
- **2009:** Tronox filed for bankruptcy and MassDEP asserted a claim to obtain funds for Tronox's share of response costs.
- **2011:** Tronox Inc. Expendable Trust established with proceeds from bankruptcy. Contributions in 2011, 2015 and 2016.

Response Actions – Continued



- **2010-2012:** Cooperating Parties conducted additional focused characterization of the southern portion of the Site.
- **2015-2018:** Cooperating Parties conducted additional activities:
 - to address data gaps and Investigate areas impacted from the 2010 historic flooding
 - Included soil, sediment, groundwater, and surface water sampling for contaminants.
 - Funded by the Tronox Trust.
- **2016-2024:** Munitions and explosives investigation and remediation ongoing. Funded by the Tronox Trust.
- **2019-2021:** Remedial alternatives were developed and evaluated to address the contamination identified during the site characterization. This was finalized in 2021, after public comment period and DEP approval. Funded by the Tronox Trust.
- **2021-2022:** Work was conducted to design the remedial alternatives. However, this work was not completed due to funding limitations. Funded by the Tronox Trust.



Response Action Current Status



- As of November 2023, over 192,000 munitions items (35,611 lbs.-17.80 tons) have been removed from the site. 21,095 items (11%) contained explosives, posed a public safety hazard and were required to be destroyed on site by the Massachusetts State Police.
- 15 of 22 areas of munitions, soil and sediment contamination in the southern portion of the site have been investigated and cleaned up under the MassDEP environmental regulations.
- Current site activities include soil sampling, off-site disposal of contaminated soil, sediment and asbestos-containing material, destruction of munitions items, and demobilization. Expect these activities to be completed by October 2024.
- The site will be secured with access restrictions to the site and to Factory Pond until site investigation and cleanup activities begin again.





Site Risks

- No public or private water supply wells have been impacted by contaminants released at the site.
- There are risks from direct contact with contaminant-impacted soil and sediment.
 - Southern site access is restricted and patrolled by Hanover Police Department.
 - Impacted soils are being excavated and properly disposed off-site.
 - Access to Factory Pond is restricted.
- There are risks to people, fish-eating birds and wildlife from ingestion of contaminants found in fish.
 - Fish advisory for Factory Pond is in place.
- There are safety risks to people from munitions items identified in the southern portion of the site, including in Factory Pond.
 - Access to Factory Pond is restricted.



Summary of Expenditures –Tronox Inc. Expendable Trust

Work Description	Work Period	Amount Paid to Date	Status
Additional site characterization, soil, sediment, groundwater, surface water.	2015-2018	\$ 633,727.74	completed
Develop and evaluate remedial alternatives to address contamination.	2019 - 2021	\$ 176,670.02	completed
Some work to design the remedial alternatives.	2021-2022	\$ 532,608.17	Stopped work
Work to address munitions and explosives	2016-present	\$54,951,981.78	on-going
MassDEP Personnel and Contractor Costs for FY20, FY21 and FY22. Oversight of work; DEP contractor for review of remedial alternatives and costs, and sediment sampling downstream of Factory Pond Dam.		\$ 380,799.42	completed
Total		\$56,675,787.13	



Status of Tronox Inc. Expendable Trust – 1/4/2024

Item	Description	Time Period	\$ in Million	Running Balance \$ in Million
Tronox Inc. Expendable Trust	Contributions w/Interest	2011 - present	\$ 74.23	\$ 74.23
Disbursed to Date from Trust	Investigation and response activities for munitions; DEP costs	2015 - present	\$ 56.68	\$ 17.55
Prioritized response actions	Ongoing for munitions and asbestos	2023 and 2024	\$ 7.70	\$ 9.85
Balance Available	Safe shut down and site security, any response action until cleanup resumes	2024		\$ 9.85



Predicted costs to complete required environmental remediation of the site is estimated to be greater than \$200 M.

MassDEP Request for EPA Involvement: Cleanup Funding Issues



- **2015-present:** Site work has been funded by the Tronox Inc. Expendable Trust; however remaining funding is insufficient to complete the required response actions.
- The Commonwealth and the Potentially Responsible Parties could not reach an agreement regarding estimated costs for conducting a complete cleanup of the entire Site, including the Indian Head River Corridor.
- The Commonwealth could not accept a settlement that would not achieve a level of no significant risk of damage to health, safety, public welfare, or the environment during any foreseeable period of time throughout the Site.
- Given the projected costs for the remaining cleanup and status of settlement negotiations, MassDEP reached out to the EPA as a possible option for funding the cleanup at the site – through the Superfund National Priorities List process.



What is Superfund?

- CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act.
- CERCLA is informally called Superfund. It allows EPA to clean up contaminated sites. It also forces the parties responsible for the contamination to either perform cleanups or reimburse the government for EPA-led cleanup work.
- Goals:
 - Protect human health and the environment by cleaning up contaminated sites.
 - Make responsible parties pay for cleanup work.
 - Involve communities in the Superfund process.
 - Return Superfund sites to productive use.



What is the National Priorities List (NPL)?



- National list of sites that EPA determines require further detailed investigation, and potential cleanup action in accordance with CERCLA* .
 - Investigations at NPL sites determine whether long-term threats to human health & environment exist.
 - Where needed, comprehensive strategy to address threats is implemented.
- *CERCLA = Comprehensive Environmental Response, Compensation and Liability Act (Often referred to as Superfund)

Why add the National Fireworks Site to the NPL?



- Sites on NPL subject to detailed investigation and cleanup where warranted.
- Only sites on the NPL are eligible to receive federal Superfund resources for comprehensive cleanup.
- Federal resources can include monetary support, as well as expertise/staffing.
- Absent the use of federal resources, comprehensive cleanup strategies may not be able to be pursued.
- Given the projected costs for the remaining cleanup & status of settlement negotiations, MassDEP reached out to the EPA to address the site through NPL listing.

The Superfund Process: Discovery and Cleanup for a Long-Term Site



The point where federal resources can be expended.

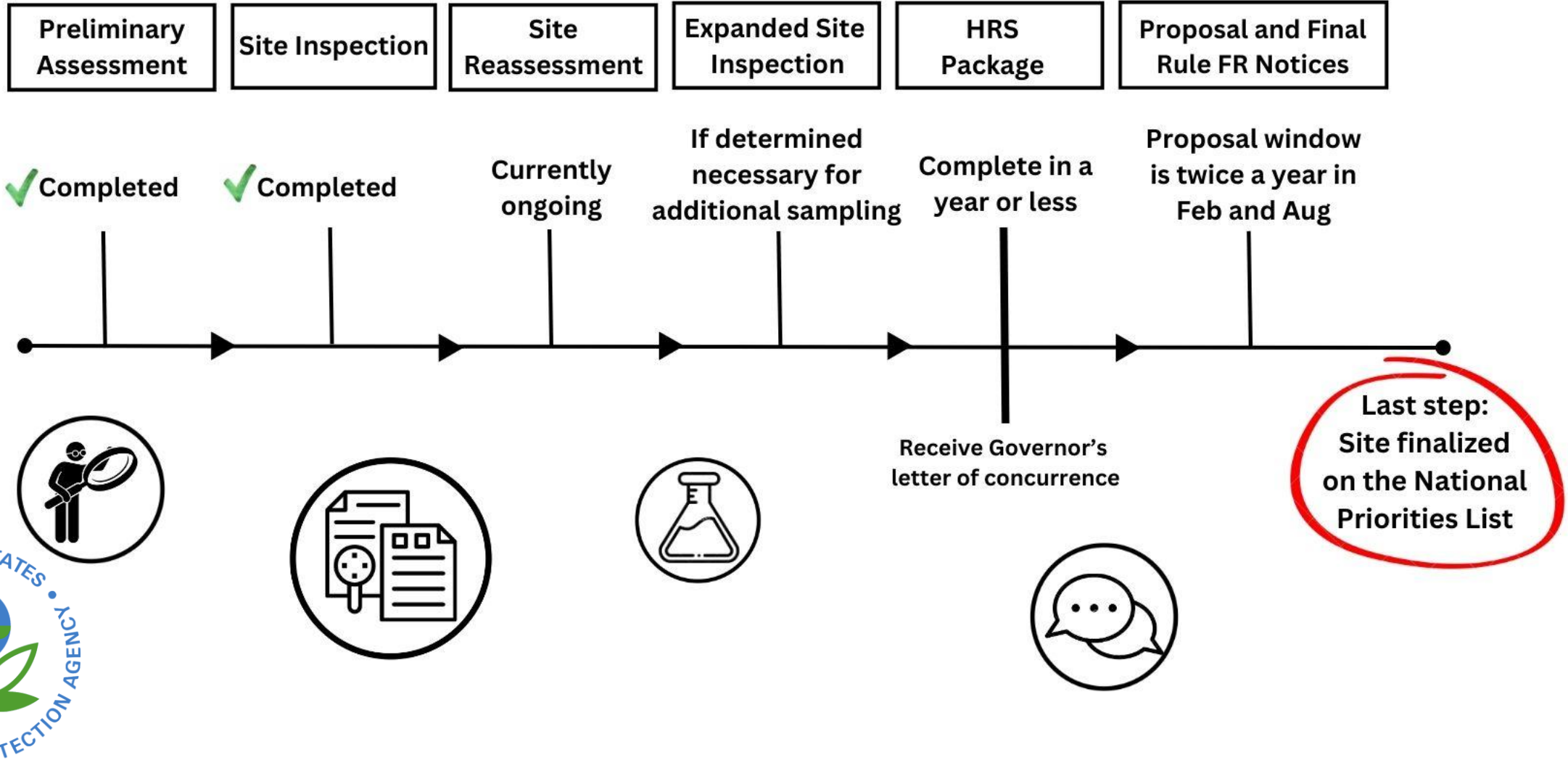
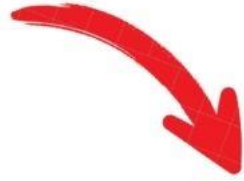


How is a Site added to the NPL?

- Sites added to NPL through federal rulemaking.
- Requires letter of concurrence from Governor.
- Site is first proposed to the NPL.
- 60-day public comment period.
- Site finalized to NPL, upon consideration of public comments received.



Site Assessment Steps Needed for NPL Listing



Order of Upcoming Activities for National Fireworks if We Pursue Listing

- Conduct a Site Reassessment (currently ongoing).
 - Review available data and reports.
- Conduct Expanded Site Inspection (if determined necessary).
 - Address any data gaps and take additional samples.
- Update/develop the Hazard Ranking System (HRS) package.
 - Includes narrative, QC checklist, QA signature, scoresheets, documentation record, all references.
- Letter of concurrence from Governor required before proposal.
- Propose site to NPL (earliest August 2025).
- 60-day public comment period.
- Finalize site to NPL, Federal Register Publication.



Superfund in New England

- Most recent listing was the Lower Neponset River in Milton/Boston.
- 41 Superfund Sites in Massachusetts.
- 123 Superfund Sites in New England.
- 1,833 Superfund Sites nationally.

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LOWER NEPONSET RIVER DECLARED A SUPERFUND SITE

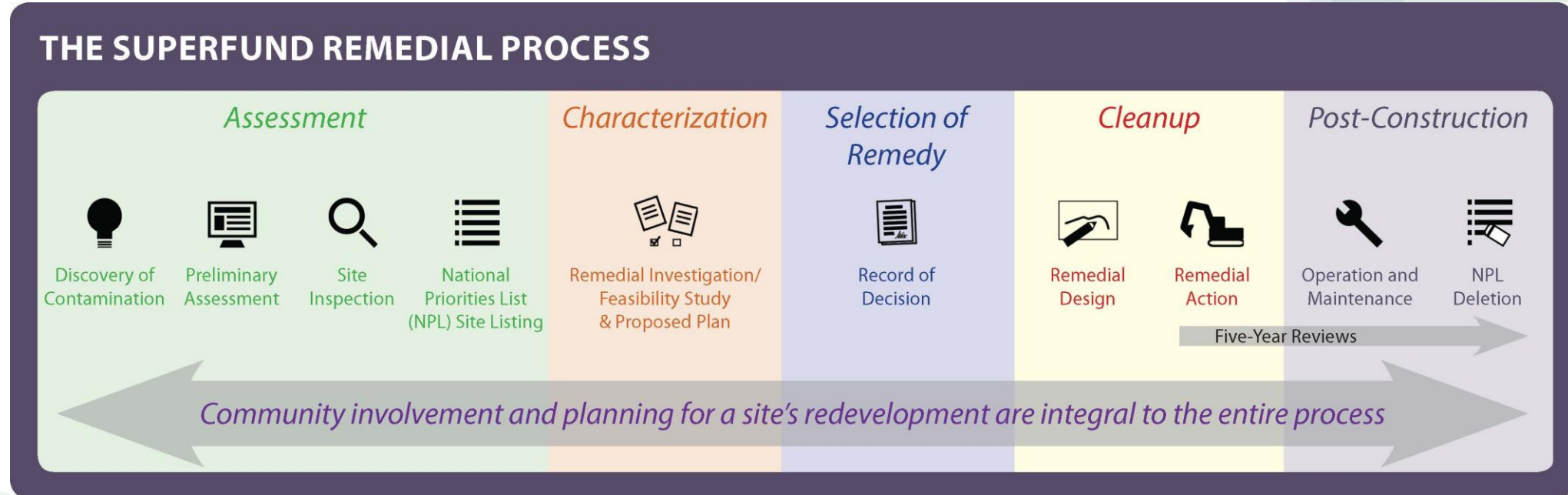
Federal funds will support the remediation of a historically neglected and polluted natural space.

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Superfund Remedial Process



Outreach Activities

- Next Steps:
 - Public Meetings in Hanover and Hanson (1/11/24 and 1/18/24).
 - Access Agreements to be sent out by mail after Hanson meeting on 1/18/24.
 - Email List.
 - Periodic updates can be found on EPA's website.



Additional Resources

- National Fireworks Website that includes Publicly Available Documents and site updates.
www.epa.gov/ma/national-fireworks
- MassDEP Website, **RTN 4-0000090**: select Supporting Documents
<https://eeaonline.eea.state.ma.us/portal#!/wastesite/4-0000090>
- Town of Hanover website
<https://www.hanover-ma.gov/former-national-fireworks-site>
- 1/2024 EPA National Fireworks Fact Sheet.
- EPA Superfund Fact Sheet.
- 1/24/22 MassDEP Fireworks presentation.
- 1/24/22 Tetra Tech Fireworks presentation.
- March 2021 Mass DPH Former National Fireworks Site Data Brief.
- 9/24/19 Mass DPH Fact Sheet.
- 9/24/19 MassDEP Fireworks presentation.
- 9/24/19 Tetra Tech Fireworks presentation.
- Fall 2019 MassDEP Fireworks Factsheet and Summary FAQs.
- May 2018 MassDEP Update and Information to Address Frequently Asked Questions.
- 11/15/17 MassDEP Fireworks presentation.
- 11/15/17 Tetra Tech Fireworks presentation.
- 2008 MassDEP Fireworks Fact Sheet.



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