

Green and Sustainable Remediation and Climate Resiliency Fact Sheet



Department of
Environmental
Conservation

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The New York State Department of Environmental Conservation (DEC), Division of Environmental Remediation (DER) requires green and sustainable remediation (GSR) and climate resiliency be considered in its remedial programs, regardless of the remedial phase, including State Superfund (SSF), Brownfield Cleanup Program (BCP), Environmental Restoration Program (ERP), and Petroleum Remediation Program.

DEC is providing additional guidance to further incorporate these concepts into its everyday business practices and to provide for better metrics to support decision making.

DEC Policies:

DER-31: Green Remediation

CP-49: Climate Change and
DEC Action

Climate Leadership and
Community Protection Act
(Climate Act)

Background

In order to meet New York State's ambitious climate and sustainability requirements, DEC is integrating decarbonization and sustainability considerations into all of its actions. Compliance with and application of green and sustainable laws, policy, and guidance will better align consultants and remedial parties with the State's and DER's mission in protecting public health and the environment in a green and sustainable manner while aiding the State in reaching climate goals.

Getting Started

GSR practices should be implemented as early as the site characterization. As not all sites have incorporated GSR in earlier phases, it can be evaluated at any time and, moving forward, should build off the completion of each remedial phase. Specific guidance and green technique examples can be found in DER-31: Green Remediation ([DER-31 - Green Remediation \(ny.gov\)](https://www.dec.ny.gov/der31)).

Key Concepts for Implementation:

- **Idle reduction plan**
- **Minimize waste generation and material use**
- **Reuse or recycle material, when applicable**
- **Increase energy efficiency**
- **Enhance habitat value and land reuse**
- **Assess applicability of renewable energy sources**
- **Environmental impacts of treatment technologies and remedies**
- **Developing/utilizing zero emission technology on-site as practicable**
- **Other site-specific considerations**

What's New?

- **Standard Remedial Elements**

- Remedial Design – To further our green and sustainable goals and provide a baseline for tracking metrics, this standard remedial element now requires (1) an environmental footprint analysis (e.g., SiteWise or SEFA), (2) definition of project-specific green and sustainable goals in the design specifications, (3) tracking of green metrics during project implementation (reported in the FER), and (4) completion of a climate change vulnerability assessment.
- Green Remediation – Sites without a design phase should still implement green and sustainable practices through the implementation of an environmental footprint analysis (e.g., SiteWise or SEFA), tracking of green metrics and reporting in periodic or other site management reports, and a climate vulnerability assessment.

- **Site Management Plan Template - [Site Management Plan Template \(ny.gov\)](#)**

- Periodic Assessments/Evaluations
 - Climate change vulnerability assessments are now mandatory and should consider wildfires.
 - Green remediation evaluations should consider material reuse and recycling, and carpooling.
- Green Remediation Metrics Form for Site Management

- **Remedial Action Objectives**

- Reduce direct and indirect greenhouse gas (GHG) and other emissions.
- Increase energy efficiency and minimize use of non-renewable energy.
- Conserve and efficiently manage resources and materials.
- Reduce waste, increase recycling, and increase reuse of materials which would otherwise be considered a waste.
- Enhance habitat value and create habitat when practicable.
- Foster green and healthy communities and working landscapes which balance ecological, economic, and social goals.
- Integrate the remedy with the Site's end use where possible and encourage green and sustainable re-development.

- **Guidance and Best Management Practices**

- [DEC – DEC Sustainability Policy Summary](#)
*Reach out to the DEC project manager for additional site-specific guidance
- [EPA – CLU-IN | Strategies & Initiatives | Green Remediation Focus > Best Management Practices](#)

Climate Resiliency

It is recommended that all sites complete a climate vulnerability assessment to identify potential risks and recommend mitigation strategies. For example, remedial sites on flood plains should be analyzed for the potential for major storm flooding and how that would impact the remedy or remaining contamination on-site. Other climate change factors to consider include extreme temperatures, increased precipitation, wind, sea level rise, and wildfires.

The following links provide an example of a DEC hazardous waste site cleanup that evaluated climate resiliency and relevant guidance provided by our federal partner which can help inform vulnerability assessments and mitigation strategies on sites in DEC's programs.

[Dzus Climate Resiliency Assessment Example](#)

[Superfund Climate Resilience | US EPA](#)

For active remedial systems, perform an assessment with the following considerations:

- Engineered caps (including asphalt and concrete caps) with drainage and erosion control components helped alleviate flooding and protected floodwater from contacting contaminated material when inundation did occur.
- Fencing, while noted as damaged at several sites, likely prevented debris from causing more significant damage to site infrastructure and clogging of drainage structures.
- Automated shut-off controls and system notifications prevented tank overflows and provided information on operating systems when sites were not accessible.
- Use of berms, dikes, and other drainage and erosion control measures prevented some sites from flooding and likely allowed quicker reduction of floodwaters where inundation occurred.
- Implementation of hazard preparedness plans including moving drums to enclosed structures, strapping tanks, controlled drawdowns of surface impoundments, controlled shutdowns of operating remedial systems and close communication with regulatory officials prevented infrastructure damage and allowed quick assessment of the sites impacted by the storms.
- Time-critical removal actions at sites where permanent remedies are not yet in place reduced the amount of contamination potentially vulnerable to release during extreme wind and flooding.
- Other site-specific considerations.

Next Steps

Keep an eye out for:

- updates to DER-10 and DER-31