Memorandum: Analysis of the Comprehensive Environmental Response, Compensation, and Liability Act

New York City's Department of Design and Construction

Town+Gown: NYC Water In and Water Out Innovative Water Research Working Group and Urban Resource Recovery Working Group

Ilya Van Nieuwenhuyse, Brooklyn Law School, Class of 2027

November 5, 2025

To: Town+Gown:NYC Water In and Water Out Innovative Water Research Working Group and Urban Resource Recovery Working Group

From: Ilya Van Nieuwenhuyse, Brooklyn Law School, Class of 2027

Re: Analysis of Comprehensive Environmental Response, Compensation, and Liability Act

---

I. Introduction

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), commonly referred to as the Superfund program, represents a landmark development in environmental law, which was enacted to address the mounting legacy of hazardous waste contamination left behind by decades of unregulated industrial activity. Through a framework of liability, remediation, and federal-state cooperation, CERCLA empowers the Environmental Protection Agency (EPA) to investigate and clean up the nation's most dangerous toxic sites, all while ultimately holding polluters financially accountable for the environmental harm caused.

CERCLA remains one of the most consequential environmental statutes governing land and water contamination in the United States. By establishing a strict, joint, and several liability scheme for Potentially Responsible Parties (PRPs), and creating mechanisms for cost recovery and emergency response, CERCLA provides a legal backbone for the remediation of thousands

of contaminated sites. Throughout the years various amendments have expanded the program's reach and reinforced the federal commitment to pollution cleanup and site reuse.

This memo focuses specifically on CERCLA's federal enforcement framework, with particular attention to implementation in New York City. While CERCLA establishes a federal standard for environmental response, certain states, including New York, have enacted more stringent cleanup laws and regulatory requirements. As such, New York often plays an active and sometimes leading role in site investigation, remedy selection, and long-term oversight.

II. Analysis of CERCLA

A. Legislative History and Purpose

The Water Pollution Control Act of 1948 (WPCA) was the first piece of federal legislation aimed at controlling water pollution. However, the WPCA heavily relied on state-level implementation and was thus limited in scope and enforcement.[1] By the 1960s, the inadequacies of the WPCA became evident, and in response to the need for increased federal intervention, Congress passed the Clean Water Act (CWA) in 1972, and the Resource Conservation and Recovery Act (RCRA) in 1976. However, while the CWA and RCRA focused on active waste management and point-source pollution, the federal government lacked the tools needed to adequately address abandoned hazardous waste sites.[2]

The American environmental movement gained significant momentum in the late 1960s and in the early 1970s, it began to spur bipartisan support for more environmentally focused legislation.[3] Furthermore, major environmental catastrophes that occurred during this period

[1] History of the Clean Water Act, *see* https://www.epa.gov/laws-regulations/history-clean-water-act
[2] History of the Superfund, *see* https://www.epa.gov/superfund/superfund-history
[3] Earth Day 1970: What it Meant, *see* https://www.epa.gov/archive/epa/aboutepa/earth-day-70-what-it-meant.html

highlighted the need for increased federal legislation. For example, between 1942 and 1953 the Hooker Chemical Company dumped over 21,000 tons of toxic chemical waste into the abandoned Love Canal and covered it with clay. However, in the 1950s, the land was sold to the Niagara Falls School Board, and a neighborhood was built directly over the buried chemicals. In 1978 a state of emergency was declared as families were evacuated from the area and the story became national news.[4] The Love Canal disaster highlighted the lack of a legal mechanism to hold polluters accountable and ultimately clean up abandoned hazardous waste sites, especially where the responsible party no longer existed or was unable to pay.

B. Adoption of CERCLA in 1980

Prior to 1980, federal laws were aimed at regulating future pollution. Thus, as a result, there was no mechanism to address past pollution or impose retroactive liability on responsible parties. Driven by mounting national concern following the Love Canal incident, Congress had bipartisan support for a new piece of gap-filling legislation to address long term contamination of soil and water. In 1980, the House introduced H.R. 7020 which favored a state-led approach with limited industry liability.[5] Conversely, the Senate's version, S. 1480, proposed federally led cleanup efforts with a joint and strict liability scheme for responsible parties.[6]

The final legislation combined the funding regime from S. 1480 with the cleanup tools from H.R. 7020.[7] Congress intended to give the federal government the capacity to respond directly to releases or threatened releases of hazardous substances whenever they posed an

---

[4] Background on the Love Canal, *see* https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.Cleanup&id=0201290#bkground
[5] H.R. 7020, *see* https://www.congress.gov/bill/96th-congress/house-bill/7020
[6] S. 1480, *see* https://www.congress.gov/bill/96th-congress/senate-bill/1480
[7] PUB. L. NO. 96-510, 94 Stat. 2767 was signed into law on Dec 11, 1980 by President Jimmy Carter

imminent danger to public health or the environment.[8] Through the executive branch, the core framework of CERCLA authorizes the federal government to identify, investigate, and clean up hazardous waste sites. The president's authority was delegated to the EPA via Executive Order 12580.[9] In pursuit of these goals, CERCLA §102(a) provides that "[t]he President shall promulgate and revise as may be appropriate… a list of hazardous substances."[10] This authority allows the president, via the EPA, to define and later revise the list of hazardous substances, without first needing Congressional approval.

As a general rule, CERCLA imposes a "polluter pays" liability scheme for PRPs. This scheme demands PRPs to either perform the cleanup effort with EPA oversight or reimburse all costs associated with the cleanup. CERCLA's §107(a)(1-4), identifies four categories of PRPs:[11]

- the owner and operator of a contaminated facility;
- past owners and operators of contaminated facilities;
- generators of hazardous substances; and
- transporters who selected the disposal site.

PRPs face strict liability for all cleanup costs incurred by the government, any necessary response costs incurred, any damage to natural resources and the costs of certain health assessments.

[8]CERCLA Overview, *See* https://www.epa.gov/superfund/superfund-cercla-overview
[9] Congress delegates specific powers to the president through legislation, and the president can further delegate these powers to specific agencies within the executive branch, *see* https://www.archives.gov/federal-register/codification/executive-order/12580.html
[10] Codified at 42 U.S.C. § 9602(a)
[11] Codified at 42 U.S.C. § 9607(a)(1–4)

Courts have interpreted CERCLA's §107 provision "any other necessary costs of response incurred by any other person" as joint and several liability.[12] Under the doctrine of joint and several liability, any PRP can be held liable for the full cost of the cleanup, regardless of how much contamination it individually caused. Courts have adopted one common law exception where liability may be apportioned if the harm is divisible and distinct portions of contamination can be attributed to specific parties.[13] Beyond that, three narrow defenses, which must be proven by a preponderance of the evidence, exist under CERCLA's §107(b)(1-3):[14]

- acts of God;[15]
- acts of war; and
- acts or omissions of unrelated third parties, where the defendant took sufficient precautions and exercised due care.

When PRPs refuse to undertake cleanup efforts, the EPA has the power to issue a legally binding Unilateral Administrative Order (UAO) under CERCLA §106(a).[16] Pursuant to CERCLA §106(b), violations of a UAO results in civil penalties of up to $25,000 per day.[17]

When PRPs are unable to pay, and a hazardous site poses an immediate threat to human health or the environment, the EPA has broad authority under CERCLA §104(a), to immediately start and finance cleanup efforts using the Hazardous Substance Superfund Trust Fund,

---

[12] *See, United States v. Chem–Dyne Corp.,* 572, F.Supp. 802 (6th Cir. 1983) and *Burlington N. and Santa Fe Ry. Co. v. United States*, 556 U.S. 599 (2009).
[13] *See U.S. v. Alcan Aluminum Corp.,* 315 F.3d 179 (2d Cir. 2003)
[14] Codified at 42 U.S.C. § 9607(b)(1-3)
[15] Definition for acts of God is codified at 42 U.S.C. § 9601(1) and means "an unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight."
[16] Codified at: 42 U.S.C. §9606(a)
[17] $59,017 adjusted for inflation in accordance with Federal Civil Penalties Inflation Adjustment Act of 2015, which requires federal agencies to adjust penalties for inflation annually

commonly referred to as the Superfund.[18] As a result, the EPA can use Superfund money without first relying on PRPs to comply. If the EPA performs the cleanup, it can sue PRPs for the total costs of remediation under CERCLA §107(a).[19] Congress directly appropriated $320 million from the U.S. Treasury to launch the Superfund program through fiscal year 1985.[20] This allowed the EPA to start tackle cleanup efforts even before a consistent revenue stream was established. Beyond this initial injection of necessary funds, Congress authorized the EPA to spend $1.6 billion through fiscal year 1985. CERCLA authorized an excise tax on domestic and imported petroleum and on chemical feedstocks as a revenue stream for the Superfund.[21] The tax was originally in effect from April 1, 1981, through September 30, 1985.

The CERCLA National Priority List (NPL) is the EPA's official list of the most hazardous contaminated sites in the United States that are eligible for long-term cleanup using Superfund resources. The NPL is authorized under CERCLA §105(a)(8)(B), which directs the EPA to establish criteria for ranking hazardous waste sites and to list those sites which present the greatest risk to human health or the environment.[22]

Pursuant to CERCLA §105, the National Contingency Plan (NCP) provides a systematic framework for identifying, investigating, and responding to the release, or the threatened release, of hazardous substances.[23] While authorized by the U.S. Code, the actual substance of the NCP is codified at 40 C.F.R. § 300 in the Federal Registry.[24] Moreover, CERCLA §105(a)(8)(A)

[18] Codified at 42 U.S.C. § 9604(a)
[19] Codified at: 42 U.S.C. § 9607(a)
[20] PUB. L. NO. 96-510, 94 STAT. 2767 authorized the appropriation of $320 million per year for fiscal years 1981–1985, totaling $1.6 billion.
[21] Codified at 26 U.S.C. § 9507
[22] Codified at 42 U.S.C. §9605(a)(8)(B)
[23] Codified at 42 U.S.C. § 9605
[24] Rules in the Federal Register are made by executive agencies pursuant to authority granted by Congress. Unlike laws codified in the U.S. code, rules can be changed by subsequent administrations without Congressional approval.

mandates that the NCP establish criteria for a Hazard Ranking System (HRS).[25] The HRS is a numerical scoring system used by EPA to assess and determine the relative risk that a hazardous waste site poses to human health and the environment.[26] Under the NCP, the law provides for two kinds of response efforts: removal actions, and remedial actions. Removal actions are limited to short-term emergency actions at sites that require immediate attention.[27]

Conversely, remedial actions refer to the physical implementation of long-term cleanup efforts at high-risk sites, usually listed on the NPL.[28] Before a contaminated site listed on the NPL can be considered for redevelopment, the site must process through a series of structured cleanup milestones. The remedial action process established under CERCLA ensures that site cleanups proceed in accordance with the NCP.[29] First, the EPA typically oversees and manages the Remedial Investigation (RI) and Feasibility Study (FS) in an attempt to develop a technical foundation for the remedy selection. Following this, the EPA formally announces a cleanup plan with a Record of Decision (ROD) to allow local governments or developers to begin planning for the site for reuse.[30] The ROD identifies cleanup objectives, chosen technologies and performance standards.[31] At the remedial design stage, the selected remedy is translated into a detailed plan, and next, either the EPA, or a PRP under EPA oversight, constructs and implements the selected remedy.[32] Finally, the EPA conducts a review every five years to ensure that long-term systems are being adequately operated and monitored.[33]

---

[25] Codified at 42 U.S.C. § 9605(a)(8)(A)
[26] Codified at 40 C.F.R. Part 300
[27] Codified at 40 C.F.R. § 300.410–300.415
[28] Codified at 42 U.S.C. § 9601(24)
[29] Codified at 40 C.F.R. § 300.435
[30] Codified at 40 C.F.R. § 300.430
[31] Codified at 42 U.S.C. § 9617
[32] Codified at 40 C.F.R. § 300.435(a-b)
[33] Codified at 42 U.S.C. § 9621(c)

C. SARA Amendments of 1986

In 1985, approximately 850 sites had been identified under CERCLA and the initial $1.6 billion authorized for the Superfund proved to be inadequate.[34] Cleanups stagnated, efforts were expensive, slow, and demand far exceeded available resources. The 1986 Superfund Amendments and Redistribution Act (SARA) was primarily enacted to address early criticisms; especially insufficient funding, inadequate enforcement, lackluster cleanup efforts, and a lack of community involvement.[35]

i. Funding

To address the insufficient available funds in the Superfund, Title I of SARA reauthorized $8.5 billion for the Superfund through fiscal year 1991. In order to provide sufficient funding for the expanded Superfund, SARA § 516 imposed an environmental tax.[36] The new environmental tax expired after December 31, 1995, and was levied against C-corporations whose modified alternative minimum taxable income exceeded $2 million per year at a 0.012% rate.

ii. Enforcement

Inadequate enforcement authority contributed to an overreliance on the Superfund Trust Fund to finance cleanups. To better hold polluters accountable, Title II of SARA allowed the EPA to issue UAOs without court approval. Refusal to comply with a UAO, without sufficient cause, resulted in treble damages under SARA §107(c)(3).[37] Treble damages are a statutory remedy which permits a court or regulatory agency to award three times the amount of actual damages

---

[34] *See* Superfund Factbook, 2d ed., at 24 (Sept. 1985), available at Nat'l Serv. Ctr. for Env'tl. Pubs., https://nepis.epa.gov/

[35] PUB. L. NO. 99-499, 100 STAT. 1613 was signed into law by President Ronald Reagan on October 17, 1986

[36] While the provision was codified at 26 U.S.C. § 59A, the tax was later repealed by PUB. L. NO.113-295, div. A, title II, §221(a)(12)(A), on Dec. 19, 2014.

[37] Codified at 42 U.S.C. § 9607(c)(3).

incurred. In order to be less reliant on the Superfund, SARA §122 granted the EPA the express authority to enter administrative or judicially approved settlements with PRPs and, enter De Minimis settlements with small-volume or low-toxicity waste contributors.[38] Moreover, despite Superfund being nearly depleted, cleanup efforts continued to stagnate. As a result, Title I introduced statutory cleanup deadlines to expedite cleanup efforts.

SARA §121(c) required that, once a site is placed on the NPL, the EPA must initiate the remedial design phase within 6 months of the ROD. Furthermore, the EPA is mandated to begin the remedial action within 12 months after the remedial design phase is completed. [39] Moreover, SARA § 122(b) authorized the use of mixed funding agreements, under which the EPA and PRPs could share the costs of remedial actions, particularly in cases involving complex liability or partial PRP settlements.[40] This enabled the EPA to move forward with remediation without having to wait for full cost recovery.

SARA also amended CERCLA §121(b) to establish a statutory preference for treatment technologies that permanently reduced or eliminated contaminants.[41] This marked a significant policy shift, emphasizing long-term and permanent remedies over temporary containment-based response efforts.

iii. *State Law Issues*

To ensure CERCLA efforts met existing local environmental standards, SARA §121(d) mandated that the federal government abide by "more stringent" state environmental law. Pursuant to SARA § 121(d)(2)(A)(ii), the EPA is required to ensure that cleanup remedies at

[38] Codified at 42 U.S.C. § 9622
[39] Codified at 42 U.S.C. § 9621(c)
[40] Codified at 42 U.S.C. § 9622(b)
[41] Codified at 42 U.S.C. § 9621(b)

Superfund sites comply with Applicable or Relevant and Appropriate Requirements (ARARs) from state environmental law, even if the state requirements are more stringent than federal standard.[42] ARARs were formally established by SARA to ensure that cleanup efforts were consistent with existing environmental laws by anchoring EPA decisions in objective, pre-existing regulatory standards. While this gave states a much stronger role in cleanup decisions, local communities lacked the technical expertise to interpret environmental data. Pursuant to SARA §117(e), Technical Assistance Grants (TAGs) were established to further help communities meaningfully participate in the cleanup of nearby Superfund sites.[43] TAGs are intended to facilitate public participation by enabling independent review.

iv. *Community Involvement*

To further increase transparency, Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA). The EPCRA is now a cornerstone of community environmental protection as it increased the state's role in cleanup decisions.[44] While the EPCRA is often treated as its own law, it supports CERCLA enforcement by enhancing chemical release reporting, improving emergency preparedness, and helping identify responsible parties. The EPCRA established a Toxic Release Inventory (TRI) to track the management of certain toxic chemicals that may pose a threat to human health and the environment. The TRI empowers communities with information on toxic substances in local areas.[45] In further pursuit of this goal, SARA recognized that the health risks posed to communities around hazardous waste sites were rarely formally studied. As a result, SARA 104(i) mandated that the EPA, in coordination with

[42] Codified at 42 U.S.C. § 9621(d)(2)(A)(ii)
[43] Codified at 42 U.S.C. § 9617(e)
[44] Codified at 42 U.S.C. §§ 11001–11050
[45] Codified at 42 U.S.C. § 11023

the Agency for Toxic Substances and Disease Registry (ATSDR), conduct public health assessments at all sites on the NPL.[46] The public health assessments are used to evaluate the extent of the contamination in relation to the particular demographics of the community. These measures created a statutory basis for integrating human health considerations into site cleanups and ensuring transparency around community risks.

D. Superfund Redevelopment Program and Ready for Reuse Determination

Even after the SARA amendments of 1986, the EPA continued to face heavy criticism that the Superfund program lacked transparency. Many sites had been listed on the NPL for years, however, there was no standardized way to show cleanup progress. In 1989 the EPA created the Construction Completion List **(**CCL) to illustrate cleanup progress, even if long-term monitoring or restoration was still underway. Once a site was listed on the CCL, it indicated to developers and local communities that it will soon be eligible for reuse or redevelopment.

The CCL distinction become especially important after the EPA launched the Superfund Redevelopment Program (SRP) in 1999.[47] The SRP, originally named the Superfund Redevelopment Initiative, established criteria to assess whether a site was ready for reuse.[48] The program helps communities return formerly contaminated Superfund sites to safe and productive uses. However, even with the SRP, the EPA lacked a formal certification tool to give developers and local governments clear, authoritative assurance that a site was safe for reuse. Three years later in 2002, the EPA announced the Ready for Reuse (RfR) program to help bridge the gap between cleanup and redevelopment.[49] The RfR program provides a technical assurance from the

[46] Codified at 42 U.S.C. § 9604(i)
[47] https://www.epa.gov/superfund-redevelopment/epa-celebrates-20-years-superfund-redevelopment
[48] https://www.epa.gov/superfund-redevelopment/superfund-redevelopment-basics
[49] https://www.epa.gov/superfund-redevelopment/ready-reuse-rfr-determinations-superfund-sites

EPA that a site is safe for specific reuse based on cleanup status and promotes the integration of reuse goals into the remedy selection process under the NCP.

E. Amendments of 2002

Congress enacted the 2002 CERCLA amendments through the Small Business Liability Relief and Brownfields Revitalization Act (Brownfields Act).[50] After previously being extended multiple times, the Brownfields Act did not reauthorize or reinstate either of the Superfund taxes, which had previously lapsed in 1995. At the time, the Office of Management and Budget (OMB) reported that even without the taxes, the Superfund revenue stream continued from interest payments, cost recoveries, and other sources. Moreover, there was mounting concern that CERCLA's strict liability structure deterred voluntary cleanups and private-sector reinvestment.

As a result, the Brownfields Act focused on limiting liability for certain parties and stimulating redevelopment at the newly defined brownfield sites. Under the original framework, small businesses and property owners with a minimal connection to contamination were being overwhelmed by CERCLA's strict liability system. Moreover, under the system of joint and several liability, small generators of waste were held equally responsible to major polluters. To address this, Title I of the Brownfields Act provided liability relief for certain small contributors:[51]

- Small *De Micromis* contributors of waste; less than 110 gallons of liquid or 200 pounds of solid hazardous substances now exempt.
- Municipal Solid Waste (MSW) generator exemption for sites listed on the NPL.
- Innocent Landowners and Contiguous Property Owners

[50] PUB. L. NO. 107-118, 115 Stat. 2356 was signed into law by President George W. Bush on January 11, 2002
[51] Codified at 42 U.S.C. § 9607(o-q)

- Bona Fide Prospective Purchasers (BFFP).[52]

Title II of the Brownfields Act created a new distinction under CERCLA §104(k) for brownfields-specific EPA actions.[53] Brownfield site means real property complicated by the potential presence of a hazardous substance, pollutant, or contaminant.[54] A brownfield site must not be the subject of a removal action, listed or proposed for listing on the NPL, or subject to a unilateral administrative order, court order, administrative order on consent, or judicial consent decree under CERCLA or related environmental laws.[55]

While brownfields grants are authorized under CERCLA, they are governed by a distinct regulatory and administrative framework. Furthermore, brownfield sites typically do not involve cost recovery actions or Superfund enforcement. The brownfield program attempts to remediate sites early enough to avoid placement on the NPL and being the subject of CERCLA liability.

F. Justice40 Initiative (2021)

The Justice40 initiative was established through Executive Order No. 14008, Tackling the Climate Crisis at Home and Abroad (EO 14008), by President Biden on January 27, 2021. EO 14008 created a non-statutory policy directive which suggested that 40 percent of the overall benefits of future federal investments flow to disadvantaged communities across the United Staes.[56] While EO 14008 is not law per se, Justice40 was implicitly and explicitly incorporated into subsequent major federal legislation and funding programs, including CERCLA. However,

---

[52] BFFPs must not have any affiliation with liable parties and must demonstrate "all appropriate inquiries" into previous ownership and uses. The “all appropriate inquiries” standard essentially equates to due diligence requirement.
[53] Codified at 42 U.S.C. § 9604(k)
[54] Codified at 42 U.S.C. § 9601(39)
[55] Codified at 42 U.S. Code §9601(39)
[56] Exec. Order No. 14,008, § 223, 86 Fed. Reg. 7619 (Jan. 27, 2021)

to the extent that the Justice40 was established through executive order, any subsequent administration could potentially rescind the executive order.[57]

G. Infrastructure Investment and Jobs Act of 2021

On November 15, 2021, during the Biden administration, Congress enacted the Infrastructure Investment and Jobs Act (IIJA). While the scope of the IIJA focuses on roads, bridges and clean energy initiatives, it also contains major environmental investment provisions which directly amend and fund programs under CERCLA.

The IIJA revived the Superfund Excise tax on chemical manufacturers which expired in 1995. The new tax doubled the previous rate, is set to expire at the end of 2031, and applies to 42 designated chemicals and certain imported chemical substances.[58] The revenues from these taxes are deposited into the Superfund for EPA-led cleanups, particularly at orphan sites with no viable PRP.[59]

Beyond the additional revenue from taxes, Congress provided a one-time injection of $3.5 billion in direct appropriations for Superfund cleanups and remediation efforts. This additional funding was primarily designed for EPA-led remedial construction at non-federal NPL sites with no viable PRPs or sites with stalled project funding. The EPA announced that the first $1 billion would be used to clear out the backlog at 49 previously unfunded Superfund construction sites. [60] Subsequent waves of funding brought new construction to 25 sites and

---

[57] President Donald Trump rescinded multiple environmental justice initiatives, including Justice40, with Exec. Order No. 14,148, 89 Fed. Reg. 46885 (January 28, 2025).
[58] Codified at 26 U.S.C. §§ 4661–4662
[59] Reinstatement of Superfund Excise Tax, *see* https://www.thetaxadviser.com/issues/2022/apr/reinstatement-superfund-excise-tax/
[60] IIJA Superfund Funding, *see* https://www.epa.gov/infrastructure/cleaning-superfund-sites-highlights-infrastructure-investment-and-jobs-act-funding

accelerated work at 85 ongoing projects.[61] Under the new framework announced by the IIJA, the EPA distributes funds to sites that are "cleanup-ready".[62]

Before the enactment of the IIJA, "cleanup ready" was used to guide performance, track reuse, and support annual budget justifications. However, under the new framework established by the IIJA, “cleanup ready” is a prerequisite for receiving Superfund supplemental funds, making it a discretionary standard for receiving federal investment. To be “cleanup ready”, a Superfund site must be listed on the CCL or be designated as Sitewide Ready for Anticipated Use (SWRAU).[63] SWRAU is not a regulatory designation and only indicates that the site is ready for reuse. This shift toward prioritizing "cleanup ready" sites as a condition for Superfund investment reflects a broader statutory emphasis on redevelopment and reuse. In parallel to this emphasis, the IIJA committed $1.5 billion in funding for through fiscal year 2026 the EPA’s Brownfields program. The IIJA dramatically expanded EPA's capacity to fund brownfields assessment, cleanup, job training, and state-level response programs.

The IIJA additionally appropriated $4 billion for state and tribal grants to address per- and polyfluoroalkyl contamination (PFAFs) under Safe Drinking Water Act (SDWA). PFAFs are a group of man-made chemicals which persist in the environment and accumulate in the body.[64] Following the enactment of the IIJA, the EPA proposed to amend the hazardous substance list to include PFAs.[65] Pursuant to CERCLA §102(a), the EPA does not need Congressional approval to

---

[61] BIL Superfund Funding, *see* https://www.epa.gov/superfund/superfund-sites-new-construction-projects-receive-bipartisan-infrastructure-law-funding
[62] Over $1 billion to Superfund Sites, *see* https://www.epa.gov/newsreleases/biden-harris-administration-announces-over-1-billion-start-new-cleanup-projects-and
[63] Performance Measures of Superfund Sites, *see* https://www.epa.gov/superfund-redevelopment/performance-measures-superfund-sites
[64] EPA factsheet on PFAFs, *see* https://19january2021snapshot.epa.gov/sites/static/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf
[65] EPA Final Rule on PFAFs, *see* https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas

amend the list of hazardous substances. While primarily regulated under the SDWA, many sites with PFAS-contaminated groundwater or surface water also fall under CERCLA jurisdiction. For example, with the Bethpage Superfund site, IIJA-funded studies confirmed larger PFAS plumes, justifying NPL designation and CERCLA enforcement.

H. Inflation Reduction Act of 2022

The Inflation Reduction Act (IRA) of 2022 was signed into law by President Biden on August 16, 2022. Although the IRA does not amend CERCLA directly, the IRA reinstated and expanded the excise tax on petroleum products to ensure the EPA had sufficient upfront capital for cleanups. The tax, which previously expired on December 31, 1995, increased from 9.7 to 16.4 cents per barrel and extended to December 31, 2032.[66] This fiscal provision restored a core element of the "polluter pays" principle, without making any substantive changes to CERCLA's statutory cleanup framework.

I. Cooperative Federalism and the Role of the States

CERCLA operates under a framework of cooperative federalism, where the federal government sets national standards for hazardous waste cleanup, while states implement those standards and facilitate the cleanup process. This cooperative framework allows states to tailor remediation strategies to local environmental conditions while maintaining consistent national protective standards. While the EPA has primary authority to identify, investigate, and ultimately remedy hazardous waste sites under CERCLA, states often lead or assist clean-up efforts. Pursuant to CERCLA §121(f), the EPA "shall provide an opportunity for the state to participate in the planning and selection of the remedial action."[67] As a result, the EPA must provide an

[66] Codified at 26 U.S.C. § 4661
[67] Codified at 42 U.S.C. § 9621(f)

opportunity for the state environmental agencies to review the ROD and participate in the selection of remedial actions at the site.

As consideration for this prominent role within CERCLA enforcement, states must financially contribute to long-term remedial actions at Superfund sites. Pursuant to CERCLA § 104(c)(3), the EPA does commence remedial action unless the state in which the release occurs first enters into a contract or Cooperative Agreement (CA) where the state is required to provide:[68]

- if the site was privately owned, then 10% of remedial action costs, but if the site is publicly owned, then 50% of remedial action costs; and
- 100% of Operation and Management costs after site completion for the period of at least ten years.

To further the framework of cooperative federalism states can set legally enforceable environmental standards which the EPA must follow when conducting cleanups. Nevertheless, when any state law conflicts with a federal law, the state law may ultimately be preempted by the supremacy clause.[69] However, pursuant to CERCLA §114(a), nothing in this statute "shall be construed or interpreted as preempting any State from imposing any additional liability or requirements with respect to the release of hazardous substances."[70] Moreover, CERCLA § 302(d) ensures that CERCLA does not override or preempt other legal obligations or remedies under federal, state, or common law.[71] The core purpose of the savings clause is to preserve the

[68] Codified at 42 U.S.C. § 9604(c)(3)
[69] U.S. CONST. ART. VI.
[70] Codified at 42 U.S.C. § 9614(a)
[71] Codified at 42 U.S.C. § 9652(d)

applicability of other environmental laws and legal rights unless CERCLA expressly states otherwise.

As a result of these provisions, states may enact additional liability regimes and impose more strict cleanup standards than those required by the EPA. Individual states implement and enforce cleanup standards within their jurisdictions, and the EPA provides guidance to ensure national consistency. Under this framework of cooperative federalism, the state is not obligated to choose the least costly remediation method. In *New York v. Green,* the court emphasized that even if less expensive remediation methods exist, as long as the state's actions are consistent with the NCP, they are presumed reasonable.[72]

III. New York Case Study

A. Role of NYS in CERCLA Enforcement

In pursuit of cooperative federalism, New York State (NYS) plays a distinct role in the implementation and enforcement of CERCLA. NYS has a statutorily recognized role under CERCLA, including site nomination, cost-sharing, oversight of remediation, and long-term operation and maintenance. Furthermore, NYS operates a parallel state Superfund which predates, supplements and, in some cases, exceeds CERCLA requirements.[73] For example, in 2020, the NYS became the first state to adopt strict enforceable MCLs for PFOA and PFOS.[74] Both the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) have the responsibility to ensure that the risks

[72] *New York v. Green*, 420 F.3d 99 (2d Cir. 2005)
[73]The NYS Superfund Program is codified at N.Y. ENVTL. CONSERV. LAW § 27-1301 ET SEQ
[74] DEC Releases Final Rule on PFAFs, *see* https://dec.ny.gov/news/press-releases/2023/3/dec-releases-final-ambient-water-quality-guidance-values-for-pfoa-pfos-and-14-dioxane

posed by inactive hazardous waste disposal sites are properly evaluated and addressed.[75] The NYSDEC is the state agency authorized to coordinate with EPA on Superfund cleanups.

While the NYSDEC has the authority to initiate non-time critical removal actions removal actions, independently of EPA.[76] NYSDEC may also perform or support EPA under federally funded Cooperative Agreements (CAs). CAs allow NYS to co-manage site investigations and use EPA removal funds under state direction.[77]

For remedial actions, the NYSDEC conducts an initial evaluation, can propose sites for inclusion on the NPL, and formally participates in the RI, FS, and the ROD. Furthermore, pursuant to CERCLA § 121(d), the EPA is required to incorporate New York's more stringent than cleanup standards. The NYSDEC frequently employs more stringent ARARs than those found at the federal level, especially in context of groundwater standards and soil cleanup objectives. Pursuant to CERCLA § 104(c)(3), for federal remedial actions at sites listed on the NPL, NYS is required to provide either 10%, or 50% of the total cost. Moreover, post construction, NYS is required to assume 100% of the cost for operation and maintenance.[78] For sites not listed on the NPL, the NYSDEC may act as the lead enforcement agency under New York State's Inactive Hazardous Waste Disposal Site Program to help identify PRPs, negotiate consent orders, and enforce long-term obligations.

---

[75] Overview of NYS Superfund Program, *see* https://www.environmental-law.net/ny-superfund-program/#:~:text=The%20New%20York%20State%20Superfund,§27-1301%20et%20seq.
[76] EPA's Guidance on Conducting non-time-critical Removal Actions under CERCLA, *see* https://semspub.epa.gov/work/HQ/175656.pdf
[77] EPA and State Cooperation at Superfund sites, *see* https://www.epa.gov/sites/default/files/2019-08/documents/epa-state-coop-mem-2019.pdf
[78] Codified at 40 C.F.R. § 300.515(f)

B. Role of NYC in CERCLA Enforcement

While CERCLA §121(f) provides that states, not municipalities, are guaranteed a formal role in remediation efforts, NYC plays a pivotal local role whenever contamination involves municipal infrastructure or populations. The NYC Department of Environmental Protection (DEP) works closely with EPA in Superfund cleanups, supplying essential environmental monitoring data, sewer system mapping, and hydrological information.[79] The DEP has been identified as a PRP for the operation of municipal wastewater systems.[80] The NYC Office of Environmental Remediation (OER) is the city's leading agency for brownfield redevelopment. OER coordinates the NYC Voluntary Cleanup Program and NYC Brownfield Incentive Grant (BIG) Program, which handles low risk contaminated sites outside the federal Superfund system.[81]

C. CERCLA in NYS; Nassau County

Nassau County is also one of the only locations in the U.S. where a high density of residential and commercial development is dependent on a sole source aquifer for drinking water. Nassau County relies on the Long Island Aquifer System, a federally designated drinking water source under the SDWA. As a sole source aquifer, the system is subject to heightened scrutiny under both the SDWA and CERCLA. The aquifer is used by 46 public water suppliers who have a total of approximately 500 wells.[82]

---

[79] For example, at the Gowanus Canal the DEP provided essential infrastructure plans to EPA. *See,* https://www.bers.nyc.gov/assets/dep/downloads/pdf/environmental-reviews/gowanus-canal-cso-facilities-project/gowanus-cso-statement-findings.pdf

[80] DEP listed as a PRP for Newtown Creek Superfund site. *See* https://semspub.epa.gov/work/02/528368.pdf

[81] Pursuant to Local Law No. 27 of 2009 and Charter § 15(e)(5), OER manages financially supported municipal brownfield cleanup and redevelopment efforts. *See* https://nycadmincode.readthedocs.io/t24

[82] Nassau Public Water Supply, *see* https://www.nassaucountyny.gov/2970/Public-Water-Supply

Currently, the groundwater which services the aquifer in Nassau County contains nitrates, volatile organic chemicals (VOCs) and chloride concentrations in excess of the regulated MCLs. Moreover, the discovery of 1,4-dioxane and PFAFs requires new treatment systems to comply with both state and federal MCLs for emerging contaminants. Additionally, saltwater intrusion, particularly along the northern and southern coastal areas of Nassau County has resulted in chloride concentrations exceeding 5,000 mg/L.[83] The Nassau County case study is particularly relevant to NYC as, though CERCLA, there may be a way to leverage federal funds.

i. The Old Bethpage Landfill Site

The Old Bethpage Landfill Site operated as a municipal solid waste landfill that later expanded to accept sewage sludge and incinerator ash between 1958–86 in the Town of Oyster Bay.[84] In 1986, the NYSDEC placed the site on the New York State Inactive Hazardous Waste Disposal Site Registry. Following this, the EPA and NYSDEC conducted a RI and FS in 1987, with a ROD issued in March of 1988.[85] The Municipal Delegation Agreement was signed by the Town in April 2000. By 2002, the NYSDEC completed landfill capping. [86] The site was officially listed on the EPA's CCL and now is subject to ongoing operation and maintenance.[87] The Old

[83] Groundwater Sustainability of the Long Island Aquifer System, *see* https://www.usgs.gov/centers/new-york-water-science-center/science/groundwater-sustainability-long-island-aquifer-system
[84] Background of Old Bethpage Landfill, *see* https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0201951
[85] EPA, Record of Decision: Old Bethpage Landfill, EPA ID No. NYD980531727, Operable Unit 01, Oyster Bay, N.Y. (Mar. 17, 1988), *see also* https://extapps.dec.ny.gov/data/DecDocs/130001/ROD.HW.130001.1988-03-17.ROD.pdf
[86] DEC remediation Database, s*ee* https://appfactory.dec.ny.gov/DERExternalSearch/ERDDetails?SiteName=Old%20Bethpage&County=All%20Counties&City=&Position=0&CameFromList=true&EngineeringControls=All&InstitutionalControls=All&Region=All%20Regions&ControlType3=All&Street=&Program=All%20Programs&SiteClass=All%20Classes&SiteCode=130001%20%20
[87] EPA CCL, *see* https://www.epa.gov/superfund/construction-completions-npl-sites-state

Bethpage Landfill site is still listed on the NPL, and as such, remains subject to O&M, and ongoing monitoring through five-year reviews.[88]

ii. Bethpage Groundwater Plume

The Bethpage groundwater plume originated from operations by Northrop Grumman and the U.S. Navy from the 1930s through the 1990s under both federal and commercial contracts.[89] The facilities were permitted hazardous waste facilities under RCRA. Under the RCRA, facilities that treat, store, or dispose of hazardous wastes are subject to corrective action authority. As a result, the EPA retains enforcement under RCRA, not CERCLA, and thus the site was never proposed for the NPL, a prerequisite for Superfund eligibility. [90] While the site is not listed on the NPL, the NYSDEC designated the site under the state Superfund program as a class 2 site which poses a "significant threat to public health or the environment" requiring remedial action. The NYSDEC, rather than the EPA conducted the RI, FS, issued the ROD and actively manages the cleanup with cooperation from Northrop Gruman and the U.S. Navy.[91]

iii. Relevance to NYC

The NYSDOH and NYSDEC conducted a feasibility study to determine if NYC supplement Nassau County's water supply. The feasibility study identified two different approaches, a small- and large-scale approach. The low bookend approach attempts to revitalize

[88] EPA's Fifth Five-Year-Review of the Old Bethpage Landfill Superfund Site, published June 2022, *see* https://oysterbaytown.com/wp-content/uploads/Old-Bethpage-Landfill-FYR-Public-Notice-2022_Final.pdf
[89] Background of Bethpage Groundwater Plume, *see* https://www.epa.gov/hwcorrectiveactioncleanups/hazardous-waste-cleanup-naval-weapons-industrial-reserve-plant-and
[90] Naval Weapons Industrial Reserve Plant Bethpage, *see* https://www.navfac.navy.mil/Divisions/Environmental/Products-and-Services/Environmental-Restoration/Mid-Atlantic/Bethpage-NWIRP/Site-Descriptions
[91] N.Y. STATE DEP'T OF ENVTL. CONSERVATION, Record of Decision: Northrop Grumman – Bethpage Facility, Operable Unit 03, State Superfund Project, Bethpage, Nassau Cnty., Site No. 130003A (Mar. 2013), *see also* https://extapps.dec.ny.gov/docs/remediation_hudson_pdf/130003ou3rod.pdf

existing inactive interconnections to convey 20 million gallons per day (MGD) from NYC to Nassau County. The capital cost would be between $35 million and $53 million with estimated completion in two to five years. However, currently NYC has a surplus of 200 MGD in excess of the city's demand. The High bookend approach attempts to leverage this excess water supply and convey up to 180 MGD with mostly new infrastructure. While NYC has a current surplus of 200 MGD, projections indicate this surplus could be eliminated by 2040. The plan calls for NYC to install new wells, upgrade underground piping in residential areas and establish onsite treatment facilities. [92]

Pursuant to CERCLA § 104(c)(11)(A), when a feasibility study contains a finding that the exposure concerned presents a significant risk to human health, the EPA shall take the necessary steps to reduce such exposure and mitigate the risk to human health, where such steps may include the provision of alternative water supplies.[93] This provision provides a statutory basis for the NYCDEC to leverage funds for the construction of permanent water connections, linking Nassau County to the NYC water system.

D. CERCLA Sites in NYC

Given NYC's dense urban environment and long-standing industrial history, several sites have been designated on the NPL and are thus subject to EPA enforcement authority under CERCLA. In addition to legacy contamination, Combined Sewer Overflows (CSOs), common throughout the city's aging infrastructure, present an ongoing regulatory intersection between the CWA and CERCLA.[94] During periods of heavy rainfall, CSOs potentially discharge untreated

[92] New York City-Nassau County Water Supply Interconnection Feasibility Study, NEW YORK STATE DEPT' OF HEALTH, August, 2022
[93] Codified at 42 U.S. Code § 9604(c)(11)(A)
[94] CSO Regulatory Intersection Between CWA and CERCLA, *see* https://semspub.epa.gov/work/HQ/174466.pdf

sewage and industrial pollutants, including hazardous substances which fall under CERCLA, into surrounding waterways and sediments. [95] As a result, enforcement at NYC Superfund sites requires coordinated remediation strategies that address both legacy contamination and the ongoing effects of combined sewer systems. Currently, four major Superfund sites are located within the city: Gowanus Canal, Newtown Creek, the Wolff-Alport Chemical Site, and the Meeker Avenue Plume.

i. *Gowanus Canal*

Located in Brooklyn, the Gowanus Canal was constructed in the middle of the 19th century as a major industrial transportation route, and parties who relied on the canal systematically discharged various contaminants. Although these industries are no longer present in the area, during storm events, contamination flows into the canal from CSOs that carry sanitary waste and rainwater. As a result, the Gowanus Canal is one of the nation's most contaminated water bodies. Contaminants include polycyclic aromatic hydrocarbons, polychlorinated biphenyls and heavy metals such as mercury, lead and copper. [96]

While NYS conducted the preliminary investigation, the EPA determined that state funding and authority were insufficient to execute the necessary remediation. Moreover, the site's multi-party liability warranted federal intervention to compel compliance from over thirty PRPs. Accordingly, the Gowanus Canal was formally added to the NPL in March 2010.[97] The EPA finalized the ROD in September 2013, selecting a remedy which required dredging of approximately 307,000 cubic yards of contaminated sediment, installing multilayer capping, and

[95] EPA Description of the CSO Program, *see* https://www.epa.gov/npdes/combined-sewer-overflow-basics
[96] Background of Gowanus Canal Superfund Site, *see* https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.cleanup&id=0206222
[97] EPA Lists Gowanus Canal on NPL, *see* https://www.periconi.com/blog/2010/03/epa-lists-gowanus-canal-on-the-national-priorities-list/#:~:text=On%20March%202%2C%202010%2C%20the,to%20clean%20up%20the%20site.

implementing CSO controls.[98] As a part of the final agreement, NYC waived its ability to challenge EPA's requirements in the cleanup plan when building two CSO tanks. In 2014, EPA issued a UAO to the PRP group to perform remedial design work. In March 2021, the EPA issues an additional UAO which required the city to implement the CSO controls specified in the ROD.[99] That UAO further noted that the CSO cleanup implementation was delayed to substantial noncompliance by NYC which the EPA is actively seeking to resolve.

Following EPA's approval of its remedial design for dredging and capping at the Gowanus Canal Superfund Site, the project secured supplemental funding through IIJA. As a result, the EPA's remedy incorporated various green infrastructure elements, such as bioswales, wetlands, and raingardens to manage stormwater runoff and minimize the risk of recontamination. The cleanup effort is estimated to cost over $1 billion, which is funded by a combination of settlements from PRPs and additional IIJA grants. Notably, a $25 million interest-free loan will fund a critical stormwater and resiliency initiative tied to the broader Superfund remedy. [100]

ii. *Newtown Creek*

Newtown Creek, which forms part of the boundary between Brooklyn and Queens, is a tributary of the East River and has historically served as one of the most industrialized corridors in NYC. Over fifty industrial operations, including oil refineries, petrochemical plants, sawmills, and coal yards, were located along its banks. Today, a mix of privately owned industrial facilities,

---

[98] EPA Finalizes Cleanup Plan for Gowanus Canal Superfund Site, *see* www.epa.gov/archive/epapages/newsroom_archive/newsreleases/b1cf5011d9857ea585257bf6005286d5.html

[99] EPA UAOs for Remedial Design at the Gowanus Canal, *see* https://www.epa.gov/enforcement/case-summary-epa-issues-two-orders-remedial-design-work-gowanus-canal-site-new-york

[100] $200 Million to Make Local Water Infrastructure Projects Affordable Across New York State, *see* https://www.governor.ny.gov/news/governor-hochul-announces-nearly-200-million-make-local-water-infrastructure-projects

along with municipal infrastructure, continues to occupy the creek surrounding area. In addition to direct discharges, multiple upland contaminated sites have contributed to the degradation of the creek. Widespread contamination has been documented in sediments, surface water, and groundwater, including hazardous substances such as polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), heavy metals, and pollutants from CSOs. [101]

As a result of the severity and complexity of these environmental impacts, the EPA formally added Newtown Creek to the NPL in September 2009.[102] As with Gowanus, the site presented a multi-party liability structure that necessitated federal enforcement under CERCLA. In 2011, EPA issued UAOs under CERCLA § 106(a) to compel the performance of a RI and FS of the site, which remains ongoing. Furthermore, Newton Creek's substantial CSO burden continues to complicate source control assessments and is anticipated to be a central consideration in future remedy selection and enforcement.[103]

Although EPA has not yet issued a ROD for the site, NYC has implemented significant green infrastructure projects in the Newtown Creek watershed under its broader stormwater management initiatives. Most notably, the NYCDEP has overseen the installation of approximately 550 bioswales across 525 acres in the tributary area, which are designed to intercept and absorb stormwater before it enters the combined sewer system.[104] These efforts

---

[101] Background of Newton Creek Superfund site, *see* https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.Cleanup&id=0206282#bkground

[102] EPA's Final Decision on Newton Creek, *see* https://www.epa.gov/archive/epapages/newsroom_archive/newsreleases/2396919b9ba01909852577ab00624103.html#:~:text="The%20toxic%20pollution%20in%20Newtown,the%20contamination%20in%20the%20creek.

[103] In the proposed plan for Newton Creek, EPA emphasized additional CSO-related control measures will be evaluated in future decision documents if monitoring indicates that CSO discharges are impeding attainment of the Remedial Action, *see* https://semspub.epa.gov/work/02/562695.pdf

[104] Green Infrastructure at Newtown Creek, *see* https://www.mottmac.com/en/projects/green-infrastructure-at-newtown-creek

help reduce CSOs and improve local water quality but were undertaken pursuant to CWA based Long-Term Control Plans and not through CERCLA enforcement mechanisms.

iii. *Wolff-Alport Chemical Superfund Site*

The Wolff-Alport Chemical Company was located in in Ridgewood, Queens. From the early 1920s until 1954, the Wolff-Alport Chemical Company imported monazite sand and extracted rare earth metals onsite.[105] Until 1947, the Wolff-Alport Chemical Company dumped the thorium waste in the sewer and possibly buried the waste on the property.[106] The facility operated without proper disposal controls, resulting in the widespread release of thorium and uranium byproducts, which now contaminate the soils, building materials, groundwater, and sewers. EPA investigations confirm that contamination still exists on the property and around the sewer lines downstream of the former facility.

The Wolff-Alport Chemical Superfund Site covers approximately 0.75 acres and was added to the NPL in September 2014. EPA initially undertook time-critical removal actions under CERCLA § 104, including the demolition of contaminated buildings and the installation of shielding and ventilation systems. NYC agreed to remediate radioactive materials on New York City-owned property located near the former Wolff-Alport Chemical Company facility, and to pay the United States $1.6 million for costs incurred by the EPA.[107] While a ROD has not been issued, the site is classified as a high-priority radiological which justifies direct EPA involvement

[105] Monazite is a phosphate mineral which contains thorium and uranium, *see* https://www.britannica.com/science/monazite
[106] Background of Wolff-Alport Chemical Superfund Site, *see* https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.Cleanup&id=0206479#bkground
[107] City of New York Agrees to Clean Up Radioactive Materials at Wolff-Alport Chemical Company facility, *see* www.justice.gov/usao-edny/pr/city-new-york-agrees-clean-radioactive-materials-city-owned-property-queens-new-york

and federal funding.[108] The site is currently in the remedial investigation phase, with sampling, risk assessments, and land use reviews ongoing.

iv. *Meeker Avenue Plume*

The Meeker Avenue Plume is located in Greenpoint and East Williamsburg neighborhoods of Brooklyn. The area surrounding Meeker Avenue was historically home to dry cleaners, metal degreasers, machine shops, and manufacturing facilities which improperly disposed of various chemicals. As a result, the soil, soil gas and groundwater at the Meeker Avenue Plume site are contaminated with chlorinated volatile organic compounds.[109] While the EPA has not taken any enforcement actions at this site, the NYSDEC has been investigating the site since 2007. The NYSDEC identified several sources of the subsurface contamination and properties that pose a significant threat to human health and the environment. During their investigation, the NYSDEC installed over 25 sub-slab depressurization systems, otherwise known as mitigation systems, to reduce the impacts of vapor intrusion to residential and commercial buildings.[110]

The Meeker Avenue Plume site was formally listed on the NPL in March 2022 after the EPA determined that federal enforcement authority under CERCLA was necessary due to the scale of the contamination, the absence of voluntary cleanup by responsible parties, and the ongoing threat to human health. Now that the site has been adde d to NPL, the EPA is fully investigating the extent of contamination and will work towards cleaning up the contaminated

[108] EPA Fact Sheet on Wolff-Alport Chemical Company Superfund site, *see* https://semspub.epa.gov/work/02/591243.pdf
[109] Background of Meek Avenue Plume, *see* https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.Cleanup&id=0203407#bkground
[110] U.S. Envtl. Prot. Agency, Proposed Plan: Meeker Avenue Plume Superfund Site, Brooklyn, N.Y. (Apr. 16, 2024), *see also* https://semspub.epa.gov/work/02/704738.pdf

plume. In the spring of 2023, the EPA began a remedial investigation with the U.S. Army Corps of Engineers, building on what had already been completed by the NYSDEC. [111]

[111] Meeker Avenue Plume Superfund Site, *see* https://northbrooklynneighbors.org/project/meeker-avenue-plume-superfund-site

IV. Definitions

- **ARARs** means "Applicable or Relevant and Appropriate Requirements"
- **Brownfields Act** means "Small Business Liability Relief and Brownfields Revitalization Act of 2002"
- **CCL** means "Construction Completion List"
- **CSOs** means "Combined Sewer Overflows"
- **CWA** means "Clean Water Act of 1972"
- **EPCRA** means "Emergency Planning and Community Right-to-Know Act"
- **EPA** means "Environmental Protection Agency"
- **FS** means "Feasibility Study"
- **HRS** means "Hazard Ranking System"
- **IRA** means "Inflation Reduction Act of 2022"
- **IIJA** means "Infrastructure Investment and Jobs Act of 2021"
- **MCL** means "Maximum Contaminant Levels"
- **NCP** means "National Contingency Plan"
- **NYC** means "New York City"
- **NYCDEP** means "New York City Department of Environmental Protection"
- **NYS** means "New York State"
- **NYSDEC** means "New York State Department of Environmental Conservation"
- **NYSDOH** means "New York State Department of Health"
- **NPL** "National Priority List"
- **OMB** means "Office of Management and Budget"
- **PRP** means "Potentially Responsible Parties"

- **RfR** means “Ready for Reuse”
- **RI** means “Remedial Investigation”
- **ROD** means “Record of Decision”
- **RCRA** means “Resource Conservation and Recovery Act of 1976”
- **SARA** means “Superfund Amendments and Redistribution Act of 1985”
- **SDWA** means “Safe Drinking Water Act of 1974”
- **SRP** means “Superfund Redevelopment Program”
- **SWRAU** means “Sitewide Ready for Anticipated Use”
- **TAG** means “Technical Assistance Grant”
- **UAO** means “Unilateral Administrative Order”
- **WPCA** means “Federal Water Pollution Control Act of 1948”