

U.S. EPA's Petroleum Brownfields Action Plan: Promoting Revitalization And Sustainability



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The nation's approach to assessing, cleaning up, and reusing brownfields has evolved dramatically since the emergence of EPA and state brownfields programs. The cleanup and subsequent redevelopment of brownfields have had significant positive impacts on their surrounding communities, including enhancing local economies, increasing property values, generating new jobs, and creating new commercial, residential, and recreational space on sites once viewed as liabilities.

While there are countless success stories of brownfields that were transformed into new assets, brownfields with petroleum contamination present unique challenges. Typically small and widely dispersed throughout communities, abandoned gas stations and other petroleum-impacted properties often require tailored approaches to overcome the economic and environmental conditions that limit their cleanup and subsequent revitalization. (Note that where this document uses the term "redevelopment" or "revitalization," it is referring to the ensuing redevelopment and revitalization of brownfields sites that EPA hopes will result from their assessment and cleanup.)

Although there are an estimated 200,000 brownfields across the U.S. with petroleum contamination issues, it has only been within the last six years that these properties were considered eligible to address under EPA's Brownfields program. Since that time, the program has provided a number of resources that specifically target petroleum-contaminated brownfields. However, EPA and its stakeholders recognize that the program's approach to petroleum brownfields can be further honed and enhanced to provide even greater assistance in reclaiming these sites.

Toward this goal, EPA has begun to collaborate across all levels of government and with private industry to develop a new Petroleum Brownfields Action Plan—one that improves stakeholder communications; expands technical assistance to states, tribes, and local governments; explores potential policy changes; and builds upon existing successes by expanding partnerships. Such actions can serve to revitalize petroleum brownfields through new, innovative approaches and to promote sustainability through efficient resource use, waste reduction, and a longer-term perspective on site and community benefits.

This document includes background on EPA's petroleum brownfields efforts and details the Agency's new action plan for enhancing its approach to petroleum-contaminated sites. The plan draws on the perspectives of many stakeholders, including local governments, the private sector, states, non-profit organizations, and EPA staff from headquarters and Regional offices. The plan reflects EPA's commitment to take actions that are within its existing statutory authorities to support petroleum brownfields cleanup and revitalization. As a key first step in building on EPA's existing petroleum brownfields successes and the lessons learned to date, this action plan provides a framework for a series of specific actions, new tools, and expanded partnership efforts that will be launched and take shape over the next three years.

Background On EPA's Petroleum Brownfields Program

In 2002, the Small Business Liability Relief and Brownfields Revitalization Act ("Brownfields Law") was enacted. Among its benefits, the Brownfields Law acknowledged the significance of petroleum-contaminated properties within the Brownfields universe—not only making such sites eligible for the EPA Brownfields program for the first time but requiring that 25 percent of the funds appropriated to EPA for activities authorized under CERCLA 104(k) be used to characterize, assess, and remediate petroleum brownfields.

Soon after the Brownfields Law's passage, EPA commissioned a report to identify areas for expansion and improvement of state, tribal, and local efforts to address petroleum contamination at brownfields sites. EPA considered the resulting report titled *Recycling America's Gas Stations* in developing its own petroleum brownfields program.

The EPA petroleum brownfields program is jointly managed by two EPA offices: the Office of Brownfields and Land Revitalization (OBLR), which has overseen the Brownfields program since its inception, and the Office of Underground Storage Tanks (OUST), which promotes the cleanup of leaking underground storage tank (LUST) sites. OUST had already contributed to the Brownfields program through the USTfields Initiative, which funded 50 pilot projects in communities across the country seeking to clean up LUST sites. OUST also brought its wealth of existing partnerships to the table, including those with other EPA offices, state and local governments, and local community development organizations and non-profits.

The program established and developed by these two EPA offices, in partnership with state programs, has been an invaluable resource for states and local governments in the assessment, cleanup, and reuse of petroleum-affected brownfields. During the 2003-2007 grant cycles, EPA received more than 800 applications for petroleum brownfields project grants and awarded 390 of them. These projects increased the knowledge and familiarity with petroleum brownfields, developed improved approaches, and provided lessons learned that many states and local governments have used to develop their own petroleum brownfields programs.

Most recently, the Brownfields office is supporting sustainable activities by providing technical assistance support for 16 sustainability pilots to demonstrate best practices that can be used by communities across the country. Three of the 16 pilot projects relate to redeveloping former gas stations and are incorporating sustainable features such as energy efficiency, stormwater management, green building design, and the reuse and recycling of materials into the planning associated with the cleanup and site preparation of these sites.

The Challenges Ahead

Even with the successes enabled through the petroleum brownfields program and the program's own evolution and experience, many barriers remain to the cleanup and redevelopment of these sites. The small site size, which may impact the site's marketability, liability concerns associated with site redevelopment, and the unique assessment and cleanup approaches for petroleum contamination are continuing challenges for the future success of the revitalization of these sites. At a program level, the challenge remains that the opportunities offered by the petroleum brownfields program may not be well communicated to those that could use the resources. The unique attributes associated with petroleum contamination can seem overwhelming to local and tribal governments because they require specific technical expertise. Some of the program's

existing policies and procedures could be re-evaluated to relieve funding and site eligibility constraints. And there remain many untapped partnerships at the federal, state, and local levels as well as with tribal governments and the private sector that could provide valuable assistance and additional resources if successfully formed.

Revitalizing Sites And Promoting Sustainability

Redeveloping petroleum brownfield sites will not only revitalize properties to foster greater social and/or economic use but can also model how sustainability can take root in communities today. In meeting current needs without compromising the ability for future generations to meet their needs, sustainable development ushers in a new age for public and private organizations to be better stewards of the environment and promote positive economic growth and social objectives. These challenges can be overcome, and this plan begins to articulate a path towards smarter use of land and resources both now and for the future.

Strategic Initiatives And Actions

This section presents the four strategic initiatives of EPA's Petroleum Brownfields Action Plan:

- Bolster communication and outreach to petroleum brownfields stakeholders;
- Provide targeted support to state, tribal, and local governments;
- Explore and evaluate policies to facilitate increased petroleum brownfields site revitalization; and
- Forge partnerships to promote investment in and the sustainable reuse of petroleum brownfields.

Each of these initiatives is described and then followed by recommended EPA actions to help achieve their respective goals.

INITIATIVE 1 – Bolster Communication And Outreach To Petroleum Brownfields Stakeholders

While the general Brownfields program has achieved increased recognition, petroleum-related program elements are not as widely known across stakeholder groups. Communities may not be aware of the resources available to address these types of properties. Developing and implementing a targeted communication and outreach action plan for the petroleum brownfields program will increase awareness of assistance, tools, and resources available through EPA. This approach will build on the existing coordination among OUST and OBLR and other EPA offices relevant to petroleum brownfields revitalization and state, tribal, and local governments and community-based organizations. More specifically, this plan includes the following actions to increase awareness of the petroleum brownfields program and the resources to address petroleum sites:

ACTION 1.1: Define and communicate the objectives of the petroleum brownfields program. EPA will clarify the specific objectives for the petroleum brownfields program and establish the mechanisms to convey these objectives to enhance the cleanup and subsequent revitalization of petroleum-contaminated sites. The resulting communication and outreach materials could include brochures, fact sheets, reports, Web site content, success stories, and newsletters. Tailored toward specific target audiences (e.g., states, tribes, localities, investors, small business), these products will raise awareness of the program's objectives and the resources available to stakeholders for petroleum-contaminated brownfields.

ACTION 1.2: Consolidate the resources and tools available to promote the assessment, cleanup, and sustainable reuse of petroleum brownfields and develop an online clearinghouse. EPA will identify and organize the vast array of resources and tools available to promote petroleum-contaminated site cleanup and reuse. Consolidating these resources into a comprehensive Web site—often referred to as a “clearinghouse”—will promote broader use of the tools and resources that support petroleum brownfields. Resources listed in the clearinghouse will include those found across EPA programs as well as those available through other federal agencies, local, tribal, and state governments, and the non-profit and private sectors. Such resources and tools can be found in a variety of

programs addressing underground storage tanks, brownfields, voluntary cleanups, and other remediation and/or revitalization activities. Consolidating resources into a central location will also make it easier for EPA to identify the need for new tools and resources that may be of value to petroleum brownfields stakeholders.

ACTION 1.3: *Prepare a petroleum brownfields redevelopment options catalogue.* EPA will identify multiple redevelopment options for petroleum brownfields and develop a resource catalogue to showcase these potential reuses. The catalogue will describe examples of successful redevelopment on former petroleum-affected brownfields, including sustainable or “green” cleanup and reuse strategies. The catalogue will include details on public and private financing strategies used for interim and permanent redevelopment options. The catalogue will allow stakeholders to determine the most beneficial and feasible reuses for petroleum-contaminated brownfields in their communities.

ACTION 1.4: *Explore and promote a recognition program.* EPA will explore and promote an external awards program to recognize outstanding efforts in the cleanup and subsequent redevelopment of petroleum brownfields. The recognition program would showcase state, local government, and private partnerships and highlight transformational results. EPA will identify the criteria for creating such an awards program and explore co-sponsorship opportunities with outside organizations.

INITIATIVE 2 – Provide Targeted Support To State, Tribal, And Local Governments

Petroleum-affected brownfields present unique challenges for local, tribal, and state redevelopment programs. Many of these sites are small (e.g., abandoned gas stations) and are dispersed widely throughout communities and geographic regions. The unique challenges of petroleum contamination make it difficult for local, tribal, and state governments to assemble resources and deploy the technical expertise needed to assess, clean up, and redevelop these properties. By developing targeted tools and offering technical assistance, EPA can help enhance cross-program interactions within state, tribal, and local governments in their efforts to revitalize petroleum sites and promote sustainability. Collaboration with local entities will also help EPA to better understand the nature and extent of petroleum brownfields implementation concerns. In addition, EPA recognizes specifically the roles and responsibilities of state tank programs and will continue to work together to meet changing needs and growing opportunities. To meet the needs of state, tribal, and local governments, this plan includes the following actions:

ACTION 2.1: *More clearly identify the Regional EPA representative who will serve as a point of contact within the Agency as well as to outside stakeholders.* The Agency will establish a single EPA point of contact within each of its ten Regions who will assist stakeholders by connecting them with the appropriate experts and resources available to help overcome obstacles to the cleanup and redevelopment of petroleum brownfields.

ACTION 2.2: *Explore opportunities under EPA’s Technical Assistance to Brownfields (TAB) grants and associated consulting teams to assist local and Regional petroleum brownfields efforts.* EPA will seek to encourage TAB grantees and consulting support teams to make their services available to local petroleum brownfields revitalization projects that face unique challenges. These grants and their associated technical assistance teams can help to inventory petroleum sites, conduct site-specific and area-wide outreach activities, identify reuse strategies, plan for remediation, and assist in property

transfers. In this way, TAB grants and assistance will help local projects overcome some of the most common obstacles to successful site reuse.

ACTION 2.3: Assist state, tribal, and local governments in developing voluntary inventories of petroleum brownfields. EPA will develop a Best Practices Guide to assist communities that want to develop petroleum brownfields inventories. Drawing on experience from successful inventory projects, EPA will highlight guidance on how to balance property ownership interests with the needs of communities and end-users of petroleum brownfields. In particular, the ability to identify these sites within the context of surrounding land uses will enhance coordination between brownfields initiatives and ongoing community redevelopment efforts. The Best Practices Guide will provide practical tools and advice for building site inventories and should be valuable for stakeholders at both the state and local levels as well as for tribal governments.

ACTION 2.4: Provide technical support for geographic initiatives. EPA will pursue a geographic initiative pilot project to replicate the success of other pilots undertaken by Regions and states (e.g. Route 66, Historic Highway, Colorado Byways). These geographic initiatives will include “corridors” that could highlight targeted economic development areas, enterprise zones, environmental justice, and other areas of special focus that provide opportunities to enhance the revitalization of petroleum brownfields. EPA will provide technical assistance to help with site identification, assessment, cleanup, redevelopment planning, community outreach, or other needs identified by the communities and organizations impacted by these sites.

INITIATIVE 3 – Explore And Evaluate Policies To Facilitate Increased Petroleum Brownfields Site Revitalization

The 2002 Brownfields Law provided significant opportunities to local, state, tribal, and federal governments to focus on sites that have been community eyesores for years. The Brownfields Law brought a renewed emphasis and resources to petroleum brownfields, and many communities have successfully used Brownfields assessment and cleanup grants on petroleum sites.

EPA now has six years of experience implementing the Brownfields Law, and many of the contributors to this action plan suggested that EPA explore and evaluate new policies that will expedite the cleanup and redevelopment of petroleum brownfields. The petroleum brownfields program will benefit from a review of several EPA policies to determine how the program’s resources are improving or impeding petroleum brownfields revitalization. This review is particularly important given the distinctions between petroleum brownfields and traditional brownfields. To ensure the effectiveness of its petroleum brownfields policies and resources, this plan includes the following actions:

ACTION 3.1: Maximize grant flexibility and effectiveness. To the extent consistent with statutory requirements, EPA will explore new and innovative ways to reduce the burden on petroleum grant applicants. The current eligibility criteria for petroleum grants, found in section 101(39)(D) of CERCLA, present challenges for applicants. These criteria require applicants to work with their state and EPA Regional staffs to verify that a site is “relatively low risk” and that “there is no viable responsible party.” These criteria require risk levels to be compared with other petroleum-contaminated sites and require the grant applicant and state staff to investigate a site’s ownership history and potentially responsible parties.

These requirements can be particularly complex and burdensome for both applicants and states.

ACTION 3.2: Seek burden reduction in the administration of the 25 percent set-aside for petroleum brownfields grants. The Brownfields Law requires that 25 percent of annually appropriated funds to EPA for activities authorized under CERCLA 104(k) be used to characterize, assess, and remediate petroleum-contaminated sites. The set-aside is intended to boost petroleum cleanups. For implementation, EPA established a two-track process (hazardous substances and petroleum) for applying, awarding, and tracking Brownfields grants. The current process has created some administrative burdens to both applicants and EPA, including creating paperwork burdens and requiring difficult judgments when a site contains both petroleum and hazardous substance contamination. Under this action plan, EPA will explore options for carrying out the 25 percent petroleum set-aside in a manner that minimizes administrative and paperwork burdens and provides greater flexibility at sites where there is both petroleum and non-petroleum contamination.

ACTION 3.3: Explore implementation of a multi-purpose grant for Brownfields. EPA Brownfields grants could better fulfill the needs of the smaller petroleum brownfields sites if the grants allowed for activities ranging from assessment to cleanup and allowed multiple substances to be addressed. This would streamline the process and make petroleum sites more viable as cleanup and revitalization projects. A multi-purpose grant would help to break down barriers between the hazardous substances and petroleum programs and provide an applicant with more flexibility in managing projects. However, due to differing statutory eligibility and cost share requirements for assessment and cleanup grants as well as the need to account separately for expenditures at petroleum and hazardous substance sites, this effort will pose significant challenges for the Agency.

INITIATIVE 4 – Forge Partnerships To Promote Investment In And The Sustainable Reuse Of Petroleum Brownfields

The challenges of accelerating and expanding the cleanup and revitalization of petroleum brownfields require collaboration; new and strengthened partnerships; and the creation of new approaches and models for the assessment, cleanup, and sustainable reuse of petroleum properties. Such collaboration certainly involves coordination among governments at the federal, state, tribal and local levels and across tank remediation, brownfields, revitalization, and economic development programs.

Partnerships should include governments, private companies, and developers. Such partnerships could promote the coordination of regulatory programs, the streamlining of administrative procedures, and a multi-stakeholder examination of cleanup solutions and risk sharing. In addition, public-private partnerships could pursue more "public interest" development and realize, for example, the development of a community police station or a medical clinic as additional end-use possibilities for abandoned gas station sites.

The nature of petroleum brownfields suggests that there are opportunities for unique partnerships to further the success of the cleanup and redevelopment activities at these sites. By forging new partnerships and testing new approaches, EPA can expand its partnership circle and establish even more effective models for petroleum brownfields revitalization. This plan includes the following actions to forge partnerships and promote investment in petroleum brownfields:

ACTION 4.1: Promote sustainability and sustainable practices at petroleum brownfields. EPA will explore opportunities to promote sustainability through its petroleum brownfields program. Such promotion includes the support of sustainability pilots begun by the Agency's Brownfields office; the investigation of pilot programs to extend geographic, multi-site approaches (discussed under Action 2.4) towards sustainable objectives; and the identification of ER3 pilot projects (discussed below under Action 4.5). Such attention will strengthen existing partnerships and initiatives between OUST and the EPA Smart Growth and Green Building programs. The Agency will also explore opportunities to promote "green gas stations" that are both energy efficient and environmentally friendly and the siting of renewable energy production or distribution operations such as biofuels service stations and hybrid or electric vehicle recharging centers. Finally, EPA will consult with its stakeholders and develop additional tools, resources, and partnerships that encourage sustainable practices (e.g., green development, long-term stewardship).

ACTION 4.2: Launch and support the "Petroleum Brownfields to Open Space Projects" program. Supporting Petroleum Brownfields to Open Space Projects would involve several unique partnerships, including those with oil distribution companies, non-profit wildlife entities, and environmental preservation organizations. In an effort to further reuse opportunities, this action would promote the use of green space or wildlife habitat. EPA will seek to collaborate with wildlife habitat organizations, state regulators, and others to promote and support the transformation of petroleum brownfields into small neighborhood pocket parks and wildlife habitat preserves.

ACTION 4.3: Support the reuse of petroleum brownfields by small business owners. Through outreach and partnership efforts, EPA will engage federal agency networks to promote the reuse of petroleum brownfields by small business owners. For example, EPA will seek to develop a partnership with the Small Business Administration (SBA) to foster the reuse of petroleum sites. There are many programs within SBA and other federal partners with the potential to support petroleum brownfields revitalization, and EPA can help communicate these opportunities across the stakeholder community and ensure that coordination disseminates down to local offices.

ACTION 4.4: Pilot and promote more optimal petroleum brownfields cleanup techniques. EPA will seek to develop a public-private partnership with interested private sector entities, communities, economic development and community planning agencies, state regulators, and other federal programs. The purpose of the partnership would be to explore techniques for efficiently and cost effectively assessing, cleaning up, and monitoring petroleum-impacted properties. Communities in which these properties are located will benefit by having petroleum brownfields assessed and cleaned up for reuse. State and local regulators will have an opportunity to showcase their administrative and technical processes and test new techniques and approaches for the assessment and cleanup of these sites. The findings and lessons learned from these research projects will be promoted by EPA to all brownfields stakeholders.

ACTION 4.5: Work with the EPA Office of Site Remediation Enforcement (OSRE) to promote the ER3 initiative. The Environmentally Responsible Reuse and Redevelopment initiative (ER3) seeks to promote sustainable development at properties needing assessment or cleanup. The initiative relies on strong partnerships to promote environmentally superior development. OSRE has worked successfully with EPA Regions, the states, and other partners to promote sustainable development at a hotel project near

Park City, Utah, and to convert a former army ammunition manufacturing plant located in Mead, Nebraska, into an integrated solid waste management and ethanol manufacturing facility. EPA will explore opportunities to apply ER3 at petroleum brownfields.

ACTION 4.6: Promote petroleum property deal flow sessions. EPA will seek to cooperate with economic development corporations, state planning agencies, brownfields marketing partners, owners of portfolios of petroleum brownfields (e.g., petroleum companies, local governments), and potential end-users (e.g., small businesses, retail chains, developers) to promote a series of deal flow sessions. The Agency cannot promote commercial interests of particular developers and property owners. However, EPA may cooperate with and provide technical assistance to nongovernmental organizations that sponsor forums for presenting individual or multiple properties for potential redevelopment. Representatives in search of sites for new commercial uses will present their interests and needs for new locations. Various mechanisms will be available to facilitate deal flow among current property owners and future users. These sessions will help to build a growing network of petroleum property owners and potential end-users, share property marketing and deal-structuring best practices (e.g., property bundling, liability issues), and create models for private-sector petroleum property transactions.

EPA's Petroleum Brownfields Action Plan: Promoting Revitalization And Sustainability

This action plan represents the commitment by EPA to support the continued improvement and success of assessing, cleaning up, and reusing petroleum brownfields sites. Many challenges and opportunities were identified through the action plan development process, demonstrating the importance of the renewed commitment to prioritize opportunities for the petroleum brownfields program. The action plan captures actions, ideas, and challenges where EPA can provide significant support and leadership. Some of these actions can be implemented in the short term, and EPA intends to follow through on these immediately. Other actions will require long-term plans for staffing, resources, and project management. EPA recognizes the need to continue pursuing strong coordination and communication among petroleum brownfields stakeholders in order to address additional opportunities.

EPA will work internally and with a broad array of external stakeholders to implement this action plan to ensure that each of the strategic actions is designed and carried out effectively. These activities will achieve enhanced communications, provide needed assistance to state, tribal, and local partners, explore policy improvements, and establish lasting partnerships. New emphasis and new approaches will overcome the barriers to wide-scale petroleum brownfields cleanup and revitalization and further sustainability. As efforts proceed, EPA will provide more specific time frames, products, and guidance. The initiation and completion of each action will help to address challenges in the petroleum brownfields program and achieve greater success in the assessment, cleanup, and redevelopment of petroleum brownfield properties.