Petroleum Brownfields: Developing Inventories

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INTRODUCTION

Petroleum Brownfields: Developing Inventories, a publication of the U.S. Environmental Protection Agency (EPA), is intended as a tool to help states, tribes, EPA Brownfields Assessment grant recipients, and others develop an inventory of relatively low-risk, petroleum-contaminated brownfield properties. The publication has three sections. Section I identifies petroleum brownfields inventories as a tool for building and promoting a brownfields program. Section II outlines considerations for building an inventory, and Section III discusses best practices from stakeholders that have implemented a petroleum brownfields inventory.

The Small Business Liability Relief and Brownfields Revitalization Act ("Brownfields Law") defines a brownfield site as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." The law further defines the term "brownfield site" to include a site that "is contaminated by a controlled substance…; is contaminated by petroleum or a petroleum product excluded from the definition of 'hazardous substance'…; is mine-scarred land."

Abandoned gas station along commercial strip

There are continuing challenges for the future success of the revitalization of petroleum sites, including the relatively small size of petroleum sites, which may impact the sites' marketability; liability concerns associated with site redevelopment; and the unique assessment and cleanup approaches for petroleum contamination. This publication intends to enhance communication among stakeholders and facilitate opportunities for the redevelopment of petroleum brownfield sites to help overcome these challenges.

SECTION I: SITE INVENTORY AS A PROGRAM TOOL

In order to understand the benefits and challenges of petroleum brownfields inventories, EPA contacted 25 brownfields stakeholders from across the country with existing petroleum site inventories to discuss their experiences and best practices. These stakeholders included representatives from state agencies, non-profit organizations, regional planning councils, and local governments, all of which had a role in building or promoting their respective brownfields programs.

Although this publication is specifically intended to assist in developing inventories of petroleum-contaminated brownfields, many of the techniques, examples, and resources may also apply to other types of brownfields inventories. Many stakeholders indicated that they did not build their petroleum brownfields inventory independent of other types of brownfields. For instance, the North Side Development Company in Pittsburgh, Pennsylvania, used the same process to identify and inventory all brownfields in their target area but developed a system to categorize the petroleum versus non-petroleum sites differently to help manage funding opportunities by contaminant type.

DEFINITION OF A PETROLEUM BROWNFIELDS SITE INVENTORY

A petroleum brownfields site inventory is a collection of site-specific information for properties that are potentially contaminated with petroleum-related products and other hazardous substances. The design and utility of these inventories exist in various forms with varying levels of complexity, ranging from manual lists to electronic spreadsheets to Web-based databases linked with geographic information system (GIS) mapping tools. These inventories have a variety of purposes, including management and tracking, reporting, prioritizing, and marketing, and should be designed consistent with the needs of the particular brownfield program it serves. Specific examples of various types of inventories are provided in Section III: Petroleum Brownfields Inventory Best Practices.

BENEFITS OF INVENTORIES

Site data inventories provide many benefits to brownfields stakeholders. Inventories allow states, tribes, and municipal governments to focus available resources on site prioritization and more clearly target their cleanup and reuse efforts. Other benefits include:

- Identifying properties and areas eligible for special financing programs;
- Tracking property activities;
- Helping measure and meet state and local environmental goals;
- Collecting information to help meet EPA grantee reporting requirements;
- Increasing awareness and encouraging dialogue on brownfields;
- Promoting infill redevelopment to potential developers; and
- Marketing available properties to private interests.

BENEFITS OF DEVELOPING A PETROLEUM BROWNFIELDS SITE INVENTORY

There are many benefits associated with petroleum brownfields site inventories. Site inventories can help establish a brownfields program by identifying targeted properties for assessment, cleanup, and redevelopment. Site inventories also help established brownfields programs track and measure success, manage financial resources, and respond to potential inquiries related to redevelopment. In addition, site inventories can also help promote redevelopment opportunities.

A recognized concern when considering a site inventory is the resources required for development and maintenance. While a site inventory can be resource intensive, it does not always have to be a significant

investment. Inventories can be started with minimum resources or time, depending on the information requirements. Stakeholders should not base the decision of developing a site inventory solely on the limitation of resources. If it is believed a brownfields program can benefit from a site inventory, there are many initial steps that can be taken to develop a useful preliminary inventory that can evolve in scope and size with the program.

KEY CONSIDERATIONS FOR BUILDING AN INVENTORY

Many states, tribes, municipal governments, and non-profit organizations have embraced the brownfields inventory as an effective tool for resource prioritization, community outreach, and marketing to attract private investment in cleanup and redevelopment. Others, however, are concerned about the potential stigma of the "brownfields" designation from a site's listing in an inventory, as well as the resources required to build, manage, and keep the inventory up to date. Additionally, concerns have been raised about confidential or sensitive information being included in inventories that may or may not be publicly available.

Stigma

To help alleviate concerns regarding sites being designated as brownfields within inventories, some communities make data from their inventories available only through requests for specific site criteria. If the inventory is to be shared outside the immediate organization, concerns about releasing information regarding private properties should be fully understood so that an informed decision can be made. Some communities only include a private property on inventories if the owner gives permission, or if the site is located in an area that has been designated as in need of redevelopment. In sensitive situations, careful consideration should be given to the inventory's data fields so that they contain only information appropriate for public release.

Stakeholders take varying approaches to making data publicly available and addressing stigma that might be associated with the information. However, in designing an inventory tool and determining accessibility, community-right-to-know requirements and/or Freedom of Information Act requirements need to be a consideration.

SITE INVENTORY USED TO PRIORITIZE NEEDS

The Northern Lakes Economic Alliance in Cheboygan County, Michigan, developed a site inventory that included brownfields with petroleum contamination and those with other hazardous substances, which helped conserve financial resources. The brownfields program officer stated that development of the inventory has been a valuable tool and allows an opportunity for community members to discuss concerns and opportunities in a public forum by seeking their input throughout the inventory development stage.

Some stakeholders address the concern of designating properties as "brownfields" by using the inventory only as an internal tool to prioritize resources, with none of its information publicly available. Other jurisdictions make some data publicly available while keeping other data private; for instance, offering publicly-accessible information only for publicly-owned properties. As long as the actual or potential contamination on these properties is not misrepresented, some stakeholders do not use "brownfield" or "contaminated land" labels within their inventories, preferring broader descriptions such as land and buildings available for redevelopment.

Most stakeholders seek some sort of release from property owners to list their site's information. As part of this process, it is explained to property owners that such releases do not act as an admission or recognition of any site contamination. Frequently, listing may help a property owner realize the potential of the property by attracting developers who offer to clean up any contamination. As part of the effort to de-stigmatize

properties on brownfields inventories, many states work with landowners to emphasize that the definition of brownfield includes properties with the *potential presence* of contamination and that listing a property in an inventory does not change any actual condition of the land.

Inventory Ownership

Another legal/regulatory consideration when developing a property inventory is identifying and agreeing upon who "owns" the inventory. Many different offices or departments within an organization are typically involved in creating and using the inventory—the environmental or health department, the tax office, the economic/community development office, etc. Identifying the roles and responsibilities of each department in the planning stage will help overcome some of the inherent challenges in working on this type of inter-departmental effort.

New shopping center on former petroleum site in Hartford, Connecticut

Resources

To help address concerns regarding limited resources, each stakeholder needs to consider the intended use of the inventory and what information needs to be collected to meet overall goals. The inventory does not need to be a complex, comprehensive tool if the stakeholder has limited funds or staff resources. For instance, while a GIS Web-based inventory might be helpful or even necessary in some communities, this level of complexity would not be needed for others.

Inventory Maintenance

Another consideration is how, once developed, the inventory will be updated and managed. This consideration will determine the inventory's level of complexity (i.e., how many different types of data will be included). Site information can change, and data will need to be updated and tracked. Once a site inventory has been planned and built, its manager must ensure that it is used to meet its stated purposes: inventories often go underutilized. An inventory manager and the inventory's key stakeholders should occasionally reevaluate the inventory's purpose, design, and content to ensure it continues to meet program needs, and they should consider upgrades if needed.

FUNCTIONS AND CAPABILITIES OF PETROLEUM BROWNFIELDS SITE INVENTORIES

Petroleum brownfields site inventories have different functions and capabilities, ranging from tracking basic information to complex tasks such as aiding in site prioritization. Typical functions include site monitoring and tracking; data retrieval, exchange, and reporting; site planning and prioritizing; and marketing and public outreach. Following are descriptions of inventory functions. Understanding an inventory's potential functions and capabilities can help determine whether your program should develop a site inventory.

- **Site Monitoring And Tracking** – organizing and maintaining brownfields property-related information

- **Data Retrieval, Exchange, And Reporting** – obtaining information through inventory outputs, data queries, and user-system interfaces and/or sharing data between stakeholders (including fulfilling EPA grant reporting requirements)

- **Prioritization And Planning** – arranging brownfields properties based on criteria and associated thresholds and/or preferences; ranking properties based on user-defined criteria to help identify priority sites for investigation, cleanup, and redevelopment

- **Marketing And Public Outreach** – advertising brownfields properties available for cleanup and redevelopment and/or sharing property information with the general public or selected developers

- **Streamlining The Redevelopment Process** – organizing site information and characteristics can help streamline steps that are taken during the redevelopment process

Further detail on each of these purposes and examples is described in the next section, Section II: Planning And Building An Inventory.

SECTION II: PLANNING AND BUILDING AN INVENTORY

Information presented in this Section includes questions to consider in creating and planning a petroleum brownfields site inventory, useful data to include, types of inventory designs, and methods to collect the data that will populate the inventory.

Prior to initiating development of a petroleum brownfields site inventory, the entity pursuing the development should meet with potential partners to discuss the approach. Asking key questions during the planning phase will save time and resources and ensure that the inventory is a useful tool. Discussions should include identifying the purpose of the inventory: who will be using the inventory, and what will they be using it for? Will this be an internal tool for prioritizing brownfields efforts? Will stakeholders use it to market economic development projects? Will the information be shared with community-based partners or other governmental/quasi-governmental partners? Will it be generally available to the public for marketing or other purposes? These decisions will drive the type of information collected and shape the format in which the information is stored.

INVENTORY DEVELOPMENT PROCEDURE

Key components for planning an inventory can be considered in two stages; however, these components can be revisited before, during, or even after the inventory has been created.

Stage 1 – Planning The Inventory

- Determine the purpose and audience of the inventory, including whether all or part of the inventory will be public.
- Assess key stakeholder needs, available resources, the estimated number of properties for inclusion, and mechanisms for updating the information.
- Determine the inventory design and content.

Stage 2 – Developing The Inventory

- Collect data.
- Build and populate the inventory.
- Reassess the inventory and update data.

Stage 1 components should be completed jointly before moving on to Stage 2, which consists of more linear components. The components and steps are described in detail below.

STAGE 1 – PLANNING THE INVENTORY

Determine The Purpose Of The Brownfields Inventory

Stakeholders indicated that one of the most limiting factors in the development of a site inventory is the availability of staff and financial resources; however, many indicated that pre-planning the inventory and collecting only the data necessary to meet project goals can reduce project costs. Determining the purpose and use of the brownfields inventory up front in the inventory development stage will help manage resources and expectations for the project. Thinking through the use of the inventory will help identify the required

data, answer future questions as to what will be the design and content of the inventory, and manage expectations for the data collection effort.

Stakeholders reported that without proper planning, it is easy to become overwhelmed in the development of an inventory that is more complex and larger than their programmatic needs. A lesson learned to help ensure that the inventory does not exceed resources or programmatic needs is to outline the inventory goals and needs up front in the planning process. Creating an inventory that is larger than needed not only strains budgets, it becomes more burdensome to update and manage. Purpose(s) of the inventory may include:

- **Site Monitoring And Tracking** – Even the most basic inventory should monitor and track property-related information. This inventory function allows the managing entity to track data elements such as property location, owner, and size. More complex inventories may contain additional information such as environmental status or other site attributes. The inventory can be updated to reflect changes in site status, including ownership, activities undertaken (assessment, cleanup, reuse), or other important site characteristics. This function provides information on the number and size of petroleum brownfield sites within the targeted inventory area and allows quick identification of potential or confirmed environmental concerns. For example, in New Jersey, the City of Trenton's petroleum brownfields inventory provides a quick snapshot of the number of former service stations in the city, their locations and ownership status, and whether or not environmental work has been performed at a site.

- **Data Retrieval/Exchange/Reporting** – Another basic function of an inventory is the retrieval and output of information. Data can be retrieved in ways that include reports, graphic representations, and data queries.

  Inventories may also allow for data to be exchanged between stakeholders, particularly if the entities use the same inventory platform. Often, information from an inventory that is managed by a municipality or county is transferred to regional, state, or federal governments. For example, two of the three county inventories overseen by the South Florida Regional Planning Council directly transfer their data to the Florida Department of Environmental Protection as all three entities use the same Microsoft Access database platform. In this example, data transfer occurs when regulatory actions take place.

  EPA Brownfields State and Tribal (Section 128(a)) grant recipients are required to take reasonable steps to develop and/or maintain a system or process that can provide a reasonable estimate of the number of brownfields in their target areas. Brownfields Assessment grant recipients may use grant funding to create and/or maintain a site inventory. If grant funding is used on a property, recipients are also required to report on these property activities to EPA through the Assessment, Cleanup, and Redevelopment

PLANNING AN INVENTORY CHECKLIST OF QUESTIONS

Below is a simple checklist of questions that you should consider before launching an inventory effort. Consider outlining answers to each question to help guide you during the inventory development stage.

- What is the purpose of this inventory?
- Who is the intended audience?
- What information is required to meet the purpose of the inventory and the needs of the audience?
- How many resources do I have to devote to this effort?
- What is the geographic area to be covered?
- What funding sources are available to assist in this effort?
- What platform (e.g., hard copy, electronic) is most appropriate for meeting the needs of the audience?
- Are there critical project partners/stakeholders that need to be engaged up front in the inventory development process?
- What sources will be used to collect data to populate the inventory?
- How will this inventory be updated?

Exchange System (ACRES) data system or in a Property Profile Form. To help meet EPA requirements, reports can be designed to pull relevant data directly from an inventory system. For example, the brownfields inventory created by Fort Edward, New York, can output reports in the same format as EPA's Property Profile Form (see Appendix III).

- **Planning Purposes** – Inventories can be a powerful tool for planners, providing important information for consideration during the development of land use plans, zoning ordinances, or economic development plans. When inventories are linked to mapping systems and information such as the condition of buildings is included in the data collection, an inventory can indicate which areas are most in need of assistance, which are ripe for redevelopment, and which zoning distinctions are most appropriate. For example, in New Jersey, the City of Camden's Industrial Sites Inventory included brownfields in a comprehensive database of all industrial properties in the city and was used to identify areas where industrial uses could be expanded as well as where properties were underutilized and ripe for industrial redevelopment.

- **Prioritizing** – Inventories can allow users to prioritize sites, which can be weighted and ranked based on user-defined criteria. An inventory can help to categorize properties based on criteria such as ownership status, zoning, or readiness for assessment, cleanup, or redevelopment—all of which can help in decision-making and managing resources.

EPA BROWNFIELDS GRANTEE REPORTING REQUIREMENTS

Section 128(a) State and Tribal grant recipients are required to take reasonable steps to develop and/or maintain a system or process that can provide a reasonable estimate of brownfields sites. EPA Brownfields Assessment grant recipients may use grant funding to create and maintain an inventory.

All EPA Brownfields grant recipients—Assessment, Cleanup, and Revolving Loan Fund grantees—are required to capture specific data elements and accomplishments on a regular basis through the EPA ACRES data system.

Using an inventory to prioritize properties also assists in making funding eligibility determinations for sites contaminated with petroleum or other hazardous contaminants. Due to many property-specific factors (i.e., the presence of underground storage tanks (USTs), when the USTs operated, whether the USTs were insured, when the property changed hands, etc.), there is no individual, simple method to make petroleum eligibility determinations. However, with the aid of site inventories, petroleum eligibility determinations may be made easier by creating tools such as a "decision tree" to assess specific data. For example, software can be created that assembles information needed to make petroleum eligibility determinations from inventories.

- **Marketing And Public Outreach** – Site inventories allow inventory managers to market properties available for redevelopment. For example, inventories have been established by government entities for the purpose of identifying available properties. Pennsylvania Site Search (PASiteSearch) is an example of an inventory that allows property owners to market sites by indicating whether properties are available for sale, lease, or other cooperative arrangement. The inventory is maintained by the Pennsylvania Department of Environmental Protection's Land Recycling Program, and property owners may provide as much or as little information as they like for their own property. Information can include property location, size, and contact information. Sites are added frequently, and information is updated regularly through maintenance of the inventory.

- **Streamlining The Redevelopment Process** – An inventory can help communities streamline the redevelopment process by clearly identifying elements that typically occur during the process. By

promoting the opportunity for site redevelopment, the redevelopment process can be streamlined by engaging interested developers. The redevelopment process can be made smoother by having many redevelopment elements already organized and presented to help quickly educate and engage potential investors, developers, and site users.

Assess Key Stakeholder Needs, Available Resources, Number Of Properties, And Mechanisms For Updating The Information

The following interdependent aspects should be considered in the planning of an inventory:

- **Partnerships** – Involve key stakeholders, such as real estate brokers, developers, lenders, adjacent property owners, community members, public officials, etc. In addition, determine if, how, and to what extent they should have access to the inventory's information.

- **Number Of Properties** – The number of properties included in the targeted inventory area may alter the purpose and type of the inventory and affect the number of data elements in it, based on the inventory's use and the program's available resources.

- **Inventory Update And Maintenance** – Updating site inventory information requires adequate time and staff availability as well as a manageable number of properties and pieces of data. Inventories that are used frequently require an update and maintenance schedule. External databases that can be used to automatically update the inventory should be considered during the design phase. If the tax assessor's database can be used to update information such as property improvements, ownership status, and other data, the inventory should be designed with this in mind. Other partner databases that can potentially provide updates to your inventory include real estate databases, city-owned or vacant property databases, building inspector databases, or databases that contain information on deed restrictions.

PARTNERSHIPS

Developing partnerships with stakeholders will assist in determining the purpose, scope, and function of an inventory. It is important to engage all relevant stakeholders at the beginning of the development process to ensure that the inventory is as comprehensive and as useful as resources allow. Stakeholder input helps to determine which data elements to include and how information should be disseminated. Talking with stakeholders also helps them understand resource and other constraints that affect whether and how an inventory will be built and maintained. Partnerships may include economic and/or community development organizations, health departments, tax assessors, environmental departments, and/or city planning departments.

Determine Type Of Inventory Design And Content

After determining the purpose of the inventory and assessing project resources and needs, the next step should be to design and determine the inventory's content. There are many different types of inventory designs, including hard copy files, electronic spreadsheets, electronic databases, and Web-based databases. It is important to realize that no one type of inventory is better than another, and each should be tailored to meet the current and future needs of stakeholders. If an electronic format is selected for the inventory, it is important to include the organization's information technology (IT) office in the inventory development stage to ensure that the system's software and other elements comply with the organization's IT resources and rules.

There is also a wide range of data for possible inclusion in an inventory, including, but not limited to: address, lot and block, zoning, acreage, prior uses of the property, environmental conditions, environmental report information, cleanup activity, redevelopment plans, neighboring uses, building conditions, ownership, access to utilities or transportation infrastructure, and socioeconomic measures.

Consideration of what types of information community groups may be interested in can influence the inventory's data fields. For example, the presence of sensitive populations in the vicinity (nursing homes, schools, day care centers, hospitals, etc.) may be of interest. An understanding of state requirements would be important in considering which data fields should be included. For example, New Jersey requires the identification of sensitive populations within 200 feet of a site prior to the start of remediation. For communities with mechanisms in place to update the inventory regularly, these fields would be particularly helpful.

Ideally, all of these data should be inventoried; however, there are key data elements that, if included, allow for a sufficient understanding of a property's status. These key elements include:

- Property identification number – if tied to the tax assessor's database, this can allow for easy reference to tax information or past ownership;
- Size – allows for discussion on reuse opportunities, as well as cleanup cost estimates;
- Location – not only address but tax block and lot, and, if available, latitude and longitude;
- Project ownership/contact information – provided in case of reuse interest or to assist in determining eligibility for funding sources; and
- Environmental and contaminant information – identification of contaminants of concern; presence of known tanks, piping, hydraulic lifts, or other areas of concern; environmental project or case numbers if applicable; and environmental site assessment dates and findings.

SHARING INVENTORY DATA

When designing an inventory, it is also important to consider how data will be shared with stakeholders. If the goal of the inventory is property redevelopment, it may be useful to have the inventory available to many stakeholders, such as environmental contractors, developers, lenders, etc. Some methods of data distribution, such as hard copy outputs and Web-based systems, can require users to request information from the inventory's manager. Also, allowing users direct access to an inventory will likely require permission from the manager.

If there is a chance that EPA Brownfields funding will be used on any of the sites, it is helpful to plan ahead during the inventory design process for the collection of required data elements. EPA Brownfields grant recipients are required to collect information on specific data elements and either complete data entry into the EPA ACRES data system or file Property Profile Forms for sites. (See Appendix III: EPA Property Profile Form for more information about specific data requirements.) In addition, the inventory can meet other reporting requirements from additional local, state, or federal funding programs.

Petroleum Brownfields Inventory Data Types

Categories of tracked data elements include property background, environmental conditions, and institutional controls, as well as cleanup, redevelopment, and socioeconomic information. The data elements tracked in an inventory depend upon the scope of both the inventory's managing entity and the goals of the program. The information provided below is an expansion of examples provided above.

Property Background
Inventories typically track some form of property background information. One data element often included is a tax identification or parcel identification number designated by the overseeing entity. Applying these municipally-designated numbers to each property allows inventory managers to easily keep track of properties and link to other databases for information exchange. Other common data elements include the property's location (e.g., address, town, and state), tax block and lot numbers, latitude and longitude (used for mapping), past and present ownership information, property size, zoning classification and vacancy status, and property tax status (e.g., foreclosure, liens, delinquency).

Another consideration for incorporation of the property background information is the inclusion of surrounding property/neighborhood characteristics. Capturing information about the surrounding property uses or availability of developable land may help increase the success of marketing by enticing developers with current land uses or the availability of additional property for development.

Environmental Conditions
Information typically found in a site inventory speaks to the known past and present environmental conditions of a property. This may include information regarding the presence of USTs and related leaks. Other typically tracked information includes: environmental case or project numbers, the beginning and completion of environmental site assessments, funding used to complete site assessments, types and levels of contamination found through assessments, and the environmental conditions of surrounding properties (e.g., nearby gas stations and dry cleaners).

Site assessment on Hopi Indian Reservation

Cleanup Activity Information
Inventories also track cleanup information, such as start dates, which may be determined by the beginning of demolition or remediation; contamination levels prior to and following cleanup; and funding used to complete cleanup. Cleanup completion is another element typically included in inventories; this can be signified by a No Further Action (NFA) letter or Certificate of Completion (COC) issued by the state or tribe under its voluntary cleanup program.

Institutional controls (ICs) may be tracked with cleanup information. Some inventories maintain information regarding these administrative or legal measures, which helps minimize the potential for human exposure to contamination or protect the integrity of a cleanup remedy. Generally, there are four categories of ICs usually related to restrictions on the future uses of the property, including: (1) proprietary controls in the form of easements or covenants; (2) governmental controls (e.g., zoning, building codes); (3) enforcement/permit tools such as orders and consent decrees; and (4) informational devices (e.g., state registries, deed notices).

Redevelopment Information
Inventories also maintain redevelopment information. This includes the date(s) upon which redevelopment activities began at the property, such as a groundbreaking ceremony; redevelopment completion dates; funding used to complete redevelopment; and future property use(s).

Socioeconomic Impacts

Some inventories also track the socioeconomic impacts of property cleanup and redevelopment. Such information may include short- and long-term jobs leveraged due to cleanup and redevelopment and local census information. Tracking jobs leveraged by acknowledging the number of construction jobs on the site during assessment and cleanup, as well as jobs at the new use of the site, helps tell the story of the benefits associated with redevelopment. As an example, the Colorado Historic Byways Initiative collected information on jobs leveraged to help demonstrate the economic benefits achieved through several redevelopment projects (see www.coloradobrownfieldsfoundation.org/casestudies.html).

Collected socioeconomic information may be used to calculate future tax revenues based on job creation, local and/or state property taxes, and state business and occupation taxes. Certain inventories may not maintain socioeconomic information, particularly when socioeconomic impacts are not within the purview of the overseeing entity. For example, this may be the case when environmental quality is the focus of the inventory's managing entity rather than community development. Nonetheless, recipients of EPA Brownfields Assessment, Cleanup, and Revolving Loan Fund grants are required to maintain information on certain socioeconomic impacts of their grants, including the number of cleanup and redevelopment jobs leveraged.

The following chart (see next page) identifies possible data for inclusion in petroleum brownfields inventories. Once again, inventory managers should consider upfront which data elements are important for their purposes—the more data fields included in an inventory, the more resources required for creating and updating it.

Once the inventory's design and content are agreed to, the planning phase (Stage 1) is complete. Stage 2 includes the physical creation of the inventory.

PETROLEUM BROWNFIELDS INVENTORY DATA OPTIONS

PROPERTY BACKGROUND

- Tax identification number and/or parcel identification number
- Property location (address, town, state)
- Tax block and lot numbers
- Latitude/longitude
- Past owner(s) name and contact information
- Present owner name and contact information
- Property size
- Former use(s)
- Current use(s)
- Number, size, condition, and age of existing structure(s)
- Presence of historic structures
- Zoning classification
- Vacancy status
- Tax status
- Assessed land value
- Nuisance complaints
- Utility availability
- Rail and road access
- Waterfront access, footage
- Enrollment in state voluntary cleanup program
- Availability of photographs and/or video
- Property narrative/highlights
- Adjacent property information

ENVIRONMENTAL CONDITIONS

- Petroleum contamination information
- Presence, history of underground storage tanks (USTs) or aboveground storage tanks (ASTs)
- Product(s) released from USTs/ASTs
- Type of response/closure methods
- Start and completion date(s) of Phase I, II, and/or III environmental site assessments
- Funding used to complete site assessments (federal, state, local)
- Types and levels of contamination
- Media affected
- Cleanup required (Y/N)
- Environmental conditions of surrounding properties
- Nearby sensitive populations
- Nearby sensitive ecosystems
- Proposed cleanup plans
- Estimated cleanup costs

CLEANUP ACTIVITY INFORMATION

- Cleanup start and completion dates
- Acres cleaned up
- Contaminants removed
- Media addressed
- Contamination levels prior to and following cleanup
- Funding used to complete cleanup (federal, state, local)
- Types of institutional controls implemented

REDEVELOPMENT INFORMATION

- Property owner, contact information, date of sale
- Redevelopment start and completion date(s)
- Funding used to complete redevelopment (federal, state, local)
- Desired future use(s) of the property
- Acres and types of greenspace created
- Developer name and contact information

SOCIOECONOMIC IMPACTS

- Short- and long-term jobs leveraged
- Population of surrounding area
- Low- and moderate-income zones
- Census tract

FINANCIAL INCENTIVE OPPORTUNITIES

- Federal, state, and local Empowerment/ Enterprise Zones, Renewal Communities designations and incentives
- Remediation tax incentives
- Leverage federal/state/local grants or loans
- Redevelopment tax incentives
- Cultural/historic preservation tax incentives

STAGE 2 – DEVELOPING THE INVENTORY

Collect Data

After determining the inventory's design and content, the process for data collection should be developed. There are many methods to obtain property-specific data, including but not limited to: collecting data from state and local tax, environmental, and health offices; area surveys and site visits; public input; property files managed by a state government; fire insurance maps from private companies and/or local fire departments; census reports; historic documents such as city directories, crisscross directories (reverse directories searched by multiple data points such as phone number, address, and name to retrieve all site information available), and historic phone books; and building inspection reports. In most cases, inventory managers use more than one method of data collection. Once the methods are determined, the process of data collection can begin. Examples of data collection methods are briefly described below:

Partner Queries

One of the most basic methods of developing an inventory is to ask stakeholders to self-select sites and provide relevant data. This could include internal stakeholders, such as members of the planning, real estate, and economic development divisions of a municipality, or external stakeholders, such as real estate brokers or the business community. Bucks County, Pennsylvania, asked its municipalities to nominate sites for inclusion in its petroleum site inventory.

Surveys And Public Input

Site information also comes from direct surveys of knowledgeable parties as well as general public input. Surveys and interviews may be conducted of residents who have lived in the area for many years as well as current and past property owners. Also, complaints from the general public and nearby property owners can provide information on property that could be considered a brownfield. Public or community meetings can be held to elicit information about potential sites. Public input is particularly helpful in determining property history.

RECORD SEARCHING

In New Jersey, the City of Plainfield used historical document searches to update its existing database of petroleum and hazardous substance brownfield sites and found nearly 200 additional former gas station sites to add to its inventory. Likewise, the City of Trenton used historic records and discovered approximately 130 petroleum brownfields that had not previously been included in its brownfields inventory.

Site Visits

Some inventory managers conduct site visits in order to gather property information. Generally, site visits can provide insight on the condition of structures and the condition and usage of adjacent properties. Sometimes, if site access is granted, the presence of underground storage tanks can also be ascertained. If access has not yet been granted, viewing the site without trespassing allows the inventory manager to determine if it is worth approaching a property owner about inventorying (and possibly assessing, cleaning up, and redeveloping) a brownfield. If site visits and field surveys are to be used, it is often useful to engage community groups or college students for a low-cost way to survey large areas. If this method is to be used, training is essential to ensure consistent reporting.

Reports And Other Documentation

Property-specific information may also be obtained through a variety of existing documents. These include property files managed by a state government, fire insurance maps from private companies and/or local fire departments, census reports, and inspection reports of potentially-contaminated properties. Building inspections also provide pertinent information, such as a property's background and environmental conditions. Particularly valuable for uncovering former gas station sites is research in past city directories, crisscross directories, and historic phone books. In this way, historic gas stations that closed prior to the instituted reporting requirements can be discovered and addressed.

Build And Populate The Inventory

Building the inventory will be a unique process for each community. After the data has been collected, it should be entered into the chosen inventory type (e.g., hard copy files, electronic, Web-based). In some instances, this will require the inventory's manager to use internal or external staff resources to build the inventory and/or populate the inventory with the data.

For those developing any type of electronic inventory, standardizing the data will help ensure better data quality, reporting, and transferability. For example, creating uniform formats for street addresses (e.g., Street, ST., ST, NE, N.E.) and phone numbers (e.g., (123) 456-7890, 123-456-7890) may seem like a small nuance but will lead to better data quality and reporting. Providing researchers or field survey teams with handheld devices to directly enter data into the inventory database will help to eliminate errors in transcribing field notes. However, be sure that people are comfortable using such equipment and that the systems are backed up regularly to avoid losing data.

QUALITY ASSURANCE

To maintain accurate and reliable data, an inventory should undergo quality assurance (QA) procedures during the population and updating of data. The QA process will verify and determine if the data meets the needs and purpose of the inventory.

Site inventories come in a range of designs, which are often dictated by the managing entity's jurisdiction and available resources. For electronic tools, the entity may have preferred computer applications and/or information technology (IT) program requirements that need to be considered. Some typical inventory designs are described below.

Hard Copy Files

A basic inventory format is the use of hard copy files. Although hard copies may include similar information as electronic versions, hard copy inventories are becoming less widely used with time. However, in instances when a managing entity has a small jurisdiction to oversee, hard copy files can be just as useful as an electronic inventory.

Electronic Spreadsheets

Another inventory platform is the electronic spreadsheet, which can more easily track large numbers of properties and data elements. Spreadsheets are also useful in that they allow users to sort and prioritize properties based on criteria and associated thresholds. For example, the site inventory managed by the Niagara County Department of Economic Development in western New York permits users to sort information for more than 43 different properties. By using a spreadsheet platform, county officials are easily able to sort properties by location and size when parties inquire about a specific type of property.

Electronic Databases

Databases allow for a systematic format of data entry as well as easily readable outputs (e.g., property profiles, reports) and greater ability to categorize data and apply prioritization criteria. With appropriate use interfaces (for data entry and updating), databases can be more welcoming than other platforms to users who are less computer savvy. However, although electronic databases are becoming more common, sufficient resources, such as funding to purchase software and to train staff, are needed to maintain them.

Web-Based Databases

Communities across the country use the Internet to maintain site inventories. Some communities only make their inventories available on their internal intranet, thereby ensuring access strictly for designated users. While having a site inventory available online can make it easily available to anyone who can access the Internet, this platform may require alternative output methods and other tools for users lacking Internet access.

Trenton, New Jersey, firehouse on old gas station site

Geographic Information Systems (GIS)

Some advanced site inventories use GIS to capture, store, analyze, and display property-specific spatial data. Because GIS can connect graphic features on a map to site inventory information, inventory managers may determine which data elements may be included (e.g., property latitude and longitude, cleanup activity information, presence of USTs, economic incentives). Although GIS can provide a highly-detailed, visual representation of property information, establishing and maintaining this type of system requires sufficient resources. Several state and federal agencies already have GIS standard requirements that can be referenced during development to help facilitate data sharing in the future. As an example, review the U.S. EPA Geospatial Data Requirements document at www.epa.gov/geospatial/policies.html.

Reassess Inventory And Update Data

After an inventory has been in use for some time, the manager should reassess its usefulness. In some instances, the inventory may need to be upgraded to a new design, such as moving from hard copy files to electronic spreadsheets. Perhaps changing the electronic platform will allow for better communication with other databases and thus enhanced utility, or it may be discovered through use that additional fields are needed. Whether the inventory design is upgraded or not, the data should be regularly reviewed and updated.

Updating inventory data can be challenging for both small and large communities. The update of data fields will vary by community depending on several possible changes to relevant data that might include demographics, site conditions, and ownership information. Small communities often lack the financial resources and staff needed to maintain up-to-date property information. On the other hand, large communities often have so many properties to oversee that updating information can become overwhelming. Updating an inventory requires planning resources accordingly, including maintaining a manageable number of properties and pieces of data and setting a schedule. Updating the inventory should be considered during initial development planning to ensure that the project is not too large for future efforts.

SECTION III: PETROLEUM BROWNFIELDS INVENTORY BEST PRACTICES

There is no one ideal inventory because what works for one community may not work for another. However, discussions with petroleum brownfields stakeholders illustrate that there are many inventories that exemplify best practices. The following best practices are designed to demonstrate that regardless of the size, complexity, or resources devoted, inventories are a useful tool for many types of organizations. Many of the best practices captured during the conversations with petroleum brownfields stakeholders were used to develop the steps identified in Section II: Planning And Building An Inventory. Best practices include planning out the inventory in advance of data collection, engaging community members and project partners to identify sites, and organizing data to meet specific organizational needs.

EXAMPLES OF BROWNFIELDS INVENTORIES

Generally, findings from discussions with stakeholders indicate that inventories fall into three levels of complexity, which are described in the table below. These levels do not necessarily apply to every inventory; rather, they describe common categories used by practitioners.

SITE INVENTORY GENERAL LEVELS OF COMPLEXITY			
	Basic	***Moderate***	***Advanced***
Resources	Limited resources, uses in-house staff, may be developed over time as sites emerge	Moderate commitment of resources, may involve dedicated interns or outsourced work	Project budget in the $100,000 to $200,000 range to cover software development, document research, and field surveys
Inventory purpose	Used for site monitoring, tracking, and/or public outreach	Used for site monitoring, tracking, public outreach, reporting, planning purposes, prioritizing, and marketing to private sector	Used for site monitoring, tracking, public outreach, reporting, in-depth planning purposes, prioritizing, enhanced marketing to private sector, community outreach tool, and/or data exchange
Inventory design	Hard copy files, basic spreadsheet	Electronic files (e.g., searchable spreadsheets, database)	Interactive Web-based database linked to a geographic mapping system
Amount of data	Few data elements per property, covering mainly locational information	Moderate number of data elements per property, covering locational and environmental information	Many data elements per property, covering locational, environmental, and site quality information suitable for marketing purposes
Number of properties	Limited number of properties, may focus on a particular geographic sub-area (such as a commercial strip), site selection methods limited	Limited or moderate number of properties, may or may not focus on a geographic sub-area, multiple site selection methods may be employed	Typically consists of many properties, may be city or community wide, various site selection methods employed

DESCRIPTIONS OF PETROLEUM BROWNFIELDS INVENTORIES

Following are examples of stakeholders that have had success in the planning, development, and use of a petroleum brownfields site inventory. Information shared in these examples is aimed to help identify practices, uses, or end results that could be useful to other petroleum brownfields stakeholders. The examples are arranged alphabetically by state.

Los Angeles Environmental Affairs Department, California

The Los Angeles Department of Environmental Affairs' initial brownfields inventory included approximately 150 properties from all over the 466-square mile city. This inventory required the use of a contractor and was created in an electronic spreadsheet format to track former gasoline station properties. The inventory was developed using fire department files (where storage tank compliance violations were filed); records of underground storage tank permits; and state and county databases. City officials also conducted site visits to identify underutilized sites.

Through an EPA Brownfields Assessment grant, the city expanded this inventory to include other types of sites and updated it from an electronic spreadsheet to an advanced yet user-friendly Web-based database. This internal management and marketing inventory is easily shared and accessible across seven city departments. The inventory is not shared with the public due to property owner concerns regarding the stigma of the brownfields label. However, the inventory's properties can be marketed to community redevelopment agencies and neighborhood associations through inventory-generated publications, including one-page property profiles. Information on the Los Angeles brownfields program can be found at www.lacity.org/ead/labf/.

Best Practice: Site inventories evolve over time, with increases in the number of tracked properties, leveraged resources, and technology advancements. Inventory platforms can change as needed.

Contact Information: Nuna Tersibashian • Nuna.Tersibashian@lacity.org • (213) 978-0872

Colorado Historic Byways Revitalization Initiative

The Colorado Historic Byways Revitalization Initiative is a partnership between state agencies and a nonprofit organization and aims to further local economic development projects by providing environmental assessment and cleanup services. The Initiative targets communities along scenic byways, historic districts, and other economic development corridors. Initial community visits result in a list of potential sites. To collect information on sites for inclusion in the inventory, the Initiative conducts outreach with local officials and stakeholders, ranging from small meetings to community events. The intended purpose of the inventory is to help local officials recognize their opportunities; to prioritize sites needing assessment, cleanup, and reuse planning; to provide information to prospective developers; and to measure progress toward redevelopment goals.

The inventorying process is kept simple, with all data maintained in an Excel spreadsheet that can be sorted and updated with relative ease. The inventory collects basic site information, such as address, owner, site and environmental conditions, as well as photographs. Currently, the inventory is used as an internal management tool, but interest continues to grow in its use for local site marketing efforts. The inventory continues to be evaluated and will likely evolve along with user needs.

Best Practice: Consider your organization's specific needs and design the inventory accordingly. A simple design might prove more than adequate and provides a foundation to build on as needs develop.

Contact Information: Jesse Silverstein • jesse@ColoradoBrownfieldsFoundation.org • (303) 962-0940

South Florida Regional Planning Council

The South Florida Regional Planning Council (SFRPC) assisted in the development of brownfields site inventories for Broward, Miami-Dade, and Palm Beach counties. The purpose of these three inventories is to track contaminated properties and designated areas as well as identify where resources need to be focused. The approximately 2,000 properties within these inventories were identified through code enforcement violations, inspections, complaints from the public, and private property owners. Although the data varies by county, information found in all three databases includes property identification numbers, addresses, zoning designations, current uses, owners, code violations, and environmental assessment records. This information is tracked in both electronic and GIS formats and updated approximately every six months by each county. The Broward and Miami-Dade county inventories are accessible on the Internet and shared directly with the Florida Department of Environmental Protection, which uses the same electronic database design for its own inventory.

Best Practice: The sharing of data across multiple brownfields site inventories provides benefits to multiple stakeholders.

Contact Information: Cheryl Cook • cherylc@sfrpc.com • (954) 985-4416

Northern Lakes Economic Alliance, Cheboygan County, Michigan

The Northern Lakes Economic Alliance planned a county-wide brownfields inventory, collecting information on both hazardous waste and petroleum sites to combine into one inventory effort. The Alliance planned for a GIS Web-based application inventory and designed the inventory to correlate with county GIS overlays such as zoning, water, soils, etc. The Alliance conducted a broad search of all properties, identifying as many as possible through multiple efforts. The Alliance held two public meetings to seek input on sites to consider including in the inventory and conducted windshield surveys (site drivebys) to ensure proposed sites met general criteria for inclusion. Once a list of sites was developed, the Alliance prioritized sites based on pre-determined criteria as well as a visual inspection.

While the Alliance first developed the inventory as an internal tool, they believed it could achieve additional successes by making it available to the public. The Alliance contacted property owners to inquire about willingness to participate in Phase I environmental assessments and presented site information to prospective developers and investors. The Alliance has eight sites with property owner participation and active marketing efforts to encourage reuse. These owner participation sites and their environmental conditions are posted on the Web site.

Best Practice: Modifying an inventory and associated data elements for public access.

Contact Information: Lisa Fought • lisa@northernlakes.net • (231) 582-6482

Department Of City Planning And Development, Kansas City, Missouri

Using EPA USTfield Pilot funds, the State of Missouri assisted the Department of City Planning and Development for the City of Kansas City, Missouri, by hiring a contractor to perform two “feasibility studies” that identified 47 underground storage tank (UST) properties along the Prospect Avenue Corridor and 203 properties along the Troost Avenue Corridor in the Kansas City urban core. The initial focus on these sites was a result of the use of LUST Trust Funds. The contractor reviewed relevant city department databases, city records and permits, and fire insurance maps. The contractor also performed site visits on each block in the targeted area in order to determine if an UST existed or was previously located on the property.

The feasibility studies identified properties that might be impacted with petroleum contaminants, including sites where the presence of an UST could not be confirmed. The data was put into an electronic database, which included information regarding historical site occupancy; location and ownership; current land use; UST status; site inspection information such as property and building square footage and structural condition; and potential eligibility for the state tank insurance fund. This information was used for internal management decisions and

has been provided on a timely basis to prospective developers, both public and private, interested in properties in the study areas.

As a result, six key urban redevelopment projects involving some of the studied petroleum sites have already been assisted: ALDI Store project at 39th & Prospect Ave.; Satchel Paige Park project at 28th & Prospect Ave.; Citadel Plaza project at 63rd & Prospect; Wabash Village affordable housing project at 51st & Prospect Ave.; DeLaSalle Education Center expansion project at 37th & Troost Ave.; and Ashton Villas affordable housing project at 57th Troost Ave. The ALDI, Satchel Paige, and DeLaSalle projects are actively in the process of assessing, cleaning up and redeveloping UST sites in the study areas.

The studies have given the city another important tool to focus redevelopment efforts on key properties in the Prospect Avenue and Troost Avenue corridors. Information regarding Kansas City's Brownfields Program can be found on the Internet at www.kcmo.org/planning.nsf/busast/.

Best Practice: Feasibility studies that compile key environmental and real estate site information of UST sites in large areas can help cities focus redevelopment efforts on key properties and respond to development interest in a timely manner.

Contact Information: Andrew Bracker • andrew_bracker@kcmo.org • (816) 513-3002

City Of Trenton, New Jersey

The City of Trenton's Brownfields Coordinator, with assistance provided by interns from local universities, completed a city-wide inventory of current and former gas stations using ownership and operational history records, such as a chain of title, city directories (available from 1938 to 1971), crisscross directories (available from 1971 to the present), Sanborn fire insurance maps (available from 1890-1990), phone directories, and state environmental files and databases. Through these methods, a total of 159 sites were identified. Of these, only 13 are currently operating in the city.

Information collected included address, lot and block, owner name and contact information, current land use, zoning, known compliance history, and source of information. This information was linked to the city GIS system to allow for the mapping of the sites as well as the ability to pull up census tract demographic information and tax information on each site. Eight city-owned sites were initially selected to perform Phase I investigations using EPA Brownfields Assessment grant funds. Additional phases of investigation are underway at several of these sites.

Best Practice: Inventories can be linked to other data sources to expand the amount of information available. Use of interns is a cost effective way to build an inventory.

Contact Information: J.R. Capasso • jcapasso@trentonnj.org • (609) 989-3501

Niagara County Department Of Economic Development, New York

The brownfields site inventory managed by the Niagara County Department of Economic Development in western New York State was first developed for hazardous waste sites through input from the county's Brownfields Working Group—which included representatives from every municipality in the county, developers, and the county health department. Utilizing the same inclusive process, Niagara County created an inventory of petroleum-specific brownfield sites. Initially, the petroleum inventory included over 1,500 sites throughout the county. With assistance from the Working Group, the inventory was narrowed down to 143 priority sites. The inventory includes both electronic spreadsheets and GIS components. The inventory contains 43 different data fields ranging from basic site data to owner and environmental information. By using a spreadsheet platform, county officials are also able to sort properties by location and size when interested parties—typically developers—inquire about a specific type of property.

Best Practice: Inventories can be most effective when they are developed using input from multiple stakeholders, including municipality representatives, planning offices, developers, and other local organizations.

Contact Information: Amy Fisk • amy.fisk@niagaracounty.com • (716) 278-8754

Oswego County, New York

Oswego County maintains a brownfields site inventory for a one mile buffer along the Oswego River/Canal corridor. While the county would like to expand its inventory effort county-wide, it recognized the need to restrict the scope to ensure that the inventory was manageable. The county designed the inventory for use as an internal prioritization tool and to help leverage additional grant funding for cleanup and redevelopment. Twenty-five Phase I environmental site assessments have been completed; three Phase II's are underway.

Best Practice: Restricting your inventory to cover a smaller area can help save resources and refine the inventory's process and goals.

Contact Information: Karen Noyes • knoyes@co.oswego.ny.us • (315) 349-8292

North Side Industrial Development Company, Pennsylvania

The North Side Industrial Development Company is a non-profit organization promoting the cleanup and reuse of industrial sites in the Pittsburgh region. The Company designed a petroleum brownfields site inventory to identify sites along the Allegheny River corridor. Company staff met with community members to identify sites for cleanup and redevelopment and collected information through one-on-one meetings with local municipal leaders and open community forums. While information was collected on both hazardous waste and petroleum sites, the Company maintained separate inventories for these categories.

With a real estate attorney on staff, the Company was able to reach out to property owners and promote the benefits of participating in the brownfields program and secure access agreements for every site within the inventory. The site access agreements allowed the Company to conduct environmental site assessments on the sites with property owner permission. The inventory is now used to help identify sites for assessment, cleanup, and reuse, and to promote redevelopment opportunities along the Allegheny River corridor.

Best Practice: Being able to promote the benefits of participation in the site inventory and brownfields program enabled the Company to secure property access agreements for all sites.

Contact Information: Emily Buka • eb@riversidecenterforinnovation.com • (412) 322-3523

Tacoma-Pierce County Health Department (TPCHD), Washington State

The Tacoma-Pierce County Health Department's Abandoned Commercial Tanks Project (Project ACT) maintains an advanced site inventory of approximately 740 properties using both GIS and an electronic database. The inventory allows county government staff to easily sort and rank properties based on more than 135 data elements. The Project ACT inventory also helps to understand some area-wide issues. TPCHD's inventory gives it a big advantage in illustrating the impact of these old gas stations. The inventory of 372 abandoned sites, related site information, and GIS database used for mapping the information represent valuable tools for this project. The inventory's capabilities can go from the area-wide to the one-site perspective, and the inventory has provided the focal point that helps frame the conversation about this brownfields issue that forges partnerships in government, business, and the community.

Best Practice: Employing PC-based technology to capitalize on pre-existing data and utilizing simple GIS software to construct a tool that is very useful in forging partnerships.

Contact Information: Greg Tanbara • gtanbara@tpchd.org • (253) 798-4784

APPENDIX I: EPA BROWNFIELDS GRANT OPPORTUNITIES

The federal Small Business Liability Relief and Brownfields Revitalization Act (the Brownfields law) of 2002 expanded the definition of a brownfield to include sites that are contaminated by petroleum or petroleum products and are determined to be of relatively low risk relative to other petroleum sites within a state. Also within the Brownfields law are several provisions that allow EPA Brownfields grant recipients to conduct activities that help them to survey and inventory their brownfields, including petroleum-contaminated sites. These provisions include:

- Section 128(a)(2)(A) authorizes states and tribes to use federal grant funds to survey and inventory brownfield sites [42 U.S.C. 9628(a)(2)(A)].

- Section 211(k)(2)(A)(i) authorizes the use of federal grant funds, in the form of competitive Brownfields Assessment grants, to be used to inventory, characterize, assess, and conduct planning related to brownfields [42 U.S.C. 9604(k)(2)(A)(i)].

In addition to Assessment grants and State and Tribal (Section 128(a)) grants, EPA funding is available for petroleum brownfields inventory development activities through Exchange Network grants.

Section 104(k) Brownfields Assessment, Revolving Loan Fund (RLF), And Cleanup Grants
EPA's Brownfields Assessment grants provide funding for a grant recipient to inventory, characterize, assess, and conduct planning and community involvement related to brownfields properties. An eligible entity may apply for up to $200,000 to address a property contaminated by hazardous substances, pollutants, or contaminants (including hazardous substances co-mingled with petroleum) and up to $200,000 to address a property contaminated by petroleum. To learn more about EPA's Brownfields Assessment, RLF, and Cleanup grants visit: www.epa.gov/swerosps/bf/pilot.htm.

Section 128(a) State And Tribal Grants
Section 128(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, authorizes a noncompetitive $50 million grant program to establish and enhance state and tribal response programs. Each year, actual allocation of funds varies depending upon Congressional appropriation.

The primary goal of the funding is to ensure that state and tribal response programs include, or are taking reasonable steps to include, the following four elements in their programs:

1. Timely survey and inventory of brownfields sites.
2. Oversight and enforcement authorities or other mechanisms and resources to ensure that a response action will protect human health and the environment.
3. Mechanisms and resources to provide meaningful opportunities for public participation.
4. Mechanisms for approval of a cleanup plan and verification/certification that cleanup is complete.

To learn more about EPA's Section 128(a) State and Tribal Response Program grants visit: www.epa.gov/brownfields/state_tribal.htm.

Exchange Network Grants
The Environmental Information Exchange Network (Exchange Network) is a new approach for exchanging environmental data between EPA, states, and other partners. The Exchange Network grant program provides funding to states, territories, and federally-recognized Indian tribes to support the development of the

Exchange Network. This network is an Internet- and standards-based secure information systems network that supports the electronic collection, exchange, and integration of high-quality data. This grant program supports the acquisition and development of computer hardware/software needed to connect to the Exchange Network; the development of common data standards, formats, and trading partner agreements for sharing data over the Exchange Network; and the planning, development, and implementation of collaborative and innovative uses of the Exchange Network. This grant program may include the standardization, exchange, and integration of geospatial information to address environmental, natural resource, and related human health issues. For more information on the EPA's Exchange Network visit www.epa.gov/exchangenetwork/.

APPENDIX II: RESOURCES

The following information has been compiled to help stakeholders learn more about petroleum brownfields-related programs and tools.

CONTACTS AND TECHNICAL ASSISTANCE

U.S. EPA Office Of Underground Storage Tanks (OUST)

The EPA Office of Underground Storage Tanks carries out a Congressional mandate to develop and implement a regulatory program for underground storage tank (UST) systems and supports the assessment, cleanup, and productive reuse of former petroleum-contaminated properties.

Steven McNeely
703-603-7164
mcneely.steven@epa.gov

U.S. EPA Office Of Brownfields And Land Revitalization (OBLR)

The EPA Office of Brownfields and Land Revitalization provides financial and technical support that helps clean up and reuse brownfields and other contaminated properties.

Doris Thompson
202-566-0203
thompson.doris@epa.gov

Technical Assistance To Brownfields (TAB) Communities

TAB grants provide geographically-based technical assistance and training to communities and other stakeholders on brownfields issues with the goal of increasing a community's understanding and involvement in brownfields cleanup and revitalization. TAB grants serve as an independent source of information assisting communities with: community involvement; better understanding the health impacts of brownfields; science and technology relating to brownfields site assessment, remediation, and site preparation activities; brownfields finance questions, and information on integrated approaches to brownfields cleanup and redevelopment.

- New Jersey Institute of Technology (NJIT) serves communities in EPA Regions 1, 2, and 3
  www.njit.edu/
- Enterprise Corporation of the Delta, Inc. (ECD) serves communities in EPA Regions 4 and 6
  www.ecd.org/
- Kansas State University serves communities in EPA Regions 5 and 7
  www.engg.ksu.edu/CHSR/
- Center for Creative Land Recycling (CCLR) serves communities in EPA Regions 8, 9, and 10
  www.cclr.org/

WEB SITES AND RESOURCE DOCUMENTS

Association Of State And Territorial Solid Waste Management Officials (ASTSWMO)

www.astswmo.org

ASTSWMO Tanks Subcommittee
www.astswmo.org/programs_tanks.htm

CERLA And Brownfields Research Center
http://www.astswmo.org/programs_cercla.htm

Northeast Midwest Institute

www.nemw.org

Recycling America's Gas Stations
www.nemw.org/recyclegas_stations.pdf

Smart Growth America

www.smartgrowthamerica.org/

U.S. EPA Office Of Underground Storage Tanks (OUST)

www.epa.gov/oust/

Petroleum Brownfields Action Plan: Promoting Revitalization And Sustainability
www.epa.gov/oust/rags/petrobfactionplan.pdf

U.S. EPA Office Of Brownfields And Land Revitalization (OBLR)

www.epa.gov/swerosps/bf/index.html

State Brownfields And Voluntary Response Programs: An Update From The States (September 2008)
www.epa.gov/swerosps/bf/pubs/st_res_prog_report.htm

Tribal Brownfields And Response Programs: Respecting Our Land, Revitalizing Our Communities (April 2008)
www.epa.gov/brownfields/tribalreport08.pdf

U.S. EPA Office Of Superfund Remediation And Technology Innovation (OSRTI)

www.epa.gov/superfund

APPENDIX III: EPA PROPERTY PROFILE FORM

(See next page)

United States
ENVIRONMENTAL PROTECTION AGENCY
Washington, DC 20460

Form Approved.
OMB No. 2050-0192
Expires 07-31-2009

PROPERTY PROFILE FORM—Brownfields

Public reporting burden for this collection of information is estimated to average 1.25 hours per response, including the time for reviewing instructions, searching data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate, or any other aspect of this collection of information, including suggestions for reducing this burden, to the Environmental Protection Agency, Office of Environmental Information, Code 2822T, Washington, DC 20460 and to the Paperwork Reduction Project, Office of Management and Budget, Washington, DC 20503. DO NOT RETURN your form to either of these addresses. Send your completed form to the address provided by the issuing office.

PART I GRANT RECIPIENT INFORMATION

1. Grant Recipient Name (State/Tribe for Section 128(a) Grants; requestor/contractor for TBAs): _____

2. Grant Number (contract number for TBAs): _____

3. Type of Brownfields Grant (check only one box):

☐ Assessment
☐ Revolving Loan Fund
☐ Cleanup
☐ Section 128(a) – State and Tribal Response Program
☐ TBA (EPA Regions Only)

4. For Assessment, Cleanup, and Revolving Loan Fund grants, what type of funding is being used at the property?

☐ Hazardous Substance ☐ Petroleum ☐ Both

5. Indicate if this form is the Initial or Updated Form:

☐ Initial Form ☐ Updated Form

6. Date: _____

PART II PROPERTY INFORMATION

Property Background Information

7. Property Name: _____

8a. Street Address: _____

8b. City: _____

8c. State: _____ **8d.** Zip Code: _____ **9.** Size (in acres): _____

10. Parcel Number(s): _____

11a. Ownership Entity:

☐ Government (Tribal, State, Local) ☐ Private

11b. Current Owner: _____

Ownership & Superfund Liability *(Mandatory for Cleanup and RLF Grants)*

12a. During the life of the grant, did ownership change?

☐ Yes ☐ No

12b. If "yes," did Superfund federal landowner liability protections factor into the ownership change?

☐ Yes ☐ No ☐ Unknown

Property Geographic Information *(EPA Brownfields Program, or its contractors, will provide complete latitude/longitude information if grant recipients are unable)*

13a. Latitude (use 00.000000 format): _____

13b. Longitude (use -000.000000 format): _____

13c. Horizontal Collection Method: _____

13d. Source Map Scale Number (only if a map/photo was used): _____

13e. Reference Point (e.g., Center of Facility or Station): _____

13f. Horizontal Reference Datum (Choose one):

☐ NAD27-North American Datum of 1927
☐ NAD83-North American Datum of 1983
☐ WGS84-World Geodetic System of 1984

Property History Information *(as available)*

14. Property Description / History / Past Ownership: _____

15. Predominant Past Use(s) (check all that apply):

Type	Acreage	Type	Acreage
☐ Greenspace	_____	☐ Commercial	_____
☐ Residential	_____	☐ Industrial	_____

PART III ENVIRONMENTAL ASSESSMENT INFORMATION *(mandatory for Assessment Grants, State & Tribal Property Specific Assessments, and TBAs; as available for Cleanup and RLF grant recipients)*

Table A – Environmental Assessment Activity (If there are multiple assessments, please use a separate line for each assessment)

Environmental Assessment Detail			Source of Funding (enter one source of funding per line; do not include funding received prior to the award of this EPA grant)						
Phase (Choose I, II, III)	Start Date	Completion Date	This US EPA Grant	Other Federal	State/ Tribal (exclude §128(a) funds)	Local Gov't	Private/ Other	Name of Entity Providing Funds	Amount of Funding
			☐	☐	☐	☐	☐		$
			☐	☐	☐	☐	☐		$
			☐	☐	☐	☐	☐		$
			☐	☐	☐	☐	☐		$
			☐	☐	☐	☐	☐		$

16. Indicate whether cleanup is required: ☐ Yes ☐ No ☐ Unknown

Make sure to complete Part V – INSTITUTIONAL CONTROLS INFORMATION before submitting this Property Profile Form to your EPA Regional Representative

PART IV CONTAMINANTS & MEDIA AFFECTED INFORMATION *(mandatory for all grant types)*

Table B – Contaminants and Media Affected (check all that apply)

Contaminants			Media		
Class of Contaminant	Found	Cleaned Up	Media	Affected	Cleaned Up
Petroleum/Petroleum Products	☐	☐	Soil	☐	☐
Controlled Substances	☐	☐	Air	☐	☐
Asbestos	☐	☐	Surface Water	☐	☐
PCBs	☐	☐	Ground Water	☐	☐
VOCs	☐	☐	Drinking Water	☐	☐
Lead	☐	☐	Sediments	☐	☐
Other Metals (_____)	☐	☐	No Media Affected	☐	
PAHs	☐	☐	Unknown	☐	
Other Contaminants (_____)	☐	☐			
No Contaminants	☐				
Unknown	☐				

State & Tribal Brownfields/Voluntary Response Program Information

17a. State & Tribal Program Enrollment (If the property was not enrolled in a state program, check Property Not Enrolled check box):

Date of Enrollment _____ ID Number (if applicable) _____ ☐ Property Not Enrolled in a State or Tribal Program

17b. Date No Further Action/Cleanup Completion Document Issued
(If the property was not enrolled in a state or tribal program, leave blank):

Date: _____

PART V INSTITUTIONAL CONTROLS INFORMATION *(mandatory for all grant types)*

18a. Indicate whether Institutional Controls are required: ☐ Yes ☐ No

18b. If Institutional Controls were required, indicate the category (check all that apply):

☐ Proprietary Controls (e.g., easements, covenants) ☐ Governmental Controls (e.g., zoning, building codes)

☐ Informational Devices (e.g., state registries, deed notices) ☐ Enforcement/Permit Tools (e.g., permits, consent decrees)

Address of Data Source (URL if available): _____

18c. Indicate whether Institutional Controls in place:
☐ Yes ☐ No Date:

PART VI ENVIRONMENTAL CLEANUP INFORMATION *(mandatory for Cleanup and RLF Grants and State & Tribal Property Specific Cleanups; as available for Assessment Grants and TBAs)*

19. Cleanup Activity Start Date: _____

20. Cleanup Activity Completion Date: _____

21. Acres Cleaned Up: _____

22. If EPA Brownfields funding was used, indicate the type and amount (If any non-EPA funding was used, fill out Table C):

Type	Amount	Type	Amount
☐ Cleanup Grant	_____	☐ RLF Subgrant	_____
☐ RLF Loan	_____	☐ Section 128(a) State/Tribal Grants	_____

Table C – Environmental Cleanup Leveraged Funding Detail

Source of Funding (enter one source of funding per line; do not include funding received prior to the award of this EPA grant)					
Other Federal	State/ Tribal (exclude §128(a) funds)	Local Gov't	Private/ Other	Name of Entity Providing Funds	Amount of Funding
☐	☐	☐	☐		$
☐	☐	☐	☐		$
☐	☐	☐	☐		$
☐	☐	☐	☐		$

PART VII REDEVELOPMENT AND OTHER LEVERAGED ACCOMPLISHMENTS *(Mandatory for Assessment, Cleanup and RLF Grants; as available for State and Tribal Property Specific Activities and TBAs)*

Redevelopment Information

23. Redevelopment Start Date: _____

24. Future Use and Estimated Acreage (check all that apply):

Type	Acreage	Type	Acreage
☐ Greenspace	_____	☐ Commercial	_____
☐ Residential	_____	☐ Industrial	_____

25. Number of Cleanup and Redevelopment Jobs Leveraged: _____

26. Actual Acreage(s) and Type(s) of Greenspace Created: _____

Table D – Funds Used to Perform Redevelopment Activities

Source of Funding (enter one source of funding per line; do not include funding received prior to the award of this EPA grant)					
Other Federal	State/ Tribal	Local Gov't	Private/ Other	Name of Entity Providing Funds	Amount of Funding
☐	☐	☐	☐		$
☐	☐	☐	☐		$
☐	☐	☐	☐		$
☐	☐	☐	☐		$

PART VIII ANECDOTAL PROPERTY INFORMATION *(as available for all grant types)*

27. Property Highlights _____

_____

_____

_____

_____

Property Photograph Information

28. Indicate whether photographs are available:

☐ Yes ☐ No

29. Indicate whether video is available:

☐ Yes ☐ No

PART IX APPROVALS

30. Grant Recipient Project Manager

Name (Please Print)	Signature	Date

31. US EPA Regional Representative

Name (Please Print)	Signature	Date

APPENDIX IV: PUBLICLY AVAILABLE INVENTORIES

The following entities have publicly available site inventories online.

EPA Region	Community/State	Web site
1	Connecticut Department of Economic Development	www.ct.gov/dep/cwp/view.asp?A=2715&Q=325018
1	State of New Hampshire	www2.des.state.nh.us/OneStop/ORCB_Query.aspx?Project=UST
3	Bucks County Redevelopment Authority, Pennsylvania	www.bcrda.com/brown.html
3	State of Pennsylvania	www.pasitesearch.com/selectsites/
4	State of Georgia	www.gaepd.org/Documents/hazsiteinv.html
4	Mississippi Department of Environmental Quality	muster.deq.state.ms.us/webreportapplication/USTFacilityWithin.aspx
5	Michigan Department of Environmental Quality	www.deq.state.mi.us/ustfields/
5	Wisconsin Department of Natural Resources	dnr.wi.gov/org/aw/rr/brrts/index.htm
10	State of Oregon	www.deq.state.or.us/lq/ECSI/ecsiquery.asp?listtype=lis&listtitle=Environmental+Cleanup+Site%20Information+Database

COMMENTS?

Please send any comments on this publication or other information, such as lessons learned or success stories, to Pbf_strategy@sra.com.

United States Environmental
Protection Agency

Solid Waste and
Emergency Response
5401P

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