

Online Tutorial Background

EPA's cleanup programs have set a national goal of returning formerly contaminated sites to long-term, sustainable, and productive use. EPA fosters land revitalization across its cleanup programs by developing policies and systems for the safe, long-term use of remediated land.

Charrettes are a best practice used to address conflict and support land revitalization efforts at contaminated lands. This 90-minute, online training tutorial provides an introductory overview to EPA's one-day Charrette Training, developed by EPA's Conflict Prevention and Resolution Center (CPRC), which is designed to familiarize EPA staff with the use of charrettes to achieve these outcomes.

CPRC's Charrette Training explores how charrettes can inform and strengthen cleanup decision-making, address and resolve conflicts, enhance stakeholder relationships, and identify feasible future land use opportunities for contaminated lands.

The Charrette Training is built around a series of interactive training modules designed to immerse participants in site-based situations and engaging discussions focused on charrette best practices at contaminated sites. The online tutorial provides participants with an opportunity to explore and learn from materials presented during the Charrette Training. The training is designed for remedial project managers, community involvement coordinators, and anyone involved in decision-making regarding the reuse of contaminated lands.

The online tutorial helps EPA staff:

- Explore what a charrette is and why it is an important tool.
- Decide when and where a charrette can be used.
- Initiate a charrette process for a site.
- Understand who should be involved and their roles.

CPRC will sponsor the one-day Charrette Training upon request in your Region. CPRC (EPA's Conflict Resolution Specialists) also provides support for initial assessments for Superfund sites where charrettes could play a key role in resolving conflicts and supporting revitalization outcomes.

For more information on this online tutorial, CPRC's Charrette Training, or the charrette assessments, please contact:

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Online Tutorial Objectives

Participants in CPRC's online charrette tutorial will achieve the following objectives:

- Learn about and explore the defining characteristics, benefits, and outcomes of charrettes at contaminated lands, with an emphasis on how these processes can resolve conflicts and strengthen remedial decision-making, protectiveness, and long-term stewardship.
- Identify the key characteristics of environmental conflicts and understand how conflict dynamics at contaminated lands are addressed by charrettes.
- Identify situations where charrettes can be used appropriately to resolve conflicts and support land revitalization outcomes and understand how to access EPA charrette resources.
- Understand how to participate effectively and appropriately as part of a charrette process.
- Examine how charrettes can be used most appropriately in the cleanup process and the characteristics of these processes at different stages of cleanup.
- Explore examples of how charrettes have been used to resolve conflict and support land revitalization at contaminated sites across the country.

Notice

This training tutorial is intended solely for informational purposes. It does not provide legal advice, have any legally binding effect, or explicitly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits for any person. The United States Environmental Protection Agency reserves the right to act at variance with the information provided in this tutorial without public notice.



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Section I. EPA Cleanup Programs, Revitalization, & Reuse

Overview

Since the inception of the Superfund program, EPA has been building on its expertise in conducting site characterization and remediation to ensure that contamination is not a barrier to the reuse of property. Today, consideration of future use is an integral part of EPA's cleanup programs from initial site investigations and remedy.

Under CERCLA, the NCP, and Executive Order 12580, EPA has broad authority to carry out response actions at Superfund sites in order to protect human health and the environment. Consistent with the statute, NCP and existing EPA policy and guidance, the Agency considers reasonably anticipated future land use in the remedial process in a number of ways, such as working with all appropriate parties as it identifies anticipated future land use for sites or portions of sites being cleaned up. Whenever practicable, the Agency also seeks to avoid response actions that might hinder or prevent site reuse that is consistent with the Agency's assumptions regarding anticipated future land use.

“EPA’s cleanup programs have set a national goal of returning formerly contaminated sites to long-term, sustainable, and productive use.”

– 2006-2011 EPA Strategic Plan
[\(<http://www.epa.gov/ocfo/plan/plan.htm>\)](http://www.epa.gov/ocfo/plan/plan.htm)

Five Reasons Why EPA Considers Future Use in Site Cleanups

- 1. Considering future use helps protect human health and the environment.***
- 2. Site reuse protects remedies.***
- 3. Considering reuse engages local communities.***
- 4. Reuse brings social and environmental benefits. It can result in protected greenfields, infill development and open space preservation, and decreased urban sprawl.***
- 5. Reuse provides local benefits, including jobs, tax revenues, and land revitalization.***

EPA and Charrettes

The charrette is a powerful land use planning and conflict resolution best practice that brings together diverse stakeholders to develop innovative strategies to revitalize contaminated lands. The following sections of the online tutorial explore how charrettes can inform cleanup decision-making, address and resolve conflicts, enhance stakeholder relationships, and identify feasible future land use opportunities for contaminated lands.



Section II. Introduction to Charrettes

Charrettes are collaborative planning and design workshops that bring together diverse stakeholders to plan for the future of neighborhoods, communities, and even cities and regions. Charrettes use dynamic visualization and mapping tools to develop innovative, sustainable plans for implementation. Charrettes enable public agencies, community organizations, developers and others to address contentious, complex land use planning situations and build long-lasting relationships.

At contaminated lands like Superfund sites, the charrette is a powerful land use planning and conflict resolution best practice that uses visualization and mapping tools to develop innovative, sustainable plans for revitalization. These collaborative workshops have made a difference in communities across the country.

Charrettes: A Brief History

char•rette /shuh-RET/ n.

The word “charrette” comes from the Old French word for a cart. The term refers the final intense work effort by art and architecture students to meet a project deadline. At the École des Beaux Arts in Paris during the 19th century, professors collected students’ final drawings in a cart for jury reviews. Students would jump on the charrette with their work, continuing with finishing touches as they travelled to the reviews.



“La Charrette, by Alexis Lemaistre at L’École des Beaux- Arts, c. 1889.



Superfund site charrette, 2008.

Source: EPA



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Today, the National Charrette Institute (NCI) defines a charrette as **“a collaborative design and planning workshop held on-site and inclusive of all affected stakeholders.”** The charrette process is a type of collaborative, community-based planning. In all settings, the word “charrette” is used to capture the atmosphere of energy, creativity, and visual focus inherent in the term’s 19th century origins.

“The charrette is about dynamic balances. It is about principles balanced by process, about the interests of the few balanced by those of the many, about experts being balanced by those who know nothing except how things really should be, about public benefit and private gain... A proper charrette brings into being a collective intelligence.”

- Andres Duany

The charrette process has risen to prominence in the United States since the mid-1980s, in response to the social, economic, and environmental impacts from land use patterns, often referred to as “sprawl,” that have developed since World War II. There has also been increased interest in addressing community conflicts and ensuring meaningful public participation in the planning of communities.

Interest in charrettes has been supported by organizations and initiatives like the Congress for the New Urbanism, the Smart Growth Network, and the National Charrette Institute. A detailed history of charrettes is provided in *The Charrette Handbook*, published by the American Planning Association.

Today, charrettes are most commonly used as part of planning processes to guide:

- individual development projects
- the growth of larger districts like neighborhoods and business areas
- initiatives focused on the future of entire cities and even regions for purposes like economic development and watershed and green infrastructure planning
- the revitalization of contaminated lands

The following sections of the tutorial explore the appropriate uses of charrette processes in the context of contaminated lands like Superfund sites.

Have you heard about or participated in a charrette process? What were the opportunities and challenges identified during the project? What were the outcomes? Is the project’s implementation ongoing?



Key Elements of the Charrette Process

- A mission to plan for a site or larger area's future use(s) based on a detailed understanding of local and regional land use and market data, community history and priorities, and other relevant information.
- Conflict and conflict resolution.
- Intensive, collaborative design and planning workshops with all interested parties represented.
- An interdisciplinary charrette team engaged by a sponsor group – a public agency, non-governmental organization, and/or private-sector entity.
- An emphasis on visual and design aids like maps to visualize future use opportunities.
- A feasible plan and sustainable implementation strategy are primary outcomes.

When to Use a Charrette

Charrettes may be a helpful tool to consider using at a contaminated site if any of the conditions below are met. Charrette strategies can be revisited and updated based on new site and community information on an as-needed basis during the cleanup process.

- EPA staff need to identify a site's reasonably anticipated future land use (RAFLU) to inform response actions and the RAFLU cannot be easily determined from available information.
- Determination of a site's anticipated future use will require coordination with multiple parties and evaluation of site and community information.
- A community, a government entity, or other parties express interest in a site's cleanup and revitalization.
- Education and outreach are needed to build relationships between EPA, the community, and other site parties.
- Public meetings and availability sessions are contentious and marked by competing interests, perceived injustices, and miscommunication and misunderstanding.
- There are no outstanding issues that require resolution prior to future land use discussions being able to move forward.



General Benefits Provided by Charrettes

- Charrettes are a powerful conflict resolution tool well-suited to environmental and land use conflicts. Charrettes enable parties with diverse and divergent perspectives to work together to address complex issues and identify areas of shared interest and outcomes that can benefit all parties.
- Charrettes emphasize education and capacity-building, recognizing that project parties are responsible for the long-term implementation of project goals and plans.
- Charrettes' use of detailed and comprehensive information establishes realistic community expectations for future land use opportunities, as well as an understanding of issues and challenges that may need to be addressed.
- Charrettes are time and resource efficient processes that yield short and long-term outcomes “owned” by appropriate project parties.

Charrette Benefits at Contaminated Lands

- Charrettes yield information that leads to enhanced decision-making by EPA staff throughout the remedial process.
- Charrettes yield information that can reduce cleanup costs and timeframes.
- Charrettes build relationships between EPA, communities, and other key parties at contaminated sites.
- Charrettes can inform the selection of appropriate institutional controls.
- Charrettes engage key site parties and identify future site roles and responsibilities, ensuring the protectiveness and long-term stewardship of sites.



Potential Charrette Participants and Roles

There are many possible starting points for charrette processes. At some contaminated lands, a local government department, community organization, or developer may spur the start of the project. In other cases, EPA may ask a locality to provide an updated assessment of the community's future land use recommendations for the site.

In all cases, there will be three general groups involved in the charrette process – a sponsor group, the charrette participants, and the charrette resource team.

Charrette Sponsor Group

- local government(s)
- EPA
- state agencies

The sponsor group, which may include EPA, state agencies, and the local government, is responsible for establishing the charrette process and guiding it through to its successful completion.

Superfund Charrette Participants

- local government agency staff and elected officials
- community residents (from adjacent to the site and across the community)
- neighborhood associations
- business owners
- realtors and financial institutions
- faith-based organizations
- community historians
- indigenous peoples
- trade, industrial, agricultural, and labor organizations
- public health, scientific, and professional representatives and societies
- minority and ethnic groups
- news media
- site owners
- site potentially responsible parties
- local civic organizations
- non-profit community organizations
- environmental and environmental justice groups
- research, university, education and governmental organizations and associations
- public involvement practitioners
- regional planning organizations

Charrette participants are the parties identified by the sponsor group as appropriate stakeholders with an interest in the site's cleanup and future use. In most cases, broad community involvement is a cornerstone of successful charrettes.



Charrette Resource Team

The **charrette resource team** is the group of interdisciplinary specialists – planners, landscape architects, economists, ecologists, engineers, historians, real estate specialists – that will gather and analyze site and community information and lead the sponsor group and the charrette participants through the charrette process.

EPA Roles in Charrettes

In the context of EPA’s mission to protect human health and the environment, EPA considers a site’s reasonably anticipated future land use as part of the remedial process at contaminated lands in order to ensure the protectiveness and long-term stewardship of site remedies. EPA has no local land-use decision making authority. Local land use regulation is the purview of local governments, which use tools like comprehensive planning and zoning to guide the growth and physical characteristics of communities over time. As a result, local governments will often serve as the hosts and convening authority for charrette processes.

EPA and state agency staff can help to organize a charrette process and serve as resource members during the charrette itself. EPA and state agency staff are not typically part of the charrette decision-making process. They provide information on a site’s physical characteristics, contamination, remedial options, and protectiveness and long-term stewardship requirements.

EPA staff also serve as reviewers and advisors, providing the community with input and feedback on project materials, including reuse framework strategies in particular. EPA staff’s engagement ensures that all outcomes from a charrette process are thoroughly grounded in an understanding of the remedial process and an individual site’s characteristics. In turn, this involvement ensures realistic participant expectations for a site’s reuse and provides EPA with the reasonably anticipated future land use information needed to inform the site’s cleanup and long-term stewardship.

While a charrette process may often be a new experience for EPA site staff, these projects can help make their jobs easier and more effective.

Charrettes in particular, and consideration of a site’s future use in general, can help:

- **Identify a site’s reasonably anticipated future land use (RAFLU).**
- **Streamline site cleanups.**
- **Lead to more cost-effective remedies.**
- **Build strengthened relationships between EPA and local communities.**
- **Ensure the protectiveness of site remedies.**



Section III. The Charrette Process at Contaminated Lands

Stage #1: Pre-Charrette Preparation

The first stage of the charrette process focuses on several general activities:

- Building support for, designing, and organizing the process.
- Gathering information about parties and issues.
- Identifying goals and desired outcomes.
- Gathering, mapping, and analyzing information to inform the charrette.

Detailed Stage #1 process activities include:

- Determining the project's constituent members, roles, ground rules, and responsibilities.
- Building support for and establishing the legitimacy of the charrette process.
- Establishing the project's decision-making framework.
- Defining project goals, guidelines, and timeframes.
- Identifying the project's charrette consultant team.
- Allocating project resources.
- Identifying information needs.
- Planning for the project's charrette.

Detailed Stage #1 information gathering activities include:

- Conducting interviews in the community, with project participants, and with EPA, state agency, and local government staff.
- Visiting the site, its adjacent surroundings, and the larger community.
- Gathering, mapping, and analyzing site and community information.
- Identifying key future land use considerations, including opportunities and challenges.



Process Design

The tutorial has discussed the importance of involving a wide range of perspectives in a charrette process, emphasizing that broad and sustained community outreach and involvement efforts are important at most sites. As the organizers of the charrette bring these perspectives together, it is important to clearly define participants' responsibilities. In most charrettes, project participants serve in an advisory capacity as part of a committee, making recommendations for consideration by EPA and local elected officials or departments. Alternatively, in some cases, local governments grant project participants' decision-making authority to directly determine local government policies and regulations.

Charrette preparation meetings need to define project participant roles, ground rules, and responsibilities. Charrette processes work best when they are consensus-based and when all project participants work together to identify reuse opportunities, address challenges, and build common ground around shared decisions that have outcomes acceptable to all participants.

Pre-charrette preparation meetings also focus on the clear definition of project goals, duration, and desired outcomes. Project goals often include:

- Gathering adequate information to inform project decision-making.
- Outlining site reuse challenges, opportunities, and key considerations.
- Developing project goals and site reuse guidelines.
- Formulating an effective long-term site reuse strategy.
- Identifying resources and organizations that can help foster a site's reuse, using grants, loans, technical assistance, and other tools.

Project participants can also revisit and update project goals and desired outcomes throughout the charrette process, as discussions progress and additional information becomes available. On average, the pre-charrette preparation stage of a charrette process lasts approximately 2-4 months.



Project Information Gathering

Effective charrette processes rely on extensive information gathering and analysis that is completed prior to the charrette. The charrette team engaged to work with project participants will visit the site and community, conduct interviews, and gather and analyze site and community information, including:

- the site’s physical characteristics
- the site’s contamination and remedial characteristics
- the site’s remediation status
- adjacent land uses
- local land use regulations and community initiatives
- infrastructure and access
- regional land use trends

Integrating Site and Community Information

Once gathered, the integration of site and community information provides the solid research and analysis foundation for the charrette itself, the second stage of the process. Key findings are distilled and presented in a visually compelling manner, providing charrette participants with the actionable knowledge they need to develop an implementable reuse strategy, or framework, for the site’s future use.

By bringing all of this information together and working closely with EPA, parties can work together during the charrette to determine whether a particular land use can mesh with community goals and priorities, be compatible with adjacent land uses, respect the site’s natural and human history, help attract jobs and generate tax revenues, and protect human health and the environment.

How does information gathering for a charrette process differ from EPA’s information gathering activities at contaminated sites? How might EPA’s approach inform and strengthen charrette efforts? Does the charrette approach offer any opportunities or benefits for EPA?



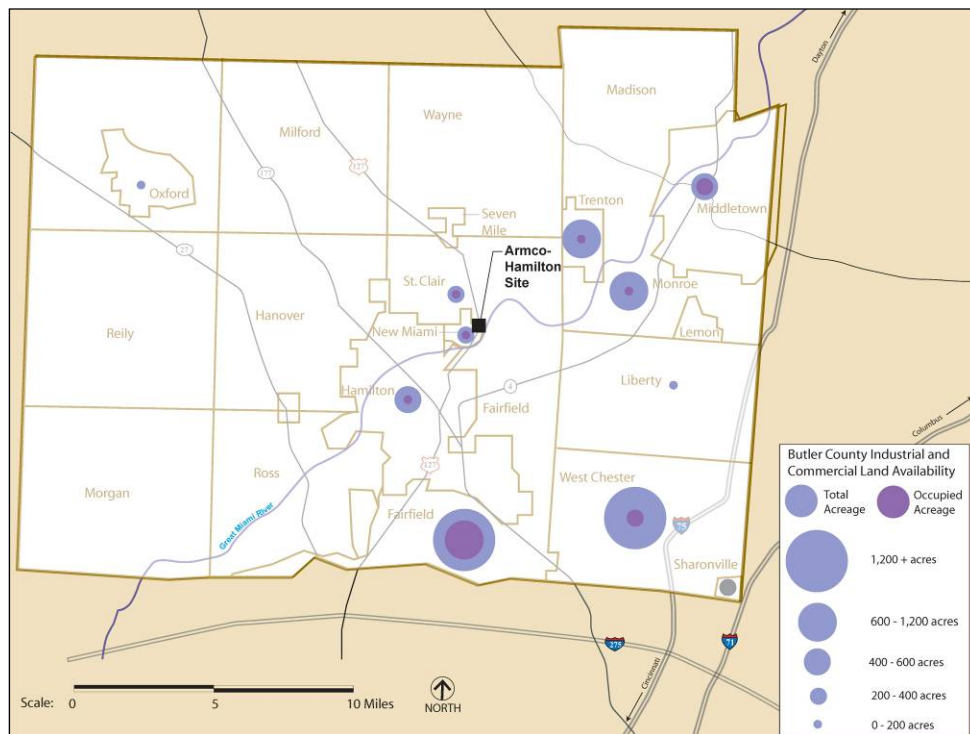
Stage #2: The Charrette

The charrette is the heart of the charrette process. Building on the relationships established and information gathered during the pre-charrette meetings, the charrette is an intensive, multi-day workshop or series of meetings that carries a reuse planning project from initial ideas to alternative concepts to a preferred plan, often called a site reuse framework.

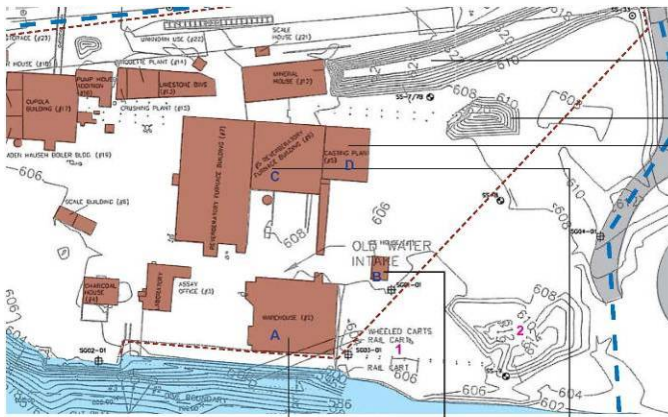
The Beginning of the Contaminated-Site Charrette

Initial charrette activities focus on education and orientation for charrette participants.

- Charrette process and project goal review: project participants work with the charrette team to review and confirm the goals and components of the charrette process.
- Site tour: visiting the site is indispensable for all project participants, providing a hands-on opportunity to understand site conditions and the site's surrounding context.
- Visualization: information gathered and analyzed during the pre-charrette stage is distilled into key findings by the charrette's consultant team and presented in a visually compelling manner for the project's initial educational sessions.
- Open house: charrettes can include one or multiple open house sessions (usually held in the evening) that provide opportunities for the community to learn about the project and provide feedback on the draft reuse concepts developed for a site.



Dynamic maps and other graphics used in charrettes translate complex data into accessible information. Above, a map highlights regional land use trends. Below, a diagram illustrates a site's historical uses and current status.



Shoreline view, dockside warehouse on right

- A. Dockside Warehouse (1898)
- B. Ice House (1899)
- C. Stack
- D. Casting Plant (1920)



Quincy Smelter - Photo Sheet 5

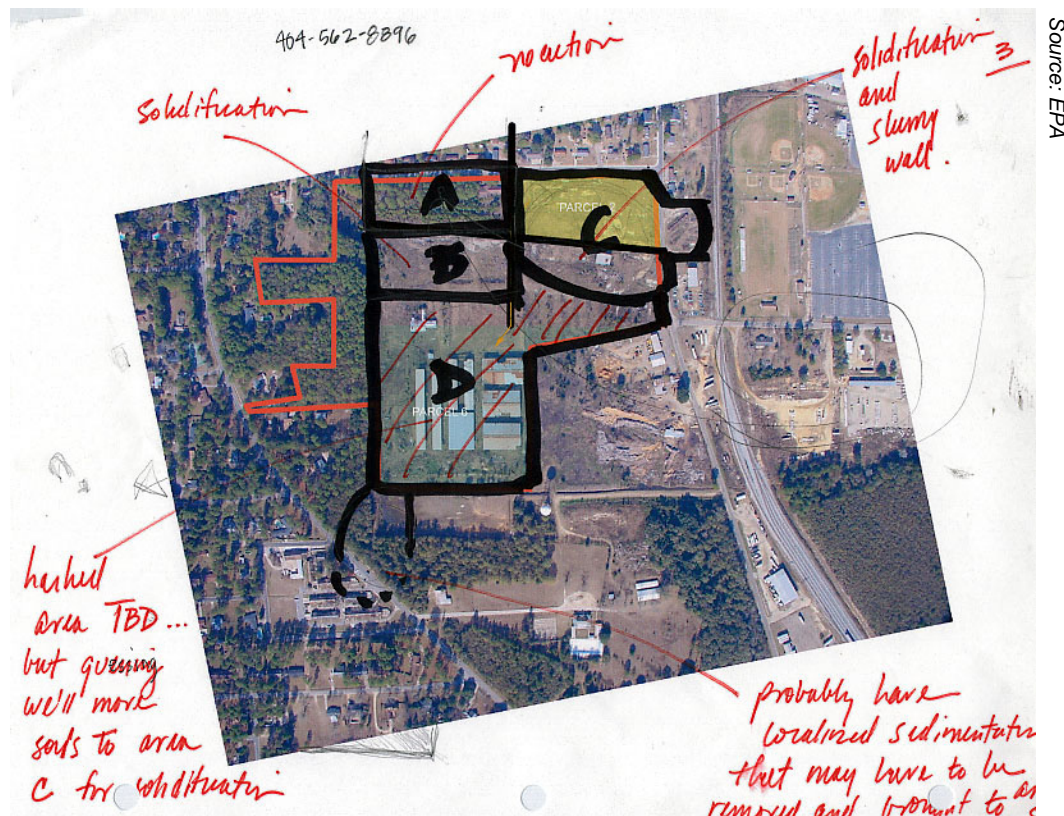
The Middle of the Contaminated-Site Charrette

Mid-charrette activities focus on the development of alternative reuse concepts for the site by the charrette team, based on regular feedback from meetings with charrette participants and open house sessions with the general public.

- Revised reuse guidelines: following review of project information and discussion sessions, project participants update the project’s draft site reuse guidelines, which in turn guide the charrette team’s work. These guidelines are revisited and revised throughout the charrette and after the charrette as needed.
- Draft alternative reuse concepts: the charrette team develops alternative reuse scenarios that identify future land use opportunities for different portions of a site. The team also highlights challenges and issues that need to be addressed in order for particular land uses to be located at the site.
- Review and feedback: the charrette team’s reuse concept scenarios are evaluated by project participants, including EPA, and the general public. EPA and state agency staff play a key role as project resources during these “feedback cycles,” working with all parties to explore whether potential site uses could be compatible with the site’s contamination, remedy, and the protection of human health and the environment.
- Information gaps and fact-checking: the charrette team and charrette participants address any information gaps and follows up as needed.



- Issue definition and resolution: the charrette team facilitates small- and large-group discussions with project participants to clarify and address project-related issues and participant concerns that have not previously surfaced in the charrette process.



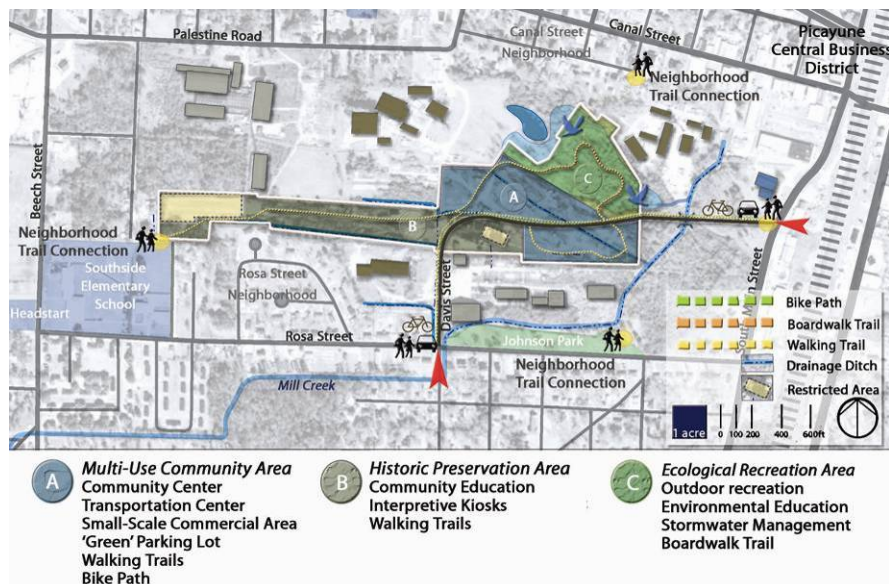
EPA staff provide feedback regarding site conditions, remedy considerations, and EPA requirements to project participants and the charrette team throughout the charrette process. The map above is marked by feedback from an EPA project manager regarding potential cleanup options for a Superfund site in Georgia.

How best can EPA staff participate in the middle stages of the charrette process? What opportunities and challenges are presented by serving as resources for project participants and the charrette team?

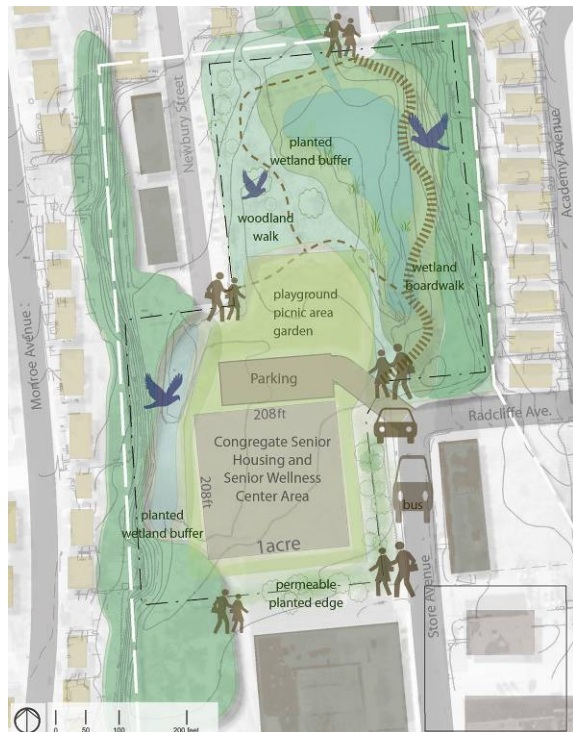
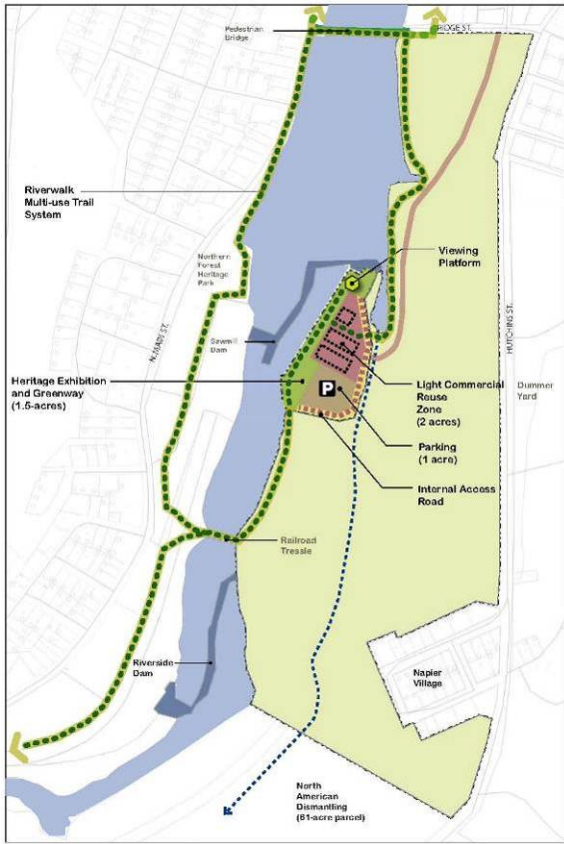
The Conclusion of the Contaminated-Site Charrette

Final charrette activities synthesize site reuse options and focus on the development of a site reuse framework, a preferred site reuse plan that incorporates all project participant and community feedback, consolidates elements of the preceding reuse scenarios, and reflects the best design ideas of the project's charrette team.

- Reuse options synthesis: the charrette team incorporates all available information and feedback from participant discussion and public review sessions and evaluates the feasibility of different reuse options to identify a prioritized set of reuse opportunities for a site.
- Site reuse framework production: the charrette team develops a visual plan or series of maps, called a reuse framework, which lays out the preferred reuse opportunities and key considerations for different parts of the site. Frameworks are flexible documents, able to incorporate new information over time.
- Project implementation strategy: while development of a detailed implementation strategy for the site's reuse takes place later in the charrette process, project participants will begin to identify initial considerations, including key next steps and parties' roles and responsibilities. These considerations are collected and revisited during the third stage of the charrette process.
- Final reviews: final reviews occur on as-needed basis. Project participants often appreciate an opportunity to preview the project's reuse framework and public presentation materials prior to the charrette's final public presentation.
- Presentation: the charrette culminates in a final presentation to the community and EPA. This presentation harnesses all of the charrette's energy and intensity to build long-term support, interest, and momentum for the project's implementation.



Reuse frameworks developed for Superfund sites across the country: the Picayune Wood Treating site in Picayune, Mississippi (above), the Chlor-Alkali site in Berlin, New Hampshire (below), and the Scovill Industrial Landfill site in Waterbury, Connecticut (bottom of page).



Stage #3: Post-Charrette Planning and Implementation

Once the charrette has concluded, the project's site reuse framework will have been finalized and presented to the community and EPA. In the third stage of the charrette process, project participants work together to finalize a long-term implementation plan for returning a site to use, refining the reuse framework as needed.

While implementation plans vary from community to community, they share some general considerations in common, including:

- Developing a coordinated timeline that outlines reuse-related next steps and milestones for all appropriate project parties.
- Establishing key next steps and milestones to enable EPA to integrate the community's reuse findings as part of the Agency's ongoing remedial process.
- Working with EPA and state agencies to implement institutional controls, confirm site stewardship responsibilities, and modify site decision-making documents, as appropriate.
- Coordinating with EPA and state agencies over the long-term to ensure the protection of human health and the environment at the site.
- Pursuing site ownership transfer opportunities.
- Addressing site liability and stigma concerns.
- Updating local regulatory tools (comprehensive planning and zoning) to spur site reuse.
- Creating new regulatory tools and incentives (overlay districts, planned unit development districts, tax incentives, grants and loans, etc.) to spur site reuse.
- Institutionalizing the community's reuse planning capacity within the local government or other entity, like a designed development authority.
- Identifying local, state, and federal public and private sector resources, including grants, loans, and technical assistance, which can help support a site's return to use.

Once the project's participants have developed a site reuse framework and implementation plan, all stages of the charrette process – from initial organization and stakeholder outreach through the charrette and implementation planning – are complete. Project materials can be compiled in a final project report that can be presented to local governments and/or elected officials, EPA, state agencies, and other key parties. The project report serves as the road map that will guide parties' roles and responsibilities moving forward. With a strong project foundation in place and an engaged and committed group of project participants and community support behind the project, the pieces are in place for all parties to work together to spur a site's reuse, protect human health and the environment, and support revitalization outcomes.

What might be EPA priorities for sites during the post-charrette implementation stage? What challenges and opportunities are presented by this stage for EPA site staff?



Section IV. Charrettes & the Remedial Process

Charrettes can be used appropriately and effectively throughout the remedial process at contaminated lands. Each stage offers opportunities and challenges for their use, which are described below, along with several site examples.

Charrettes and the Remedial Process: General Considerations

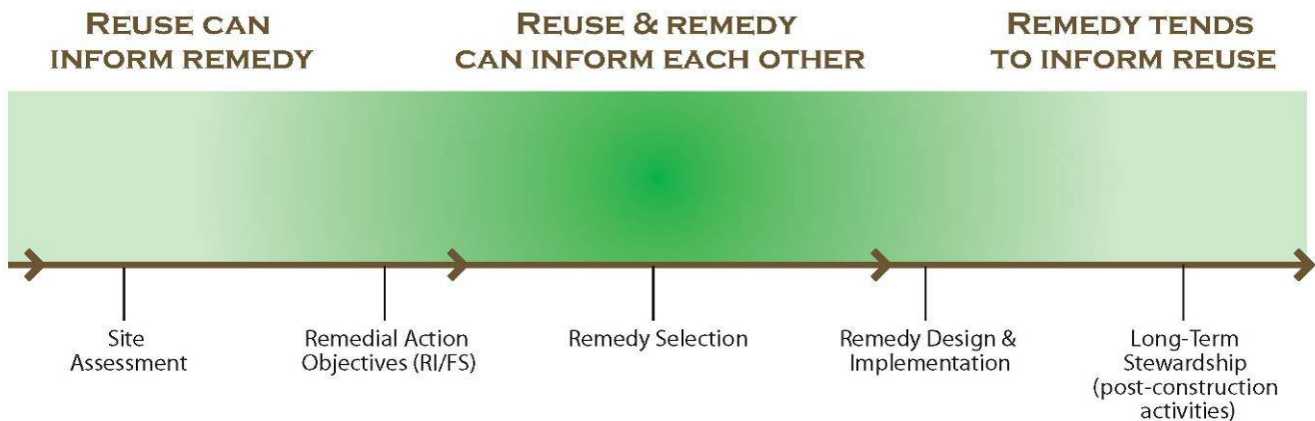
#1. The timing of a charrette in the remedial process determines the extent to which remedy and reuse considerations can inform each other.

Prior to remedy selection, future land use considerations can inform EPA’s site activities, including the site assessment, the development of remedial action objectives, and the selection and design of a site’s remedy. Design charrettes provide a way to identify future land use considerations that can inform EPA’s site activities, as well as community decision-making and planning.

These “upstream” interventions present a host of additional opportunities as well – to build community relationships, to address and resolve potential conflicts early-on, to establish realistic stakeholder expectations for a site’s future use, and to explore how future land use considerations may enable potential cost- and time-savings for a site’s cleanup.

Once a site’s remedy has been designed, the focus of design charrettes changes. In most cases, the characteristics of the site’s remedy and the types of land uses that it can support are primary factors in identifying potential future land uses that may be located at a site.

Charrettes during these “downstream” stages are also an effective tool for EPA and community stakeholders. For EPA, these processes can help ensure the development of effective institutional controls and identify potential future site users willing to implement and enforce ICs. For communities, the certainty of the types of land uses that a site’s remedy will support can provide developers and other interested parties with the information they need to be able to move forward with a project.

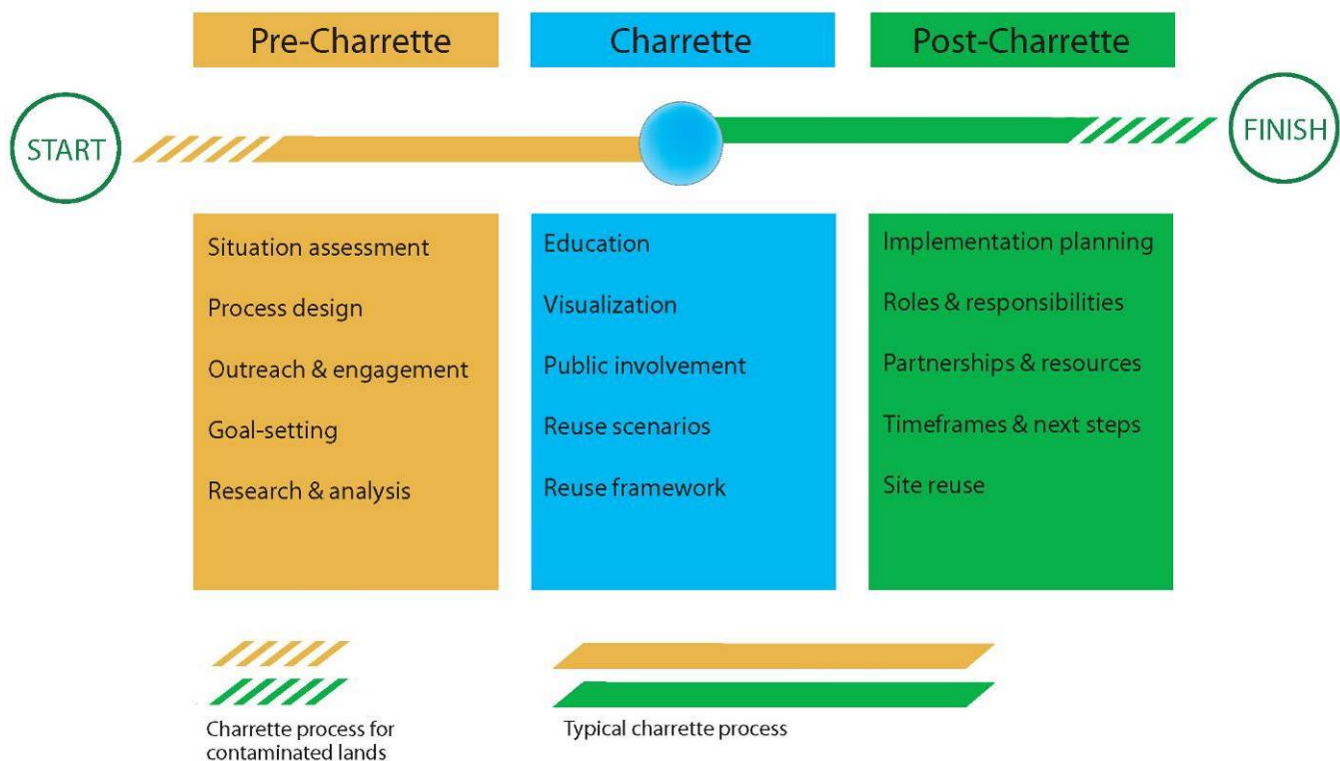


#2. The cleanup process' long-term timeframes and the additional stakeholders at contaminated lands are key factors in the design of charrette processes for these sites.

Charrettes for conventional projects can start quickly and move from ideas to implementation within months, rather than years. Charrettes at contaminated lands like Superfund sites can take longer to start, due to the importance of building relationships among key parties and the community and addressing health and safety issues, and take much longer to implement, given the duration of many site cleanups.

The long-term nature of many site cleanups also serves as an opportunity, however. These timeframes provide localities and other key parties with the time needed to address the site stigma, liability, infrastructure, and other considerations that need to be addressed to ensure successful site reuse and the long-term protection of human health and the environment. For the same reason, the outcomes of charrettes need to be reuse strategies, or frameworks, that are flexible and can be updated and revisited over time, as additional site and community information becomes available.

The long-term nature of site cleanups may also mean that portions of sites can be reused in the shorter-term, leveraging the redevelopment of sites to certain levels in stages. For example, parts of a site may be reused as a park or for commercial retail land uses in the shorter-term, enabling site users to address site stigma issues and financially leverage a next phase of redevelopment, like mixed use residential land uses, in the future.



Charrettes and the Remedial Process: Five Windows of Opportunity

Window #1: Site Assessment

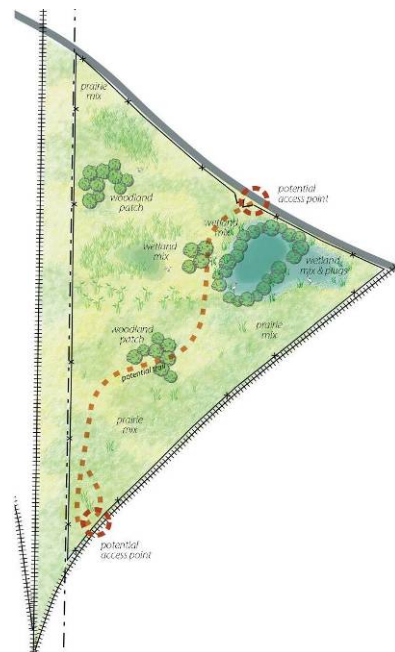
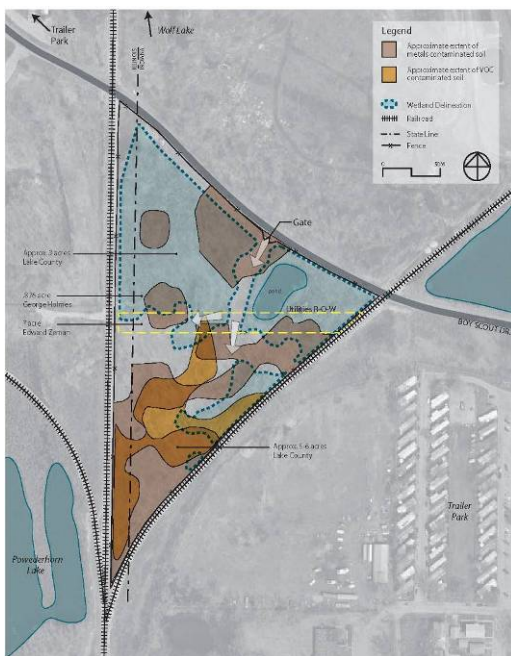
Charrette processes during the site assessment phase provide EPA with an opportunity to begin the process of identifying anticipated future land uses, build stakeholder relationships, and identify potential conflicts at the earliest possible stage of the remedial process.

Charrettes at this stage also face one major challenge: limited site information. Accordingly, it is important that all parties understand that the charrette is part of a long-term reuse planning process that can be revisited over time, as additional site information becomes available. In this way, open communication between EPA and other site parties helps establish realistic expectations for a site's future use.

While site information may be limited, information regarding a site's surroundings and community priorities is plentiful. Indeed, charrette processes at this stage frequently focus on the implications of community information for site assessments. Perception mapping and inventorying exercises with site stakeholders document local land use trends, future plans for adjacent properties, and how the community anticipates that a site could be used in the future. This information can inform data collection, site sampling plans, and the analysis of potential risks to human health and the environment.

Calumet Container Superfund Site, Hammond, Indiana

Evaluation of future land use considerations early in the cleanup process at the Calumet Container site enabled EPA to design a remedy that retained the site's natural features while protecting human health and the environment.



Source: EPA

Site characteristics and recreational reuse maps created for the Calumet Container site.

The reuse strategy for the site focused on two compatible components: ecological and passive recreational uses. The site's ecological analysis focused on increasing the biological diversity of native plants and habitats through prairie and wetland restoration. The recreational reuse strategy focused on repositioning the property as a community park with passive recreational opportunities such as hiking, biking, wildlife viewing, and environmental education.

Window #2: Remedial Action Objectives

Charrette processes during the development of a site's remedial action objectives (RAOs) – part of a site's remedial investigation and feasibility study – provide an opportunity for EPA and communities to discuss site cleanup and revitalization in conjunction with each other.

As part of the charrette process, EPA can share preliminary site findings from the site assessment regarding contaminant locations and characteristics, exposure pathways, and media, which have potential implications for the site's cleanup approach and the types of land uses that could be located at the site in the future. As part of the charrette process, this information is translated into maps and other visual tools to inform EPA and community discussions and future land use challenges, opportunities, and key considerations are identified.

At the same time, community priorities and local and regional land use information can inform EPA's selection of remedial action objectives for the site, in addition to ongoing data collection, site sampling plans, and the analysis of potential risks to human health and the environment.

Window #3: Remedy Selection

EPA decisions made at this stage can have a powerful effect on future land use possibilities at a site. Remedy selection decisions determine the size of areas that can be returned to productive use and the particular types of land uses that will be possible following remediation.

Charrette processes conducted just prior to or during remedy selection typically no longer inform EPA site assessment and investigation activities. Instead, these charrettes focus on the potential components of a site's remedy, and the implications of each of these components for the remedy's protectiveness and the site's potential future use. Future use considerations may lead to the identification of a wider range of potential remedial approaches and technologies. In some cases, remedial components like phytoremediation may even serve *as part of a site's reuse* – as vegetation restores ecological functions and its biomass serves as a potential alternative energy resource.

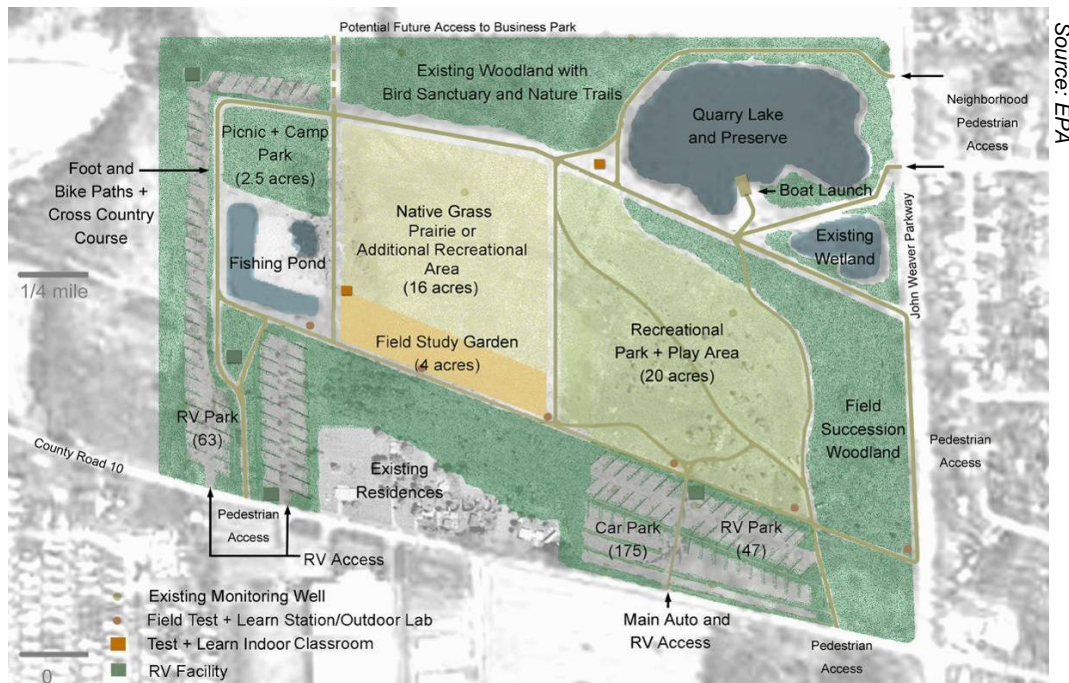
Charrette processes during remedy selection also consider the upcoming stages of the cleanup process, looking beyond a site's remedy components – to consideration of appropriate institutional controls and operation and maintenance approaches, and addressing site ownership to ensure EPA's long-term priorities – protectiveness and long-term stewardship – for contaminated lands.

Charrette process outcomes from this stage of the cleanup process are also documented in a site's Administrative Record, as part of the site's Record of Decision (ROD).



Himco Dump Superfund Site, Elkhart, Indiana

In Elkhart, Indiana, a 20-member, community-based reuse committee identified recreational and ecological land uses for the Himco Dump Superfund site, located adjacent to the community's downtown district. At the same time, EPA was developing an Amendment to the site's original 1993 Record of Decision, due to updated site information. The committee's charrette process identified opportunities to link the site's remedy and reuse.



Recreational and ecological reuse framework strategy developed for the Himco Dump site.

Recreational and ecological land uses identified by the Committee meant that the site's significant ecological resources, including native prairie and wetland areas, could be retained, reducing remedial timeframes and costs. The presumptive remedy had been to completely clear and cap the site. Partly as a result, the site's lead responsible party has been cooperative regarding revisions to the site's cleanup approach.

Future land use considerations were taken into account during both the negotiation of the site's Consent Decree and the site's ROD Amendment, which specified that the site would be reused for recreational and ecological purposes. EPA staff also updated the site's institutional controls, revising language from the site's original ROD that limited future site uses to industrial and commercial land uses. The site's updated institutional controls allow for the site's recreational and ecological reuse.

Stage #4: Remedy Design & Implementation

Charrette processes at this stage of the remedial process focus on the potential future land use implications of different approaches to the design and implementation of the remedy selected for a site. Even once a site's remedy has been selected, considerable latitude remains in how response actions can be designed, conducted, or phased in a cost-neutral manner that could allow earlier reuse or maximize redevelopment potential without adversely affecting the protectiveness or integrity of the remedy.

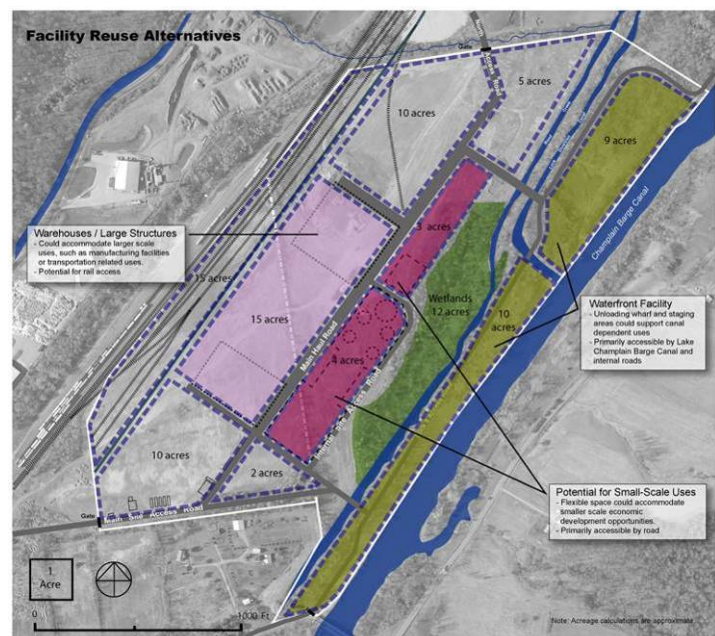
Charrette strategies at this stage focus on locating and clustering remedy components in site locations that do not unnecessarily limit future use opportunities. For example, monitoring or extraction wells, air-stripping towers, or other treatment units, could be located around a site's perimeter, or clustered in an area that does not block access to the site, so that they do not interfere with the future placement of structures or infrastructure needed for a site's anticipated future use. Charrettes at this stage also look closely at the site's natural features, physical features, and contamination characteristics and pathways to determine if there are particular remedial technologies best-suited to site conditions that can also foster site reuse and revitalization. In some cases, remedy support components like warehouses, roads, and parking areas required for a site's remedy may also be able to serve double-duty as infrastructure for future site uses.

The activities described above are necessary to ensure the compatibility of a site's remedy with its anticipated future use; the activities contribute to the long-term protectiveness of the remedy.

Hudson River PCBs Superfund Site, Fort Edward, New York

As part of the cleanup of the Hudson River PCBs site, a sediment dewatering facility needed to be built to process approximately three million yards of contaminated sediment dredged from the Hudson River. In June 2005, EPA announced the final location of the facility, indicating that the Energy Park site in Fort Edward, New York met multiple selection criteria, with 106 acres of usable land, rail access, proximity to the dredging area, flood plain protection, access to utilities, and a waterfront berthing area.

EPA worked with a consultant team and the community to analyze the potential future use opportunities, challenges, and key considerations presented by the remedial design and implementation of the dewatering facility. The project's goal: to plan for a facility that could be adaptively reused to meet community needs and priorities following completion of sediment dewatering and transfer activities at the site in 2013. The project identified opportunities for the dewatering facility's road infrastructure, stormwater management systems, utilities, and structures to be designed with the capacity to accommodate the community's priority future land uses.



Source: EPA

Fort Edward, New York and one of the reuse framework maps created for the planned sediment dewatering facility.

Stage #5: Long-Term Stewardship (post-construction activities)

Charrette processes that take place once a site's remedy is in place continue to provide benefits for EPA, communities, and other site stakeholders. For EPA, post-construction activities are critical to maintaining the protectiveness of site remedies and frequently require the participation of parties other than EPA. These charrettes can inform the final selection of a site's institutional controls and provide the information required for a Five-Year Review's required evaluation of the compatibility of site uses and remedies. The charrettes can help ensure stable site ownership and build the foundation for site stewardship agreements. At remediated sites across the country, property owners and partnership organizations like the Academy of Model Aeronautics are maintaining fences and mowing grass, stewarding site properties and maintaining protectiveness as well as returning the sites to use.

In most cases, the physical characteristics of the remedy in place at these sites guides the types of land uses that can be considered during the charrette process. At the same time, there may be barriers to appropriate reuse that can be addressed. EPA's Return to Use (RTU) Initiative was created in 2004 to help remove these barriers. Barriers to appropriate reuse can include lack of understandable information about a site; site stigma and liability concerns; complex ownership issues; and understanding the land uses that might be appropriate for a site.

HOD Landfill Superfund Site, Antioch, Illinois

Once an unusable piece of land, the site's remedy has been completed and today, the site hosts multiple uses, including athletic fields, a methane co-generation plant, and restored wetlands. To support the site's reuse and ensure the site's protectiveness, EPA worked closely with the community and Waste Management, one of the site's responsible parties. EPA committed to removing the site's fence and issuing a Ready for Reuse (RfR) Determination to help address public health and safety concerns.

To accomplish these outcomes, EPA approved or issued three documents: a revised risk assessment, an Explanation of Significant Differences (ESD), and an RfR Determination. Based on the revised risk assessment, the ESD approved the site fence's removal, allowing public access. The ESD also allowed for the site's recreational reuse as long as the remedy remains intact. Finally, EPA communicated the site's capacity to support recreational uses by issuing the site's RfR Determination.



Source: EPA

A playground and athletic facilities are among the new land uses at the HOD Landfill site.

Section V. Charrettes, Conflict Resolution, & Collaboration

Lengthy site histories, health and safety concerns, diverse stakeholders, and the complexities of technical site information often lead to contentious situations regarding the cleanup and revitalization of contaminated lands. Public availability sessions with angry community members or combative negotiations with responsible parties can lead EPA staff to recoil from these situations, rather than embracing the opportunities presented by conflict.

Charrettes are a conflict resolution and consensus building tool as well as a land revitalization tool. This section of the tutorial explores the characteristics of environmental conflicts and why collaborative processes like charrettes are an effective tool that can be used to resolve these conflicts.

Understanding Conflict

Social conflict may be defined as “the opposition of two or more parties, one or more of whom have or perceive incompatibility of values, interests, or goals, and one of whom attempt to persuade, neutralize, injure, or gain advantage over the other party or parties.”

Conflict is manifested in many ways. Some people like to think of disputes as one product of larger social conflicts. In this sense, a dispute is the expression of conflictual behavior, one episode of conflict. For example, a dispute between representatives of two ethnic groups which leads to a fight may be just one in a series of episodes or outcomes of ongoing racial conflict. Among many other products of conflict are repression and avoidance.

Conflict is a natural, inevitable, and recurring part of all human interaction occurring at all levels of society, from interpersonal to international. It is not necessarily deviant or pathological, nor does it necessarily result in serious harm; its manifestation may be a revealing expression of injustices or strains in the social system which demand attention. Left alone, however, conflict behavior can become destructive, and destructive behavior can be self-reinforcing and self-escalating.

The Elizabeth River Project

The Elizabeth River Project and its Money Point Revitalization Task Force in Virginia provide an example of an innovative planning and charrette process that has addressed conflict and built consensus around the importance of sustaining the region’s industrial economy and environmental regeneration at Money Point, a 330-acre portion of the Elizabeth River. The Money Point project is discussed at length during the one-day Charrette Training. The final report for the Money Point project is available from the Elizabeth River Project’s Web site at: http://www.elizabethriver.org/PDFs/Money%20Point/MP_layout_061011final.pdf.



Conflict is not the opposite of ‘order’ or the same as ‘chaos,’ for behavior of parties in conflict often follows identifiable and even predictable patterns. Conflict is rooted, not only in scarcity of resources, aggressive behavior, and personality, but in universal human needs for individual and cultural identity, security, and recognition, as well as in the policies and structures of political and economic systems. Struggles over identity, values, power, and limited resources are at the heart of all social conflicts.

REMEMBER:

- **Conflict does not just happen – its sources can be understood and addressed.**
- **Conflict is not necessarily negative. It can reveal injustices, attract attention to problems that need to be addressed, foster creativity, and empower individuals and groups to take control of their lives.**
- **Conflict often can be resolved, and mediation or other forms of conflict resolution, including the use of charrette processes, are often successful in doing so.**

Conflict is:

- Natural...Normal...Inevitable.
- Neutral in terms of potential outcomes...Outcomes of the conflict depend on how it is handled.
- An opportunity for:
 - ❖ Identifying problems and injustices
 - ❖ Improving understanding
 - ❖ Creating innovative solutions
 - ❖ Improving relationships
 - ❖ Improving standards, regulations, and policies
 - ❖ Engaging stakeholders
 - ❖ Building civic capacity
 - ❖ Building social, intellectual, and political capital

“Thus we shall not be afraid of conflict, but shall recognize that there is a destructive way of dealing with such moments and a constructive way. Conflict as the moment of the appearing and focusing of difference (emphasis added) may be a sign of health, a prophecy of progress.”

– Mary Parker Follett



Four Types of Conflict

1. *Data or Fact Conflict*

- Characterized by different data sets, different interpretations of the same data, or differing access to data.
- May be relatively easy to resolve by addressing these issues in a way that meets the needs of all parties – for example, getting additional data, finding experts whose opinions are respected by all parties, equalizing access to data. *Most often, accurate data alone is insufficient to resolve differences.*

2. *Interest Conflict (“True” Conflicts)*

- Characterized by limited resources whereby fully meeting one party’s needs means that the other party’s needs cannot be met.
- May or may not be easy to resolve, depending on the nature of the resources and needs.

3. *Relationship Conflict*

- Characterized by personality clashes and miscommunication.
- Probably the easiest type of conflict to resolve through conflict resolution approaches such as mediation, particularly when a conflict is a result of miscommunication or where attacks have become personalized.

4. *Values Conflict*

- Characterized by conflicts involving deeply held beliefs, such as religious, cultural, or political views.
- Probably the most difficult type of conflict to resolve through any conflict resolution approach. Potential approaches should emphasize the development of understanding, through dialogue, public conversations, consensus building, or even shuttle mediation.

These types of conflict may all be present in varying degrees within a particular situation.

Common Sources of Conflict

- Distribution of resources; real or perceived inequities
- Real and/or perceived injustices
- Differing values
- Institutional barriers
- Power differentials and power struggles
- Personal and psychological reactions, including individual and group identity
- Competing cultural expectations
- Miscommunication and misunderstanding



Types of Environmental Conflicts

1. *Land Use (site-specific and policy-level)*

- neighborhood and housing issues, parks, preservation of agricultural land, facility siting, transportation, regional planning issues, commercial and urban development issues, growth, urbanization

2. *Natural Resource Management*

- fisheries, mining, timber and forest management, wilderness area management, pollution prevention and cleanup

3. *Water*

- water supply, water quality, flood protection, thermal effects of power plants, instream flow, relicensing of dams, nonpoint source and point source pollution

4. *Energy*

- siting of small-scale hydroelectric plants, conversion of power plant fuel from oil to coal, siting and storage of spent nuclear fuel

5. *Air*

- Odor problems (such as from biosolids holding lagoons), acid rain, national air quality legislation

6. *Toxics*

- hazardous materials cleanup (Superfund sites and other contaminated lands), brownfields redevelopment, national regulations (“reg-neg”), policies for asbestos, lead paint, and pesticides

Distinguishing Characteristics of Environmental Conflicts

- Multi-party: numerous stakeholders, with impacts beyond stakeholders. Representatives are usually accountable to larger constituencies.
- High-stakes: the long-term integrity of public health, community vitality, and ecological systems is often on the table.
- Multi-objective: complex and competing needs, values, and interests.
- Often science and technology-based.
- Heavily influenced by regulations and statutes.
- High level of contention.
- High-profile, public, and often subject to media attention.
- Often marked by large resources among the parties: power, money, time, issue knowledge, comfort level with the process, technology access, formal “legitimacy.”

Sound familiar?

Conflicts at contaminated lands often combine all of these characteristics in a single situation.



Collaborative Processes

Collaborative processes like charrettes provide parties with an opportunity to transform environmental conflicts into opportunities for effective site cleanups and land revitalization.

Collaboration is a reflective process where two or more people or organizations work together toward an intersection of common goals by sharing knowledge, learning, and building consensus.

Not all decisions need to be made collaboratively. But without sufficient attention to the human dynamics and relationships, what may be seen as technical site decisions by EPA staff risk exacerbating conflict with other stakeholders at contaminated lands.

Primary benefits of collaborative processes include more creative, legitimate, and enduring outcomes; political, economic, or social feasibility; learning and change among participants; new personal and working relationships; social and political capital; and shared information and analyses that all parties understand and accept. Secondary benefits of collaborative processes include changes in behaviors and actions; spin-off partnerships and collaborative activities; and new practices or even new institutions.

Charrettes as a Conflict Resolution & Collaborative Problem-Solving Tool

Charrettes are used as a successful conflict resolution and collaborative problem-solving tool at contaminated lands for two reasons.

- The structure of charrette processes is conducive to these outcomes. Charrettes openly recognize and address site complexities, include diverse interests and concerns, provide comprehensive information resources, and normalize conflict as part of process discussions.
- Conditions at contaminated lands are ripe for collaborative opportunities. Parties may have different positions and disparate perspectives, but they all have a shared interest in site cleanup and reuse outcomes. This bottom line can lead to surprising partnerships and initiatives among parties at sites.

Keys to Collaborative Problem-Solving for Charrettes

- Design tailored, participant-appropriate approaches to the charrette process.
- Begin as early as possible and bring people face-to-face.
- Set attainable charrette goals and identify future milestones, as appropriate.
- Invite broad participation, including site owners and potentially responsible parties.
- Use high-quality, legitimate information.
- Seek feasible design opportunities that work for all key interests.
- Address participants' information needs promptly and as comprehensively as possible.
- Focus on understanding – issues and people.



Section VI. Nine Charrette Best Practices

1. *Plan for a site's next use as well as the end use.*

Although the cleanup of contaminated lands is often a long-term process, opportunities may exist at some sites for distinct areas – areas that were never contaminated or that are remediated first, for example – to be returned to use prior to completion of a site's cleanup. Similarly, it may be possible to return a site to use while operation and maintenance of a site's remedy is ongoing.



Source: EPA

The Anaconda Lead Smelter Superfund site covers 300 square miles in western Montana. While cleanup of several operable units is ongoing, Anaconda's historic, century-old copper smelter site has been redeveloped as the Old Works Golf Course, an 18-hole championship course designed by Jack Nicklaus. Ground black smelter slag is used in place of sand in the course's sand traps.

2. *Recycle and reuse materials as well as sites.*

Contaminated lands may include buildings, infrastructure, equipment, and materials with minimal or no contamination that can be adaptively reused on-site or reclaimed and sold for use elsewhere. Even site wastes can be recycled. Methane gas generated from landfills can be used as an alternative energy resource. Fly ash, a powdery byproduct from coal-generated electricity, can be recycled into concrete blocks and wallboard and is also used for a range of structural fill uses, like road embankments and building construction.

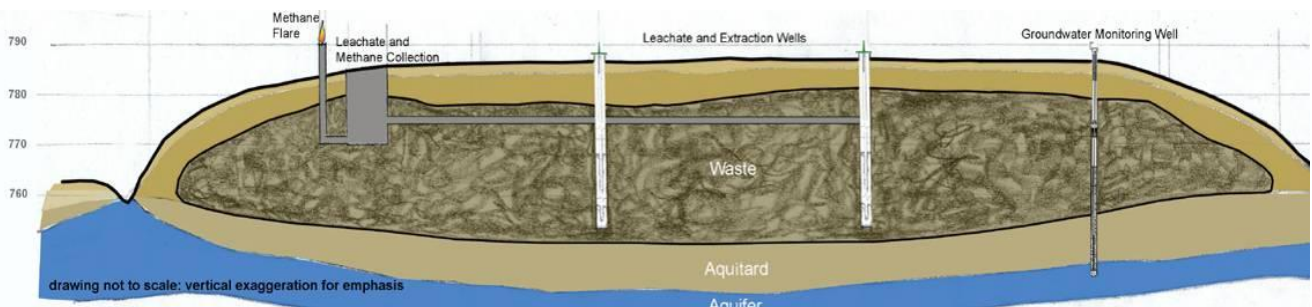




Source: EPA

At the South Point Plant Superfund site in South Point, Ohio, several fly ash ponds remained on-site from previous site operations. Research indicated that the fly ash could be recycled as roadbed material, which would enable the reuse of the former pond areas as new building locations, and would reduce on-site infrastructure costs for road construction. Today, local governments have returned the site to use as a 500-acre industrial park called The Point. The localities have obtained more than \$3.4 million from state and federal sources for site infrastructure and tax incentives.

3. Address health and safety concerns as part of the charrette process.



Source: EPA

The illustration above has been used during charrette processes for landfill sites to illustrate how landfill remedies operate and remain protective of human health and the environment. The conceptual illustration on the next page presents a community education area for the Velsicol Chemical Corporation site in St. Louis, Michigan. Educational panels enable community members to learn about the site's history and cleanup while looking across the Pine River at the site.

Visually presented information is one of the key elements of charrette processes. At contaminated lands, maps and other visual tools provide a way to translate technical information for general audiences and multi-party decision-making. For sites where health and safety concerns are prominent, graphics illustrating site conditions and remedy components can directly address these concerns.



4. **Recognize sites' historical importance for communities.**

While activities like wood preserving and paper mill operations at contaminated lands resulted in contamination, these activities were also often an important part of a community's economy and daily life for decades. Today, many sites include buildings, equipment, and landscapes shaped by decades of site operations. Charrette processes for these sites can provide an opportunity to recognize and preserve these resources as part of the community's history and heritage.



Located on Lake Union, just north of downtown Seattle, Gas Works Park is a 20-acre recreational area that was once a coal gas manufacturing facility. Several former industrial site features have been preserved as educational areas and other features are being adaptively reused as part of the park. The boiler house has been converted to a picnic shelter with tables, fire grills, and an open area. The site's former exhauster-compressor building, now a children's play barn, features a maze of brightly painted machinery.

5. **Consider sites' natural systems and ecological histories.**

Many sites include intact ecosystems like wetlands and natural features like forested areas and water bodies. Natural systems can serve as key elements of charrette processes that include recreational and ecological site reuses, like walking trails, bird watching areas, and wildlife habitat. Natural areas can also serve as significant amenities and provide a range of ecosystem services for residential, commercial, and industrial site uses.



Source: EPA

At the Himco Dump site in Elkhart, Indiana, the community worked with EPA and the site's responsible party to develop a reuse framework for the site that preserved and restored much of the site's existing ecosystem, while also reducing the scope and cost of the site's remedy.

6. **Ensure that cleanup activities do not unnecessarily preclude reuse opportunities.**

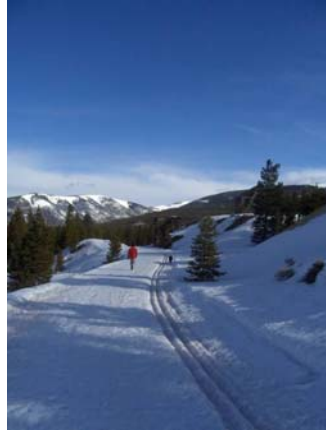
Response actions at some sites can be designed, conducted, or phased in a cost-neutral manner that could allow earlier reuse or maximize redevelopment potential without adversely affecting the protectiveness or integrity of the remedy. Clean corridors for future utility access can be established when anticipated use makes it likely that they will be needed. Wastes can be moved to a location other than the place that might otherwise have been chosen, in order to avoid blocking a site access point needed for its anticipated future use. Future use considerations can also guide the placement of monitoring or extraction wells, air-stripping towers, or other treatment units, so that they do not interfere with placement of structures needed for a site's anticipated future use. Each of these considerations have been evaluated as part of charrette processes for contaminated lands.

The activities described above are necessary to ensure the compatibility of a site's remedy with its anticipated future use; the activities contribute to the long-term protectiveness of the remedy. Accordingly, they are not "enhancements" or "betterments." An enhancement is not a remedial feature or activity. An enhancement is any response action not necessary for the effectiveness of a site's remedy, even though it may make some contribution to its effectiveness. Enhancements include such things as the construction of roads, building foundations, or parking lots not required as part of a site's remedy.



7. Integrate remedy and reuse.

Remedy components can serve as infrastructure for a site's reuse. In these cases, a remedy component like a landfill cap may result in a landscape feature, like a broad, flat area, that can support particular reuses, like sports fields. Charrettes can ensure that factors like grading and drainage are taken into account during the cleanup process.



Source: EPA

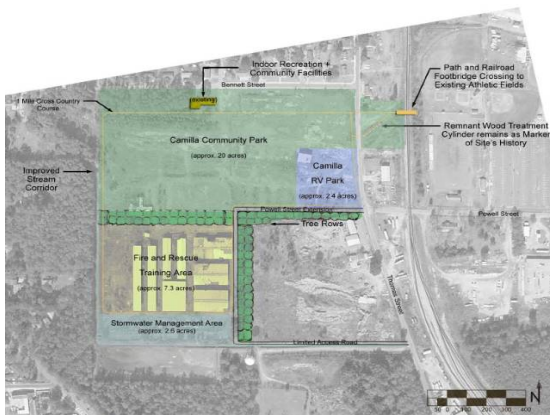
Today, in place of an abandoned transportation corridor on the California Gulch site in Leadville, Colorado, the Mineral Belt Trail loops through the historic Leadville Mining District.

8. Consider longer-term cleanups as a planning opportunity rather than a limitation.

At contaminated lands where cleanup activities will preclude future use opportunities for several years or more, this reality can be addressed as part of the next steps for charrettes. Project participants can identify the responsibilities and strategies that will be needed over time to enable a site's use. Activities like transferring site ownership, addressing liability issues, implementing institutional controls, updating local planning tools, allocating resources, and ensuring long-term stewardship can require years rather than months as well.

9. Plan for a site's future use with flexibility and change as constants.

Parties' future land use plans change and new site information becomes available over time. These two factors are ever-present considerations for charrette processes at contaminated lands. Reuse plans, or frameworks, developed during charrettes may need to be revisited at later stages of the cleanup process. In these situations, the previous draft of the reuse plan serves as the key reference and foundation for the creation of the updated plan.



Source: EPA



Source: EPA

Updated community priorities and a revised cleanup approach at the Camilla Wood Preserving Company site in Camilla, Georgia led a revised reuse framework plan for the site. Prior plans have been replaced by a greater emphasis on multiple recreational reuses, including soccer fields and basketball courts.

Section VII. Tutorial Review & Resources

Tutorial Review

CPRC's 90-minute, online training tutorial has been designed to provide EPA staff with an introduction to charrettes, a best practice used to address conflict and support land revitalization efforts at contaminated lands. Key lessons from the tutorial include:

- Charrettes are intensive, collaborative planning and design workshops that bring together diverse stakeholders and typically last from one to five days. Charrettes are used to address contentious, complex land use planning situations like the cleanup and revitalization of contaminated lands and to build long-lasting relationships.
- Seen through the lens of a charrette, conditions at contaminated lands are ripe for collaborative opportunities. While parties may have different positions, they have a shared interest in site cleanup and reuse outcomes. This bottom line can lead to engaging, fruitful partnerships and initiatives that provide a foundation for success.
- Charrettes openly recognize and address site complexities, provide comprehensive information resources, and normalize conflict as part of process discussions. They bring together the diverse “community of interests” at contaminated lands to work together to develop innovative reuse plans that reflect site conditions and community priorities.
- For EPA, charrettes yield information that can enhance cleanup decision-making, inform the selection of appropriate institutional controls, and engage key parties and identify future site roles and responsibilities, helping to ensure the protectiveness of remedies and the long-term stewardship of sites. At some sites, charrette outcomes may even lead to reduced cleanup costs and timeframes. EPA and state agency staff can help to organize a charrette process and serve as advisors and reviewers during the charrette itself. EPA and state agency staff are not typically part of the charrette decision-making process.
- For communities, charrettes allow the exploration of new opportunities for long-vacant and stigmatized land areas and consider how these areas could address communities' social, economic, and environmental priorities. Charrettes also help communities establish reasonable expectations for a site's cleanup and reuse.
- Charrettes can be effective at any stage of the cleanup process. Prior to the selection of a site's remedy, reuse considerations can inform EPA's site activities. Once a site's remedy has been selected, the focus of charrettes changes. In most cases, the characteristics of the site's remedy and the types of land uses that it can support are primary factors in identifying potential land uses that may be located at a site.
- The one-day Charrette Training and resources are available to support the development of charrettes for Superfund sites where the process could play a key role in preventing or resolving conflicts and supporting revitalization. Please see the next page for more information.



Resources

For more information on this tutorial or CPRC's one-day Charrette Training, please contact:

EPA Conflict Prevention and Resolution Center (CPRC)

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(202) 564-1897 / abbey.anna@epa.gov

Deborah Dalton
(202) 564-2913 / dalton.deborah@epa.gov

CPRC (EPA's Conflict Resolution Specialists) will sponsor the one-day Charrette Training upon request in your Region. Additional information is available on www.trainex.org.

CPRC also has funding available to support the development of charrettes for Superfund sites where the process could play a key role in preventing or resolving conflicts and supporting revitalization.

