SUPERFUND PROCESS WORKSHOP

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2/18/2017

AGENDA

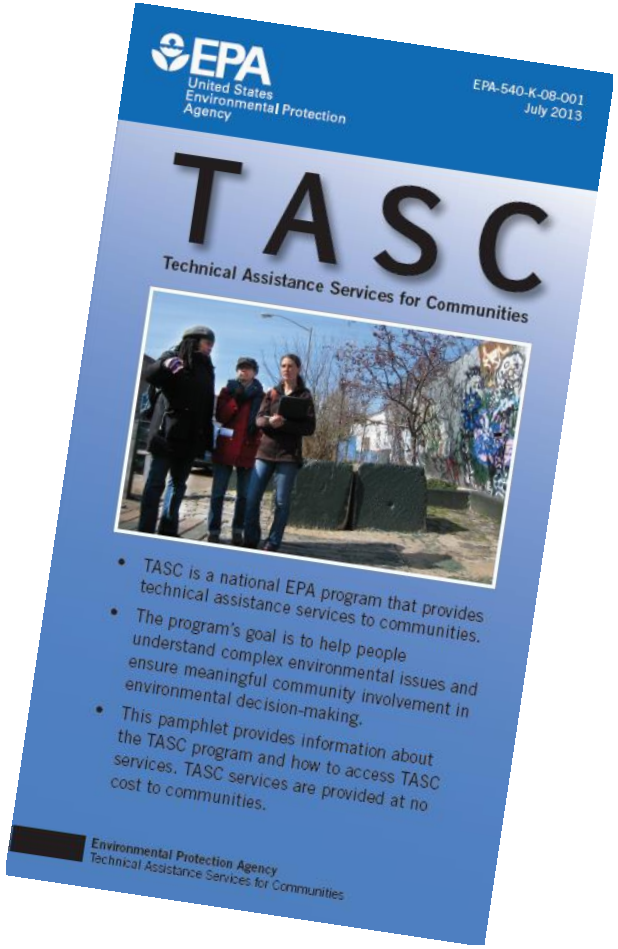
- TASC Overview
- What is Superfund?
- The Superfund Process
- Building a Good Relationship and Effectively Communicating with Regulators

TASC

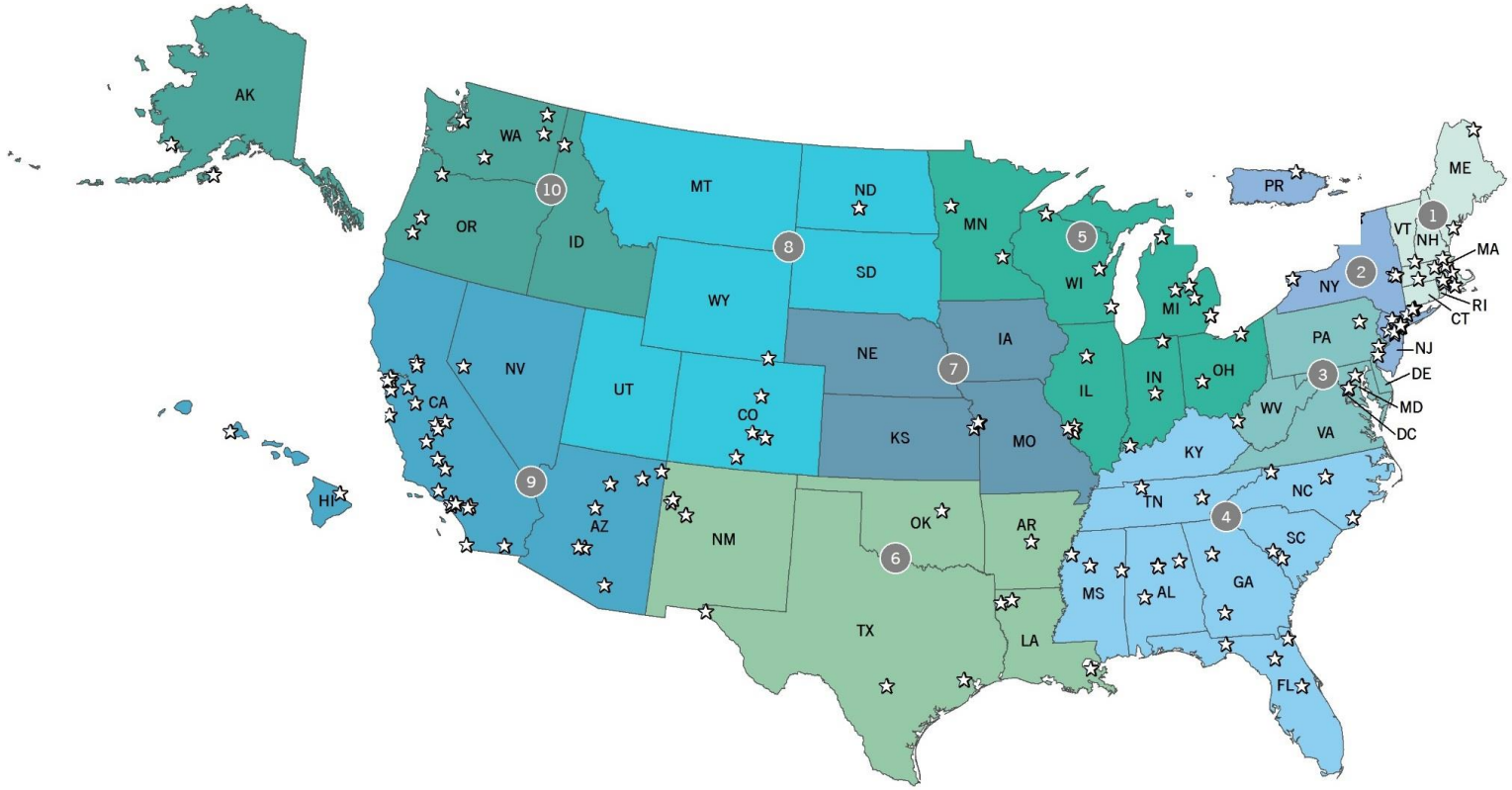
- Technical Assistance Services for Communities (TASC)
- Provides non-advocacy, independent technical assistance
- This workshop is funded by EPA's TASC program. Its contents do not necessarily reflect the policies, actions or positions of EPA.

TASC SERVICES

- Reviewing and explaining technical information
- Developing and giving educational presentations
- Developing informational materials, such as fact sheets and brochures
- Developing and giving workshops and community trainings
- Conducting technical assistance needs assessments



COMMUNITIES SERVED



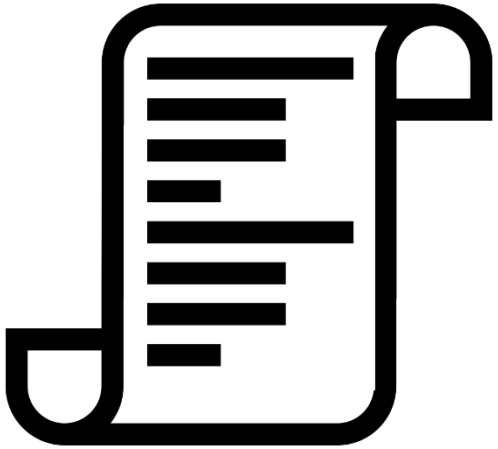
WHAT IS SUPERFUND?

WHAT IS SUPERFUND?

- EPA's Superfund program is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills and natural disasters

SUPERFUND HISTORY

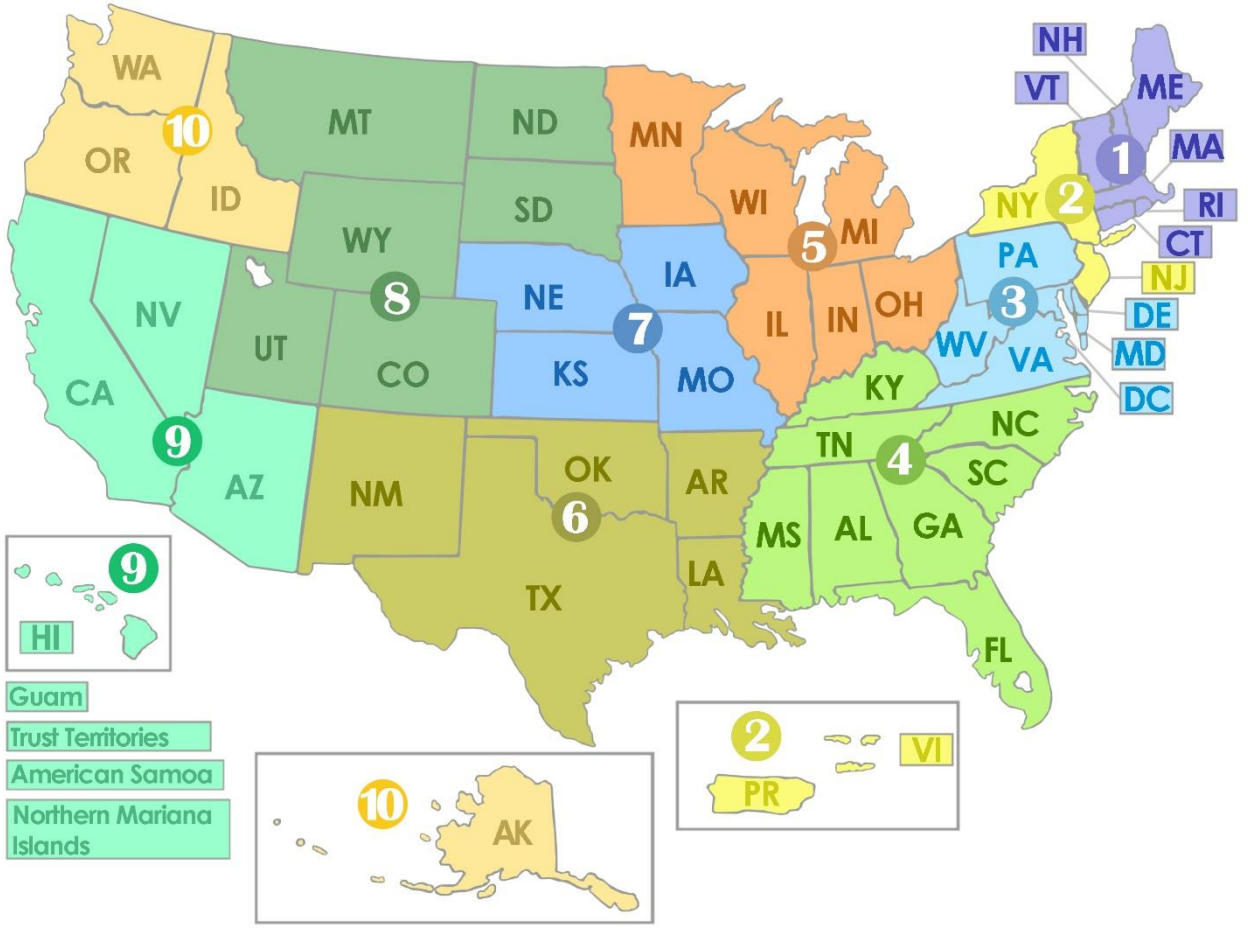
- CERCLA (Superfund)
  - Comprehensive Environmental Response, Compensation, and Liability Act, as amended
  - A law passed in 1980 by Congress to address the dangers of abandoned or uncontrolled hazardous waste dumps by developing a nationwide program for:
    - Emergency response
    - Information gathering and analysis
    - Liability for responsible parties
    - Site cleanup
  - National Oil and Hazardous Substances Pollution Contingency Plan (NCP)
    - The implementing regulations for CERCLA
    - The NCP sets forth the procedures that must be followed by EPA and private parties in emergency responses and cleanups



GOALS OF SUPERFUND

- Includes:
  - Protecting human health and the environment by cleaning up polluted sites
  - Involving communities in the Superfund process
  - Making responsible parties pay for work performed at Superfund sites

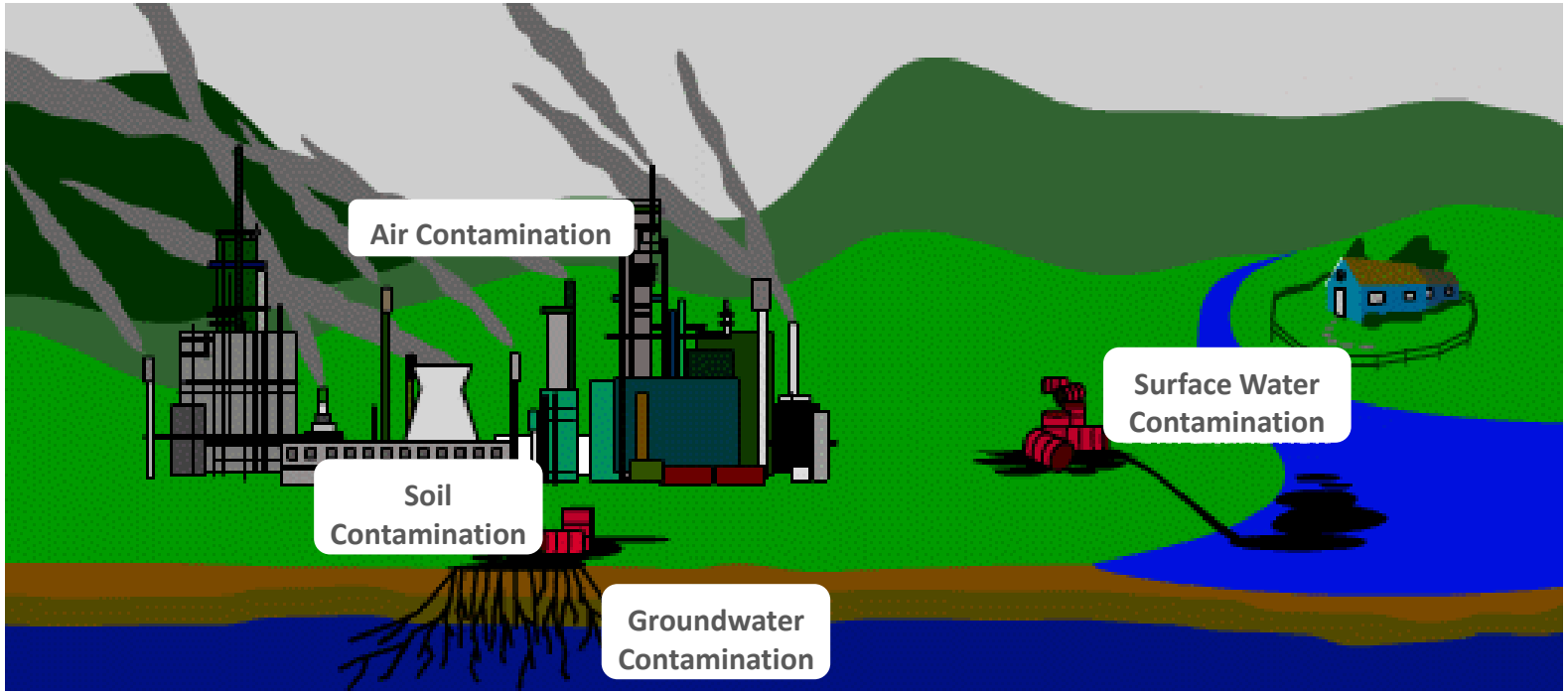
IMPLEMENTATION OF SUPERFUND



Source: EPA

HAZARDOUS WASTE CONCERNS

- Superfund was enacted in response to growing concerns over the health and environmental risks posed by hazardous waste sites



Source: EPA

HAZARDOUS WASTE CONCERNS – POTENTIAL HUMAN EXPOSURE

Inhalation
(through breathing)

Ingestion
(through eating/drinking)

Direct Contact
(through skin or eye contact)

Illustrations: Skeo Solutions

HAZARDOUS WASTE CONCERNS – POTENTIAL HARM TO THE ENVIRONMENT

- Superfund also addresses harmful effects of Site contaminants on plants and animals of concern

TYPES OF RESPONSES

- There are two basic types of response that EPA uses to address polluted sites:
  - **Removal actions**: Used to handle emergency oil spills or chemical releases and short-term responses
  - **Remedial actions**: Used to handle complex sites needing a long-term response

Source: EPA

REMOVAL ACTIONS

- **Emergency Removal Actions**: These include hazardous waste spills that require immediate attention. These are limited, short-term response actions to address situations such as:
  - Tanker spills
  - Leaking drums

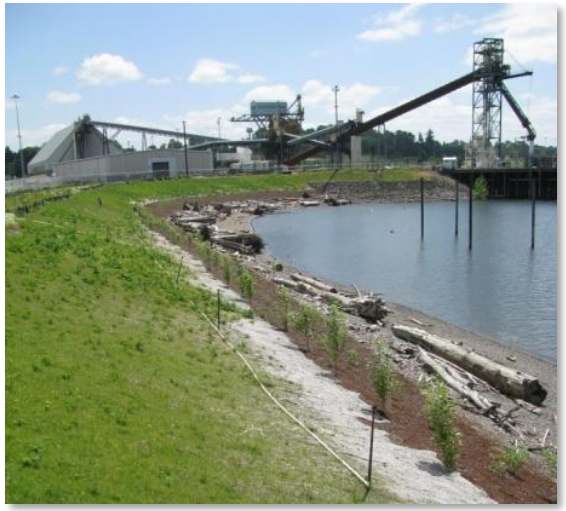
- **Time-Critical Removal Actions**: Those actions where, based on an evaluation of the site, EPA determines site activities must be initiated within six months
- **Non-Time Critical Removal Actions**: Those actions where, based on an evaluation of the site, EPA determines that the planning period is greater than six months

REMEDIAL ACTIONS

- **Remedial actions:** Those actions which manage releases that do not pose an urgent threat to public health or the environment and do not require immediate action. Remedial actions involve complex and highly contaminated sites that often require several years to study the problem, develop a permanent solution and clean up the hazardous waste.

Source: EPA

Before

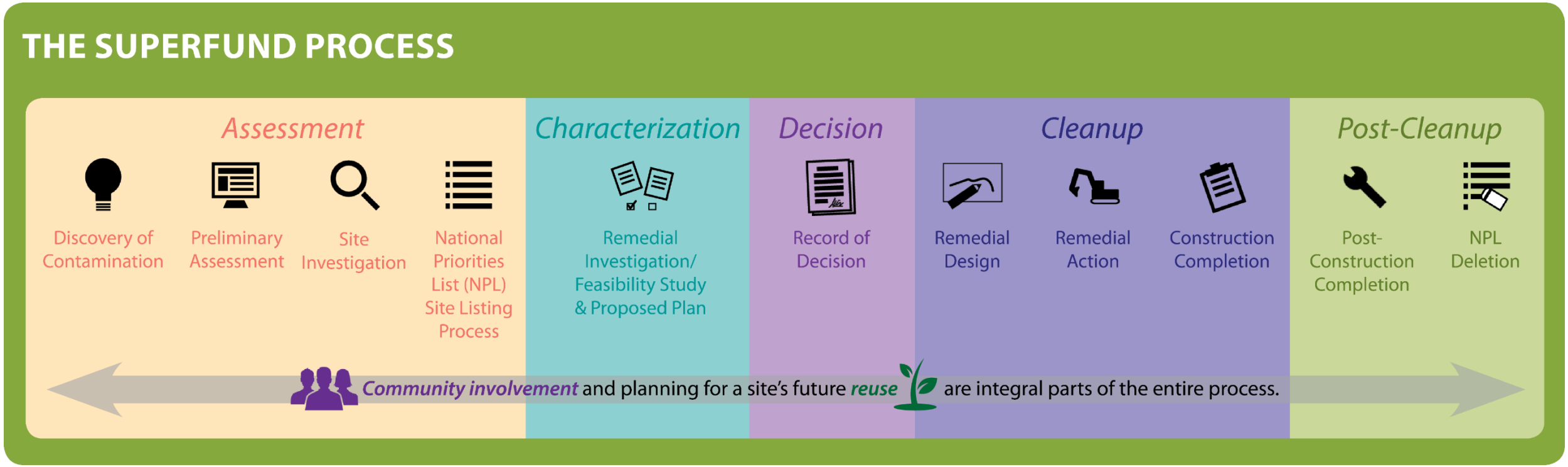


Source: EPA

After

THE SUPERFUND REMEDIAL PROCESS

[NOTE: REMOVAL ACTIONS CAN OCCUR SIMULTANEOUSLY]



COMMUNITY INVOLVEMENT

- Communities have a voice during all phases of cleanup starting at the site assessment process
- Communities are provided with:
  - Educational materials
  - Outreach activities
  - Site information
  - Training
  - Technical assistance
  - Other support

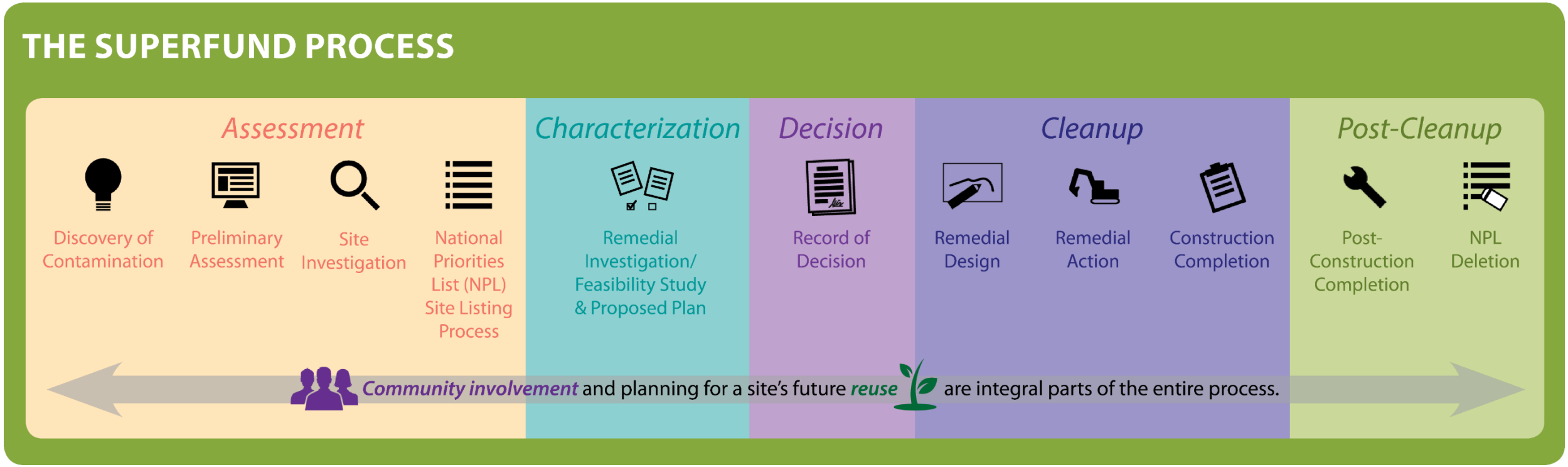
COMMUNITY INVOLVEMENT GOALS

- Keep communities informed of site activities
- Provide opportunities for public comment
- Address community issues
- Improve environmental education
- Provide training opportunities
- Create partnerships with academic institutions

THE SUPERFUND PROCESS

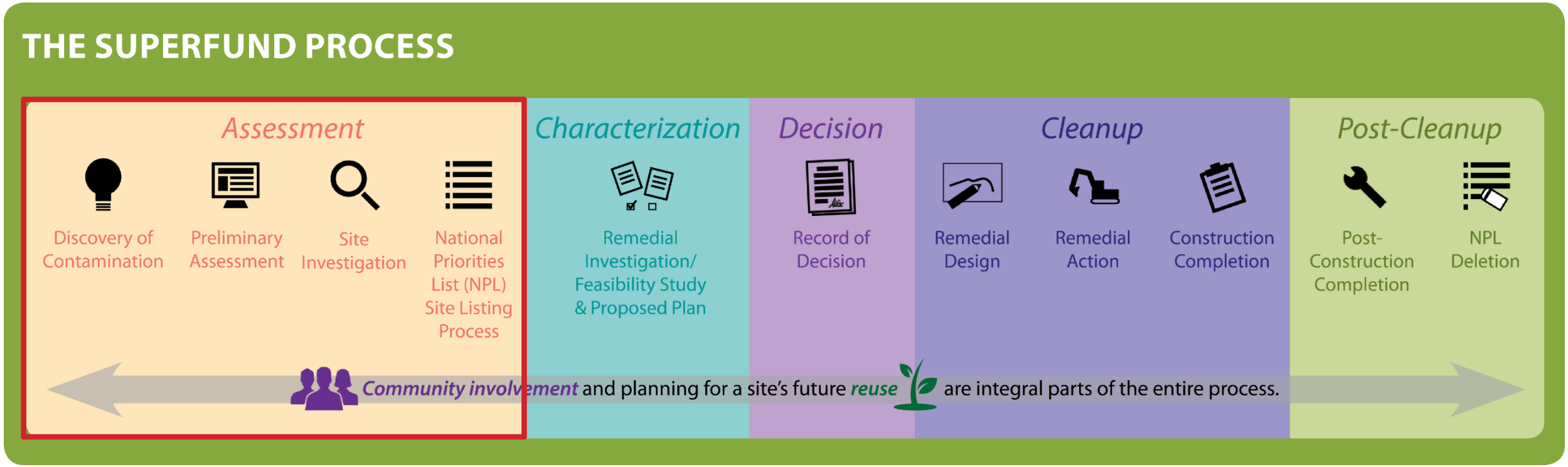
OVERVIEW OF THE SUPERFUND REMEDIAL PROCESS

[NOTE: REMOVAL ACTIONS CAN OCCUR SIMULTANEOUSLY]



ASSESSMENT

- What happens when a polluted site is discovered?



DISCOVERY OF CONTAMINATION

- Superfund sites are “discovered” when **the presence of hazardous waste** is made known to EPA. The presence of contaminants is often reported by residents, local, state, tribal or federal agencies, or businesses. Sometimes these hazardous wastes are found by EPA during inspections or investigations into complaints.
- From the time the site is discovered, EPA tries to identify the generators and transporters of the hazardous waste and the owners and operators of a site. These people/companies/municipalities are considered **potentially responsible parties PRP(s)** under Superfund and are asked to conduct and/or pay for cleanup studies and activities.
- **States and tribes** are now involved in virtually every phase of cleanups

PRELIMINARY ASSESSMENT (PA)

- A **Preliminary Assessment** is limited in scope
- Once a site is identified, EPA looks at existing information, and may interview nearby residents to find out the history of the site and its effects on the population and the environment
- EPA uses this information to determine if a site may pose a threat to human health and/or the environment and requires further investigation

Source: EPA's TASC Program

SITE INVESTIGATION (SI)

- A **Site Investigation** builds on information gathered during the PA
- A site investigation may involve sampling at the Site

Discovery of Contamination → Preliminary Assessment → **Site Investigation** → National Priorities List (NPL) Site Listing Process

HAZARD RANKING SYSTEM

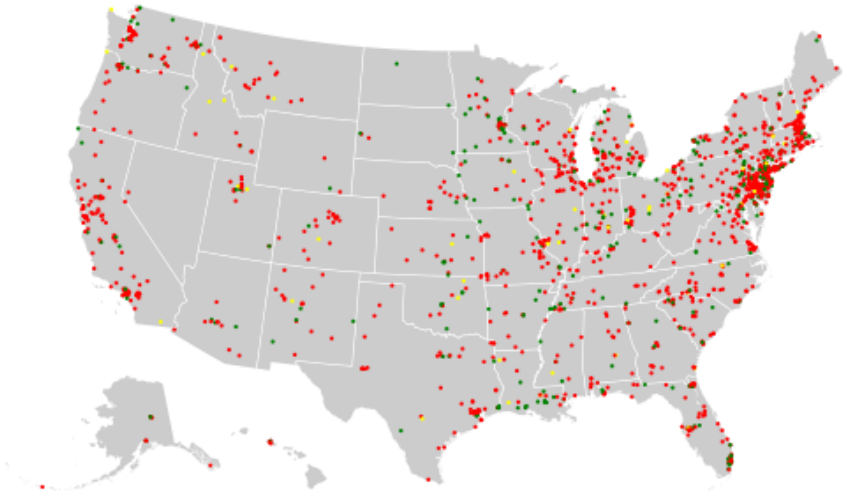
- The HRS uses PA/SI data and compares that to certain criteria to arrive at a numerical score
- The criteria are:
  - Amount and toxicity of contaminant
  - Potential for pollution to spread
  - Threat of soil exposure or migration to surface water, groundwater and air
  - Risk to human health and the environment

HAZARD RANKING SYSTEM

- Sites scoring at or above an established regulatory level are proposed for listing on the NPL
  - The proposed listing is published in the Federal Register
  - 60-day public comment period

NATIONAL PRIORITIES LIST

- Once on the NPL, a site can receive Superfund money for cleanup
- The sites with the highest score are not necessarily completed or funded first



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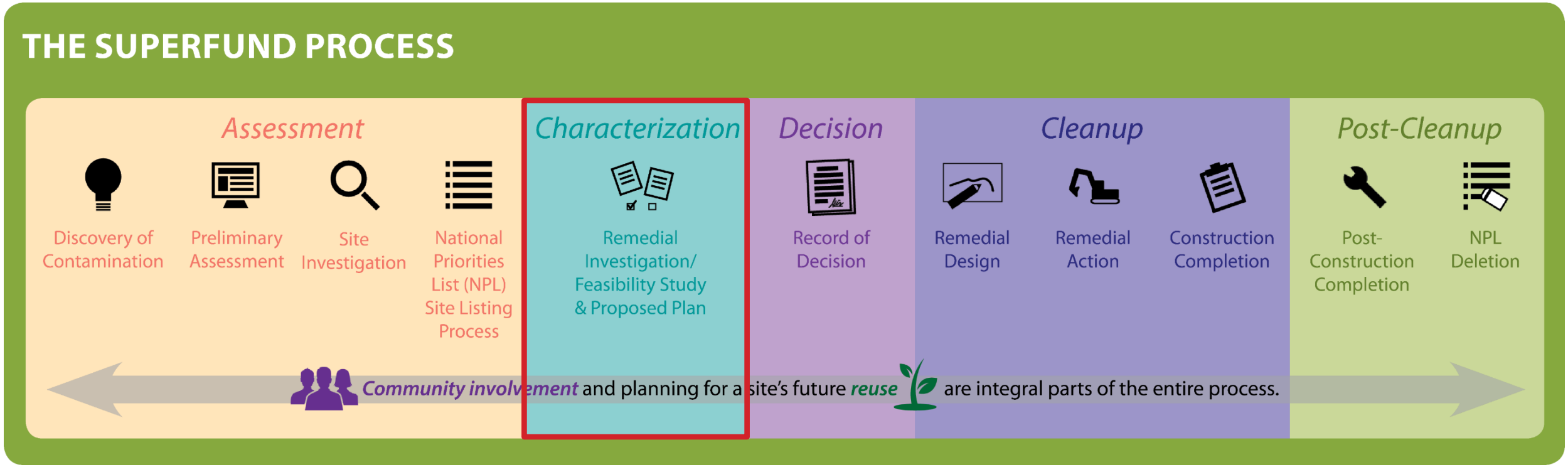
Discovery of Contamination → **Preliminary Assessment** → **Site Investigation** → **National Priorities List (NPL) Site Listing Process**

CHARACTERIZATION

- How much contamination is there? How do we clean it up?



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REMEDIAL INVESTIGATION (RI)

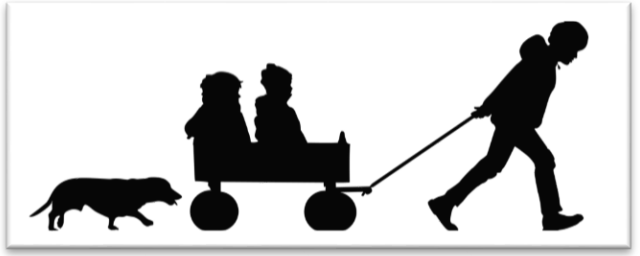
- The RI usually involves gathering and analyzing numerous samples of soil, surface water, groundwater, and waste from locations throughout the site and near the site borders
- The RI also involves assessing risks posed by the site

Remedial Investigation/Feasibility Study & Proposed Plan

WHAT IS RISK ASSESSMENT?

- Risk assessments are science-based estimates of the human health risk faced by a population exposed to a particular substance
- EPA conducts **site-by-site risk assessments** to address the unique contaminants and range of potential harmful effects to human health or the environment at Superfund sites
- Conducting risk assessments produces estimates of **current and possible future risks**, if no cleanup actions were taken
- Superfund's risk managers use risk assessment information and other site factors to select the best cleanup strategies to **manage risks to acceptable levels**

RISK HAPPENS WHEN …



1. Contaminants exist

2. Concentrations are high enough

3. There is a pathway for exposure (a way for people to come into contact with contamination)

4. There are receptors (people, animals, a sensitive ecosystem)

ASSESSMENT PHASE – RISK ASSESSMENT

- Does contamination pose unacceptable human and/or ecological health risks?
  - Based on detailed EPA and State risk assessment guidance documents
  - Uses step-wise process to estimate cancer and noncancer risks based on:
    - Type of contaminants/hazards
    - Potential for exposure to contaminants

ASSESSMENT PHASE – RISK ASSESSMENT

- Most samples from hazardous waste sites are analyzed for 103 **target compounds and analytes** recommended by the EPA Superfund program
- While EPA considers it necessary to gather information on many contaminants, **for most sites, baseline risk assessments are dominated by a few contaminants and a few routes of exposure**

FEASIBILITY STUDY (FS)

- The analysis of potential treatment methods or “cleanup alternatives" is called an FS
- During the FS, the advantages and disadvantages of each cleanup method are explored in relation to nine criteria contained in the NCP
- Based on results of the FS, EPA will develop a Proposed Plan for cleaning up the site

ASSESSMENT PHASE – REMEDY SELECTION

- Proposed Plan
  - EPA identifies the preferred remedy
  - EPA gathers public input through a formal comment period
  - EPA responds to comments received in responsiveness summary

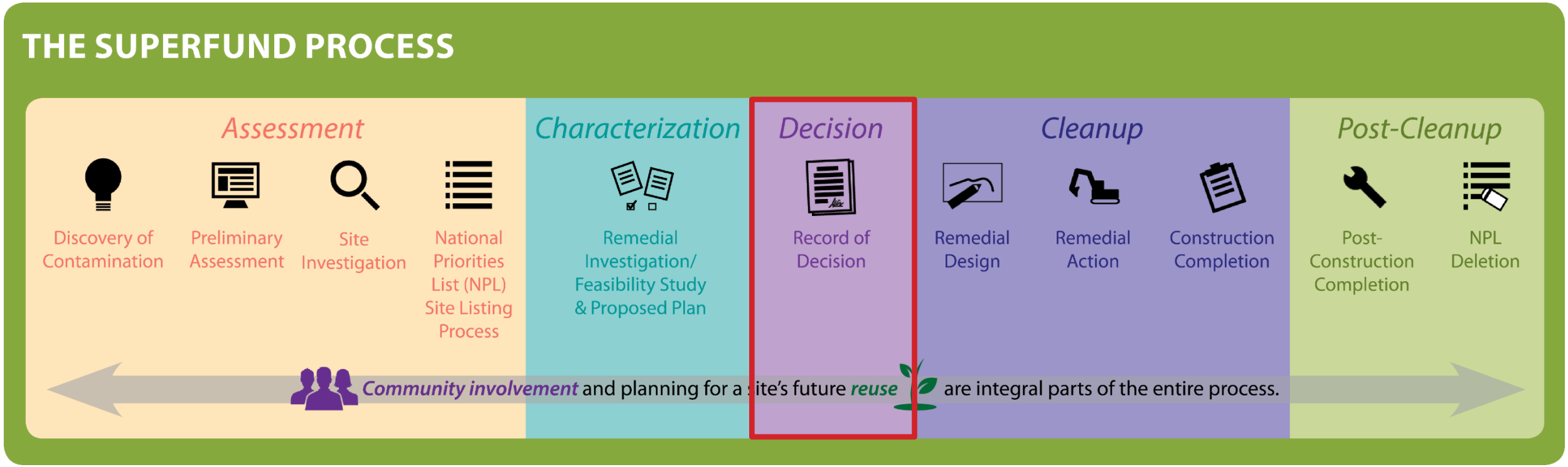
Remedial Investigation/Feasibility Study & Proposed Plan

NINE EVALUATION CRITERIA

- Protection of Human Health and the Environment
- Compliance with State and Federal Requirements
- Long-term Effectiveness and Permanence
- Reduction of Toxicity, Mobility, or Volume through Treatment
- Short-term Effectiveness
- Implementability
- Cost
- State Acceptance
- Community Acceptance

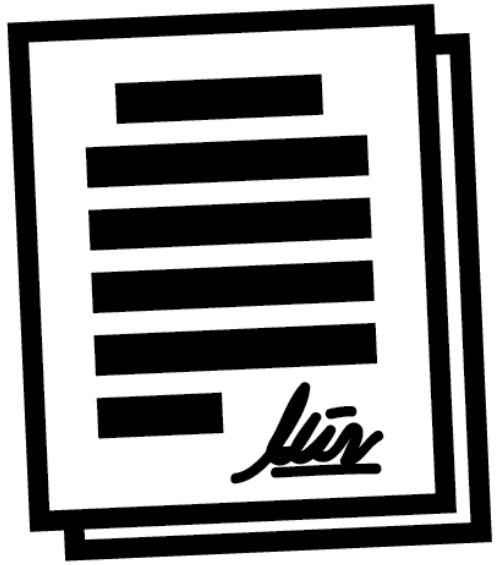
DECISION

- What happens after evaluation of cleanup options and public comment?



RECORD OF DECISION (ROD)

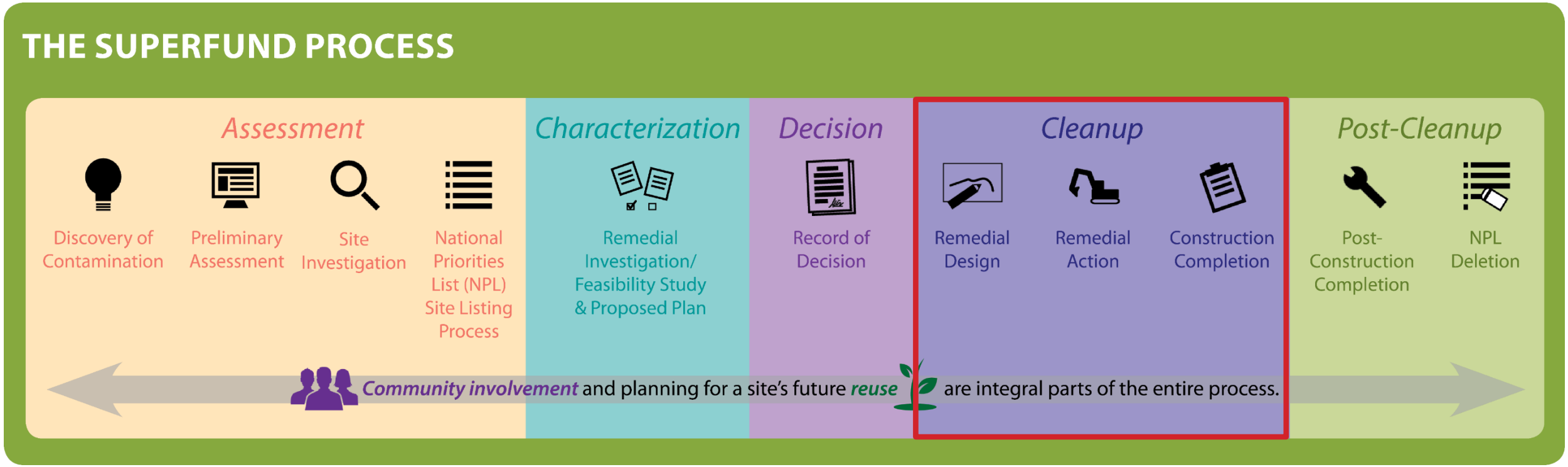
- Legally binding decision document
- Outlines cleanup specifics



Record of Decision

CLEANUP

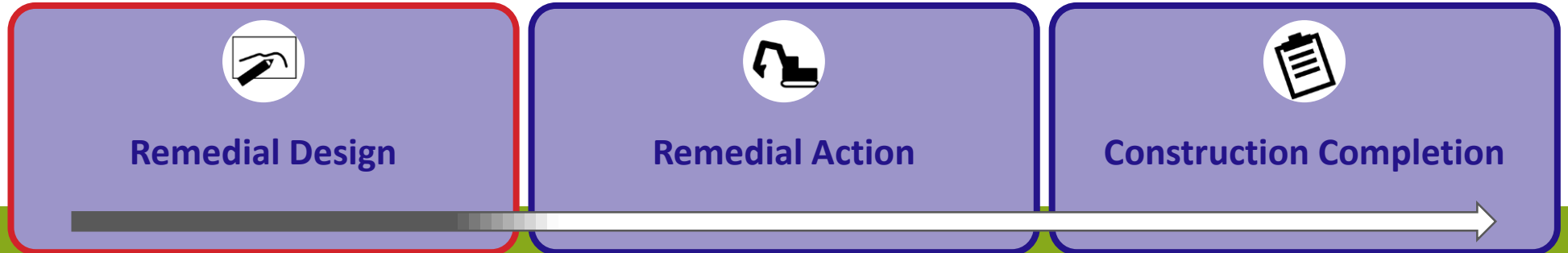
- What happens after remedy selection?



REMEDIAL DESIGN (RD)

- Detailed cleanup plans are developed during the RD stage. Remedial design includes development of engineering drawings and specifications for a site cleanup
- May include additional sampling

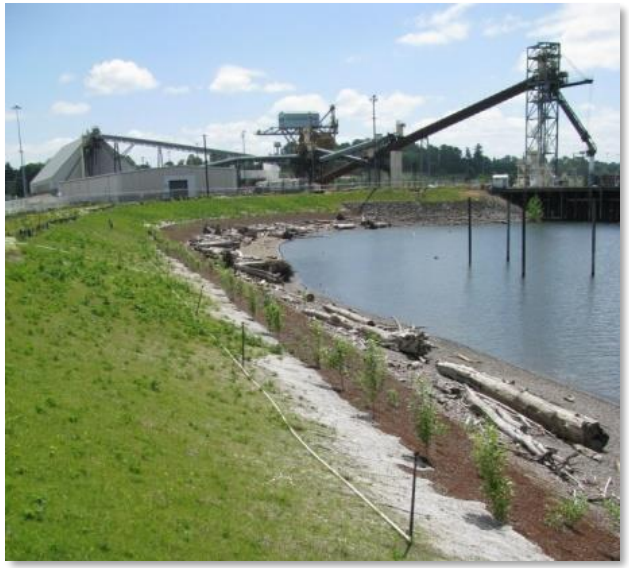
Source: EPA



REMEDIAL ACTION

- Remedial action follows design, and involves the actual construction or implementation phase of site cleanup

Source: EPA



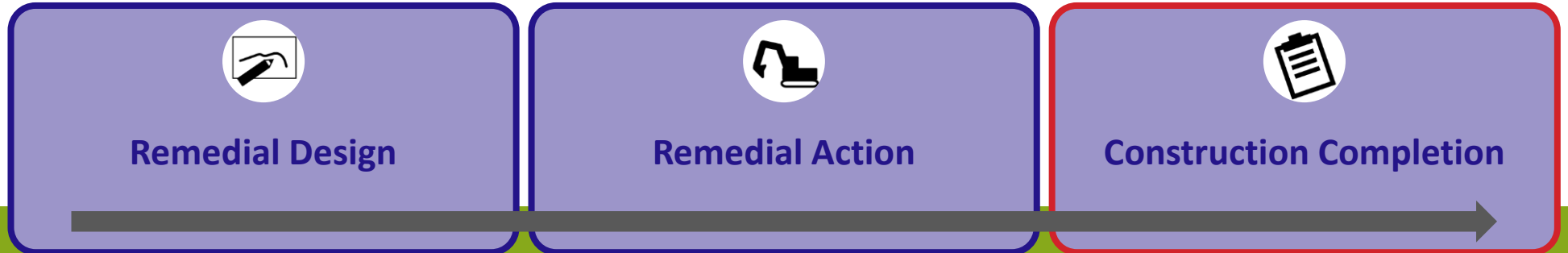
Source: EPA

Remedial Design → **Remedial Action** → **Construction Completion**

CONSTRUCTION COMPLETION

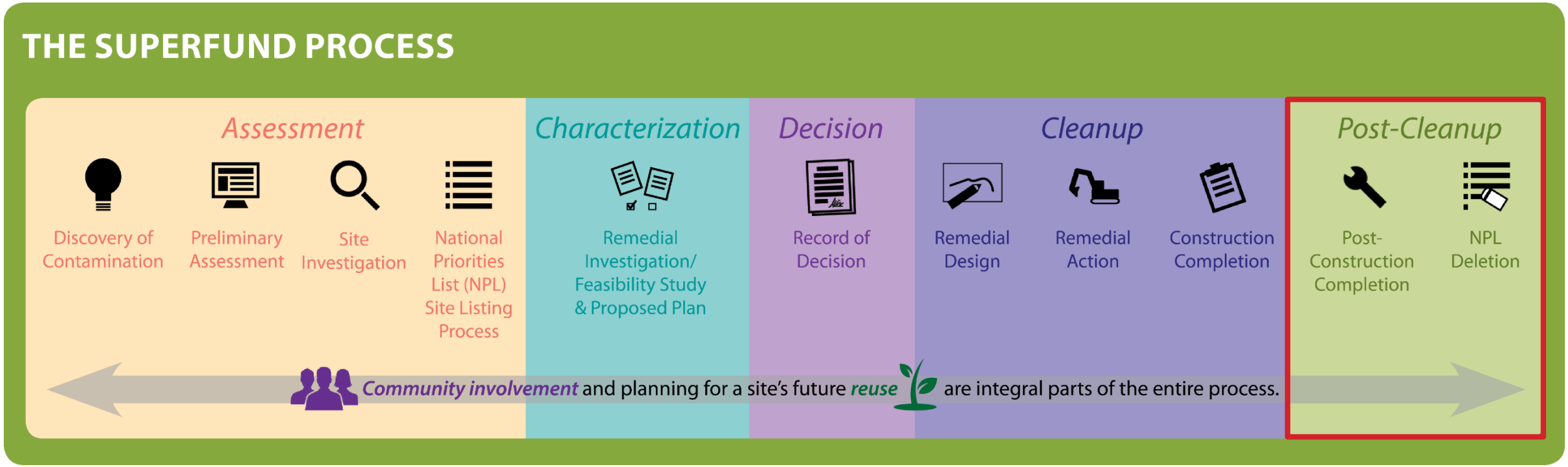
- All necessary physical construction needed for the cleanup has been completed
- Final cleanup levels may not have been reached

Source: EPA



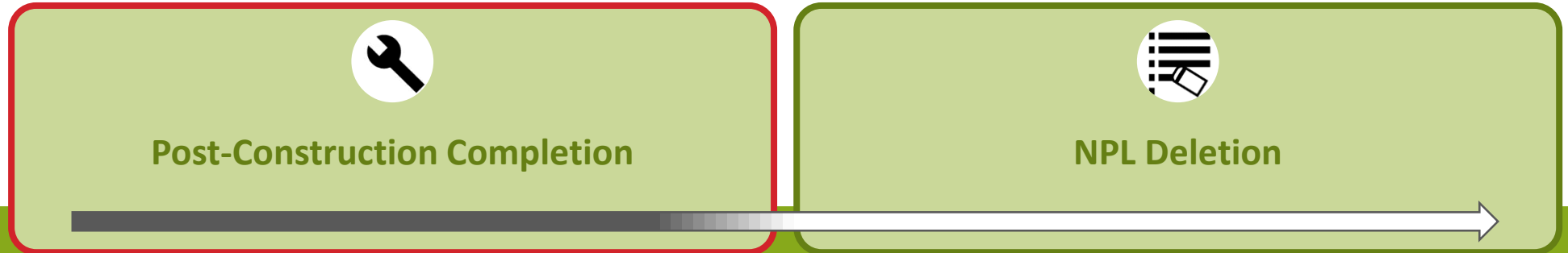
POST-CLEANUP

- What happens after cleanup?



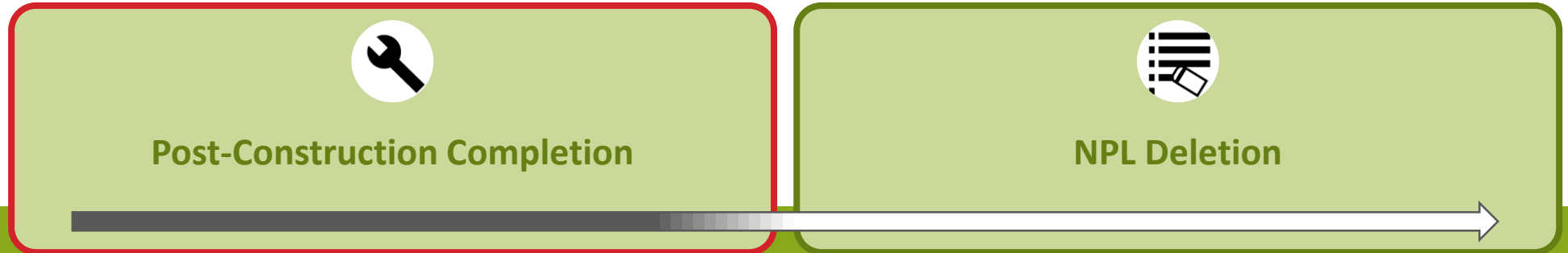
POST CONSTRUCTION-COMPLETE ACTIVITIES

- After EPA determines that the physical construction at a site is complete, activities are put in place to ensure that the cleanup actions will protect human health and the environment over the long term
- For example, these activities may include routine maintenance at the site such as making sure signs and fences are intact or soil treatment systems are running smoothly



FIVE-YEAR REVIEWS

- Required when not all waste is removed
- Evaluate the implementation and performance of a remedy to determine whether it is still effective
- A Five-Year Review may include:
  - Examining site data
  - Inspecting the site
  - Taking new samples
  - Talking with affected residents about site conditions, problems or concerns
- EPA is required to notify the community and other interested parties when a Five-Year Review will be conducted at the site



NPL DELETION

- Removing the site from the list of Superfund sites
- EPA notifies the community of the availability of an intention to delete for comment
- EPA then accepts comments from the public on the information presented in the notice and issues a Responsiveness Summary to formally respond to public comments received
- If, after the formal comment period, the site still qualifies for deletion, EPA publishes a formal deletion notice

BUILDING A GOOD RELATIONSHIP AND EFFECTIVELY COMMUNICATING WITH REGULATORS

BUILDING A GOOD RELATIONSHIP AND EFFECTIVELY COMMUNICATING WITH REGULATORS

- Regulators are not the enemy
- You can create conditions for mutual respect by treating regulators with respect
- You can build relationships with regulators to establish the basis for productive dialogue and conversation

SEPARATING FACT FROM EXAGGERATION

- State the facts clearly and plainly
- Gather data from established sources
- Take pictures and video of site-related problems (A picture tells a thousand words!)
- Make statements that are based upon facts and tell about things you or others in your community have seen and experienced firsthand
- Learn what the regulating agency has the power and authority to do and recommend what specific actions you want them to take to assist your community

USING PASSION TO UNDERSCORE AND NOT OBSCURE YOUR MESSAGE

- It is ok to be angry, but try to constructively channel your anger when dealing with regulators
- Remember that human nature causes most people to shut down when they are being shouted at, cursed at or otherwise disrespected
- Being passionate does not mean being disrespectful to others

SAYING WHAT YOU NEED TO SAY IN FIVE MINUTES

- Keep statements and inquiries short and focused during meetings and phone calls
- Spend time preparing your comments or questions by organizing your main points
- Give brief statements about your thoughts, concerns or questions
- Whenever possible, provide written comments that elaborate on your verbal statement
- Written comments can be of any length

EFFECTIVE WRITTEN COMMENTS

- Write specifically to the issues at hand
- Work with others to produce your written comments and/or have someone else read your written comments before you submit them
- There are two ways to proceed with written comments:
  - Have one set of comments that are signed by many people and organizations (This can be very persuasive!)
  - Organize your community to submit many individual comments
- Be sure to include specific recommendations for how you think the regulating agency should address the issues at hand

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