



Standard Guide for Stakeholder-Focused, Consensus-Based Disaster Restoration Process for Contaminated Assets¹

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1. Scope

1.1 To ensure a publicly acceptable and timely restoration of an asset contaminated as a result of a natural or man-made disaster, including a terrorist event, it is essential to have a pre-planned strategy developed and tailored at the community level and facilitated by the government which advocates the support and involvement of the affected community during such a crisis period. This pre-planned strategy for restoration will need to be seamlessly incorporated into the overall emergency management process within the community. This guide presents a framework (that is, strategy) for involving the public in a stakeholder-focused, consensus-based event restoration process, for those situations where such involvement is essential to move a stalled (due to stakeholder issues) restoration process forward. This framework is designed to be an event-specific, community-specific process to help prioritize and consider actions necessary to optimize the restoration of an asset contaminated as the result of a disaster.

1.2 This guide is intended to describe a highly flexible restoration planning process, and therefore does not specify or recommend a specific course of action for this activity.

1.3 This guide is intended to assist in the implementation of a restoration planning process allowing a holistic assessment and balancing of the impacts associated with human health, ecology, socio-cultural values, and economic implications. It is intended to be used in alignment with current Federal Emergency Management Agency (FEMA) guidance and other guides and agency procedures and requirements to address specific stakeholder issues and concerns.

1.4 After completing the immediate response and stabilization phase of a disaster that required Federal assistance through establishment of a Joint Field Office (JFO) in accordance with

the National Response Plan, mitigation and recovery activities will need to be planned and initiated to address the significant long-term impacts for any contaminated assets in the affected area. This guide provides a process that can be used by the JFO to gain stakeholder consensus on the restoration of these assets.

1.5 The user should consult other restoration-related standards, regulations, and sources for specific methods in the utilization of predictive models or other analysis tools that may be required under a restoration planning assessment.

1.6 Although the implementation of a restoration planning process is intended for use after a disaster occurs, it needs to be an integral part of a community's pre-event planning activities and incorporated into appropriate community response plans. Identifying the important assets of a community and key stakeholders associated with each respective asset, before an event occurs through a process such as Community Asset Mapping, will help ensure a more efficient restoration process following an actual contamination of the asset in a disastrous event.

1.7 Since restoration planning as proposed in this guide follows a plan established prior to the event, it is important to coordinate asset restoration plans with event preplanning on how to minimize damages to significant assets from uncertain, low-probability, but potentially costly natural and man-made disasters. What will be required for asset restoration will be in part dependent on what measures have been taken to protect those same assets before the extreme event occurs. Guide E2506 provides a three-step protocol for formulating and evaluating risk mitigation strategies for constructed facilities. Assets identified for risk mitigation in the application of Guide E2506 prior to a disaster will likely be assets that the restoration stakeholders using this guide will want to consider restoring in the recovery phase following a disaster.

1.8 *This standard guide does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard guide to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.*

¹ This guide is under the jurisdiction of ASTM Committee E54 Homeland Security Applications and is the direct responsibility of Subcommittee E54.02 Emergency Preparedness, Training, and Procedures.

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2. Referenced Documents

2.1 ASTM Standards:²

- E917** Practice for Measuring Life-Cycle Costs of Buildings and Building Systems
- E964** Practice for Measuring Benefit-to-Cost and Savings-to-Investment Ratios for Buildings and Building Systems
- E1074** Practice for Measuring Net Benefits and Net Savings for Investments in Buildings and Building Systems
- E1739** Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites
- E1765** Practice for Applying Analytical Hierarchy Process (AHP) to Multiattribute Decision Analysis of Investments Related to Buildings and Building Systems
- E1984** Guide for Brownfields Redevelopment (Withdrawn 2012)³
- E2348** Guide for Framework for a Consensus-based Environmental Decision-making Process
- E2506** Guide for Developing a Cost-Effective Risk Mitigation Plan for New and Existing Constructed Facilities

2.2 Other Documents:

- (SARA Title III, 42 U.S.C. §11001 *et seq.*) Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986
- (Act 1990-165, 35 P.S. §6022.101 *et seq.*) Hazardous Material Emergency Planning and Response Act
- NRP 2004** *National Response Plan*, including the Nuclear/Radiological Incident Annex, Emergency Support Function #10 (Oil and Hazardous Materials Response Annex) and Emergency Support Function #14 (Long-Term Community Recovery and Mitigation Annex). December, 2004. U.S. Department of Homeland Security, Washington, D.C.
- P/CCRARM** (The Presidential/Congressional Commission on Risk Assessment and Risk Management). 1977a. Risk Assessment and Risk Management in Regulatory Decision Making. Volume II, Washington, D.C.
- P/CCRAM** (The Presidential/Congressional Commission on Risk Assessment and Risk Management). 1997b. Framework for Environmental Health Risk Management. Final Report. Volume I, Washington, D.C.

3. Terminology

3.1 Definitions:

3.1.1 *affected stakeholder*, *n*—any individual, group, company, organization, government, tribe, or other entity which may be directly affected by the outcome of the specific restoration planning process.

3.1.2 *asset*, *n*—property of a community to which (for purposes of this standard) a high monetary, ecological, or socio-cultural, or a combination thereof, value can be assigned, but which has no essential service or critical infrastructure

function within the community. (There would be no need for this consensus-based restoration process in cases where complete restoration of critical infrastructure is obligatory.)

3.1.2.1 *Discussion*—Some examples of assets include statues and monuments, historical landmarks, forests and nature preserves, watersheds, parks and recreational areas, cultural and archaeological sites, sports and entertainment pavilions, tourist attractions, government facilities, roads, streets, bridges, utilities, dams, and infrastructure.

3.1.3 *community*, *n*—group or groups of individuals, who live or work in specific neighborhoods, areas, or regions.

3.1.4 *community asset mapping*, *v*—documenting the tangible and intangible resources of a community where assets are to be preserved and enhanced.

3.1.5 *informed consent*, *n*—agreement reached between the responsible party(ies) and the affected stakeholders, which is obtained by a process by which affected stakeholders (1) are informed about the issues, concerns and priorities of all other affected stakeholders; (2) are directly involved in developing criteria for selecting solution(s); and (3) consider the balancing of trade-offs to achieve procedurally defined consensus on specific initiatives and actions identified through the restoration planning process.

3.1.5.1 *Discussion*—Multi-criteria decision analysis methods can be useful in sorting through and resolving differences among stakeholders with diverse opinions to help reach informed consent. (See Practice **E1765** for help in multi-criteria decision analysis.)

3.1.6 *interested party*, *n*—any individual, group, company, organization, or other entity which is not an “affected stakeholder” but which is interested in the outcome of the particular restoration planning process.

3.1.7 *regulator*, *n*—local, regional, state/provincial, or federal government agency or person employed therein for the purpose of administering or enforcing compliance with laws and regulations, which may be a stakeholder, a decision-maker, or an advisor to the responsible party’s(ies’) lead Stakeholder Committee.

3.1.8 *responsible party(ies)*, *n*—specific Federal, State, local, or tribal government, private sector or non-governmental organization(s) designated to be responsible for the restoration of an asset that was contaminated in a disastrous event.

3.1.8.1 *Discussion*—For example, upon request, the Federal government assists State, local, and tribal governments to develop and execute recovery plans. In accordance with the National Response Plan, the Environmental Protection Agency may be designated as the Emergency Support Function Coordinator and consequently the “responsible party” when a disaster results in the spread of radiological contamination or other hazardous materials.

3.1.9 *restoration*, *n*—returning the assets of a community to a normal, natural, or healthy condition as determined through a structured framework of decision making and community action.

3.1.10 *stakeholder committee*, *n*—entity lead by the responsible party(ies) which is directly involved in the decisions made within the restoration planning process.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard’s Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

3.1.10.1 *Discussion*—It is composed of affected individuals or representative(s), or both, selected from each group of stakeholders. Members of the Stakeholder Committee are responsible to act as liaisons with their respective stakeholder groups.

3.1.11 *stakeholder consensus on disaster restoration planning process, n*—responsible party(ies)-led and stakeholder-involved, community-specific process to help assess, prioritize, and select restoration actions to be implemented with the goal of optimizing the restoration of an affected asset following a disastrous event, which considers and balances the full spectrum of human health, ecological, socio-cultural, and economic impacts.

3.1.11.1 *Discussion*—In the National Response Plan example given above, the Joint Field Office would serve as the central coordination point among Federal, State, local, and tribal agencies and voluntary organizations for this restoration planning process as well as for delivering recovery assistance programs.

4. Summary of Guide

4.1 *The Stakeholder*—Focused Consensus-Based Event Restoration Planning Process is a responsible party(ies)-led, stakeholder-focused, event-specific, and community-specific process established to help assess, prioritize and select optimized and timely actions to effect the efficient restoration of a contaminated asset to its original or agreed upon altered condition and use. The restoration planning process is designed to consider and balance the event’s implications on human health, ecology, socio-cultural values, and economic impacts. The Stakeholder Committee, established by the responsible party(ies), will consider issues related to environmental justice, which relates to the fair treatment and meaningful involvement of all people, regardless of race, ethnicity, income, national origin or education level. The restoration planning process is an iterative process comprised of five main steps: (1) affected stakeholder identification and formation of the Stakeholder Committee; (2) information gathering; (3) forecasting; (4) establishment of informed consent; and (5) implementation and evaluation of initiatives.

4.2 The restoration planning process focuses on the holistic assessment of the impacts of any event restoration project. By utilizing effective, science-based tools and active involvement of affected stakeholders, the responsible party(ies) (with assistance from the affected stakeholders) can readily identify and manage the most important issues related to the timely and acceptable restoration of the affected asset.

4.3 There is no set prescriptive path that can be universally followed when initiating or participating, or both, in the restoration planning process. The process must be tailored to meet the specific needs of the affected community and conditions of the disaster. Depending on the needs and priorities dictated by the specifics of the disaster, different analysis tools may be needed to address specific issues.

5. Significance and Use

5.1 The understanding and management of the interrelationship between human health, ecological condition, socio-

cultural values, and economic well-being of the community and the high-value asset is essential to timely and acceptable restoration. This standard guide is designed to help responsible party(ies) with the identification and integration of affected stakeholders and with the establishment of a process to identify and resolve key issues essential to a satisfactory restoration. The standard guide is presented herein as a “framework” to help ensure that all the restoration planning process components (that is, human health, ecological condition, socio-cultural values and economic well-being) are considered. The framework is designed to allow a user to determine which components of the process are applicable to the restoration problem being addressed, and to establish the level of analytical detail necessary for each component. It provides general guidance to help with the selection of approaches and methods for specific analysis of each of the major restoration planning components (that is, human health, ecological condition, socio-cultural values, and economic well-being).

5.2 By actively involving affected stakeholders in the restoration decision-making process, it will help the user to orient the process to prioritize and consider the most important issues of those who’s lives are most directly impacted by the consequences of the event and resulting restoration. This not only greatly increases the chances of a successful and acceptable restoration, but will also help promote public trust in the responsible party’s ability to rapidly restore the high-value asset(s).

6. Consensus-Based Disaster Restoration Decision-Making Framework

6.1 *Identification of Affected Stakeholders and Formation of a Stakeholder Committee:*

6.1.1 Stakeholders are at the center of the restoration planning process, and are involved from the planning through the implementation phases, providing input at the issue identification, decision-making, and restoration stages. The affected stakeholders are key contributors to decision-making, rather than just providing feedback about decisions made by others.

6.1.2 It is necessary to both identify and involve all the key affected stakeholders and interested parties. An active two-way communication process is essential and required to identify key stakeholders early in the process. Affected stakeholders generally fall into three broad categories: (1) the community (for example, the occupants of the building(s)/asset(s), localized general public, non-governmental organizations with a direct stake, investors and investor organizations); (2) government (for example, municipal, regional, tribal, state/provincial, or federal, or a combination thereof, responsible agencies, and regulatory agencies); and (3) commercial (for example, private owners, local businesses, and industry). These groups should be invited to select a representative(s) to participate on the Stakeholder Committee; the most effective representatives are those people selected by the respective group or organization itself. There may be a representative(s) of several organizations within each category (for example, there may be two main owners or organizations with the most at stake; there may be three government agencies which require representation; there