

Area Contingency Planning (ACP) Handbook / Version 2.0 / August 2018



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While EPA will attempt to keep links to information timely and accurate, the Agency makes no expressed or implied guarantees. EPA expects to review this Handbook routinely and update the links listed in the appendices as appropriate.

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Introduction



This Handbook is a guide and reference for the development of Area Contingency Plans (ACPs) for environmental emergencies. While it is primarily intended for use by United States (U.S.) Environmental Protection Agency (EPA) emergency response program personnel, area contingency planning is necessarily an inter-agency process, and the use of this Handbook to inform other agencies of EPA's planning process is encouraged. Because area plans are focused on specific geographic domains, with many physical and jurisdictional variables, there can be no 'one size fits all' plan format, but maintaining national consistency in the basic content is important, particularly considering the statutory and regulatory requirements by which EPA and other agencies are bound.

This Handbook was initially developed by EPA's Area Planning Workgroup during 2011 and 2012, revised in 2014, and updated in 2018. It incorporates the accumulated knowledge of years of contingency planning experience. Although ACPs are specifically mandated by the Clean Water Act (CWA) as amended by the Oil Pollution Act of 1990 (OPA 90), EPA's responsibilities under other laws, including the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), make an all-hazards approach to contingency planning desirable. The processes of planning for responses to all types of environmental emergencies (e.g., oil discharges, hazardous substance releases, natural disasters) share common elements that have been demonstrably successful in major responses.

In the interests of conciseness and accessibility, this Handbook will not recapitulate extensive portions of related documents, but will list key references, including laws, regulations, and technical resources, in appendices.

This Handbook is available for download as a PDF file from EPA's Office of Emergency Management web site at <https://www.epa.gov/oil-spills-prevention-and-preparedness-regulations/area-contingency-planning-handbook>.

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Section 1: Overview of Area Planning



A. What is an Area Contingency Plan (ACP)?

An ACP is a reference document prepared for the use of all agencies engaged in responding to environmental emergencies in a defined geographic area. Throughout this Handbook, the terms ‘Area Contingency Plan’ and ‘ACP’ also encompass the processes for developing and managing Sub-Area Plans and Geographic Response Plans (GRPs), which are more limited in scope than ACPs.

Under federal law (OPA 90) and regulation (National Oil and Hazardous Substances Pollution Contingency Plan, commonly referred to as the National Contingency Plan or NCP), all U.S. territory is divided into jurisdictional zones for purposes of removal and response actions. The U.S. Coast Guard (USCG) is designated the lead agency for planning and response in the coastal zone and certain major inland water bodies, and EPA is designated the lead for the inland zone, with certain exceptions for areas managed by the Department of Defense (DoD). While this EPA Handbook is focused on inland zone planning, it is important to note that EPA also has a role in coastal zone planning, specifically regarding oil spill countermeasure concurrences and authorizations. USCG-lead coastal plans and EPA-lead inland plans covering adjacent areas must be compatible. Appendix A provides details on applicable statutory and regulatory authorities.

Under the Clean Water Act (CWA), section 311(j)(4) specifies required elements for ACPs, including:

- When implemented in conjunction with the NCP, the ACP must be adequate to remove a worst-case discharge, and to mitigate or prevent a substantial threat of such discharge from a vessel, offshore facility, or onshore facility operating in or near the area. A worst-case discharge means: 1) in the case of a vessel, a discharge in adverse weather conditions of its entire cargo, and 2) in the case of an offshore facility or onshore facility, the largest foreseeable discharge in adverse weather conditions.
- A description of the area covered by the plan, including areas of special economic or environmental importance that might be damaged by a discharge. This description should provide a comprehensive picture of the defined area, which may be a body of water, a watershed or a political jurisdiction.
- A detailed description of the responsibilities of an owner or operator, and of federal, state and local agencies in removing a discharge, and in mitigating or preventing a substantial threat of discharge. The plan should identify those entities with authorities and resources for planning and response, describe their capabilities and establish an operational framework for these entities to ensure optimum communication and coordination during a response.
- A list of equipment (including firefighting equipment), dispersants, or other mitigating substances and devices, and personnel available to an owner or operator; federal, state and local agencies; and tribal governments to ensure an effective and immediate removal of a discharge, and to ensure mitigation or prevention of a substantial threat of a discharge.

- A list of local scientists, both inside and outside the federal government, with expertise in the environmental effects of spills of the types of oil typically transported in the area, who may be contacted to provide information or, where appropriate, participate in meetings of the scientific support team convened in response to a spill, and describe the procedures to be followed for obtaining an expedited decision regarding the use of dispersants.
- A description of how the plan is integrated with other plans, including other ACPs and tank vessel, offshore facility, and onshore facility response plans, and into operating procedures of the National Response Unit.
- An advance planning and decision-making framework for closing and reopening fishing areas following a discharge.
- Any other information the President requires.
- Be updated periodically.

In addition, there are other provisions of the CWA that the NCP implements through required elements for ACPs. These elements include:

- A detailed annex containing a Fish and Wildlife and Sensitive Environments Plan (FWSEP). The FWSEP annex must be developed in consultation with the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration (NOAA), and other interested parties, including state fish and wildlife conservation officials. The annex must address fish and wildlife resources and their habitat, and other areas considered sensitive environments, and provide the necessary information and procedures to immediately and effectively respond to discharges that may adversely affect them, including provisions for a response to a worst-case discharge (40 CFR 300.210(c)(4)).
- Guidelines for conducting specific tasks such as: sampling, classifying, segregation, and temporary staging of recovered waste; and identifying prior state disposal approval, various waste disposal options and a hierarchy of preferences for disposal alternatives (40 CFR 300.310(c)).

An ACP is not a rigid, prescriptive plan with step-by-step instructions for responses. Rather it serves as a mechanism to ensure responders have access to essential area-specific information, as well as to promote inter-agency coordination as a means of improving the effectiveness of responses.

B. How is an ACP developed?

An ACP is the product of a collaborative process involving agency stakeholders within the defined area, organized as an Area Committee (AC). Under the direction of the Federal On-Scene Coordinator (FOSC) for its area (33 U.S.C. 1321(j)(4)(B)), the AC is comprised of members from qualified personnel of federal, state, and local agencies, as well as members of federally recognized Indian tribes, where applicable. The AC provides a forum for these agencies to develop cooperative working relationships while identifying issues and challenges through preplanning of joint response efforts, and developing solutions in advance of a response. The AC is responsible for developing the ACP, evaluating its implementation, and maintaining it through a continuous improvement process by consulting with Regional Response Teams (RRTs) and others, as appropriate.

C. What are the benefits of an ACP?

Responding to the immediate circumstances of an environmental emergency can be a challenging task. Overlapping jurisdictions and potentially divergent interests of the parties involved can further complicate the response. The ACP provides a mechanism for planning for these potential complications prior to an incident. The ACP is a useful tool for responders, providing practical and accessible information about who and what they need to know for an effective response.

The process for ACP development may be as beneficial as the final product. The AC provides a forum for all parties to identify problems, resolve conflicts, and become informed about the issues raised by actual and potential incidents. The AC provides an effective mechanism for communicating and informing a wide audience about the response and planning concepts as part of the National Response System (NRS). The NRS is the government's mechanism for emergency response to discharges of oil and releases of hazardous substances, pollutants or contaminants. The NRS functions through a network of interagency and inter-government relationships that are formally established and described in the NCP as found in 40 CFR Part 300. The AC provides a way for federal, state, local, and, where applicable, tribal members to define their most significant concerns, ensuring that those concerns will be considered should a response be initiated or required.

D. What are the statutory and regulatory underpinnings of the ACP?

ACPs were initially conceived as part of oil spill legislation, but the ACP concept has grown beyond that to encompass the prospect of responses to environmental emergencies in general, including hazardous substance releases, natural disasters and acts of terrorism. There is a substantial foundation of laws, regulations and executive orders that provide the basis for ACPs, including the following:

Clean Water Act (1972): The CWA amended the Federal Water Pollution Control Act (FWPCA) of 1948 and expanded the federal government's authority to regulate discharges to waterways. The Water Quality Improvement Act, amended by the FWPCA, provided the basis for the National Contingency Plan (NCP).

Oil Pollution Act of 1990: The OPA 90 amendment to the CWA established ACP requirements for the NRS to address worst-case discharges of oil and hazardous substances and mandated facility-specific plans (facility response plans (FRPs)) for certain categories of facilities.

Comprehensive Environmental Response, Compensation, and Liability Act (1980): CERCLA established a federal emergency response program to deal with immediate threats from hazardous substances and pollutants or contaminants (excluding petroleum as provided by 42 U.S.C. 9601(14) and (33)) and a remedial response program to deal with hazardous waste sites requiring actions consistent with a permanent remedy.

Emergency Planning and Community Right-to-Know Act (1986): EPCRA amended CERCLA by adding requirements for community-based emergency planning, through State Emergency Response Commissions (SERCs), Local Emergency Planning Committees (LEPCs), and public disclosure of hazards associated with certain facilities.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended: The Stafford Act provides the authorities and funding for federal support to state and local entities in responding to major disasters and emergencies.

National Response Framework (2008): The NRF is the federal executive document that provides the national blueprint for how the Nation conducts all-hazards response.

National Oil and Hazardous Substances Pollution Contingency Plan, commonly referred to as the **National Contingency Plan (40 CFR Part 300, last substantial amendments in 1994):** The NCP is a federal regulation that codifies certain authorities and responsibilities of designated federal agencies for responding to releases of oil, pollutants and hazardous substances. The NCP requires each federal Region, through its Regional Response Team (RRT), to develop RCPs. ACPs exist under the umbrella of the applicable RCP.

Executive Order 12580 (1987): Executive Order 12580 implements CERCLA, including delegating lead response authorities to EPA and USCG and requiring the NCP to provide for national and regional response teams (NRT and RRTs).

Executive Order 12777 (1991): Executive Order 12777 implements OPA 90 by outlining emergency response procedures for discharges of oil and hazardous substances, including delegating authority to designate areas, appoint AC members, determine the information to be included in ACPs, and review and approve plans for the inland zone to the EPA Administrator.

Presidential Directives: Homeland Security Presidential Directives (HSPDs) and Presidential Policy Directives (PPDs) are executive orders that address specific issues. HSPD-5 covers incident management, and requires the establishment of the National Incident Management System (NIMS). PPD-8 focuses on improving the overall preparedness of the nation to respond to emergencies. PPD-8 replaces HSPD-8. PPD-21 addresses the protection of the nation's critical infrastructure. PPD-21 revokes HSPD-7.

State Laws and Tribal Codes: Each state, territorial and tribal entity has its own laws, codes, and regulations that apply to environmental emergencies. As partners in the ACP process, these entities identify which agencies and requirements are relevant to the ACP.

Local Laws: Each locality participating in the ACP process identifies which of its laws and ordinances are relevant to the ACP and which agencies will participate in the ACP process.

A more detailed summary of the statutory and regulatory basis for ACPs is included in Appendix A.

E. What is the relationship of the ACP to other plans?

The NCP regulation is the foundation for interagency contingency planning, and establishes the authorities, responsibilities and relationships of agencies when responding to environmental emergencies. RCPs extend the NCP model to a narrower regional focus, bringing in states and other entities to focus on region-specific concerns, as described below.

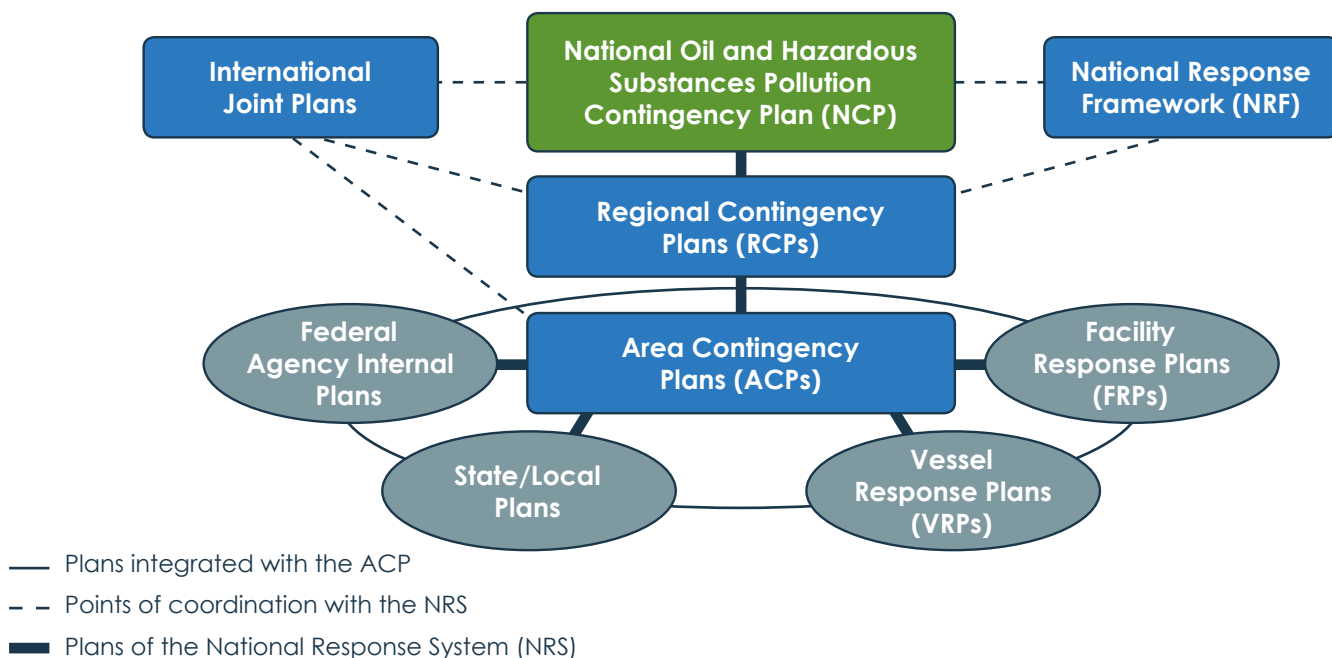
In Executive Order 12777, the President delegated the authority to designate areas, appoint AC members, determine the information to be included in ACPs, and review and approve plans for the inland zone to the EPA Administrator.¹ The EPA Administrator, through delegation 2-91, initially designated thirteen geographic areas already covered by RRTs, and the RRTs as the initial ACs. The EPA Administrator also delegated Regional Administrators the authority to designate different geographic areas within their Regions and appoint different AC members. Regional Administrators are authorized to delegate the authority no lower than the Division Director level. For this reason, a RCP may function as an ACP if the EPA Regional Administrator (RA) or their designee determines that there is no

need for formally defining multiple ACPs within a region. Sub-regional concerns may also be addressed by Sub-Area Plans, which are more limited in scope, but include many of the same elements as ACPs. GRPs may also serve to address sub-regional concerns since their focus is on specific response strategies and tactics for narrowly-defined areas. If the RA determines that the RCP will serve as the sole ACP for the region, the RRT assumes the responsibilities of the AC as described in 40 CFR 300.205(c). In this case, the RRT solicits states and federally recognized tribes for local representatives to serve on the AC. Representatives from nongovernmental organizations (NGOs) and the private sector may participate in AC activities that are open to the public.

ACPs also interface with plans developed by state and local authorities, and by vessel and facility owners/operators, as well as with other ACPs in bordering jurisdictions, such as those developed by USCG. The diagram below illustrates the relationships between the various plans.

There are three levels of contingency plans under the national response system: National Contingency Plan, Regional Contingency Plans, and Area Contingency Plans. The relationships between these plans and other planning mechanisms are described below.

Relationship of Plans



¹ See summary of CWA ACP provisions in Appendix A.

Section 2: Initial Steps/ Preliminary Analysis



The decision to initiate the development of an ACP separate from the RCP or to update an existing ACP (or a Sub-Area Plan or a GRP) should be preceded by an analysis by the lead federal agency's designated On-Scene Coordinator (OSC). In considering this decision, it is important to keep in mind that ACPs need to be adequate to remove a worst-case discharge and to mitigate or prevent a substantial threat of such discharge from a vessel, offshore facility, or onshore facility operating in or near the area. The initial forum for this analysis is most often the RRT because ACPs are reflective of areas encompassed within the RCPs. The stimulus for developing a separate ACP or updating an existing ACP may be lessons learned (e.g., a new worst-case discharge), the experiences of agencies during the response to a major incident, a pro-active effort to protect newly-identified sensitive resources, or to address issues related to high-risk facilities. There are no constraints on what the ACP-defined areas are within the region provided they are within the RCP jurisdiction (e.g., state jurisdictional boundaries, state need for specific measures within its boundaries, geographical determinants such as a watershed that encompasses sensitive resources). Regardless, if the RRT determines that a separate ACP should be considered, or if the AC determines that an update to an existing ACP is needed, then the RRT or AC should establish an ad hoc committee of interested agencies to conduct an initial analysis, which should reflect the following considerations:

1. An inventory and assessment of existing plans, including the RCP and any other federal, state, regional and local plans, and an assessment of the effectiveness of these plans, including the identification of gaps and other inadequacies that could be remedied.
2. Identification of the portions of existing plans that are adequate and can be incorporated into a separate or updated ACP.
3. Identification of potential sub-areas within the ACP boundaries that may require special attention, leading to Sub-Area Plans.
4. Review of data and information from past incidents (e.g., after-action reports, lessons learned, unresolved issues). This review is to identify specific problems that the separate or updated ACP should address.
5. Identification of sensitive areas, including environmental, cultural and economic resources.
6. Identification of jurisdictional overlaps/conflicts.
7. Identification of high-risk facilities and critical infrastructure.
8. Assessment of natural disaster risk and impact.



9. Estimates of the time and resources required for developing the separate ACP or updating an existing ACP.
10. Identification of key qualified personnel of federal, state, and local agencies, and federally recognized Indian tribes, where applicable, that should be invited to participate in the AC.
11. Assessment of the consequences of not developing a separate ACP or updating an existing ACP.
12. Consideration of the expansion of other Sub-Area Plans and Response Plans beyond their current geographic area.

If the initial analysis concludes that there is marginal or no environmental benefit from developing a separate ACP or updating an existing ACP, then the RCP should remain the operative plan and function as the ACP, provided the RCP meets the statutory obligation of an ACP.

If the conclusion of the initial analysis is that there would be an environmental benefit from developing a separate ACP, the next step is to establish an AC. EPA, as the lead federal agency for the inland zone, should be designated to conduct outreach and provide information to potential AC members.

Section 3: Area Committees



A. Initial AC recruitment

The first task is to identify the qualified personnel of federal, state, and local agencies, and federally recognized Indian tribes, where applicable, that should be involved in developing the ACP. Beginning with the list developed during the initial analysis, a summary of the analysis and an invitation to join the effort should be distributed by EPA, the agency responsible for the inland zone. This first invitation list may be supplemented with additional invitees as the effort gains visibility, with the objective to be as inclusive and comprehensive as possible.

Potential members include:

- Existing RRT member agencies
- Other state/territorial/tribal agencies
 - The lead state agency representative to the RRT should identify other state agencies with interest and expertise relevant to ACP development
- Regional and local agencies
 - The LEPCs within the area should be the initial contact point for developing a list of potential participants
- Federally recognized Indian tribes, where applicable

Responses to the solicitation should be evaluated critically. Every invitee may not be able or willing to participate, so consideration must be given to identifying those that are most important to the success of the effort

and potential incentives to encourage their participation. The number of AC members is variable and it is likely that several tiers of participation will emerge.

The AC recruitment phase may require several months of dialog with critical members that are reluctant to commit for various reasons (e.g., time constraints, limited resources). A decision by EPA must be made as to whether enough of the key members have committed to warrant proceeding with the initial AC meeting or whether additional preliminary work is needed.

B. Project management

Concurrent with the solicitation of participants, EPA, as the agency responsible for the inland zone, should begin scoping the project because the costs and the timeframe will be important factors to potential AC members. Cost and schedule estimates should be developed based on previous experience. Other available ACPs that meet the regulatory obligations should be reviewed to identify an appropriate model and the AC for the selected model should be contacted to obtain realistic costs and schedule information. This first estimate should include:

- Staffing requirements and costs
- Travel costs
- Contractor support requirements, sources, and costs
- Overall funding requirements and sources
- Time-line



C. Initial AC meeting

If responses to the solicitation indicate sufficient interest by potential participating AC members to proceed with the effort, an AC formation meeting should be planned. EPA, as the agency responsible for the inland zone, should prepare a briefing package for the meeting, including the initial analysis and the presumptive schedule and budget, and related materials. Materials should be made available to invitees in advance.

The meeting date and location should be selected with care to afford maximum participation. Special consideration should be given to critical members, as appropriate, and to encourage the support of state, local, and tribal co-hosts for this collaborative effort.

General elements of an initial meeting agenda include:

- Welcoming remarks by co-hosts
- Briefing by EPA, as the agency responsible for the inland zone, on overall context, authorities, analysis, AC functions, projected schedule, and budget
- Opportunity to review sample plans from other areas
- Opportunity for clarifying questions and dialog
- Opportunity to opt for non-participation or information-only status
- Opportunity for potential members to describe their interests, authorities and resources
 - Discussion of obstacles (e.g., budgetary, bureaucratic)
 - Immediate follow-on meeting to plan for first formal meeting following the formation meeting

The initial meeting of the AC should focus on the following basics:

- AC membership and organization
 - Mail and email lists
 - Identification of other possible AC members for further solicitation
 - Agreement on chair/co-chair agencies
- AC protocols
 - Meeting locations and scheduling, record-keeping, logistics
- Review of the initial analysis
 - Is the area covered by the ACP defined appropriately?
 - Are there errors or gaps in the initial analysis?

- General agreement on scope and schedule for ACP development
- Review of resources available for ACP development, as well as potential resource constraints
- Review of potential obstacles
- ACP format, focus, level of detail, and distribution

Subsequent AC meetings should focus on the specific tasks of ACP development.

D. AC organization

The AC may consider various options as there are no specific models or organizational requirements beyond what has been discussed above. The formality of the organization will mostly be a function of its size; smaller ACs can be more informal and collegial, while larger ACs may require more clearly-defined structure.

The qualified personnel of federal, state, and local agencies, and of federally recognized Indian tribes, where applicable, will likely fall into three groups:

- **Key players:** Those with an active interest and with sufficient resources to play an active continuing role in the AC.
- **Supporting players:** Those with active, but limited interest or resources that may participate on specific issues.
- **Observers:** Those that want to know about AC activities, but have no active role.

Organizationally, key players should be included in an executive committee or should act as chairs of potential subcommittees. Supporting players should be offered roles and positions tailored to their expertise and time/resource limitations. Observers may be kept informed through periodic reports and should be offered the opportunity to provide input and comment regarding elements of the ACP as they are developed.

In addition, potential participants that are not members of the AC, but wish to attend specific AC activities open to the public may include representatives from:

- NGOs:
 - Entities such as industry associations and environmental organizations
- Private sector entities, including regulated facilities:
 - Entities with facilities required to have FRPs and others identified as high-risk in the initial analysis

E. AC operations

Each AC is headed by the FOSC for its area: EPA personnel for the inland zone and USCG personnel for the coastal zone. EPA will chair the committee in areas where joint inland and coastal planning is conducted. Member assignments are voluntary, and should be based on the interests, expertise, and time/ resources commitment required to execute the assigned tasks. Key AC operations are the following:

Review and approval processes: As tasks are completed, the AC determines what levels of review are required, both within the AC itself and for RRT member agencies. Draft ACP elements should be broadly distributed for review and comment, with reasonable deadlines (e.g., 30 days). When the AC determines that the ACP is complete, the ACP should be submitted to the involved EPA Regional Administrators (or their designees) for final approval. (See Appendix A, April 24, 1992 Federal Register Notice.)

Documentation, record-keeping and administrative support: An important early AC decision is to determine the appropriate level of record-keeping and documentation, and the amount of administrative support required to maintain this level. Administrative support may be provided by staff from participating agencies or from their support contractors and includes the maintenance of files, distribution lists, web sites, and other tasks.

Reference materials library and distribution: As the ACP process evolves, the set of reference materials supporting the ACP will grow. Maintaining this set and ensuring that all AC members have access to it is a separate administrative support task.

Membership management: The most important part of this task is the maintenance of the AC membership and distribution lists, ensuring that mailing addresses, email addresses and phone numbers are accurate and current. For those members of the AC with specific AC responsibilities, back-up or alternate members should also be identified to ensure continuity is maintained when a member is unavailable.

F. AC activities and responsibilities

The lead agency designated FOSC is responsible for developing and managing the ACP through the AC. These tasks may include, but are not limited to:

- **ACP development:** The AC's primary task is to produce a final ACP that meets all statutory requirements, as well as NCP regulatory requirements and the needs of the AC members.
- **ACP publishing and distribution:** Once the final ACP is developed, the AC should decide on the modes of publication (e.g., hard copy, electronic, internet) and the scope of distribution.
- **ACP evaluation:** Once the ACP is distributed, the AC should establish a mechanism for evaluating its effectiveness. The ACP itself should contain contact addresses for receiving feedback and the AC should periodically consider comments received for possible future amendments. In evaluating the ACP, the AC may consider findings from the OSC after-action analyses of significant incidents and exercises.
- **ACP updates and modifications:** Technological advances, jurisdictional and organizational changes, infrastructure changes, and other factors may lead to a perceived need to modify or update the ACP. The AC should consider establishing an appropriate update cycle. In addition, a means for providing interim updates should be established for significant events that cannot be deferred to the update cycle (e.g., identification of new worst-case discharge scenarios from vessel response plans and FRPs that are higher than the worst-case discharge in the current ACP). Acting in this manner makes ACP version control and date-stamping an essential part of ACP management and enables all users to work with the most current information.
- **Inreach and outreach activities:** At a minimum, the AC may be requested to provide reports on progress to the RRT. Beyond that, the AC should consider how information should be disseminated among the area community. The AC may serve as a clearing-house for planning- and response-related news. AC members should inform their own agencies about the ACP and how to access and use it, so that all responders are equally prepared when an incident occurs. The AC should also be prepared to respond to requests for information from outside entities and organizations; this may require the preparation of fact sheets and briefing materials that provide a general overview of the ACP.
- **ACP Fish and Wildlife and Sensitive Environments Plan (FWSEP):** In order to provide for coordinated, immediate and effective protection, rescue, and rehabilitation of, and minimization of risk of injury to fish and wildlife resources and habitat, ACs are

required to incorporate into each ACP, a detailed annex containing a Fish and Wildlife and Sensitive Environments Plan (FWSEP) that is consistent with the RCP and NCP. The annex is to be prepared in consultation with the U.S. Fish and Wildlife Service, NOAA, and other interested natural resource management agencies and parties. The FWSEP annex is to address fish and wildlife resources and their habitat, and include other areas considered sensitive environments in a separate section of the annex, based upon AC recommendations. The annex will provide the necessary information and procedures to immediately and effectively respond to discharges that may adversely affect fish and wildlife and their habitat and sensitive environments, including provisions for a response to a worst-case discharge. Such information is to include the identification of appropriate agencies and their responsibilities, procedures to notify these agencies following a discharge or threat of a discharge, protocols for obtaining required fish and wildlife permits and other necessary permits, and provisions to ensure compatibility of annex-related activities with removal operations. The FWSEP annex requirements under 40 CFR 300.210(c)(4)(ii) are available at <https://www.gpo.gov/fdsys/pkg/CFR-2017-title40-vol30/pdf/CFR-2017-title40-vol30-sec300-210.pdf>.

- **ACP Environmental Tradeoff Analysis:** The NCP does not require the use of any specific methodology to identify protective strategies that may minimize the potential environmental impact of hazardous substances releases or oil discharges. However, some contingency planners have used Net Environmental Benefit Analysis (NEBA), a methodology for identifying and comparing environmental tradeoffs of alternative management options in the removal of discharged oil or released hazardous substances to address this goal. Environmental tradeoffs are often characterized as the contrast between avoided loss of environmental or ecological services attained by using a given removal technique to remove the oil (or combinations of various removal techniques) with the potential environmental harm that another removal technique or combination thereof may cause. When developing ACPs, RRTs and ACs should use the best available scientific information to assess environmental tradeoffs. An environmental tradeoff analysis for oiled sites typically involves the comparison of the following management alternatives:

- Leaving contamination in place for natural attenuation;
- Removing the contaminants through traditional removal techniques (e.g., mechanical recovery);
- Remediating contamination with alternative removal techniques; and
- A combination of the above.

This analysis involves agency personnel with environmental responsibilities that include evaluating environmental or ecological services (e.g., natural resource trustees), assessing adverse impacts, and evaluating removal actions. In addition, this type of tradeoff analysis may be applied to environmental management options. To do this, a balance of resource managers and emergency responders from federal, state and local agencies would coordinate in forming opinion, guiding discussion and educating each other in processes of importance and concern.

Each resource manager and emergency responder is responsible for implementing their statutory obligations and thus weighing the value of natural resources in a manner that reflects the agency's mission. It is important to note that, while environmental tradeoff analyses may be useful in informing the selection of response options, some response options (e.g., chemical countermeasures) have applicable statutory and regulatory requirements that must be considered and take precedence over any environmental tradeoff analysis results.

An environmental tradeoff analysis has the potential to assist resources managers with a wide array of information, including the possibility that selected removal alternatives may provide marginal or no environmental benefit relative to natural attenuation of contaminants and ecological recovery. An alternative removal option may provide marginal or no environmental benefit because:

- The removal action is ineffective or inappropriate (the action does not substantially change the risk);
- The removal alternative causes environmental injuries greater than the damage associated with the contamination, the ecological injury from contamination has been overestimated, or injuries associated with removal were not properly addressed; or
- The removal alternative provides an environmental advantage to one environmental compartment, but causes unacceptable injuries to another.

Environmental tradeoff analyses have the potential to help resource managers plan a removal that minimizes adverse environmental impacts relative to other alternatives that are equally viable under the applicable statute(s) and regulation(s). These analyses may be useful when multiple alternatives minimize adverse environmental impact, but the specific approach or combination of options that would minimize damage is not apparent without formal analysis.

See Appendix D for examples of sensitive areas inventories.

- **ACP-based drills and exercises:** Under 40 CFR 300.212, the OSC is to periodically conduct drills of removal capability (including fish and wildlife response capability), without prior notice, in areas for which ACPs are required by 300.210(c) and under relevant tank vessel and facility response plans. The AC should encourage its members to use the ACP when conducting drills and exercises in internal agency venues and in inter-agency exercises. The AC should ensure that exercise evaluations relating to the ACP are included in the ACP review process.

- **ACP-related training:** The AC may develop and sponsor training activities to improve the ability of responders to access and utilize the ACP. These may be specific to the ACP or may include more general topics, such as NIMS-ICS courses, health and safety courses, or spill response courses. For electronic and web-based ACPs, the AC should consider the need for training in the use of software that may be required for access and utilization.

See Appendix C for examples of AC organization, documents, agendas and processes.

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Section 4: Scope and Content of the ACP



- **ACP coverage:** The area covered by the ACP may be defined by geographic features, jurisdictional boundaries, or both, at the discretion of the AC. Under the direction of an OSC and subject to approval of EPA, within the inland zone, each AC, in consultation with the appropriate RRTs, USCG District Response Groups (DRGs), the USCG National Strike Force Coordination Center (NSFCC), Scientific Support Coordinators (SSCs), LEPCs, and SERCs, is to develop an ACP for its designated area. This plan, when implemented in conjunction with other provisions of the NCP, should be adequate to remove a worst-case discharge under 40 CFR 300.324, and to mitigate or prevent a substantial threat of such a discharge, from a vessel, offshore facility or onshore facility operating in or near the area. Within the ACP boundaries, sub-areas may be defined where there are unique circumstances that may require tailored response strategies.
- **Areas of special economic and environmental importance:** The ACP is to include an inventory of features within the area that require awareness by responders when developing response strategies. Examples of special economic and environmental importance include:
 - **Critical infrastructure:** Utilities (such as drinking water intakes, water and wastewater treatment plants, and major electrical power plants and transmission lines), transportation infrastructure locations, corridors and facilities, and other infrastructure elements may require specific protection measures, special notification or access protocols or have other unique attributes that may affect a response. Other examples may be recreational or commercially-significant areas. The ACP should identify these features and provide guidance on how they should be considered in response strategies.
 - **Environmentally sensitive areas:** The ACP is to identify areas within its bounds that may require tailored protection or response strategies due to unique environmental attributes. These may be endangered species habitats or other areas defined by the AC. In each case, the ACP is to provide guidance on how responders should incorporate the needs of these areas into response strategies.



- **Culturally sensitive areas/Traditional Ecological Knowledge²:** The ACP should identify historical landmarks, archeological sites, tribal lands and other features that may require special protective measures or interaction with trustees or tribal authorities.³
- **High-risk locations:** The ACP should identify fixed facilities and locations that present a high risk of release of oil or hazardous substances. Once these facilities and locations are identified, the ACP should then address location-specific response strategies and preparedness, such as the pre-staging of response equipment. To the extent that these locations may be subject to regulatory requirements, such as facilities required to have an FRP under 40 CFR 112.20, the ACP should reference or provide a link to the FRP or other appropriate response plan. The ACP should also reference and, whenever possible, link to plans and other information developed by LEPCs within its bounds.
- **Natural disaster impact areas:** The ACP should incorporate information relating to locations that may be susceptible to natural disaster impact (e.g., flooding, earthquakes), and provide references or links to related disaster response plans at the federal, state, and local levels.
- **Identifying and integrating with other plans:** The ACP is to identify and define its relationship to other contingency plans that are within, adjacent to, or overlapping the ACP defined area. These plans should be reviewed to ensure the ACP is consistent with them, and the owners of these plans should be informed of the ACP's status and receive copies of the final ACP. If there is a reasonable prospect of an incident occurring that impacts both the ACP area and an area covered by an adjacent plan, the AC should establish notification and coordination protocols with the adjacent entities. Examples of other plans to consider include:
 - Adjacent RCPs and ACPs and international border plans
 - State and local plans and private sector plans (FRPs and Risk Management Plans (RMPs))
- **Overall ACP formats:** The AC should review example formats for the ACP to determine the most appropriate fit for the needs of area responders. The primary purpose of the ACP is to serve as a response tool. The primary customers of the AC process are the area responders, so an effective ACP is portable, easy to navigate, and accurate.
- **ACP maintenance:** Once the ACP is issued in final form, the AC should implement a management and maintenance process to keep the ACP current and to incorporate improvements. A regular update cycle should be considered to provide for changes that are not time-critical, but interim amendments may also be appropriate to reflect significant changes within the defined area. Version control should be established and an interim update process is critical. Certain portions of the plan, such as contact lists, may change frequently and should be maintained separately from the plan itself.
- **Downloadable and internet-accessible ACPs:** Consideration should be given to distribution of the ACP in electronic form, to usability on smart phones, tablets and PCs, and to providing access to the ACP via internet.

²Traditional Ecological Knowledge (TEK) is the accumulated knowledge American Indians and Native Alaskans have about their environment. It is important for scientific research, but is threatened by environmental change. EPA is working with tribal and Native Alaskan communities to incorporate TEK into environmental science, policy, and decision-making.

³See reference document *Guidance for Preparing Tribal Emergency Response Plans* in Appendices B and G.



Section 5: Essential Plan Elements



A. Maps

Maps are central to ACP development and utilization. The variety of mapping formats, platforms, and applications is constantly increasing and evolving. Mapping tools should be evaluated in terms of accuracy, accessibility, usability for responders in the field and ease of maintenance and updating. Appendix D provides links to mapping tools that have proven useful during ACP development in the past.

B. Contacts and notification

Contact and notification lists should be maintained for a variety of purposes. These lists may include:

- Lists relating to the AC and the ACP itself, the first of which includes individuals and entities engaged in ACP development and maintenance. Other lists may cover those that receive ACP copies for information only.
- Lists related to response operations should cover both immediate notifications when an incident occurs and contacts during response operations when assistance is required from an entity listed in the plan with knowledge, authority, expertise or resources required by the Incident Commander (IC)/Unified Command (UC). In general, these lists should be maintained separately from the plan itself, since they may contain information that should not be widely disseminated. Lists of this type are not intended to supplant existing notification protocols, but reinforce and supplement

them by adding information specific to the area covered by the ACP. Response operations lists should include 24/7 contact information for all essential response entities.

- All lists should include mail, email, land line, and cell phone contact information, as well as back up numbers if the primary contact is unavailable, and general agency office numbers.
- List management should be through a central administrative support control point.

In addition, to ensure national consistency and build further redundancy into notification procedures, the area and sub-area plans should also incorporate any potential cross-boundary considerations for state, local, and tribal jurisdictions. These may include reviewing and strengthening notification procedures in areas where RCPs cascade into applicable area and sub-area planning, specifically:

- Review ACPs to strengthen and update downstream notifications as needed;
- Secure appropriate actions to improve tribal notifications;
- Review notifications with Canada, Mexico, the British Virgin Islands, and applicable Oceania countries;
- Develop and regularly reassess all notification call trees/protocols/contact lists/rosters, including upon completion of notification/table top and/or other exercises;

- Coordinate area planning with local, state and tribal governments, as they are an essential part of the response planning process.⁴

C. Resources

The resources section of the ACP is perhaps the most difficult to develop and manage, primarily because of the sheer magnitude of developing an inventory of the personnel, equipment and capabilities of all response entities in the defined area, and the difficulty of keeping the inventory current. It is advisable that the AC detail and focus on the capabilities of the response entities and appropriate resources. If the IC/UC requires specific information from a response entity, contact points can be provided to obtain the most current information directly from the provider.

Resource information is generally organized by the AC. The information may be organized by resource category, agency, type of incident or some combination of these or other categories. Regardless of the organization, there are minimum requirements that should be incorporated into the inventory. After determining the organizational concept, the AC should identify the initial resource requirements and establish a spreadsheet format for agencies to enter their resource information.

- **General capabilities:** Each entity identified as potentially having a response or response support role should describe its authorities, areas of jurisdiction, areas of expertise, types of available personnel and equipment and general response capabilities, including access to funds.
- **Personnel:** The inventory may include numbers of available personnel, field-deployment qualifications (including OSHA qualifications), Incident Command System (ICS) qualifications, areas of technical and scientific expertise, mobilization response times, non-deployable support personnel, secondary resources (available through contracts or mutual aid/ Emergency Management Assistance Compact (EMAC) agreements), and any other criteria that the AC identifies as necessary.
- **Equipment:** Subcategories may include assessment, soil/water/air sampling, field categorization, ambient monitoring, aerial survey/remote sensing, transportation, field logistics, transportation, heavy

equipment, booms, pumps, skimmers, personal protective equipment (PPE), mobile command posts (MCPs), communications, and data management.

- **Laboratories:** Identification of entities that have access to analytical capability, general descriptions of capability, and access procedures and contact points.
- **Volunteer Resources:** Management of volunteer resources presents unique issues regarding training, safety, liability and integration with the response organization. The ACP should provide links to policy documents relating to volunteer management and to local organizations with volunteer management expertise. The NRT has developed guidance to address these issues (See *Use of Volunteers Guidelines for Oil Spills* in Appendix H).

In applying this guidance to the ACP, the AC should ensure that the ACP includes an inventory of potential volunteer organizations, with brief descriptions of their interests, capabilities and contact information. To develop this list, the AC should task a workgroup to conduct outreach to volunteer organizations to inform them of ACP activities and the parameters for response participation, including training, safety and liability management requirements, and to identify potential obstacles to successful integration of volunteers into the response organization. The AC should also consider the unique issues involving the use of volunteers during a response.

If the AC determines that volunteer management may be a significant factor in responses, then additional actions may be needed, such as inviting volunteer organizations to attend specific AC meetings that are open to the public, developing advance and/or just-in-time training programs in NIMS/ICS, safety (e.g., HAZWOPER) and technical response subjects (e.g., wildlife rehabilitation) and inviting volunteers to participate in ACP-related exercises.

- **Contact information:** Contacts for each type of resource, including level of approval needed for commitment.

Information from each inquiry should be entered into a searchable database so that potential resources can be identified quickly.

⁴See reference documents *Review of Regional and Area Contingency Plans for Downstream Notifications* and *In the Rearview Mirror: Implementation of the Gold King Mine After-Action Review* in Appendix E.

D. Sensitive areas

The AC should establish a committee to identify features and sub-areas that are sensitive for environmental, cultural or economic reasons. This committee should include entities with expertise in the application of requirements established by the Endangered Species Act (ESA), the Historic Preservation Act and other statutes, regulations, and agreements concerning sensitive areas. The common theme for identifying a sensitive area is that it has attributes that must be considered by responders in developing response strategies and tactics. In identifying these sensitive areas, information in the FWSEP should also be considered. For each feature or area identified, the exact location or boundaries should be mapped when possible, and a brief summary of considerations should be documented. For certain sensitive areas, such as ESA or archaeological sites, exact locations may not be identified, but should be referenced as present in the general area. This summary should include:

- Specific attributes (e.g., drinking water supply intake, endangered species habitat)
- Recommendations on protective measures that may be employed
- Description of any proscribed tactics
- Contact information for operators, trustees and others with an interest in the sensitive area
- Other information relevant to the area, such as special access protocols, hazards to responders or seasonal variations to be considered in developing response strategies and tactics

This information is organized by the AC and, as described previously, sensitive areas information is required under the NCP. Areas with especially difficult or complex issues should be considered for development of specific Sub-Area Plans or Geographic Response Plans.

The AC should consider whether certain types of information should preliminarily be designated for restricted use only. Each AC must communicate with the “owner” of the information and determine if their information falls in this category and, if so, how the information will be safeguarded but available during an emergency response. All records featuring such information may ultimately be subject to public disclosure, however, in response to a Freedom of Information Act (FOIA) request.

The ACP should ensure that the appropriate federal, state, and tribal trustees for natural resources are promptly notified of discharges and response activities are coordinated with the affected natural resource trustees. Additional information on notification and coordination with natural resource trustees is available at <https://www.epa.gov/superfund/natural-resource-damages-trustees>.

Tools for identifying sensitive areas >
See Appendix D: Selected Area Planning Tools.

Methods for organizing sensitive area data >
See Appendix D: Selected Area Planning Tools.

Methods for displaying and accessing data >
See Appendix D: Selected Area Planning Tools.

E. Hazard analysis

The AC should establish a sub-committee to identify potential sources of releases within the defined area. These sources may include fixed facilities or transportation routes with high volumes of oil or hazardous materials in transit. Consideration should also be given to potential sources adjacent to the defined area of the ACP, which may impact the area in the event of a release. The first task of the committee is to develop working criteria to establish a cut-off point, below which potential sources will not be addressed by the ACP. These need not be rigid; for example, if potential sources A and B are otherwise identical, but A is within a defined sensitive area, the ACP may address A and leave B below the threshold.

For each potential source identified, the ACP should document the following:

- Source location (to be mapped)
- Operator, with contact and access information
- Types and quantities of materials that may be released for a worst-case discharge from a vessel, onshore facility, or offshore facility operating in or near the area covered by the plan
- Special considerations for responders, including hazards
- Response capabilities of the operator

Tools for identifying potential sources:

- **FRPs:** EPA FRP Coordinators list posted at https://response.epa.gov/sites/3857/files/Regional%20FRP%20Coordinators_Dec.%202017.doc.
- **Pipelines:** The U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) web site (<http://www.phmsa.dot.gov/>) includes a range of pipeline safety resources, including a national pipeline mapping system.
- **Railroads:** The DOT Federal Railroad Administration (FRA) web site (<http://www.fra.dot.gov/>) includes passenger and freight railroad safety and environmental information. The FRA's GIS web site provides a web-based mapping application that permits users to map, view and zoom to all rail grade crossings in the U.S. Accident information for each grade crossing is available.
- **Highways:** The DOT Federal Motor Carrier Safety Administration (FMCSA) maintains a Hazardous Materials Routing Web Site that lists designated, preferred and restricted routes (<http://www.fmcsa.dot.gov/safety-security/hazmat/hm-theme.htm>).
- **Hazmat facilities:** Facilities covered by EPCRA requirements must submit an Emergency and Hazardous Chemical Inventory Form to the LEPC, the SERC, and the local fire department annually. Facilities provide either a Tier I or Tier II form. Most states require the Tier II form. Some states have specific requirements in addition to the Federal Tier II requirements. The EPA web site includes a list of links to state Tier II reporting sites: <https://www.epa.gov/epcra/tier2-submit-software>. Tier II data for most states are also maintained on the E-Plan Emergency Response Information System: <https://erplan.net/epln/login.htm>.

EPA's Toxics Release Inventory (TRI) is a database containing data on releases of over 600 toxic chemicals from thousands of U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. TRI data are available at <http://www.epa.gov/tri/>.

The Facility Registry Service (FRS) is a centrally managed database developed by EPA's Office of Environmental Information (OEI) that identifies facilities, sites or places subject to environmental regulations or of environmental interest. FRS creates

high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, data collected from EPA's Central Data Exchange registrations and data management personnel. The FRS provides Internet access to a single integrated source of comprehensive (air, water, and waste) environmental information about facilities, sites or places. FRS data are available for query at <http://www.epa.gov/enviro/html/fi/index.html>.

In general, all generators, transporters, treaters, storers and disposers of hazardous waste are required to provide information on their activities to state environmental agencies. These agencies then provide the information to EPA offices through the Resource Conservation and Recovery Act Information (RCRAInfo) System (<https://www.epa.gov/enviro/rcrainfo-overview>). Information on cleaning up after accidents or other activities that result in a release of hazardous materials to the water, air or land must also be reported through RCRAInfo.

Superfund is a program, generally administered by EPA, to locate, investigate, and clean up contaminated sites throughout the U.S. The Superfund Enterprise Management System, or SEMS, is available to retrieve Superfund data formerly contained in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Public Access Database (<https://cumulis.epa.gov/supercpad/CurSites/srchsites.cfm>).

- **LEPC plans:** Information on LEPCs can be found at <https://www.epa.gov/epcra/local-emergency-planning-committees>.
- **RMPs:** The Right-To-Know Network maintains a Risk Management Plan (RMP) Database on its web site (<http://www.rtk.net/rmp/search.php>). RMP information may also be accessed at Federal Reading Rooms: <https://www.epa.gov/rmp/federal-reading-rooms-risk-management-plans-rmp>.

The AC should also consider which significant facilities may be vulnerable to impact by natural disasters, such as floods or earthquakes.

Methods of organizing potential source information >
See Appendix D: Selected Area Planning Tools

Methods for displaying and accessing data >
See Appendix D: Selected Area Planning Tools

F. Response strategies and worst-case discharges

After the AC has developed the initial inventory of sensitive areas and potential sources, it can begin to consider the general response strategies with special consideration given to potential worst-case discharges.

- **Assessment strategies:** The AC should identify methods to assess the extent and impact of a release and identify the tools available to predict the behavior of released material. Remote sensing, modeling and sampling strategies should be developed as needed.
- **Protection strategies:** The AC should determine the most effective methods of preventing impact to sensitive areas.
- **Response strategies:** The ACP should identify the various response strategies that have proven to be effective in controlling and mitigating the impact of a release. The ACP must consider the worst-case discharge from a vessel, onshore facility, or offshore facility operating in or near the area covered by the plan, and may also consider more likely scenarios. Please refer to Appendix G.
- **Oil-spill-specific strategies and plans (e.g., the NRT Subsea Dispersant Guidance) including countermeasures:** Oil spill countermeasures include dispersants⁵, in-situ burning (including accelerants), bio-remediation, surface washing agents, solidifiers and other methods for reducing the impact of oil to the environment. While many of the countermeasure stipulations are included in the RCPs, the ACP must also consider expediting decisions on countermeasure use in the context of the defined ACP area. These issues may include:
 - Areas where specific countermeasures may be prohibited
 - Pre-authorization of specific countermeasures in certain areas
 - Protocols for monitoring use and effectiveness
 - Assessment of potential impacts from countermeasure use in adjacent planning areas (e.g., coastal zone areas)

- **Facility-specific strategies and plans:** Facilities with the potential for large-scale discharges or releases (such as pipelines, large storage and manufacturing facilities, and railroads) should be considered for focused strategy development. If facilities are covered by FRPs, the FRPs will provide a base for the responding agencies to develop strategies for worst-case discharges or releases and may also include most-likely scenarios from these facilities.

G. Response management: roles and responsibilities

- **NIMS compliance policy:** The ACP should include a brief section that commits the AC to National Incident Management System (NIMS) compliance and references the Incident Management Handbooks and Field Operating Guides that are used by participating agencies.
- **Unified Command:** One of the most important functions of the ACP is to address potential jurisdictional conflicts and to provide solutions to these in advance of a response. This section should identify the agencies that meet the criteria for participating in a Unified Command (UC), including appropriate jurisdictional authority, ability to commit resources to the response, and personnel that are trained and qualified to serve as Incident Commanders. Consideration should also be given to the role of responsible parties in the UC. In areas where there are multiple overlapping jurisdictions, this task may need to be broken down into scenario-based organizations.
- **Response Organizations:** This section should provide guidance on NIMS-compliant response organizations, identifying those entities with expertise relevant to specific positions and providing models of organizational structures. The approach to this should be inclusive, by defining appropriate roles for each AC participant. Particular attention should be paid to the placement of resource trustees, technical experts and others that may be outside the normal response community.
- **Personnel training and qualification requirements/recommendations:** This section should address recommended levels of NIMS-ICS training for responders.

⁵ In the U.S., dispersants or other oil emulsifiers are not utilized in freshwater and other inland environments because of the limited dilution available in fresh waters, the use of freshwaters as a water supply, the limited toxicology information available for dispersants in fresh water, and the limited information available as to fresh water effectiveness of dispersants. In general, the effectiveness of dispersants decreases as the salinity of the water decreases given the same hydrophilic-lipophilic balance.



- **Model Incident Action Plans:** It may be appropriate for the ACP to include example Incident Action Plans (IAPs) for specific scenarios (e.g., worst-case discharges).
- **Mutual aid agreements:** These exist at the federal, state, and local levels. Federal agreements (e.g., EPA-USCG) and state agreements (e.g., EMAC) need not be replicated in the ACP unless there are area-specific considerations which need to be explained. Local agreements, particularly when they involve entities outside the bounds of the ACP, should be referenced briefly.
- **Public Information/Joint Information Center:** The ACP should provide guidance to participants on the coordination of public messages during a response, including reinforcing the role of the UC's Public Information Officer (PIO) and defining the relationship of the PIO to individual agencies' public information operations.
- **Response to substantial threats to public health or welfare:** As described in 40 CFR 300.322, if the investigation by the OSC shows that the discharge poses or may present substantial threat to public health or welfare of the United States, the OSC shall direct all federal, state or private actions to remove the discharge or to mitigate or prevent the threat of such discharge, as appropriate.

The ACP, when used in conjunction with other provisions of the NCP, shall be adequate to remove worst-case discharges as described above.

Section 6: Advanced Area Planning



Using the latest available technology to provide current area planning data to field responders is crucial in emergencies. In today's world of situational awareness, geospatial viewers, Common Operational Pictures (COPs) and real-time field data collection/distribution, state and federal agencies are looking to EPA area planners and RRTs to lead the way in building a data-sharing environment. These agencies and teams can benefit from each other's data and informational awareness, especially in contingency planning and emergency response. Sections of this Handbook covering area planning information technology will be updated periodically to promote the development of robust data sharing environments using the latest tools. The following is a list of available platforms that responders may use to share area contingency planning data.

A. GeoPlatform

The Geospatial Platform (GeoPlatform) is an online portal used to share geographic data, maps, and online services. It is a strategic national resource that supports the Federal Administration's Open Government, Open Data and Digital Government strategies to enhance transparency, collaboration and participation. The GeoPlatform provides a suite of well-managed, highly available, and trusted geospatial data, services, and applications for use by federal agencies and their state, local, and tribal partners.

The GeoPlatform was developed by the member agencies of the Federal Geographic Data Committee

(FGDC) through collaboration with partners and stakeholders and is implemented to help agencies meet their mission needs, including communicating with and publishing data and maps for the public. The GeoPlatform focuses on web applications that facilitate participatory information sharing, interoperability, user-centered design, and collaboration.

The portfolio of data, applications, and services provided on the GeoPlatform is stewarded through the use of open licenses and careful review. It is hosted on a cloud infrastructure that maximizes geospatial interoperability. The GeoPlatform provides streamlined access to National Geospatial Data Assets and reduces data duplication. GeoPlatform services and applications include:

- **Marketplace:** The collaborative GeoPlatform Marketplace provides a listing of datasets that are planned for acquisition by one or more of the FGDC member agencies, which can reduce data acquisition costs.
- **Communities:** The GeoPlatform incorporates the concept of "communities"—interactive, topically focused sections of the website that are managed and used collaboratively by specific communities of interest. The GeoPlatform supports a variety of functionality for communities including establishing web content, publishing spatial data and services, building and sharing maps and mapping applications, and discovering geospatial data, tools, and services across a number of catalogs.



- **Dashboards:** Theme and dataset lifecycle metrics are published on the GeoPlatform in a series of information dashboards that help users quickly and easily review key information on progress toward shared goals.
- **ArcGIS Online (AGOL):** ArcGIS Online allows users to create interactive web maps and apps they can share with anyone. Users can combine their own data with data from Data.gov, Esri, and other contributors to create maps for the work they do. Ready-to-use basemaps, tools, templates, and datasets make it easy to design and publish maps online.
- **Web Map Viewer:** The GeoPlatform Web Map Viewer allows users to discover a wide range of spatial layers, create map overlays using remote map services and the user's own content, and share maps openly for use by other applications and websites.

Additional information is available at <https://www.geoplatform.gov/>.

B. EPA GeoPlatform

The EPA GeoPlatform is a shared EPA technology and governance framework, which encompasses a community of expertise as well as a suite of geospatial tools, data, and web services. The GeoPlatform facilitates coordination and consolidation of mapping activities, application development, and data management across the Agency. Information within the GeoPlatform can be accessed by EPA representatives and Agency partners.

GeoPlatform users have access to:

- A one-stop shop that delivers trusted, consistent data and services
- Authoritative data to support informed decision making
- Reusable applications and services for governmental and nongovernmental use
- A shared infrastructure that can host their data and applications

The GeoPlatform is a focal point where government, academic, private, and public data can be visualized together to inform national and regional issues.

EPA's GIS analysts use the GeoPlatform to develop maps and conduct analysis that address organizational needs. Multiple training options exist to help GeoPlatform users develop cutting-edge GIS skills or refresh existing capabilities. The GeoPlatform also includes a robust stewardship group, the GeoPlatform Administrators,

with representatives from each office or region. Each Administrator is a local GeoPlatform expert and provides guidance about policies related to GeoPlatform use. To facilitate online collaboration, EPA teams can create and share Groups on the GeoPlatform.

Access information for GeoPlatform is available at <https://epa.maps.arcgis.com/home/index.html> or <http://intranet.epa.gov/gis/geoplatform.html>.

C. NOAA Environmental Response Management Application (ERMA)

ERMA® is an online mapping tool that integrates both static and real-time data, such as Environmental Sensitivity Index (ESI) maps, ship locations, weather, and ocean currents, in a centralized, easy-to-use format for environmental responders and decision makers. ERMA is designed to:

- Aid in spill preparedness and planning.
- Assist in coordinating emergency response efforts and situational awareness for human and natural disasters.
- Help define the extent of potential environmental impacts, supporting the Natural Resource Damage Assessment process.
- Support ecological recovery and restoration efforts.
- Provide access to this information from anywhere with an internet connection.
- Visualize data from a variety of sources, with the ability to include additional media such as photos and links to scientific reports.
- Tell a story or reconstruct the history of an event using animated layers of information.

Access information for ERMA is available at <https://response.restoration.noaa.gov/maps-and-spatial-data/environmental-response-management-application-erma/> and is also included in Appendix D.

D. Computer-Aided Management of Emergency Operations (CAMEO)

CAMEO® is a system of software applications used widely to plan for and respond to chemical emergencies. It is one of the tools developed by EPA's Office of Emergency Management (OEM) and the NOAA Office of Response and Restoration to assist front-line chemical emergency planners and responders. They can use CAMEO to access, store, and evaluate information critical

for developing emergency plans. In addition, CAMEO supports regulatory compliance by helping users meet the chemical inventory reporting requirements of the Emergency Planning and Community Right-to-Know Act (EPCRA, also known as SARA Title III). CAMEO also can be used with a separate software application called LandView to display EPA environmental data and demographic/economic information to support analysis of environmental justice issues.

The CAMEO system integrates a chemical database and a method to manage the data, an air dispersion model, and a mapping capability. All modules work interactively to share and display critical information in a timely fashion. The CAMEO system is available in Macintosh and Windows formats.

CAMEO was initially developed because NOAA recognized the need to assist first responders with easily accessible and accurate response information. Since 1988, EPA and NOAA have collaborated to augment CAMEO to assist both emergency responders and planners. CAMEO has been enhanced to provide emergency planners with a tool to enter local information and develop incident scenarios to better prepare for chemical emergencies. The Bureau of Census and USCG have worked with EPA and NOAA to continue to enhance the system.

CAMEO is a suite of four core programs that can be used together or separately:

- CAMEOfm
- CAMEO Chemicals
- MARPLOT
- ALOHA

The CAMEO software suite is available for download at <https://www.epa.gov/cameo>.

CAMEOfm - Database and Information Management Tool

CAMEOfm is a database application that includes eight modules (such as Facilities and Contacts) to assist with data management requirements under the Emergency Planning and Community Right-to-Know Act (EPCRA). Each year, facilities covered by EPCRA must submit an emergency and hazardous chemical inventory form to their LEPC, SERC, and local fire department. Most facilities submit a Tier II form, which contains basic facility identification information, employee contact information, and information such as storage amounts, storage

conditions, and locations for chemicals stored or used at the facility. This information can be entered into CAMEOfm manually or by importing a Tier2 Submit™ file. CAMEOfm can also be used to navigate between ALOHA, MARPLOT, and the CAMEO Chemicals desktop program.

CAMEOfm is available for download from <https://www.epa.gov/cameo/cameo-software>.

CAMEO Chemicals - Chemical Response Datasheets and Reactivity Prediction Tool

CAMEO Chemicals has an extensive chemical database with critical response information for thousands of chemicals. There are two primary types of datasheets in the database: chemical datasheets and UN/NA datasheets. Chemical datasheets provide physical properties, health hazards, information about air and water hazards, and recommendations for firefighting, first aid, and spill response. UN/NA datasheets provide response information from the Emergency Response Guidebook and shipping information from the Hazardous Materials Table (49 CFR 172.101). In addition to the information on the datasheets, users can add chemicals to the MyChemicals collection to see what hazards might occur if the chemicals in the collection were mixed together. CAMEO Chemicals is available as a website, mobile website, mobile app, and desktop program. The mobile app and desktop program formats can be used offline.

CAMEO Chemicals is available for download at <https://www.epa.gov/cameo/cameo-chemicals-software>.

MARPLOT - Mapping Application for Response, Planning, and Local Operational Tasks

MARPLOT is a mapping application. The program comes with several global background basemap options, with maps in both street and satellite view. Users can add to the information shown on the map by drawing their own objects (such as chemical facilities, schools, or response assets) or by importing layers of objects already created by other sources. Map objects can be linked to records in CAMEOfm, in order to store additional information about these locations (such as emergency contact information or site plans). Additionally, the areas contaminated by potential or actual chemical release scenarios can be displayed on the maps to determine potential impacts and help users make decisions about the degree of hazard posed by the releases.

MARPLOT is available for download at <https://www.epa.gov/cameo/marplot-software>.

ALOHA - Areal Locations of Hazardous Atmospheres

ALOHA is an atmospheric dispersion model used for evaluating releases of hazardous chemical vapors. ALOHA allows users to estimate the downwind dispersion of a chemical cloud based on the toxicological/physical characteristics of the released chemical, atmospheric conditions, and specific circumstances of the release. ALOHA can estimate threat zones associated with several types of hazardous chemical releases, including toxic gas clouds, fires, and explosions. Threat zones can be displayed on MARPLOT maps to help users assess geospatial information, such as whether vulnerable locations (such as hospitals and schools) might be impacted by the release or whether other nearby factors (such as construction zones) might complicate the response.

ALOHA is available for download at <https://www.epa.gov/cameo/aloha-software>.

E. LandView® 6

The LandView database system allows users to retrieve census demographic and housing data, EPA Envirofacts data and U.S. Geological Survey (USGS) Geographic Names Information System (GNIS) information. The GNIS contains over 1.2 million records which show the official federally recognized geographic names for all known places, features, and areas in the U.S. that are identified by a proper name.⁶

The LandView database software:

- Uses the Population Estimator function to calculate census demographic and housing characteristics for user defined radii.
- Creates simple thematic maps of census data.
- Allows users to browse and query the census, EPA or USGS databases and show the query results on the map.
- Provides the capability to locate a street address or intersection on a map based on TIGER/Line® road features and address ranges.

Additional information is available at <http://www.census.gov/geo/landview/>.

F. RMP*Comp

RMP*Comp is a free program that calculates vulnerable zone distances based on the Risk Management Program (RMP) Guidance for Offsite Consequence Analysis (both worst-case scenarios and alternative scenarios). The RMP*Comp program guides users through the process of making an analysis.

The software is available for download from EPA's RMP*Comp web site: <https://www.epa.gov/rmp/rmpcomp>.

⁶ LandView 6 has not been updated using 2010 Census data. Please see the CAMEO MARPLOT application that provides some of the functionality of LandView and uses more current data.



Appendix A: Statutory and Regulatory Authorities

CERCLA and EPCRA

CERCLA establishes both an emergency response program designed to stabilize or cleanup releases of hazardous substances that pose a threat to public health or the environment, and a remedial response program to take actions consistent with a permanent remedy (instead of or in addition to removal actions) in the event of a release or threatened release of hazardous substances posing a threat to public health or the environment. CERCLA also authorizes response to releases of pollutants or contaminants which may present an imminent and substantial danger to public health or welfare. Executive Order 12580 delegates response authorities to EPA and USCG. CERCLA called for the revision of the NCP after the enactment of the statute in 1980 and authorized revisions from time to time. The NCP provides the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants. The Emergency Planning and Community Right-to-Know Act (EPCRA) amendments to CERCLA included provisions to strengthen emergency response planning at the state and local levels by requiring local governments to prepare chemical emergency response plans (40 CFR Part 355) and to make information more readily available to the public on hazardous chemicals that are stored at facilities in their communities (40 CFR Part 370).

Clean Water Act

Under 33 U.S.C. 1321 (j)(4) of the CWA⁷, the President (or delegate) is authorized to establish Area Committees comprised of qualified personnel from federal, state, and local agencies and of federally recognized Indian tribes, where applicable. The CWA also provides for a detailed annex containing a Fish and Wildlife and Sensitive Environments Plan as part of the NCP per 33 USC 1321(d)(2)(M). Area Committees are to prepare ACPs that detail methods and procedures for responding to a worst-case discharge, including the division of responsibilities among various authorities in a response. Each Area Committee is required under CWA 311(j)(4)(C) to submit this plan to the President (or delegate) for review and approval. The authorities assigned to the President under 33 U.S.C. 1321(j)(4) for the inland zone have been delegated by Executive Order 12777 to the EPA Administrator, who has in turn re-delegated these authorities to EPA Regional Administrators. Regional Administrators may further re-delegate the authorities to the Division Director level.

Responsibilities for each Area Committee, under the direction of the FOSC for its area, include the requirements below, among others listed in Section 1 of this Handbook:

- Prepare an ACP for its area;
- Work with state, local and tribal officials to enhance the contingency planning of those officials and to assure pre-planning of joint response efforts, including appropriate procedures for mechanical recovery, disposal, shoreline cleanup, protection of sensitive environmental areas, and protection, rescue, and rehabilitation of fisheries and wildlife;
- Work with state, local and tribal officials to expedite decisions for the use of dispersants and other mitigating substances and devices; and
- Update the ACP periodically.

The Oil Pollution Act of 1990 (OPA 90)

OPA 90 establishes mechanisms for the federal government to prevent and respond to oil discharges. OPA 90 extensively amended the CWA to provide enhanced capabilities for oil discharge response and natural resource damage assessment.

⁷ See <https://www.gpo.gov/fdsys/pkg/USCODE-2014-title33/pdf/USCODE-2014-title33-chap26-subchapIII-sec1321.pdf> for the complete 2014 changes to the CWA statute.



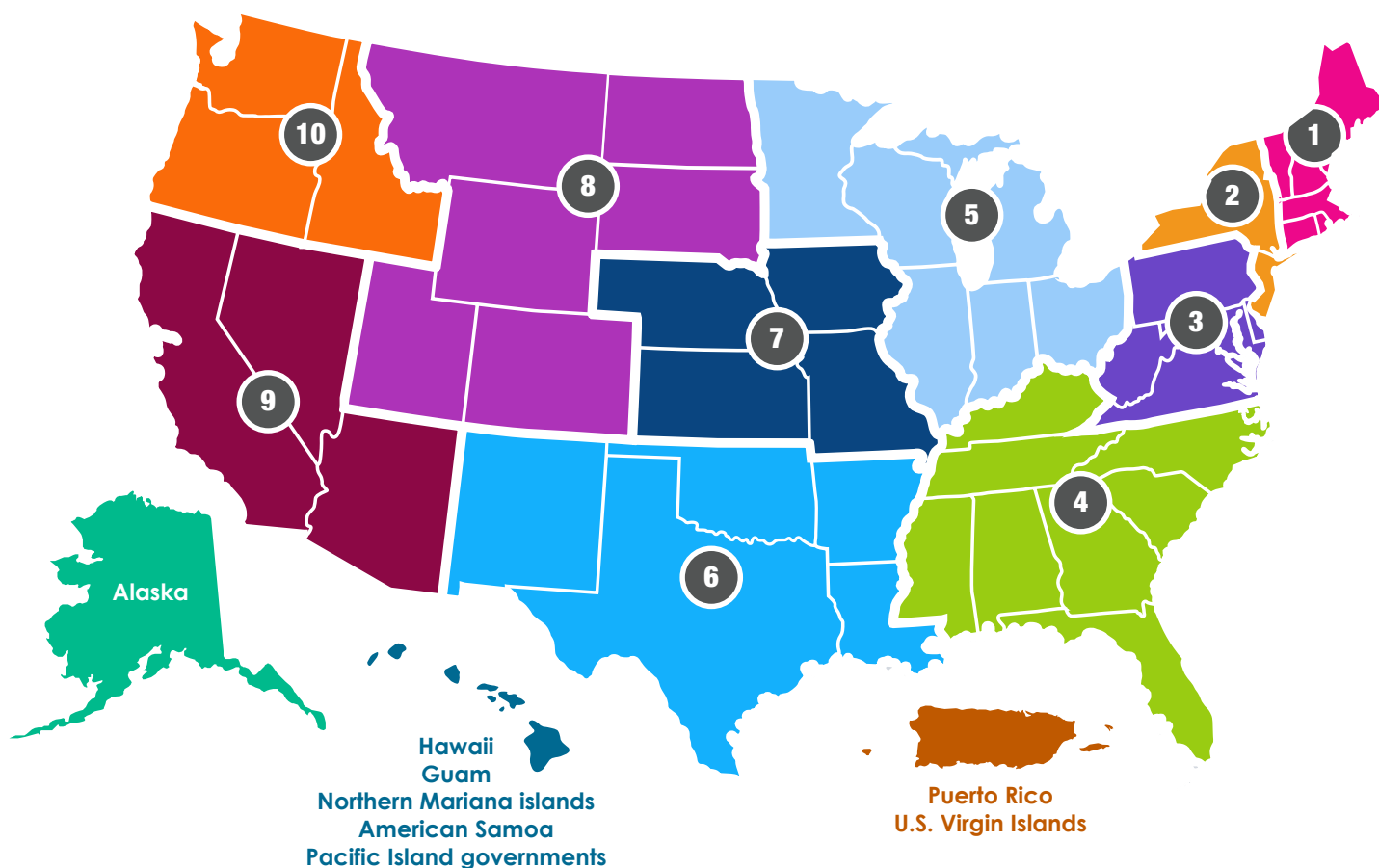
Title IV, Section 4202, National Planning and Response System, amended subsection 311(j) of the CWA with respect to the National Planning and Response System. It defines Area Committee and ACP requirements and deadlines for agencies. Pursuant to OPA 90 section 4202(b)(1)(A), the President is to designate areas for which ACPs are to be established. As stated above, the President delegated to EPA the responsibility for designating the areas and appointing the committees for the “inland zone”. Under the CWA, ACPs are developed by Area Committees under the direction of the FOSC for their area. OPA 90 Section 4202(b)(1)(A), also requires that in designating areas, the President will ensure that all navigable waters, adjoining shorelines, and waters of the exclusive economic zone are subject to an ACP.

Under the National Oil and Hazardous Substances Contingency Plan (NCP) response and planning framework, the territory of the U.S. is covered by thirteen Regional Response Teams (RRTs) and Regional Contingency Plans (RCPs). The zones of the thirteen RRTs follow the ten standard federal regions, except for the following three subregional areas that each have their own RRT: (1) Puerto Rico and the U.S. Virgin Islands; (2) Alaska; and (3) Hawaii, Guam, Northern Mariana Islands, Pacific Island Governments, and American Samoa (See Figure 1). The inland areas of the thirteen RRTs serve as the designated areas for the inland zone. USCG designates areas for the coastal zone. These coastal zone areas are based on the 48 USCG Captains of the Port (COTP) areas. The areas covered by COTPs are smaller than the RRT areas and include major river systems associated with the ports.

Unless otherwise designated, the RRTs serve as the Area Committees for the inland zone. RRTs are composed of representatives from federal, state, local, and tribal governments.

See also the April 24, 1992 Federal Register Notice (57 FR 15198): Designation of Areas and Area Committees Under the Oil Pollution Act of 1990 (Document posted at https://response.epa.gov/sites/3857/files/Designation%20of%20Areas%20Federal%20Notice_4-24-92.pdf).

Figure 1: 13 Regional Response Team Areas





The National Oil and Hazardous Substances Pollution Contingency Plan (NCP)

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) provides for the coordinated and integrated response by the federal government, as well as state, tribal and local governments, to prevent, minimize, or mitigate a threat to public health or welfare posed by discharges of oil and releases of hazardous substances, pollutants, and contaminants. The NCP is authorized by CERCLA and the CWA, as amended by OPA 90.

Section 300.210 of the NCP provides for three levels of contingency plans under the NRS, including: The NCP, Regional Contingency Plans (RCPs), and ACPs. These plans are available for inspection at EPA Regional offices or USCG district offices.

Under the direction of a FOSC and subject to approval by EPA, the agency responsible for the inland zone, each Area Committee, in consultation with the appropriate RRTs, USCG DRGs, the USCG NSFCC, SSCs, LEPCs, and SERCs, is to develop an ACP for its designated area. This plan, when implemented in conjunction with other provisions of the NCP, is to be adequate to remove a worst-case discharge of the NCP, and to mitigate or prevent a substantial threat of such a discharge, from a vessel, offshore facility, or onshore facility operating in or near the area.

In developing the ACP, the FOSC coordinates with affected SERCs and LEPCs. The ACP provides for a well-coordinated response that is integrated and compatible, to the greatest extent possible, with all appropriate response plans of state, local, and non-federal entities, and especially with Title III local emergency response plans.

The NCP, at 40 CFR 300.210(c)(3), provides that ACPs are to include the following elements:

- A description of the area covered by the plan, including the areas of special economic or environmental importance that might be damaged by a discharge;
- A detailed description of the responsibilities of an owner or operator and of federal, state, and local agencies in removing a discharge, and in mitigating or preventing a substantial threat of a discharge;
- A list of equipment (including firefighting equipment), dispersants, or other mitigating substances and devices, and personnel available to an owner or operator and federal, state, and local agencies, to ensure an effective and immediate removal of a discharge, and to ensure mitigation or prevention of a substantial threat of discharge (this may be provided in an appendix or by reference to other relevant emergency plans (e.g., state or LEPC plans), which may include such equipment lists);
- A description of procedures to be followed for obtaining an expedited decision regarding the use of dispersants; and
- A detailed description of how the plan is integrated into other ACPs and tank vessel, offshore facility, and onshore facility response plans approved by the President, and into operating procedures of the NSFCC.

Area Committees are to incorporate into each ACP a detailed annex containing a Fish and Wildlife and Sensitive Environments Plan (FWSEP) that is consistent with the RCP and NCP. The annex is to be prepared in consultation with the U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration (NOAA), and other interested natural resource management agencies and parties. The annex is to address fish and wildlife resources and their habitat, and is to include other areas considered sensitive environments in another section of the annex, based upon Area Committee recommendations. The annex is to provide the necessary information and procedures to immediately and effectively respond to discharges that may adversely affect fish and wildlife and their habitat and sensitive environments, including provisions for a response to a worst-case discharge. Such information is to include the identification of appropriate agencies and their responsibilities, procedures to notify these agencies following a discharge or threat of discharge, protocols for obtaining required fish and wildlife permits and other necessary permits, and provisions to ensure compatibility of annex-related activities with removal operations.

The Stafford Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) describes the programs and processes by which the federal government provides disaster and emergency assistance to state and local governments, tribal nations, eligible private nonprofit organizations, and individuals affected by a declared major disaster or emergency. The law establishes the process for requesting and obtaining a Presidential disaster declaration, defines the type and scope of assistance available under the Stafford Act, and sets the conditions for obtaining assistance. The Stafford Act covers all hazards, including natural disasters and terrorist events.



The NCP is an operational supplement to the National Response Framework (NRF). The NRF was issued by the Department of Homeland Security (DHS) and is an overarching guide that describes how the nation responds to all types of domestic emergencies, including natural disasters and terrorist incidents. It describes the roles of federal, state, local, and tribal governments, as well as non-governmental organizations and the private sector. Under the NRF, DHS coordinates the federal response to incidents requiring significant federal coordination, which includes incidents for which the President issues a disaster or emergency declaration under the Stafford Act. The Federal Emergency Management Agency (FEMA) may utilize Stafford Act funds to reimburse EPA for specific emergency response activities related to actual or potential hazardous materials (hazardous substances, pollutants, contaminants, and oil) incidents through the NRF under Emergency Support Function (ESF #10) – Oil and Hazardous Materials Response, when there is an Emergency or Major Disaster Declaration. EPA may also provide other assistance when requested by FEMA.

Response to oil and hazardous materials incidents is generally carried out in accordance with the NCP. NCP structures and response mechanisms remain in place when ESF #10 is activated, but coordinate with NRF mechanisms. During Stafford Act responses, some procedures in the NCP may be streamlined or may not apply.

ESF #10 may be activated by DHS for incidents requiring a more robust coordinated Federal response, such as:

- A major disaster or emergency under the Stafford Act;
- A federal-to-federal support request (e.g., a federal agency, such as the Department of Health and Human Services (HHS) or U.S. Department of Agriculture (USDA), requests support from ESF #10 and provides funding for the response through the mechanisms described in the Financial Management Support Annex); or
- An actual or potential oil discharge or hazardous materials release to which EPA and/or USCG respond under CERCLA and/or CWA authorities and funding, for which DHS determines it should lead the federal response.

As described in the NRF core document, some federal responses do not require coordination by DHS and are undertaken by other federal departments and agencies consistent with their authorities. Federal responses to oil and hazardous materials incidents under the authorities of CERCLA and the CWA that do not warrant DHS coordination are conducted under the NCP. EPA or USCG may also request DHS to activate other NRF elements for such incidents, if needed, while still retaining overall leadership for the federal response.

Homeland Security Presidential Directives (HSPD)/Presidential Policy Directives (PPD)

Three Executive Branch directives directly affect EPA's role in the national emergency response system:

- Management of Domestic Incidents – HSPD-5
- National Preparedness – PPD-8
- Critical Infrastructure Security and Resilience – PPD-21

Management of Domestic Incidents – HSPD-5

Homeland Security Presidential Directive (HSPD)-5 was issued to improve management of domestic incidents by establishing a single, comprehensive national incident management system. The Homeland Security Act of 2002 created the Department of Homeland Security (DHS) and assigned the Secretary of Homeland Security responsibility for coordinating federal emergency operations within the U.S. Federal emergency operations include preparing for, responding to, and recovering from terrorist attacks, major disasters, and other emergencies. DHS has the authority to coordinate federal resources when any one of several conditions occurs:

1. A federal department or agency requests their assistance,
2. The resources of state and local authorities are overwhelmed and they request federal assistance,
3. More than one federal department or agency is substantially involved in responding to an incident, or
4. The President directs the Secretary to assume responsibility for managing the domestic incident.



HSPD-5 also recognizes the role that state, tribal, and local governments; nongovernmental organizations; and the private sector play in managing incidents.

Initial responsibility for managing domestic incidents generally falls on state and local authorities. When their resources are overwhelmed, or when federal property is involved, the federal government provides assistance.

In order to provide a consistent, coordinated, nation-wide approach for emergency operations across all levels of government, HSPD-5 directed DHS to develop and administer a National Incident Management System (NIMS) and a National Response Framework (NRF). Together, NIMS and the NRF provide an approach for federal, state, and local governments to effectively prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.

National Preparedness - PPD-8

PPD-8 on National Preparedness was signed by the President on March 30, 2011. PPD-8 replaces HSPD-8 (National Preparedness) and HSPD-8 Annex I (National Planning). Plans developed under HSPD-8 and Annex I remain in effect until rescinded or otherwise replaced.

National Preparedness Goal

PPD-8 calls for the development and maintenance of a National Preparedness Goal defining the core capabilities necessary to prepare for the specific types of incidents posing the greatest risk to the security of the U.S. The Goal establishes concrete, measurable, prioritized objectives to mitigate specific threats and vulnerabilities – including regional variations of risk – and emphasize actions intended to achieve an integrated, layered, accessible and all-of-Nation/whole community preparedness approach while optimizing the use of available resources.

DHS, in coordination with other executive departments and agencies, and in consultation with state, local, tribal and territorial governments, the private and non-profit sectors and the general public, submitted the first edition of the National Preparedness Goal in September 2011 and the second edition in 2015. The Goal defines success as:

“A secure and resilient Nation with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk.”

The core capabilities contained in the goal are essential for the execution of each of the five mission areas: Prevention, Protection, Mitigation, Response, and Recovery. To assess both preparedness capacity and gaps, each core capability includes capability targets for which measures will be developed. The Goal is reviewed regularly to evaluate consistency with applicable policies, evolving conditions and the National Incident Management System.

National Preparedness System

The National Preparedness System is the instrument the nation employs to build, sustain, and deliver the five core capabilities described in the National Preparedness Goal in order to achieve the goal of a secure and resilient nation. The guidance, programs, processes, and systems that support each component of the National Preparedness System are intended to enable a collaborative, whole community approach to national preparedness that engages individuals, families, communities, private and nonprofit sectors, faith-based organizations, and all levels of government.

The National Preparedness System identifies six components to improve national preparedness for a wide range of threats and hazards, such as acts of terrorism, cyber attacks, pandemics and catastrophic natural disasters. The system builds on current efforts, many of which are already established in the law and have been in use for many years. These six components include:

- Identifying and Assessing Risk;
- Estimating Capability Requirements;
- Building and Sustaining Capabilities;
- Planning to Deliver Capabilities;
- Validating Capabilities; and
- Reviewing and Updating.



The System includes integrated National Planning Frameworks covering prevention, protection, mitigation, response and recovery. The Frameworks set the strategy and doctrine for building, sustaining, and delivering the core capabilities identified in the National Preparedness Goal. Integrated to ensure interoperability across all mission areas, the Frameworks describe the coordinating structures and alignment of key roles and responsibilities for the whole community.

Other key aspects of the National Preparedness System described in PPD-8 include:

- Resource guidance, including arrangements enabling the ability to share personnel;
- Equipment guidance, aimed at nationwide interoperability;
- National training and exercise program guidance; and
- Recommendations and guidance for businesses, communities, families and individuals.

PPD-8 also calls for a comprehensive approach to assess national preparedness. The approach involves measuring operational readiness against target capability levels identified in the National Preparedness Goal.

Building and Sustaining Preparedness

PPD-8 directs DHS to coordinate a comprehensive campaign to build and sustain preparedness nationwide, including public outreach and community-based and private-sector programs to enhance national resilience, the provision of federal financial assistance, preparedness efforts by the federal government, and national research and development efforts.

National Preparedness Report

The National Preparedness Report evaluates and measures gains that individuals and communities, private and nonprofit sectors, faith-based organizations, and all levels of government have made in preparedness and identifies where challenges and opportunities for improvement remain. The report is based on progress towards achieving the National Preparedness Goal and serves as a tool to inform the President's budget annually.

Prepared and delivered by DHS, the report requires close coordination with all executive departments and agencies having a role in national preparedness efforts and substantial input from state, local, tribal and territorial governments as well as the private and non-profit sectors and the general public.

EPA's Role Under PPD-8

EPA participates in the development and execution of response activities, training and exercises and contributes to the National Preparedness Report annually.

Critical Infrastructure Security and Resilience - PPD-21

PPD-21 was signed by the President on February 12, 2013 and establishes national policy on critical infrastructure security and resilience. PPD-21 revokes HSPD-7 (Critical Infrastructure Identification, Prioritization, and Protection). Plans developed pursuant to HSPD-7 remain in effect until revoked or superseded.

PPD-21 advances a national unity of effort to strengthen and maintain secure, functioning, and resilient critical infrastructure. This endeavor is a shared responsibility among the federal, state, local, tribal, and territorial entities, and public and private owners and operators of critical infrastructure. PPD-21 also refines and clarifies the critical infrastructure-related functions, roles, and responsibilities across the federal government, as well as enhances overall coordination and collaboration.

Three strategic imperatives drive the federal approach to strengthen critical infrastructure security and resilience:

1. Refine and clarify functional relationships across the Federal Government to advance the national unity of effort to strengthen critical infrastructure security and resilience;
2. Enable effective information exchange by identifying baseline data and systems requirements for the Federal Government; and
3. Implement an integration and analysis function to inform planning and operations decisions regarding critical infrastructure.



Sector-Specific Agencies

PPD-21 identifies 16 critical infrastructure sectors and describes a national effort to share threat information, reduce vulnerabilities, minimize consequences, and hasten response and recovery efforts related to critical infrastructure. Sector-Specific Agencies are agencies responsible for ensuring the protection of a particular resource or part of the national infrastructure. EPA is designated as the Sector-Specific Agency for drinking water and wastewater systems.

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Appendix B: Area Committee Resources

1. Example AC outreach document

- a. U.S. EPA Inland Area Contingency Planning Brochure: <https://response.epa.gov/sites/3857/files/ContingencyPlanningEPA%202.pdf>

2. Example AC web sites

- a. These Regional Response Team (RRT) web sites include Regional and Area Contingency Plans and other useful planning information:
 - RRT-1 (Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut): https://nrt.org/site/site_profile.aspx?site_id=38
 - RRT-2 (New Jersey, New York): https://www.nrt.org/site/site_profile.aspx?site_id=24
 - RRT-3 (Delaware, Maryland, Pennsylvania, Virginia, West Virginia): https://www.nrt.org/site/region_list.aspx?region=3
 - RRT-4 (Alabama, Georgia, Florida, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee): https://nrt.org/site/site_profile.aspx?site_id=52
 - RRT-5 (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin):
 - Region 5 Regional Contingency Plan / Area Contingency Plan: <http://www.rtt5.org/RCPACPMMain.aspx>
 - Region 5 Sub-Areas: <http://www.rtt5.org/SubAreas.aspx>
 - RRT-6 (Arkansas, Louisiana, New Mexico, Oklahoma, Texas): https://response.epa.gov/site/site_profile.aspx?site_id=5083
 - RRT-7 (Iowa, Kansas, Missouri, Nebraska): https://response.epa.gov/site/site_profile.aspx?site_id=6065
 - RRT-8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming):
 - Region 8 Regional Contingency Plan: https://www.nrt.org/site/region_list.aspx?region=8
 - Region 8 Sub-Area Plans: https://nrt.org/site/doc_list.aspx?site_id=32
 - RRT-9 (Arizona, California, Nevada): <https://community.apan.org/wg/rrt9/>
 - RRT-10 (Idaho, Oregon, Washington): <https://www.rtt10nwac.com/nwacp/>
 - Alaska Regional Response Team: <https://alaskarrt.org>
 - Caribbean Regional Response Team (CRRT) (Puerto Rico, U.S. Virgin Islands): https://www.nrt.org/site/site_profile.aspx?site_id=42
 - Oceania Regional Response Team (ORRT) (Hawaii, Guam, Northern Marianas, American Samoa): https://nrt.org/site/site_profile.aspx?site_id=88

3. Additional Resources for Assistance in ACP Development

- a. EPA Regional and Headquarters offices contact information (contacts for ACP matters): <https://response.epa.gov/sites/3857/files/2018%20ACP%20planning%20workgroup%20contacts.doc>
- b. EPA FRP Coordinators list: https://response.epa.gov/sites/3857/files/Regional%20FRP%20Coordinators_Dec.%202017.doc



- c. Highlights of Northwest Area Contingency Plan (NWACP) for EPA OSCs: <https://response.epa.gov/sites/3857/files/Highlights%20of%20NWACP%20for%20EPA%20OSCs.docx>
- d. EPA Region 10 Guidance for Preparing Tribal Emergency Response Plans (EPA-910-R-04-003): https://response.epa.gov/sites/3857/files/Guidance_for_Preparing_Tribal_ERPs.pdf
 - This guidance document is designed to assist tribes in developing emergency response plans to address oil and hazardous materials spills; natural disasters such as floods, earthquakes, and fires; and other types of emergencies.
- e. EPA ACP Handbook: https://response.epa.gov/site/doc_list.aspx?site_id=3857



Appendix C: Selected ACP Formats, Scope and Organization

1. EPA Office of Inspector General Report 13-P-0152

- a. EPA Could Improve Contingency Planning for Oil and Hazardous Substance Response (2013): <https://response.epa.gov/sites/3857/files/20130215-13-P-0152.pdf>

2. EPA-only ACPs

- a. EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont) Inland ACP: <http://www.epa.gov/region1/er/iacp/index.html>
- b. EPA Region 3 (Delaware, District of Columbia, Maryland, Pennsylvania, West Virginia, Virginia) Inland ACP: https://response.epa.gov/site/doc_list.aspx?site_id=2037
- c. EPA Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, Texas) Inland ACP: <https://response.epa.gov/sites/5083/files/NEW%20RRT%206%20Inland%20Area%20Contingency%20Plan%20--%20Final%20--%20January%2026,%202016.pdf>
- d. EPA Region 7 (Iowa, Kansas, Missouri, Nebraska) Regional Integrated Contingency Plan: https://response.epa.gov/sites/6065/files/Region%207%20Integrated%20Contingency%20Plan_March%202018.pdf

3. EPA-USCG joint ACP-related

- a. Region 2: https://www.nrt.org/site/doc_list.aspx?site_id=47
- b. Region 5: <http://www.rtt5.org/RCPACPMMain.aspx>
- c. Region 6: <https://response.epa.gov/sites/5083/files/Region%206%20Regional%20Contingency%20Plan%20--%20FINAL%20--%20May%2019%202015.pdf>
- d. Region 9: https://www.nrt.org/site/site_profile.aspx?site_id=85
- e. Region 10: <http://www.rtt10nwac.com/NWACP/Default.aspx>

4. Sub-Area Plans

- a. EPA Region 5 Sub-Area Plans:
 - Minneapolis-St. Paul: <http://www.umbra.org/hazspills/twincitiesplan.pdf>
 - Northern Michigan: <http://www.rtt5.org/Portals/0/docs/ACP-NorthernMI-EPAUSCG-Aug2015.pdf>
 - Quad Cities: https://www.epaosc.org/sites/6065/files/Quad%20Cities%20SACP_Public_April-2016.pdf
 - Upper Mississippi: <http://www.umbra.org/hazspills/umrplan.pdf>
 - Peoria, Illinois: <http://www.umbra.org/hazspills/peoriaplan.pdf>
- b. EPA Region 8 T.E.R.A. Viewer: <http://epa.maps.arcgis.com/home/index.html>
 - EPA Region 8's T.E.R.A. Viewer is an interactive, web-based application that is the primary method of disseminating response strategies and other tactical Sub-Area Plan information. Sub-Area Plan documentation will be made available on the RRT-8 website listed in Appendix B. The T.E.R.A. Viewer will allow the sub-area committee and RRT members to update and maintain response-related information. The T.E.R.A. Viewer is available to sub-area committee members, RRT members, and government agency personnel; however, a username and password must be obtained through EPA Region 8 from Gina Cristiano at cristiano.gina@epa.gov.



c. Alaska Sub-Area Plans: <https://www.alaskarrt.org/Documents.aspx?f=175>

d. Public and restricted Sub-Area Plan example (Omaha-Council Bluffs)

- Public version: https://response.epa.gov/sites/3857/files/omaha_council_bluffs_subarea_plan.pdf
- Restricted version: <https://response.epa.gov/sites/3857/files/Restricted%20Omaha%20Council%20Bluffs%20Subarea%20info%202.docx> (restricted access; login required)

5. Geographic Response Plans

a. Lower and Middle Columbia River: <https://www.rtt10nwac.com/GRP/>

b. Recommendations for Geographic Response Plan (GRP) Approaches: https://response.epa.gov/sites/3857/files/UMRBA_FSS09_GRP.pdf

6. International Contingency Planning

a. Mexico-United States Joint Contingency Plan: <https://www.epa.gov/border2020/mexico-united-states-joint-contingency-plan-2017>

b. Canada-United States Joint Inland Pollution Contingency Plan: <https://www.epa.gov/emergency-response/us-canada-joint-inland-pollution-contingency-plan>

c. Canada-U.S. Joint Inland Pollution Contingency Plan Regional Annexes and the geographic areas they cover are listed below: <https://www.epa.gov/emergency-response/us-canada-joint-inland-pollution-contingency-plan-regional-annexes>

- Annex I - CANUSWEST NORTH and SOUTH (2015) – includes the combined border of the Yukon Territory and British Columbia with U.S. EPA Regions 8 and 10 (Washington, Idaho, Montana, and Alaska)
- Annex II - CANUSPLAIN (2015) – includes the combined border of Alberta, Saskatchewan, and Manitoba with U.S. EPA Regions 5 and 8 (Minnesota, Montana, and North Dakota)
- Annex III - CANUSCENT (2013) – includes the border of Ontario with U.S. EPA Regions 2 and 5 (New York, Michigan and Minnesota)
- Annex IV - CANUSQUE (2013) – includes the inland boundary of Quebec with U.S. EPA Regions 1 and 2 (New Hampshire, Vermont, Maine, and New York)
- Annex V - CANUSEAST (2013) – includes the inland boundary of New Brunswick with U.S. EPA Region 1 (Maine)

7. USCG ACP references

a. Commandant Instruction M16000.14A: U.S. Coast Guard Marine Environmental Response and Preparedness Manual (August 2016); Chapter 4: Area Contingency Planning Policy: https://media.defense.gov/2017/Mar/29/2001723825/-1/-1/0/CIM_16000_14A.PDF

b. ACP Development Memo (February 2005): <https://response.epa.gov/sites/3857/files/ACP%20Development%20Memo%202.pdf>



Appendix D: Selected Area Planning Tools

1. Mapping tools

- a. Minimum Essential Elements for GIS: <https://response.epa.gov/sites/3857/files/GIS%20MEE%20feb%2002%202.doc>
- b. Example map formats
 - EPA Region 1: <http://www.epa.gov/region1/er/iacp/maps.html>
 - EPA Region 10 jurisdictional boundary tool: <https://www.arcgis.com/home/item.html?id=a8a4f06c49914b0d8b19730d6d6c9f3f>
- c. Software:
 - MARPLOT: <https://www.epa.gov/cameo/marplot-software>
 - LandView® 6: <http://www.census.gov/geo/landview/>
- d. Web resources
 - EPA OSC support site: <https://response.epa.gov/main/maps.aspx>
 - Compendium of e-mapping applications: http://www.ehssoftserve.com/geo_mapsinfo.htm (registration required)
 - GeoPlatform: <https://www.geoplatform.gov>
 - EPA GeoPlatform (restricted to EPA users):
 - <http://intranet.epa.gov/gis/geoplatform.html>
 - <https://epa.maps.arcgis.com/home/index.html>
 - NOAA ERMA: <https://response.restoration.noaa.gov/maps-and-spatial-data/environmental-response-management-application-erma/>

2. Sensitive Area resources

- a. EPA Region 5 Fish and Wildlife annex (example sensitive area inventory): http://www.rrt5.org/Documentation/Appendicies/App8_FishWildlifeAnnex.pdf
- b. Draft Fish and Wildlife and Sensitive Environments Annex to the Federal Region IX Regional Area Contingency Plan (March 2007): <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=16205&inline=true>
- c. NOAA Office of Response and Restoration Environmental Sensitivity Index (ESI) Maps: <https://response.restoration.noaa.gov/maps-and-spatial-data/environmental-sensitivity-index-esi-maps.html>

3. Hazard assessment examples

- a. Natural disaster-related hazards
 - Region 6 Natural Disaster Workgroup: https://response.epa.gov/site/site_profile.aspx?site_id=4907

4. Historic preservation resources

- a. National Park Service list of historic preservation officers: <https://www.nps.gov/subjects/nationalregister/state-historic-preservation-offices.htm>



5. Riverine spill modeling

- a. Applications of the Incident Command Tool for Drinking Water Protection: <http://www.awra.org/meetings/Sacramento2016/doc/PP/powerpoint/S2WSamuels.pdf>
- b. RiverSpill and the Incident Command Tool for Drinking Water Protection: A Case Study of the WV Chemical Spill: <https://www.usgs.gov/core-science-systems/ngp/national-hydrography/hydrography-seminar-series-seminar-1-main-presentation>

6. Incident management

- a. EPA ICS Incident Management Handbook: https://response.epa.gov/sites/3857/files/Incident%20Management%20Handbook_IMH.pdf



Appendix E: Sample Contact/Notification Lists

1. Example AC contact list

- a. Region 7 Area Committee: <https://response.epa.gov/sites/3857/files/R7%20ICP%20Appendix%20D.4%20AC%20Contact%20List.pdf>

2. Example incident notification chart

- a. Omaha-Council Bluffs notification list: <https://response.epa.gov/sites/3857/files/Omaha%20Council%20Bluffs%20Subarea%20Notification%20chart.docx>
- b. Truckee River incident notification list: https://response.epa.gov/sites/3857/files/07_Red%20Tab%20Notification%20Truckee%20River%202011.pdf

3. Notification guidance

- a. Review of Regional and Area Contingency Plans for Downstream Notifications (September 4, 2015): <https://response.epa.gov/sites/3857/files/Memo%20to%20RAs%20for%20Downstream%20Notifications%209-4-15.pdf>
- b. In the Rearview Mirror: Implementation of the Gold King Mine After-Action Review (January 13, 2017): <https://www.epa.gov/goldkingmine/rearview-mirror-implementation-gold-king-mine-after-action-review>

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Appendix F: Resource Inventory Development List

1. EPA response equipment

a. Environmental Response Team (ERT): ERT provides EPA regional and headquarters offices, federal, state and local agencies, and foreign governments with experienced technical and logistical assistance in responding to environmental emergencies, such as oil or hazardous materials spills. ERT also provides assistance in characterization and cleanup of hazardous waste sites. ERT equipment includes:

- Two Turner C7 Fluorometers, including one 50 Meter Cable: Contains multi sensor array, but primarily used for in-water detection of crude or refined oil, could be integrated into existing vessel CTD platform. <http://www.turnerdesigns.com/products/submersible-fluorometer/cyclops-7f-submersible-fluorescence-and-turbidity-sensors>
- Turner 10AU Flow Thru Fluorometer: “Old Reliable” Model, has a pump and internal lamp, bench top application, can run individual samples or pump/flow thru continuous sampling, can use for dye tracer studies also, could use to monitor DW intakes or other water intakes for oil contamination. http://www.turnerdesigns.com/t2/doc/manuals/10au_manual.pdf
- Site Lab UV3100 from CyberSense: Acquired for soil and water samples, simple extraction required, bench top portable application, applies UV fluorescence to extract yielding numeric concentration, can analyze oil fractions for TPH, GRO, DRO, and PCBs, purchase standards for calibration.
- PhotoVac Voyager Portable GC: Analysis for VOCs, Chlorinated solvents, benchtop and potentially used over the shoulder for compounds in air, can use heating element to purge volatiles in water and analyze headspace, good sensitivity, mostly spills or site characterization applications, also soil gas. http://www.equipcoservices.com/pdf/manuals/photovac_voyager.pdf

Additional information about ERT response equipment is available at <https://www.epa.gov/ert>.

b. Radiological Emergency Response Team (RERT): RERT is comprised of experts and specialized equipment used when responding to radiological emergencies. The RERT can bring a number of different types of radiological monitoring, sampling and analysis equipment to the site of a radiological emergency. EPA’s radiological monitoring equipment includes:

- **Mobile Environmental Radiation Laboratory (MERL):** Capabilities include gamma analysis of soil, water, vegetation and air particulate filter samples and gross alpha/beta radiation on air particulate filters and contamination swipes/smears.
- **Sample Preparation Laboratory:** Provides radiation analyses for samples collected at an incident scene.
- **Mobile Command Post:** Self-powered command center equipped with satellite TV, internet, and radio for monitoring response activities.
- **Scanner Van:** A rapid scanning system designed to find gamma radiation sources in urban environments.
- **Deployable Air Monitors:** Designed for rapid deployment to domestic and overseas locations, providing real time data communications using satellite and telephone.
- **Field Monitoring and Sample Collection Equipment:** Assets include handheld field monitoring equipment to detect alpha, beta, gamma, and neutron radiation, high resolution in-situ gamma-ray spectrometry, and low-, medium-, and high-volume air samplers.

More information about EPA’s RERT equipment is available at <https://www.epa.gov/radiation/radiological-emergency-response-expertise-and-equipment#equipment>.



c. Chemical, Biological, Radiological, and Nuclear Consequence Management Advisory Team (CBRN CMAT): CBRN CMAT prepares and supports the emergency response community 24/7/365 by providing expeditious and cost-effective solutions based upon the best available science. It provides scientific expertise and response services during all phases of crisis and consequence management with personnel and assets. For more information about CBRN CMAT, see <https://www.epa.gov/emergency-response/chemical-biological-radiological-and-nuclear-consequence-management>.

CBRN CMAT response assets include:

- *Portable High-Throughput Integrated Laboratory Identification System (PHILIS)*: A mobile organic chemical laboratory for on-site analysis of environmental samples contaminated with chemical warfare agents (CWAs) and toxic industrial compounds (TICs) (https://www.epa.gov/sites/production/files/2017-08/documents/philis_one_pager_aug2017.pdf).
- *Airborne Photometric Environmental Collection Technology (ASPECT) Aircraft*: Based near Dallas, Texas, and able to deploy within one hour of notification, ASPECT is the nation's only airborne real-time chemical and radiological detection, infrared and photographic imagery platform. ASPECT is available to assist local, national, and international agencies supporting hazardous substance response, radiological incidents, and situational awareness. ASPECT is available 24/7/365 and can begin collecting data at any site in the continental U.S. within nine hours (<https://www.epa.gov/emergency-response/aspect>).
- *Biosafety Level 2 Enhanced Laboratory*: Located in Denver, Colorado, the BSL-2E laboratory is equipped with molecular- and micro-biological equipment that can test for the presence of BSL-1 and BSL-2 pathogens (https://response.epa.gov/sites/3857/files/CMAD%20BSL-2E%20Laboratory%20Capabilities%20OSC%20Academy_2.pdf).

2. Example response resource inventory

a. EPA Region 10 equipment inventory: <http://www.rtt10nwac.com/Equipment.aspx>

3. Other response equipment

a. International spill equipment and materials providers listed on the International Spill Control Organization's (ISCO) web site: <http://www.spillcontrol.org/index.php/2013-02-05-12-36-12/equipment-materials>.



Appendix G: Response Strategy Development Samples

1. Oil spill countermeasure examples

a. Dispersant authorization

Subpart J of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) directs EPA to prepare a schedule of dispersants, other chemicals, and oil spill mitigating devices and substances that may be used to remove or control oil discharges. As described in CWA 311(d)(2)(G), a “schedule”, prepared in cooperation with the states, must identify

- dispersants, other chemicals, and other spill mitigating devices and substances, if any, that may be used in carrying out the Plan,
 - the waters in which such dispersants, other chemicals, and other spill mitigating devices and substances may be used, and
 - the quantities of such dispersant, other chemicals, or other spill mitigating device or substance which can be used safely in such waters.
- NCP Subpart J: Use of Dispersants and Other Chemicals - 40 CFR 300.900 - 300.920 (current rule): <https://www.epa.gov/emergency-response/40-code-federal-regulations-cfr-300900-920>
 - September 15, 1994, National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule. 59 FR 47384 (current regulations): <https://www.govinfo.gov/content/pkg/FR-1994-09-15/html/94-22347.htm>
 - January 22, 2015, National Oil and Hazardous Substances Pollution Contingency Plan; Proposed Rule. 80 FR 3380: <https://www.gpo.gov/fdsys/pkg/FR-2015-01-22/pdf/2015-00544.pdf>

b. Dispersant preauthorization examples

- RRT-6 FOSC Dispersant Pre-approval Guidelines and Checklist: http://www.losco.state.la.us/pdf_docs/RRT6_Dispersant_Preapproval_2001.pdf
- Use of Dispersants in Region IV: <https://nrt.org/sites/52/files/1-RRT4DISP.PDF>

c. Cleaning agents

- Chemical Shoreline Cleaning Agents for Oil Spills: <http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=30002UZK.txt>

d. Bioremediation

- EPA OSC Response Website: https://response.epa.gov/site/doc_list.aspx?site_id=ERTREAC016
- Literature Review on the Use of Commercial Bioremediation Agents for Cleanup of Oil-Contaminated Estuarine Environments: <https://www.epa.gov/emergency-response/literature-review-use-commercial-bioremediation-agents-cleanup-oil-contaminated>
- Guidelines for the Bioremediation of Oil-Contaminated Salt Marshes: <https://www.epa.gov/emergency-response/guidelines-bioremediation-oil-contaminated-salt-marshes>
- Guidelines for the Bioremediation of Marine Shorelines and Freshwater Wetlands: <https://www.epa.gov/emergency-response/guidelines-bioremediation-marine-shorelines-and-freshwater-wetlands>
- National Response Team Fact Sheet on Bioremediation Technologies: https://www.nrt.org/sites/2/files/bioremed_FS.pdf



e. In-Situ Burning

- Inland In-Situ Burning of Oil Spills: Regulations and Authorizations: <https://archive.epa.gov/emergencies/content/fss/web/pdf/dehaven.pdf>
- NOAA guidance for monitoring in-situ burning operations: <http://response.restoration.noaa.gov/ISB>

f. Dispersant Monitoring System

- NOAA Special Monitoring of Applied Response Technologies (SMART): <http://response.restoration.noaa.gov/smart>

2. FRP-related response strategies

- a. Example oil spill tactical response plan: [https://response.epa.gov/sites/3857/files/Division%201%20\(C1f\)%20Map-Photo%20Tab%204_1.pdf](https://response.epa.gov/sites/3857/files/Division%201%20(C1f)%20Map-Photo%20Tab%204_1.pdf)

3. Sensitive resource-related response strategies

- a. U.S. Fish and Wildlife Service Oil Spill Response Fact Sheet: https://www.fws.gov/ecological-services/es-library/pdfs/Oil_Response.pdf
- b. U.S. Fish and Wildlife Service, Midwest Region Spill Contingency Planning and Response: <https://www.fws.gov/midwest/es/ec/SpillResponse/index.html>

4. National Response Team Subsea and Surface Dispersant Guidance

- a. https://www.nrt.org/sites/2/files/NRT_Atypical_Dispersant_Guidance_Final_5-30-2013.pdf

5. Mechanical cleanup technologies

- a. Mechanical Containment and Recovery of Oil Following a Spill: <https://archive.epa.gov/emergencies/docs/oil/edu/web/pdf/chap2.pdf>
- b. Use of Skimmers in Oil Pollution Response: <http://www.itopf.org/knowledge-resources/documents-guides/document/tip-05-use-of-skimmers-in-oil-pollution-response/>

6. Bakken and Crude Oil Response Strategies

- a. Crude Oil and Response Considerations (EPA Region 10): <https://response.epa.gov/sites/3857/files/Bakken%20Oil%20Spill%20Response%20NWAC.pptx>
- b. NRT Responder Awareness Training: Bakken Crude Oil: https://nrt.org/Main/Resources.aspx?ResourceType=Training_and_Educational_Materials&ResourceSection=3
- c. Environment Canada Diluted Bitumen Studies: Initial World Class Phase 1 Results: <https://response.epa.gov/sites/3857/files/Diluted%20Bitumen%20Studies%20Sept%2016%202014.pptx>
- d. A Comparison of the Properties of Diluted Bitumen Crudes with Other Oils (Polaris Applied Sciences, 2013): https://response.epa.gov/sites/3857/files/COMPAR_BITUMEN_OTHER_OILS_-_A3S5G71.pdf
- e. DHS Analysis – Bakken Crude Oil Flows by Rail: https://response.epa.gov/sites/3857/files/Appendix%20B%20-%20OCIA_Bakken_CrudeOil_byRail%20July%202014.pdf
- f. DHS Analysis – Hazardous Liquid Pipeline and Rail Incidents (1985-2014): <https://response.epa.gov/sites/3857/files/Appendix%20A%20-%20OCIA%20Pipeline%20and%20Rail%20Incidents%201985-2014%20April%202015.pdf>
- g. EPA Region 4 Aliceville Train Derailment: https://response.epa.gov/sites/3857/files/Aliceville%20EPA%20Presentation_Emerging%20Oils%20WG_11-29-14.pptx
- h. Effects of Diluted Bitumen on the Environment: A Comparative Study (Douglas Friedman, Ph.D.): <https://response.epa.gov/sites/3857/files/2-NAS%20briefing%20to%20ICCP%20Sept%2015.pdf>
- i. Understanding Oil Spills and Oil Spill Response (EPA): <https://www.epa.gov/emergency-response/understanding-oil-spills-and-oil-spill-response>



- j. Map of Crude Oil Transported by Rail (The Wall Street Journal): <http://graphics.wsj.com/crude-oil-by-rail/>
- k. Oil Spill Response Strategies for Coastal Marshes during the Deepwater Horizon MC252 Spill: https://www.nrt.org/sites/2/files/NRT_marsh_cleanup_overview_6-15.pdf
- l. The Royal Society of Canada Expert Panel: The Behaviour and Environmental Impacts of Crude Oil Released into Aqueous Environments (November 2015): <https://rsc-src.ca/en/behaviour-and-environmental-impacts-crude-oil-released-into-aqueous-environments>
- m. Spills of Diluted Bitumen from Pipelines: A Comparative Study of Environmental Fate, Effects, and Response (National Academies of Sciences, 2016): <https://www.nap.edu/catalog/21834/spills-of-diluted-bitumen-from-pipelines-a-comparative-study-of>
- n. Final Bakken Crude Oil Worker Health and Safety Pilot Scale Studies (April 2018): <https://response.epa.gov/sites/3857/files/FINAL%20Bakken%20Study%20043018%20Rev%2001%20w%20Attachment%20A.pdf>

7. Tribal guidance:

- a. EPA Region 10 Guidance for Preparing Tribal Emergency Response Plans (EPA-910-R-04-003): https://response.epa.gov/sites/3857/files/Guidance_for_Preparing_Tribal_ERPs.pdf
 - This guidance document is designed to assist tribes in developing emergency response plans to address oil and hazardous materials spills; natural disasters such as floods, earthquakes, and fires; and other types of emergencies.

8. Oil spill research:

- a. EPA Oil Spill Research Web Page: <https://www.epa.gov/land-research/oil-spill-research>

9. Publications:

- a. Cleanup Publications: <https://www.epa.gov/cleanups/cleanup-publications>

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Appendix H: Guidelines for Volunteers

The National Response Team (NRT) released the NRT Use of Volunteers Guidelines for Oil Spills in 2012. The Guidelines can be found on the NRT Website (www.nrt.org; Guidance, Technical Assistance & Planning; Use of Volunteers Guidelines for Oil Spills) or through this link:

<https://nrt.org/Main/Resources.aspx?ResourceType=Use%20of%20Volunteers%20for%20Oil%20Spill%20Guidelines%20and%20MOU&ResourceSection=2>.

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Appendix I: Acronyms

AC	Area Committee
ACP	Area Contingency Plan
ASPECT	Airborne Spectral Photometric Environmental Collection Technology (EPA)
CAMEO	Computer-Aided Management of Emergency Operations
CBRN CMAT	Chemical, Biological, Radiological, and Nuclear Consequence Management Advisory Team (EPA)
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COTP	Captains of the Port (USCG)
CWA	Clean Water Act
DHS	Department of Homeland Security
DoD	Department of Defense
DOT	Department of Transportation
DRG	District Response Group (USCG)
EMAC	Emergency Management Assistance Compact
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERMA	Environmental Response Management Application (NOAA)
ESA	Endangered Species Act
ERT	Environmental Response Team (EPA)
ESF	Emergency Support Function
FEMA	Federal Emergency Management Agency
FGDC	Federal Geographic Data Committee
FHWA	Federal Highway Administration (DOT)
FMCSA	Federal Motor Carrier Safety Administration (DOT)
FOSC	Federal On-Scene Coordinator
FRA	Federal Railroad Administration (DOT)
FRP	Facility Response Plan
FRS	Facility Registry Service
FWPCA	Federal Water Pollution Control Act
FWSEP	Fish and Wildlife and Sensitive Environments Plan
GIS	Geographic Information System
GRP	Geographic Response Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HHS	Department of Health and Human Services
HSPD	Homeland Security Presidential Directive
IAP	Incident Action Plan



IC	Incident Commander
ICS	Incident Command System
LEPC	Local Emergency Planning Committee
MERL	Mobile Environmental Radiation Laboratory (MERL) (EPA)
MCP	Mobile Command Post
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEBA	Net Environmental Benefits Analysis
NGO	Nongovernmental Organization
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NRF	National Response Framework
NRS	National Response System
NRT	National Response Team
NSFCC	National Strike Force Coordination Center (USCG)
OEI	Office of Environmental Information (OEI)
OEM	Office of Emergency Management (EPA)
OPA 90	Oil Pollution Act of 1990
OSC	On-Scene Coordinator
PHILIS	Portable High-throughput Integrated Laboratory Identification System (EPA)
PHMSA	Pipeline and Hazardous Materials Safety Administration (DOT)
PIO	Public Information Officer
PPD	Presidential Policy Directive
PPE	Personal Protective Equipment
RA	Regional Administrator (EPA)
RCP	Regional Contingency Plan
RERT	Radiological Emergency Response Team (EPA)
RMP	Risk Management Plan
RRT	Regional Response Team
SEMS	Superfund Enterprise Management System
SERC	State Emergency Response Commission
SSC	Scientific Support Coordinator
TEK	Traditional Ecological Knowledge
TRI	Toxics Release Inventory
UC	Unified Command
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USGS	U.S. Geological Survey

