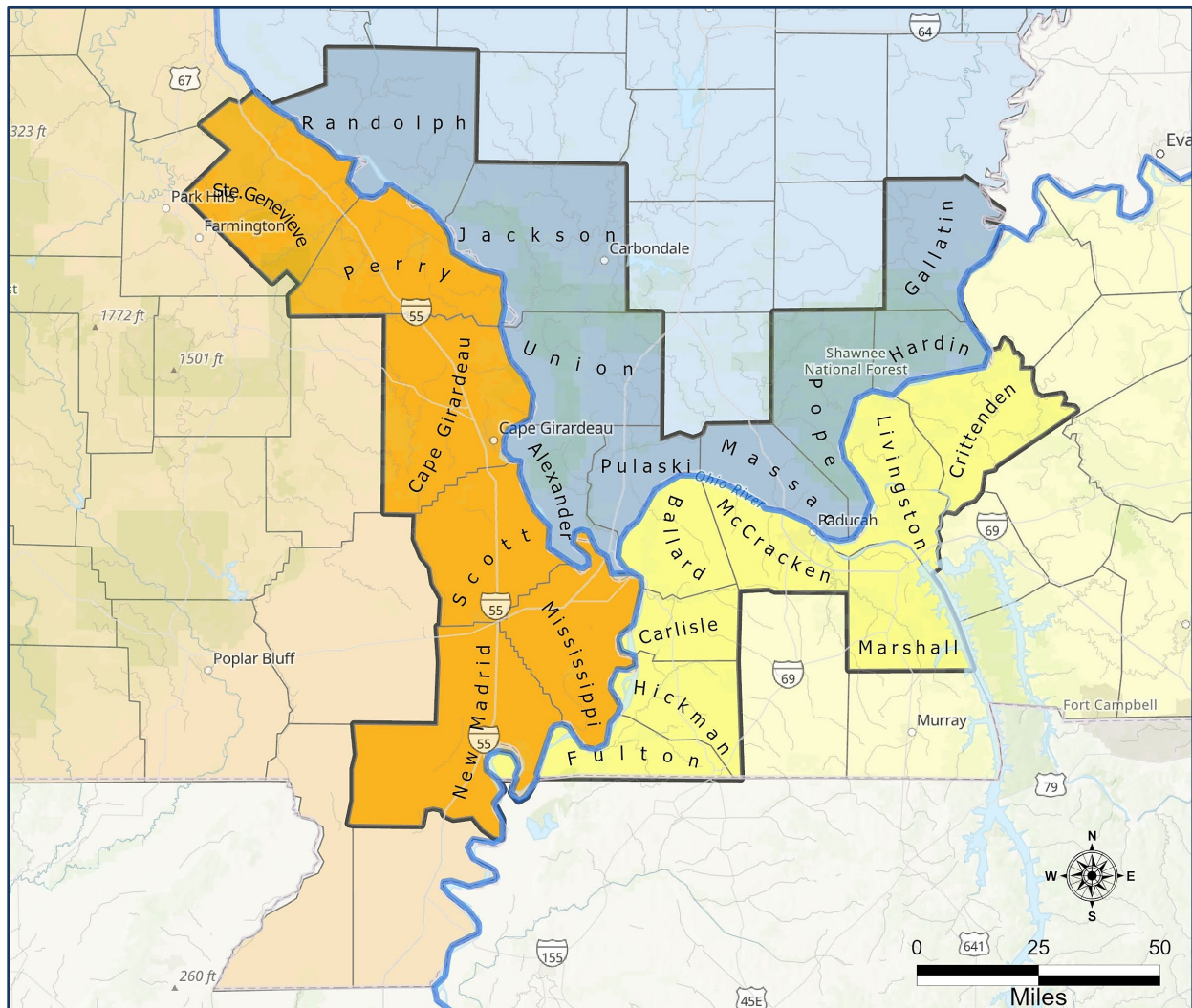


Great Rivers Subarea Contingency Plan

U.S. Environmental Protection Agency



March 2023

Public Distribution

TO REPORT A SPILL OR RELEASE



National Response Center
Emergency Response 24-Hour Emergency Number
(800) 424-8802

National Response Center
United States Coast Guard Headquarters
Washington, DC



EPA Region 5 Regional Response Center
Emergency Response 24-Hour Emergency Number
(312) 353-2318

United States Environmental Protection Agency
Emergency Response Branch
77 West Jackson Blvd.
Chicago, Illinois 60604



EPA Region 7 Regional Response Center
Emergency Response 24-Hour Emergency Number
(913) 281-0991

United States Environmental Protection Agency
Emergency Response Branch
11201 Renner Blvd.
Lenexa, Kansas 66219



EPA Region 4 Regional Response Center
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(404) 562-8700

United States Environmental Protection Agency
Emergency Response Branch
61 Forsyth St. SW
Atlanta, Georgia 30303



United States Coast Guard
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(855) 485-3727

District Commander, Eighth District
Hale Boggs Federal Building, Room 1328
500 Poydras Street
New Orleans, Louisiana 70130



Sector Upper Mississippi River, Sector Commander
24-Hour Emergency Number: (314) 269-2332

1222 Spruce Street, Suite 7.103
Saint Louis, Missouri 63103



Sector Lower Mississippi River, Sector Commander
24-Hour Emergency Number: (901) 521-4804

2 AW Willis Avenue
Memphis, Tennessee 38105



Sector Ohio Valley, Sector Commander
24-Hour Emergency Number: (502) 376-9788

600 Martin Luther Jr. King Place, Suite 421
Louisville, Kentucky 40202



Marine Safety Unit Paducah
24-Hour Emergency Number: (270) 217-0959

Commanding Officer
225 Tully Street
Paducah, Kentucky 42003



Illinois Environmental Protection Agency
Emergency Response 24-Hour Emergency Number
Illinois Emergency Management Agency
(800) 782-7860 (within state)
(217) 782-7860

1021 N Grand Avenue E
Springfield, Illinois 62702



Kentucky Department for Environmental Protection
Emergency Response 24-Hour Emergency Number
(800) 928-2380 or
(502) 564-2380

300 Sower Boulevard
Frankfort, Kentucky 40601



Missouri Department of Natural Resources
Emergency Response 24-Hour Emergency Number
(573) 634-2436

2710 West Main
Jefferson City, Missouri 65102

SPECIAL NOTICE

The Great Rivers Subarea (GRSA) Contingency Plan (GRSACP) is intended for broad dissemination. Because it is a publicly accessible document, some information has been omitted from the public version of the plan due to security concerns. Questions and special access to this restricted version of the GRSACP should be addressed to the following U.S. Environmental Protection Agency's (EPA) Coordinator of the GRSA.

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To request specific revisions to the GRSACP, see the Corrections and Updates Form on the following page. The most current copy of this document, including any changed pages, is available through EPA Region 7's websites at [Great Rivers Spill Coordination](#) and [Region 7 Subarea Plans](#).

PREAMBLE

The Great Rivers Subarea (GRSA) Contingency Plan (GRSACP) is a collaborative effort of federal and state agencies, emergency managers, and local emergency responders within the geographic area surrounding the confluence of the Mississippi and Ohio Rivers.

The GRSACP is not intended to replace any local, state, regional, or national response or contingency plans. Rather, it should be reviewed in conjunction with the relevant regional, state, and local plans. It was designed as a tool and source of information for first responders facing the unique physical conditions and blend of governmental jurisdictions within the GRSA. The GRSA includes the following counties:

Illinois: Alexander, Gallatin, Hardin, Jackson, Massac, Pope, Pulaski, Randolph, and Union Counties

Kentucky: Ballard, Carlisle, Crittenden, Fulton, Hickman, Livingston, McCracken, and Marshall Counties

Missouri: Perry, Cape Girardeau, Scott, Mississippi, New Madrid, and Sainte Genevieve Counties.

This plan will be updated annually, but more frequent revisions could occur if developments warrant. Corrections or suggestions may be submitted via the Corrections and Updates Form on page iv.

GREAT RIVERS SUBAREA CONTINGENCY PLAN

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I. INTRODUCTION

A. PURPOSE AND OBJECTIVE

The purpose of the Great Rivers Subarea (GRSA) Contingency Plan (GRSACP) is to facilitate a timely, effective, and cooperative response by representatives of private, local, state, and federal agencies to an oil spill¹ or hazardous substance release² within the GRSA.

B. SUBAREA STATUTORY AUTHORITY

The GRSACP is intended as a supplement to the U.S. Environmental Protection Agency (EPA) Region 7 Regional Integrated Contingency Plan (RICP) and Regional Contingency Plans (RCP)/Area Contingency Plans (ACP) established in EPA Regions 4 and 5. The GRSACP was prepared under Section 311(j) of the Clean Water Act (CWA), as amended by the Oil Pollution Act of 1990 (OPA or OPA 90), 33 *United States Code* (U.S.C.) 1251 et seq., the National Oil and Hazardous Substances Pollution Contingency Plan ([NCP](#)), 40 *Code of Federal Regulations* (CFR) part 300, and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601, as amended.

C. SCOPE

The GRSACP—in conjunction with the National Response Framework ([NRF](#)), the NCP, EPA Regions 4 and 5 RCP/ACPs, and state and local plans—will apply to spills and releases. The GRSACP is intended as a supplement to regional RCPs/ACPs developed in each U.S. Environmental Protection Agency (EPA) region.

Based on the GRSA's geography, three EPA regional programs maintain jurisdiction of the planning area. To assist response efforts among regions, Incident Action Plan (IAP) templates will be developed in conjunction with this planning effort for discrete areas deemed to be of higher risk. IAPs will include tactical geographic response plans (GRP) to help ensure effective response operations during a spill¹ or release² potentially impacting multiple EPA regions.

D. UPDATING

The GRSACP will be updated annually unless more frequent updates become necessary because of changes in relevant regional or national plans, or insights gained during responses or exercises. Response equipment, notifications lists, environmentally or economically sensitive area listings, and other relevant data may be updated or incorporated into the GRSACP as these become available.

¹ Spill – Oil discharges or substantial threat of discharge of oil into or on the navigable waters of the United States, on the adjoining shorelines, the waters of the contiguous zone, into waters of the exclusive economic zone, or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States. See sections 311(c)(1) and 502(7) of the CWA. The terms “spill” and “discharge” are used interchangeably in this text.

² Release – Hazardous substances, pollutants, or contaminants released into the environment which may present an imminent and substantial danger to public health or welfare of the United States.

II. RELATIONSHIP TO OTHER CONTINGENCY PLANS

A. PRIVATE-SECTOR RESPONSE PLANS

Federal and state regulations require facility operators to maintain plans designed to prevent or mitigate a spill or release to the environment. A particular facility may be subject to one or more of the following federal regulations (for a complete list of acronyms and abbreviations, see Appendix N).

- [EPA's Oil Pollution Prevention Regulation \(Spill Prevention Control and Countermeasures and Facility Response Plan \[FRP\] Requirements\) – 40 CFR parts 112.7\(d\) and 112.20-21](#)
- [EPA's Emergency Planning and Community Right-to-know Act \(EPCRA\) – Title III of the Superfund Amendments and Reauthorization Act of 1986 \(SARA Title III\)](#)
- [U.S. Department of Transportation \(DOT\) Pipeline and Hazardous Materials Safety Administration's Pipeline Response Plan Regulation – 49 CFR part 194](#)
- [U.S. Department of the Interior's \(DOI\) Facility Response Plan Regulation – 30 CFR part 254](#)
- [United States Coast Guard's \(USCG\) Facility Response Plan Regulation – 33 CFR part 154, sub-part F](#)
- [EPA's Risk Management Programs Regulation – 40 CFR part 68](#)
- [Occupational and Health Administration's \(OSHA\) Emergency Action Plan Regulation – 29 CFR 1910.38\(a\)](#)
- [OSHA's Process Management Safety Standard – 29 CFR 1910.119](#)
- [OSHA's Hazardous Waste Operations and Emergency Response \(HAZWOPER\) Regulation – 29 CFR 1910.120](#)
- [EPA's Resource Conservation and Recovery Act \(RCRA\) Contingency Planning Requirements – 40 CFR part 264, Sub-part D; 40 CFR part 265, sub-part D; and 40 CFR 279.52](#)
- [Clean Air Act \(CAA\) – 40 CFR Part 68.](#)

The National Response Team's ([NRT](#)) Integrated Contingency Plan (ICP) Guidance was published in the *Federal Register* on June 5, 1996 (Vol. 61, No. 109, 28642-28664). The ICP provides a mechanism for consolidating multiple plans into one functional emergency response plan. It does not relieve facilities of their current emergency planning obligations, and adherence to the ICP guidance is not required to comply with federal regulatory requirements. Facilities are free to continue maintaining multiple plans in lieu of an ICP to demonstrate federal regulatory compliance. The following describes private-sector emergency response plans pertaining to the NCP, OPA 90, and CWA:

Section 300.211 of the NCP describes and cross references the regulations that implement section 311(j)(5) of the CWA. Owners of tank vessels, offshore facilities, and certain onshore facilities are required to prepare and submit FRPs for responding to an oil or hazardous substance worst-case discharge (WCD) or substantial threat of discharge. Regulations and requirements governing FRPs are specified in 40 CFR § 112 and 33 CFR § 154. Prior

to approval, facility and vessel response plans shall be reviewed for consistency with any relevant area contingency plan (ACP) or regional contingency plan (RCP).

As defined in OPA 90, each responsible party (RP) for a vessel or facility that discharges oil or poses a substantial threat of a discharge into or upon the navigable waters or adjoining shorelines or the Exclusive Economic Zone is liable for removal costs and damages as specified in Section 311(f) of CWA, 33 U.S.C. § 311(f). Any removal activity undertaken by the RP must be consistent with the provisions of the NCP, the RCP, and the applicable response plan required by OPA 90. In addition, if directed by a Federal On-Scene Coordinator (FOSC) at any time during removal activities, the RP must act accordingly.

Section 311(j) (5)(c) of CWA requires that FRPs shall:

- (i) Be consistent with the requirements of the NCP, ACP, or ICPs.
- (ii) Identify the Qualified Individual having full authority to implement removal actions and require immediate communication between that individual and the appropriate federal official and the persons providing personnel and equipment pursuant to clause (iii).
- (iii) Identify, and ensure by contract or other means approved by the President, availability of private personnel and equipment necessary to remove to the maximum extent practicable a WCD (including a discharge resulting from fire or explosion), and to mitigate or prevent a substantial threat of such a discharge.
- (iv) Describe training, equipment testing, periodic unannounced drills, and response actions of persons on the vessel or at the facility, to be carried out under the plan to ensure safety of the vessel or the facility, and to mitigate or prevent a discharge, or substantial threat of a discharge.
- (iv) Undergo periodic updates.
- (v) Be resubmitted for approval of each significant change.

B. INITIAL IAPS

As companion documents to the GRSACP, IAPs are being developed to aid the initial response to a spill or release within the subarea. Initial IAPs will be developed for specific areas deemed to be of higher risk and include tactical elements to assist timely and effective response operations. These plans provide key information and response strategies specific to higher-risk areas along the subarea's major waterways. The first of these plans, the [Paducah Metropolis Initial IAP](#), has been published in draft form.

C. LOCAL RESPONSE PLANS

Sections 301 and 303 of EPCRA, which is [SARA Title III](#), provide for establishment of Local Emergency Planning Committees (LEPC) within districts to facilitate preparation and implementation of emergency plans. Emergency plans developed by LEPCs must include the identity and location of hazmat, procedures for immediate response to a chemical accident, ways to notify members of the public of actions they must take in the event of a spill or release, names of coordinators at plants, and schedules for testing the plan. Consequently, the Southeast Missouri Local Emergency Planning District (includes Perry and Cape Girardeau Counties) maintains the *SEMO LEPC Hazardous Materials Emergency Response Plan*. Similarly, the Bootheel LEPC (includes Mississippi, New Madrid, and Scott Counties) and other LEPCs within the GRSA maintain local hazmat response plans in accordance with EPCRA.

D. STATE RESPONSE PLANS

Sections 301 and 302 of EPCRA provide for establishment of a State Emergency Response Commission (SERC) for each state and implementation of state emergency plans. The States of Illinois and Missouri, and Commonwealth of Kentucky each maintains State-level operations plans to coordinate roles and responsibilities for State agencies, departments, and offices. The following State plans have been developed:

- [Illinois Emergency Operations Plan](#)
- Missouri State Emergency Operations Plan (contact Missouri State Emergency Management Agency [SEMA] Planning Section Manager to request access)
- [Kentucky Emergency Operations Plan](#)

E. AREA AND REGIONAL CONTINGENCY PLANS

Section 300.210(b) of the NCP provides for establishment of Regional Response Teams (RRT) and sets their role in implementation of RCPs. The NCP, § 300.210(c), provides for establishment of Area Committees (AC) and implementation of ACPs. Region 7 has opted to integrate these requirements through creation of a Regional ICP (RICP). Region 7 Inland Area is the same as the four-state Federal Region 7, and membership of the AC and the RRT is the same. EPA Regions 4 and 5 chose to combine their respective ACPs into their existing RCP, resulting in an RCP/ACP. Each region's plan includes elements of the NRF, [ESF #10 Support Annex](#), and the National Incident Management System ([NIMS](#)). Notably, plans for ESF #10 operations involving a large-magnitude earthquake in the New Madrid Seismic Zone have been developed by Central United States Earthquake Consortium and States. Table 1 below lists the RRTs with jurisdiction in the GRSA.

TABLE II-1: REGIONAL RESPONSE TEAMS

Team	GRSA Jurisdiction	RRT Website
R4 RRT	Kentucky	Region 4 RRT
R5 RRT	Illinois	Region 5 RRT
R7 RRT	Missouri	Region 7 RRT

1. Upper Mississippi River Basin Spill Response Plan

Consistent with the NCP and regional planning efforts, the Upper Mississippi River (UMR) Hazardous Spills Coordination Group has developed a specific response plan for the interstate UMR, [Upper Mississippi River Spill Response Plan and Resource Manual](#). The plan includes notification protocols, response protocols, and a resource manual listing a variety of river resources critical to spill response. This plan is maintained by the UMR Spills Coordination Group in conjunction with Upper Mississippi River Basin Association ([UMRBA](#)).

2. Ohio River Umbrella Plan

The [Ohio River Umbrella Plan](#) addresses authorities, roles, and responsibilities of FOSCs pertaining to inland river planning and response. Under the NCP, EPA is the lead federal agency, and provides the FOSC for a spill or release within the Ohio River Basin, except where the spill or release involves a commercial vessel, a commercial vessel transfer operation, or the marine-transportation related portion of a facility in accordance with the EPA/USCG Memorandums of Agreement (MOA). Ohio River mile classifications begin in Pittsburgh,

Pennsylvania (River Mile 0.0) at the confluence of the Allegheny and Monongahela Rivers in Region 3 and extend to the confluence with the Mississippi River near Cairo, Illinois in the GRSA. This plan addresses Ohio River Miles 867 to 981.2 and Mississippi River Miles 139.8 to 828.1 in the GRSA.

F. NATIONAL PLANS

1. National Oil and Hazardous Substances Pollution Contingency Plan

Section 300.2 of the NCP lists the various federal statutes that provide for establishment of the NRT and implementation of the NCP.

National Response Framework

The Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-707 (signed into law November 23, 1988) amended the Disaster Relief Act of 1974, PL 93-288. Subsequently, the National Response Plan (NRP) was developed. As required by Homeland Security Presidential Directive (HSPD)-5, the NRP provided a single, comprehensive approach to domestic incident management to prevent, prepare for, respond to, and recover from terrorist attacks, major disasters, and other emergencies. The NRP was an all-hazards plan built on the template of the NIMS. As a result of lessons learned during the response to Hurricane Katrina, the NRP was modified and given a new name, the NRF. On March 28, 2008, the NRF became effective and superseded corresponding sections of the NRP. Neither the NRP nor the NRF supplanted the NCP. The NRF core document, ESF Annexes, and Support Annexes were updated in October 2019 and are available at the [NRF Resource Center](#).

III. DESCRIPTION OF GREAT RIVERS SUBAREA

A. RATIONALE FOR SUBAREA CREATION

Subarea plans represent a collaborative approach to coordinate responses by all levels of government. OPA 90 required the Federal Government to establish ACPs throughout the United States to provide more coordinated, efficient, and thorough responses by local, state, and federal agencies to a spill or release. The NCP incorporated hazardous substances into this process because of the advantages of utilizing a single plan for spills of all types of hazardous materials (hazmat). EPA Region 7 decided to create only one ACP, with its geography coincident with the four states of Region 7. EPA Regions 4 and 5 adopted similar approaches for their inland areas. The RRTs, whose members also serve on the AC, later decided to consolidate their respective RCPs, ACPs, and applicable elements of FRPs into regional contingency plans.

The respective ACs have created several subarea plans within their respective regions. Initial emphasis focused on areas where multiple governmental jurisdictions are involved and areas with special environmental or economic qualities that necessitate prompt response actions. Regions 5 and 7 initially collaborated in creation of subarea contingency plans (SACP) in the Quad Cities and Greater St. Louis Subareas, while EPA Regions 3, 4 and 5 worked collaboratively on the aforementioned Ohio River Umbrella Plan.

B. GEOGRAPHY OF THE SUBAREA

Generally, the GRSA is geographically centered at the confluence of the Ohio and Mississippi Rivers near Cairo, Illinois. Specifically, the GRSA encompasses jurisdictions along Ohio River Miles 867 to 981.2 and Mississippi River Miles 139.8 to 828.1. The subarea includes counties in three States: Alexander, Hardin, Jackson, Massac, Pope, Pulaski, Randolph, and Union Counties in Illinois; Ballard, Carlisle, Crittenden, Fulton, Hickman, Livingston, McCracken, and Marshall Counties in Kentucky; and Cape Girardeau, Mississippi, New Madrid, Perry, Scott, and Sainte Genevieve Counties in Missouri.

A system of geologic faults, known as the New Madrid Seismic Zone, exist throughout the entire subarea. The last major seismic activity was the infamous 1811-1812 New Madrid event. Flooding is common during the spring months and the area has been a source for national attention and [flood management case studies](#) since the early 20th Century. Due to historical flooding and seismic events, counties in this region share a common interest in emergency preparedness.

The GRSA is a subtropical climate, with annual temperatures ranging from a mean low of 24°F in January, to a mean high of 90°F in July. Precipitation throughout the area is year-long, but heaviest during the spring and summer months. Mean annual precipitation in the area is 50 inches. Winter months are usually driest, with mean January precipitation of 3.6 inches in the area, with annual snowfall between eight to 12 inches. Severe weather is a normal occurrence in the area, with peak tornado, thunderstorm, and damaging hail activity between April and July of each year. Measurable precipitation occurs about 100 days a year, with nearly half of these being severe weather events.

Cape Girardeau, Missouri is the largest population center within the GRSA. Cape Girardeau is situated directly on the Mississippi River and had a population of 39,820 in 2021. Another population center of the subarea is Paducah, Kentucky, which is situated on the Ohio River and is home to 26,278 residents in 2021. Larger metropolitan areas just outside the subarea include St. Louis to the north and Memphis to the south. Its location along the confluence of the Ohio and Mississippi Rivers supports a robust shipping industry and provides an important means of transport for goods throughout the area.

IV. ROLES AND AUTHORITIES OF GOVERNMENT AGENCIES

A. INTRODUCTION AND ASSUMPTIONS

NIMS was adopted as the standard for incident management on March 1, 2004. Organizations and public agencies responding to an incident within the GRSA are expected to be familiar with the NIMS process, and to be prepared to integrate themselves into the [NIMS framework and implement the Incident Command System \(ICS\)](#).

B. LOCAL GOVERNMENTS

1. Roles and Responsibilities of Local First Responders

During any spill or release, local public safety organizations would normally be the first government representatives at the scene and would initially provide an Incident Commander (IC). Local law enforcement is responsible for traffic and crowd control on public property and for directing evacuations pursuant to existing state or local procedures.

If terrorism is suspected or if there is any reason to suspect a crime has been committed, local law enforcement will secure the crime scene. Local law enforcement and all other first responders will assist state and federal law enforcement authorities in collection and preservation of potential evidence.

Municipal public works departments may be able to aid, to divert, or prevent flow of contaminated materials through stormwater or sewer systems. Following GRSACP notification guidelines (see Section VII A, Protocol), the IC may notify state agencies if special expertise is needed, if the incident threatens impact beyond the local jurisdiction, or if hazardous wastes might be generated.

As the response develops and additional resources arrive at the scene, Unified Command (UC) should be established (see Section IX, Incident Command).

Initial IAP templates are being developed for higher-risk areas within the GRSA. Each plan template is intended for use during the first hours of a spill or release in a specific area of the GRSA. IAPs are also designed to serve as training tools and supplement other response plans.

2. Role of Hazmat Responders

In Missouri, the Southeast Missouri Hazmat Team is composed of firefighters from the Cape Girardeau Fire Department, Jackson Fire Rescue, and the Sikeston Department of Public Safety. The team is capable of immediate response to a hazmat/oil incident. Additional support is available from this and other State-coordinated hazmat teams through a request to the Missouri State Emergency Management Agency ([SEMA](#)) Duty Officer.

In Illinois, hazmat response resources are available through the Illinois Mutual Aid Box Alarm System ([MABAS](#)) to support local incident commanders (IC) during a hazmat/oil incident. In partnership with the Office of the State Fire Marshal, Department of Public Health, and Illinois Fire Chiefs Association—Illinois Emergency Management Agency ([IEMA](#)) has established a statewide mutual aid response system for fire, emergency medical services (EMS), and hazmat response services. A broad inventory of [MABAS assets](#) are available to support GRSA counties during a large-scale hazmat incident.

Any IC or emergency manager in Kentucky can request assistance with a hazmat incident by contacting the Kentucky Emergency Management ([KYEM](#)) Duty Officer at the Commonwealth's Emergency Operations Center, who can dispatch a hazmat team from one of five cities that participate in the [Kentucky Hazardous Materials Assistance Program](#). If KYEM determines that conditions warrant a response and the Governor declares a state emergency, response costs for any of the five mutual aid teams responding would be borne by the State. Hazmat teams, while providing special support, will not assume IC for events outside their respective jurisdictions. They will instead report to the IC or the operations officer on scene. The response teams do not perform remedial cleanup associated with hazmat incidents.

3. Roles and Procedures of Local Emergency Management Agencies

Local Emergency Planning Committees (LEPC)

LEPCs were set up as a result of [SARA Title III](#). LEPCs may include representatives from local governmental agencies, emergency responders, environmental groups, and local industry. Several local emergency plans may exist within each district. Local hazmat response plans developed under [Sections 301-303 of EPCRA](#), must include identities and locations of hazmat, procedures for responding to a chemical accident, procedures for notifying the public of necessary actions, names of coordinators of involved or threatened industrial plants, and schedules for testing the plan. A SERC must review each LEPC's hazmat response plan. If a natural disaster produces an emergency, county-level emergency management agencies (EMA) will utilize their respective all-hazards local emergency operations plans (LEOP) along with portions of their local hazmat response plan.

The Director of the Missouri Emergency Response Commission ([MERC](#)) administers the state's SERC and works closely with EPCRA staff to review necessary documents and make programmatic decisions. In Illinois and Kentucky, responsibilities for implementing federal EPCRA provisions are designated to IEMA and KYEM, respectively.

Emergency Management Agencies (EMA)

If an incident produces or threatens to escalate into an emergency that could affect large numbers of people or the off-site environment in their respective cities, or otherwise appears beyond the capacity of the local responders, one or more EMAs of the 19 GRSA counties may become involved. EMAs may activate their respective emergency operations centers (EOC), initiate an evacuation, or take other steps to protect human health and the environment. Volunteers to assist with temporary housing or other aspects of the emergency will be called into the EOC as needed.

C. STATES

Under the NCP, [40 CFR § 300.180](#), each governor is asked to assign an office or agency to represent his/her state on the RRT. Each state's representative may participate fully in all facets of RRT activity and shall designate the appropriate element of the state government that would undertake direction of state-managed responses to releases of oil or hazardous substances. Each state member of the nation's 13 RRTs also represents and coordinates RRT involvement of various other state, county, and municipal organizations in their respective states.

1. State of Illinois

Illinois Environmental Protection Agency

[Illinois EPA](#) is the enforcement agency for environmental laws in Illinois and a co-natural resource trustee for the State. When an incident threatens public safety, Illinois EPA coordinates requests for assistance from state agencies and acts as the liaison to federal officials. Personnel from their Office of Emergency Response are available 24 hours a day to provide regulatory oversight of RPs and offer technical assistance to responding agencies. Illinois EPA will provide a SOSC, as well as support staff from various [Illinois EPA field offices](#), including the Marion, Illinois office. The SOSC will respond to the scene after assessing available information and determining whether an on-site response is necessary, or when an SOSC's presence is requested by another local, state, or federal agency. Illinois EPA has regulatory authority over public water supplies and wastewater treatment facilities, as well as air pollution sources and asbestos issues. Illinois EPA also has oversight of debris disposal stemming from natural disasters. Illinois EPA Emergency Response Duty Officers are available on a 24-Hour basis to assist with and coordinate responses to a spill or release to the environment.

Illinois Department of Natural Resources (IDNR)

As the State's co-natural resource trustee, [IDNR](#) works with the U.S. Fish and Wildlife Service (USFWS) and partner agencies to assess damages and to restore natural resources (as circumstances allow) lost or injured due to a spill or release. IDNR Conservation Police Officers (CPO) are vested with full state-wide police authority and are trained as law enforcement professionals. Although CPOs have full police authority to enforce all Illinois statutes, their enforcement mission focuses on laws and activities associated with natural resource protection and recreational safety.

Illinois Emergency Management Agency (IEMA)

[IEMA](#) coordinates the State's disaster mitigation, preparedness, response, and recovery programs and activities; administers the Illinois SERC; and maintains a 24-hour Duty Officer and State EOC (SEOC). The SEOC leads crisis/consequence management response and operations to notify, activate, deploy, and employ state resources—including specialized teams and assets—in response to large-scale spill or release. IEMA also assists in improving communities' preparedness for handling chemical accidents, promoting cooperation among state and local government and industry, increasing public awareness of chemicals in the community, and building information databases.

2. Commonwealth of Kentucky

Kentucky Department for Environmental Protection (KDEP)

[KDEP](#) is designated as the Commonwealth's representative to the Region 4 RRT and is the lead agency for ESF #10 response activities. SOSCs in [KDEP's Environmental Response Branch](#) maintain a 24-hour spill reporting line for Kentucky; provide technical assistance to local responders and RPs; and respond 24-hours a day to a spill or release, including extremely hazardous substances, and other substances that may damage the waters of Kentucky. KDEP is also designated as natural resource trustee by the Secretary of the Kentucky Energy and Environment Cabinet where KDEP is housed.

Kentucky Department of Fish and Wildlife (KDF&W)

[KDF&W](#) is responsible for protecting Kentucky's natural and recreational resources. Conservation Officers (CO) are vested with full state-wide police authority and are trained as law enforcement professionals. COs have full police authority in the enforcement of all Kentucky Compiled Statutes. Their enforcement mission is to focus

upon those laws and activities associated with natural resource protection, fish and wildlife resources, and recreational boating safety.

Kentucky Emergency Management (KYEM)

[KYEM](#) is responsible for coordinating emergency response/relief/recovery efforts for natural and manmade disasters such as tornadoes, storms, earthquakes, and hazmat/oil incidents. KYEM maintains a 24-hour Duty Officer and SEOC to manage incident operations including specialized teams and assets for large-scale response to a spill or release. KYEM also coordinates numerous trainings and assists in community preparedness for handling chemical accidents while promoting cooperation across state agencies, local government, and industry.

3. State of Missouri

Missouri Department of Natural Resources (MDNR)

As the State's ESF #10 lead, MDNR staff implements the State's response to all spills or releases. SOSC's in [MDNR's Environmental Emergency Response \(EER\)](#) Section work from six locations in Missouri: Jefferson City, St. Louis, Kansas City, Poplar Bluff, Macon, and Springfield. EER staff are available 24-hours for dispatch to environmental emergencies and to ensure proper cleanup and disposal measures are implemented to protect public safety, health, property, and environment. As a natural resource trustee, MDNR works with USFWS and other co-trustees to assess damages to restore natural resources lost or injured due to a spill or release.

Missouri Department of Conservation (MDC)

[MDC](#) is responsible to protect and manage the fish, forest, and wildlife resources of the State and serves as co-natural resource trustee for the State. MDC's game wardens work as Conservation Agents (CA) to enforce the law and manage the State's resources. CA's have full police authority in the enforcement of State statutes, facilitate the acquisition of public lands, educate the public, and assist during crises or rescue situations.

Missouri State Emergency Management Agency (SEMA)

[SEMA](#) coordinates the State's disaster mitigation, preparedness, response, and recovery programs and activities; administers the [Missouri Emergency Response Commission \(MERC\)](#). SEMA maintains a 24-hour Duty Officer and SEOC to notify, activate, deploy, and State resources in response to large-scale spill or release. SEMA Regional Coordinators are the state's liaison to local jurisdictions and within assigned regions regarding all aspects of emergency and disaster management. Regional Coordinators attend and conduct meetings with local officials from the whole community to provide technical assistance and direction in the coordination of emergency management and disaster-related activities.

D. FEDERAL

1. National Response System (NRS) and Policies

The [NRS](#) is the mechanism for coordinating response actions across all levels of government in support of the FOSC or Remedial Project Manager (RPM). The NRS is composed of the NRT, RRTs, FOSC/RPM, ACs, and specialized response teams and their related support entities. The NCP at 40 CFR § 300.105 describes the general organization of the federal agencies, the NRT, RRTs, the FOSC, and the AC. Sections 300.110 and 300.115 detail structures of the NRT and the RRT. The NCP provides for an RRT whose agency membership parallels that of the NRT, and for inclusion of state, tribal, and local representation.

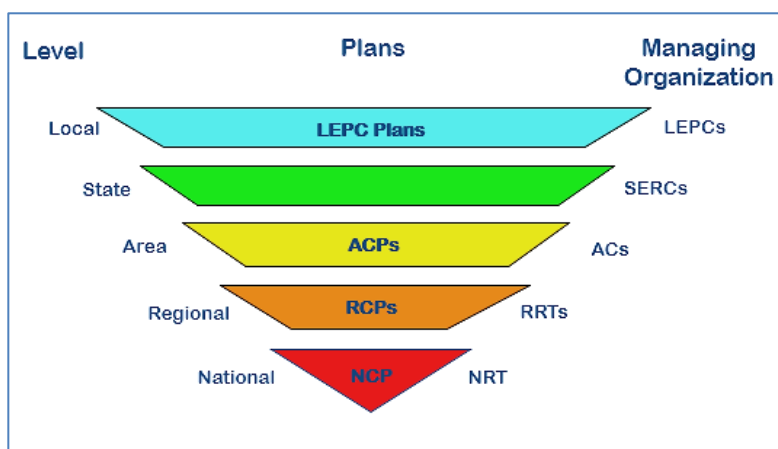


FIGURE IV-1: PREPAREDNESS COMPONENTS OF THE NRS

2. U.S. Environmental Protection Agency

[EPA Region 4](#) (Atlanta, Georgia), [EPA Region 5](#) (Chicago, Illinois), and [EPA Region 7](#) (Lenexa, Kansas) are responsible for responses to a spill or release, or a substantial threat of spill or release of a pollutant from a source originating from their respective regions. EPA will provide an FOSC to investigate and take response actions when appropriate—including spills or releases from unknown sources or those classified as “mystery spills”. EPA also maintains responsibility to notify the State agency with responsibility to respond. The State agency receiving notification from EPA is responsible for notifying operators of downstream water intakes of any spills or releases that might impact their operations. During response to a release, the appropriate EPA Region will provide a RPM for any remedial action.

EPA Regions 4 and 5 Jurisdiction Boundaries Within the GRSA

EPA Region 4 is responsible for spills or releases, or a substantial threat of spill or release of a pollutant in EPA Region 4, as well as sources originating in EPA Region 4 that impact the Ohio River. EPA Region 4 responsibilities begins at the water line of the right descending bank (RDB) of the Ohio River and extend south to include Kentucky.

EPA Region 5 is responsible for a spill or release, or a substantial threat of spill or release of a pollutant in EPA Region 5, as well as sources originating from EPA Region 5 that impact the Ohio River. EPA Region 5 responsibilities begin at the water line on the RDB and extend north to include Illinois. If a spill or release enters the water, EPA Region 5 will be responsible for investigation and response efforts.

The MOA between EPA Regions 4 & 5 can be found in the [Region 4 RACP](#) (Annex H).

EPA Regions 4 and 7 Jurisdiction Boundaries Within the GRSA

EPA Region 4 is responsible for spills or releases, or the substantial threat of spill or release of a pollutant from a source originating from EPA Region 4 into the LMR. Responsibility begins at the water line or levee on the RDB of the Mississippi River and extends east.

EPA Region 7 is responsible for spills or releases, or a substantial threat of spill or release of a pollutant from a source originating from EPA Region 7 into the LMR. Responsibility begins at the water line or levee on the RDB and extends west. If a spill or release enters the water, EPA Region 7 will be responsible for the response effort.

The MOU between emergency response programs of EPA Regions 4 & 7 can be found in the [Region 7 RICP](#) (Annex VII).

EPA Regions 5 and 7 Jurisdiction Boundaries Within the GRSA

EPA Region 5 is responsible for spills or releases, or a substantial threat of spill or release of a pollutant in EPA Region 5, as well as sources originating from EPA Region 5 that impact the UMR. EPA Region 5 responsibilities begin at the Illinois/Missouri boundary and extend east to include Illinois. If a spill or release enters the water, EPA Region 5 will be responsible for investigation and response efforts.

EPA Region 7 is responsible for spills or releases, or a substantial threat of spill or release of a pollutant from a source originating from EPA Region 7 into the UMR. Responsibility begins at the Illinois/Missouri boundary and extend west to include Missouri. If a spill or release enters the water, EPA Region 7 will be responsible for investigation and response efforts.

The MOU between emergency response programs of EPA Regions 5 & 7 can be found in the [Region 7 RICP](#) (Annex VII).

3. U.S. Coastguard (USCG)

Stand-alone MOAs between USCG and each EPA Region (4, 5, and 7) establish that USCG will fully assist the predesignated EPA FOSC consistent with agency responsibilities and authorities. If an incident involves a commercial vessel, a vessel transfer operation, or a marine-transportation-related facility, the USCG Captain of the Port (COTP) will assume the role of the FOSC and will carry out all FOSC responsibilities, including the decision to direct any necessary removal activity or to open the [Oil Spill Liability Trust Fund \(OSLTF\)](#). If an incident originates from another or an unknown source, USCG will assist the EPA FOSC to the fullest extent possible in accordance with the NCP and applicable ACP/RCP/RICP. Upon request of the predesignated EPA FOSC, the COTP may act upon the EPA FOSC's behalf. USCG units with jurisdiction in the GRSA include Sectors UMR, LMR, Ohio Valley (OV), and Marine Safety Unit (MSU) Paducah within USCG Sector OV. USCG contact information is on page ii and in Appendix C of this plan.

4. Roles and Responsibilities of the FOSC

The FOSC is the federal official predesignated by EPA or the USCG to coordinate and direct oil spill responses (subpart D of the NCP), or the government official designated by the lead agency to coordinate and direct hazardous substance removal actions (subpart E of the NCP). The OSC shall direct response efforts and coordinate all other efforts at the scene of a spill or release required by the 40 CFR § 300.135³.

³ 40 CFR § 300.135 Response Operations: (a) The OSC/RPM, consistent with §§ 300.120 and 300.125, shall direct response efforts and coordinate all other efforts at the scene of a discharge or release.

The U.S. Department of Defense (DOD) and U.S. Department of Energy (DOE) shall designate an FOSC, according to 40 CFR § 300.120(c) and (d), if their facilities or properties are involved in the spill or release. Other federal agencies are responsible for **non-emergency** removals, as stated in 40 CFR § 300.120(c)(2).

The FOSC will direct federal resources and coordinate all federal containment, removal, and disposal efforts during an incident. The FOSC's efforts shall be coordinated with other appropriate federal, state, local, and private response agencies. The FOSC may work within an established response management structure or develop a response management structure (e.g. a unified command system) to direct activities of responding entities in accordance with the NCP.

In extreme circumstances, when it is evident that a RP is unwilling or unable to adequately respond to a spill/release, the FOSC may assume full authority over the cleanup, including funding of the response through Superfund or the OSLTF. In such cases—when the applicable fund is opened, costs are incurred, and the response is “federalized”—written notice will be provided to the RP, and efforts will be made to recover costs from the RP. An Incident-Specific RRT (ISRRT) can be convened to provide guidance to the FOSC or to assist coordination activities during a major event. FOSCs, to the extent practicable, should ensure that their on-scene representatives are adequately trained and prepared to carry out actions under the NCP.

The normal sequence of actions an FOSC should take when a discharge of oil is reported are detailed in NCP [Section 300.320](#) as follows:

- (a) When the FOSC receives a report of a discharge, actions normally should be taken in the following sequence:
 - (1) Investigate the report to determine pertinent information such as the threat posed to public health or welfare of the United States or the environment, the type and quantity of polluting material, and the source of the discharge.
 - (2) Officially classify the size (i.e., minor, medium, or major based on available information) and type (i.e., substantial threat to the public health or welfare of the United States, worst-case discharge) of the discharge, and determine the course of action to be followed to ensure effective and immediate removal, mitigation, or prevention of the discharge. Some discharges that are classified as a substantial threat to the public health or welfare of the United States may be further classified as a spill of national significance by the Administrator of the EPA or the Commandant of the USCG. The appropriate course of action may be prescribed in §§ 300.322, 300.323, and 300.324.
 - (i) When the reported discharge is an actual or potential major discharge, the FOSC shall immediately notify the [RRT](#) and the National Response Center ([NRC](#)).
 - (ii) When the investigation shows that an actual or potential medium discharge exists, the FOSC shall recommend activation of the RRT, if appropriate.
 - (iii) When the investigation shows that an actual or potential minor discharge exists, the FOSC shall monitor the situation to ensure that proper removal action is being taken.

- (3) If the FOSC determines that effective and immediate removal, mitigation, or prevention of a discharge can be achieved by private party efforts, and where the discharge does not pose a substantial threat to the public health or welfare of the United States, determine whether the RP or other person is properly carrying out removal. Removal is being done properly when:
 - (i) The RP is applying the resources called for in its response plan to effectively and immediately remove, minimize, or mitigate threat(s) to public health and welfare and the environment; and
 - (ii) The removal efforts are in accordance with applicable regulations, including the NCP. Even if the FOSC supplements RP resources with government resources, the spill response will not be considered improper unless specifically determined so by the FOSC.
- (4) Where appropriate, determine whether a state or political subdivision thereof has the capability to carry out any or all removal actions. If so, the FOSC may arrange funding to support these actions.
- (5) Ensure prompt notification to the trustees of affected natural resources in accordance with the applicable RCP and ACP.
- (6) Ensure that the notifications and actions required in 300.135, the Fish and Wildlife and Sensitive Environments Plan, have been performed. If they have not been performed, the FOSC will perform those notifications and subsequent actions.
- (7) When appropriate, activate federal response using the OSLTF for oil discharges or the CERCLA Hazardous Substances Superfund for hazardous substances releases.
- (8) Removal shall be considered complete when so determined by the FOSC in consultation with the governor or governors of the affected states. When the FOSC considers removal complete, OSLTF removal funding shall end. This determination shall not preclude additional removal actions under applicable state law.

5. FOSC and USFWS Responsibilities under the Endangered Species Act (ESA)

The following is a summary of FOSC/IC and USFWS responsibilities under the ESA, implementing regulations, and the 2001 Inter-agency MOA Regarding Oil Spill Planning and Response Activities under the Federal Water Pollution Control Act's National Oil and Hazardous Substances Pollution Contingency Plan and the ESA ([ESA MOA](#)).

FOSC/IC Responsibilities During a Response

- If fish and wildlife resources may be affected by a spill or release, notify federal, state, and tribal trustees and managers, and consult with them on removal actions to be taken.
- If listed species and/or critical habitat are or could be present, immediately contact USFWS to initiate emergency consultation pursuant to the ESA, implementing regulations, and the ESA MOA.
- Keep USFWS, DOI, and RRT/AC representatives apprised of ongoing response actions.
- Document any adverse effects on listed species or their habitat.
- Maintain a record of all oral and written communications with the USFWS during the response.

USFWS Responsibilities During a Response

- Provide the FOSC/IC timely recommendations on actions to avoid or minimize impacts on listed species and/or their habitats throughout the duration of the response.
- Respond to requests for emergency consultation pursuant to the ESA, implementing regulations, and the ESA MOA.
- If incidental take is anticipated, so advise the FOSC/IC.
- Upon request, participate in ICS operations and the UC.
- Maintain a record of all oral and written communications with the FOSC/IC during the response.

FOSC/IC Responsibilities Post-response

If listed species or critical habitat has been adversely affected **by response actions**, initiate formal consultation with USFWS pursuant to the ESA, all implementing regulations, and the ESA MOA. See Annex C of the [Region 4 RACP](#), [Appendix XIII of the Region 5 RCP/ACP](#), Annex V of the [Region 7 RICP](#), or for specific requirements and procedures.

USFWS Responsibilities Post-response

Respond to requests for formal consultation in accordance with the ESA, all implementing regulations, and the ESA MOA.

V. TECHNICAL SUPPORT AVAILABLE TO THE FOSC

In addition to the support provided by the RRT, various sources of technical support are available to the FOSC either through telephone contact or actual dispatch of teams to the field. Support agencies and groups available to the FOSC include the following.

1. The USCG National Strike Force (NSF)

USCG Strike Teams (Atlantic, Gulf, and Pacific)

Phones of the three USCG Strike Teams are answered 24 hours a day. If the Strike Team contacted is already committed, another Strike Team will be deployed. Each Strike Team maintains trained personnel and specialized equipment to assist with training in responding to spills, stabilizing and containing spills, and monitoring and/or directing response actions of the RPs and/or contractors. Within the GRSA, Missouri and Illinois are covered by the [Atlantic Strike Team](#), based in Lakehurst, New Jersey. The [Gulf Strike Team](#), based in Mobile, Alabama provides response coverage to Kentucky.

The National Strike Force Coordination Center (NSFCC)

The [NSFCC](#) manages the [NSF](#), which is authorized as the National Response Unit required under OPA, with responsibility for administering the USCG Strike Teams, maintaining response equipment inventories and logistical networks. The NSFCC offers the following: technical assistance and equipment for spill response, assistance in coordinating resources during oil spill response, ACP or RCP/RICP review, coordination of spill response resources information, and conducting preparedness assessment visits on Oil Spill Removal Organizations (OSRO). The Strike Teams provide trained personnel and specialized equipment to assist the FOSC in training for spill response, stabilizing and containing the spill, and monitoring or directing response actions of the RPs and/or contractors.

Public Information Assist Team (PIAT)

[PIAT](#) is an element of the NSFCC staff available to assist the FOSC to meet the demands for public information during a response or exercise. Its use is encouraged any time the FOSC requires outside public affairs support. Requests for PIAT assistance may be made through the NSFCC or NRC.

2. EPA Environmental Response Team (ERT)

In the event of a continuing release or discharge, the FOSC has access to [EPA's ERT](#), stationed in Edison (New Jersey), Cincinnati (Ohio) / Erlanger (Kentucky), Las Vegas (Nevada), and Research Triangle Park (North Carolina). The ERT provides Scientific Support Coordinators (SSC) with expertise in treatment technology, biology, chemistry, hydrology, geology, and engineering. The ERT also has access to special decontamination equipment and can provide advice on a wide range of issues such as a multimedia sampling and analysis program, on-site safety (including development and implementation plans), cleanup techniques and priorities, water supply decontamination and protection, application of dispersants, environmental assessment, degree of cleanup required, and disposal of contaminated material. The FOSC may designate an SSC as principal advisor on scientific issues who also communicates with the scientific community and assists in requests to state and federal agencies.

As well, the ERT provides both introductory and intermediate training courses to prepare response personnel. Requests for ERT support should be made to the EPA representative on the RRT or the appropriate EPA regional emergency coordinator.

3. EPA Chemical, Biological, Radiological, and Nuclear (CBRN) Consequence Management Advisory Team (CMAT)

The [CBRN CMAT](#), present at five geographic locations, provides 24/7 scientific and technical expertise to the FOSC or response customer for all phases of consequence management, including sampling, decontamination, and clearance. With a focus on operational preparedness, CBRN CMAT facilitates transition of the latest science and technology to the field response community in order to provide tactical options for screening, sampling, monitoring, decontamination, clearance, waste management, and toxicological/exposure assessment during decontamination of buildings or other structures following an incident involving releases of radiological, biological, or chemical contaminants. CBRN CMAT maintains critical partnerships with: (1) EPA's National Homeland Security Research Center and the EPA's special teams; (2) other federal partners including the U.S. Department of Homeland Security (DHS), Federal Bureau of Investigation, DOD, and Centers for Disease Control and Prevention (CDC)/Department of Health and Human Services (HHS); and (3) international partners.

4. United States Navy Supervisor of Salvage (SUPSALV)

[SUPSALV](#) has an extensive salvage/search and recovery equipment inventory, and the requisite knowledge and expertise to support these operations, including specialized salvage, firefighting, and petroleum, oil, and lubricants offloading capability. SUPSALV can provide equipment for training exercises in support of national and regional contingency planning objectives. The FOSC may request assistance directly from SUPSALV. Formal requests are routed through the Chief of Naval Operations.

5. EPA Radiological Emergency Response Team (RERT)

[RERTs](#) have been established by EPA's Office of Radiation Programs (ORP) to provide response and support during incidents or at sites containing radiological hazards. Expertise is available in radiation monitoring, radionuclide analysis, radiation health physics, and risk assessment. RERTs can provide on-site support including mobile monitoring laboratories for field analysis of samples, as well as fixed laboratories for radiochemical sampling and analyses. Request for support may be made 24 hours a day via the NRC or directly to the EPA Radiological Response Coordinator in the ORP.

6. USCG District Response Group (DRG)

DRGs assist the FOSC by providing technical assistance, personnel, and equipment, including pre-positioned equipment. Each DRG maintains all required types of USCG personnel and response equipment, including marine firefighting equipment and additional pre-positioned equipment. The [USCG's Eighth District Response Advisory Team \(DRAT\)](#) is available to provide support to the FOSC if a spill exceeds local response capabilities. Additionally, the District Incident Management and Preparedness Advisor (IMPA) is available to assist the FOSC or staff during the pollution planning or response phases. The Eighth District IMPA supports all Eighth District field units within the GRSA. The USCG District IMPA also serves as RRT Co-Chair for their respective RRTs. Each of the nine USCG Districts staffs one IMPA. Within the GRSA, the following USCG Districts provide the RRT Co-Chair: Seventh District for RRT-4; Ninth District for RRT-5; and Eighth District for RRT-7. The District IMPA is available 24/7 via their respective District Command Centers.

7. USCG National Pollution Funds Center (NPFC)

[NPFC](#) is responsible for implementing those portions of OPA Title I delegated to the Secretary of the Department in which the USCG is operating. NPFC is responsible for addressing funding issues arising from actual and potential discharges of oil. Responsibilities of the NPFC include: (1) issuing Certificates of Financial Responsibility to owners and operators of vessels to pay for costs and damages incurred by their vessels as a result of oil discharges, (2) providing funding to various response organizations for timely abatement and removal actions related to oil discharges, (3) providing equitable compensation to claimants who sustain costs and damages from oil discharges when the RP fails to do so, (4) recovering monies from persons liable for costs and damages resulting from oil discharges to the full extent of liability under the law, and (5) providing funds to initiate natural resource damage assessment (NRDA) activities.

8. National Oceanic and Atmospheric Administration (NOAA)

National Weather Service

The National Weather Service (NWS), a federal organization within NOAA, can provide various types of support to an IC/UC operating in the GRSA through its [Paducah Kentucky office](#). The IC will be provided with a direct unlisted number to the lead forecaster's desk, through which continuous information on wind speeds, temperatures, and other atmospheric data can be obtained.

In addition, NWS has a letter of agreement with each state in the subarea. Under these agreements, a state emergency management agency can contact NWS, triggering immediate notifications to commercial radio systems through the Emergency Alert System ([EAS](#)). EAS provides a means of disseminating emergency public information regarding evacuation, sheltering in-place recommendations, and other actions intended to protect the public from hazardous conditions associated with a spill. Contact information for NWS offices is in Appendix D.

Scientific Support Coordinators (SSC)

NOAA may provide information regarding various scientific and technical subject matters. As does the ERT, NOAA's SSCs offer a wide variety of expertise. NOAA has mathematicians and physicists who can provide computer modeling and simulation studies, research and planning groups that can determine resources at risk and recommend techniques for cleanup, an environmental science group that can provide technical assistance regarding chemical identification and degradation of oil, a biological assessment group that can perform long-term studies and planning, and an information management group that can produce computerized maps. Additionally, NOAA SSCs serve as the primary interface with the scientific community for USCG FOSCs and are involved during both the planning and response phases to support USCG FOSCs.

9. U.S. Department of the Interior (DOI)

DOI can provide information concerning lands and resources specifically under DOI jurisdiction, as well as technical expertise related to natural and cultural resources, and historic properties. DOI can also provide communications equipment and other support during extended incident response activities. The Secretary of the Interior acts as trustee for resources managed or protected by various offices and bureaus within DOI. The Regional Environmental Officer (REO) supports the lead response agency by identifying technical support personnel within DOI to support response operations and assist coordination across the Department's multiple bureaus/offices involved in a response. The REO also supports development of Pollution Removal Funding Authorizations (PRFA) within DOI and supports trustee response activities, as appropriate.

U.S. Geological Survey (USGS)

USGS maintains expertise in water quality characterization, oil fingerprinting, submerged oil and oil-particle formation, transport and resuspension of oil in fresh waters, riverine two-dimensional (2D) particle transport/hydrodynamic simulations, ecotoxicology, time-of-travel studies for freshwater systems, as well as geospatial data collection of visible spill plumes applicable to spill response events in freshwater environments. In addition, USGS can provide biological survey assistance for natural resources and contaminants, and contribute distribution information about sensitive species (e.g., birds, invertebrates). USGS also provides extensive expertise and information for NRDA (e.g., aerial surveys, abundance estimation, remote sensing, etc.).

10. Contractors

Many RPs maintain contracts with OSROs and/or hazmat responders to handle spills that may occur. The NSFCC maintains the Response Resource Inventory ([RRI](#)) database listing OSROs and locally maintained equipment available to RPs. RPs are also responsible for NRDAs in conjunction with the natural resource trustee and may retain contractors to conduct such assessments. EPA Regions 4, 5, and 7 each maintain region-specific Superfund Technical Assistance and Response Team (START) and Emergency and Rapid Response Services (ERRS) contractors to facilitate emergency responses and cleanups. Any contractor responding to a spill will answer to the agency providing its funding unless all parties agree to arrangements for other supervision. Any contractor responding to a spill will answer to the agency providing its funding unless arrangements for supervision by other agencies are agreed to by all parties. Illinois EPA, KDEP, MDNR each maintain lists of available emergency response contractors.

11. Multi-Agency Response and Planning Groups

RRT and AC

The functional role of RRTs in each federal region has two principal components. One component is the standing team whose duties involve communications systems and procedures, planning, coordination, training, evaluation, preparedness, and related matters within each RRT's respective region. The second component of the RRT is an incident-specific team that may be assembled, as determined by the operational requirements of a response to a specific spill or release. The RRT has responsibility for developing an ACP/RCP/RICP and for assisting the FOSC when guidance, coordination, or resources are needed to provide an adequate response to an incident. The RRT includes a representative from each state within the federal region, and representatives from 15 federal agencies available to provide assistance or resources during such a response. EPA and the USCG co-chair the RRT, which does not respond directly to the scene, but instead responds to developments and requests from the FOSC in accordance with relevant contingency plans. Subareas have been established in the regions to develop more detailed plans for sensitive areas and to be more inclusive of industry and other nongovernmental entities in planning activities. Semiannual meetings of the RRTs occur in spring and fall of each year, and RRTs generally conduct a joint meeting involving two adjoining regions every 3 to 5 years.

Great Rivers Coordination Group

The Great Rivers Coordination Group was established among federal, state, and local partners to administer GRSA activities in a collaborative manner. Membership is composed of EPA Regions 4, 5, and 7; USCG Sector Ohio Valley and Marine Safety Unit Paducah; USFWS; Illinois EPA; KDEP; MDNR, and Ohio River Valley Water Sanitation Commission (ORSANCO). The group works on issues and projects related to subarea planning while serving as subarea representatives of their respective organizations and jurisdictions.

12. Natural Resource Trustees

CERCLA and OPA authorize the United States, states, and Indian Tribes to act on behalf of the public as Natural Resource Trustees for natural resources under their respective trusteeships (CERCLA §107(f)(1); OPA §1006(c)). OPA also authorizes foreign governments to act as Trustees (OPA §1006 [b][5]).

Trustees often have information and technical expertise about the biological effects of hazardous substances, as well as locations of sensitive species and habitats, that can assist EPA in characterizing the nature and extent of site-related contamination and impacts. Coordination at the investigation and planning stages provides the Trustees early access to information they need to assess injury to natural resources. This assists Trustees in making early decisions about whether restoration is needed in light of the response actions, and should generally result in more efficient settlement negotiations and an opportunity to address all liabilities at the site concurrently (see [Office of Solid Waste and Emergency Response \[OSWER\] Directive 9200-4.22A](#); [CERCLA Coordination with Natural Resource Trustees, 1997](#)).

Natural Resource Damage Assessment (NRDA)

Following a hazardous substance release or oil spill, natural resource trustees have responsibilities for assessing resulting injury to the environment. NRDA is the process by which trustees collect, compile, and evaluate data to determine the extent of injury to natural resources. The information gathered is used to assess damages, determine the dollar amount necessary to restore injured trust resources or compensate for lost use of resources, and seek recovery of those damages from the RP. NRDA's are typically initiated concurrent with response activities.

Initiation of NRDA usually involves acquiring data both during and after a spill to document: (1) oil or hazardous substances in water, sediments, soil, and organisms; (2) effects on fish, wildlife, and/or their habitat; (3) exposure pathways; and (4) measures taken to prevent or reduce immediate migration of oil or hazardous substances onto or into a trust resource. To avoid duplication of response activities specified in a NRDA with other response activities, all sampling and field work by natural resource trustees should be coordinated with the lead response agency.

If natural resources are injured by a spill or release of a mixture of oil and hazardous substances, DOI regulations apply. NOAA regulations apply only in assessing damages that may result from spills of oil.

State Natural Resource Trustees

State Trustees shall act on behalf of the public as Trustees for the natural resources within a state's boundaries or for resources belonging to, controlled by, or appertaining to a state (40 CFR §300.605). State official(s) are designated by the Governor of each state to act as trustee for the state's trust resources, which include surface water and groundwater. The designated official is normally the head of an agency responsible for environmental protection or fish and wildlife management, although the Governor can delegate responsibility to any entity (OPA §1006 [b][3]). States may also designate more than one Trustee agency.

State Trustees act on behalf of the public for natural resources—including groundwater and surface water, and the resources' supporting ecosystems that are: (1) within the boundary of the State, and (2) belonging to, managed by, controlled by, or appertaining to the State. For GRSA states: Directors of IDNR and Illinois EPA have been designated co-natural resources trustee for Illinois; in Kentucky, the Secretary of the Energy and Environment Cabinet has designated the KDEP as the natural resources trustee; in Missouri, the Director of MDNR has been designated the natural resources trustee.

Role of Illinois Natural Resource Trustees: [Illinois EPA](#) serves as a Co-State Natural Resource Trustee, and will provide a SOSC for responses to a spill or release affecting or threatening jurisdictions within Illinois. To prevent and abate environmental pollution, the agency has various responsibilities for responding to environmental emergencies within the State or its adjoining waters. Illinois EPA is the State's lead agency for developing plans and coordinating action before, during, and after certain emergency situations, including:

- Emergencies involving waste management
- Emergencies involving public water supplies
- Spills of oil or hazardous materials upon waters or lands of the State
- Releases of harmful quantities of toxic substances to the atmosphere.

Within Illinois EPA, the Emergency Operations Unit ([EOU](#)) is responsible for coordinating the agency's response and ensuring appropriate cleanup of any subsequent environmental contamination. EOU collects information about environmental emergencies and responds directly and/or notifies other divisions within Illinois EPA of needed action. Technical expertise is provided to first responders and public officials, addressing such issues as:

- Physical, chemical, and toxicological characteristics of the materials involved
- Effective response and treatment actions
- Precautions to be taken to prevent further injury or damage to public health or the environment.

Incident reports are routinely evaluated by the Illinois EPA Duty Officer to determine whether an immediate response is appropriate; and, if so, whether that should be a response by telephone, a visit to the scene, or a request to a support agency or a local agency for an on-scene assessment. When the response of the RP and of local responders is adequate, Illinois EPA will oversee, advise, and assist as necessary within the established ICS, as per 29 CFR 1910.120 (a). If incident demands exceed state resources, the agency will request federal resources through the established channels consistent with the NCP and the NRF.

[IDNR](#): Serves as a State co-natural resource trustee to work with the U.S. Fish and Wildlife Service (USFWS) and partner agencies to assess damages and to restore natural resources (as circumstances allow) lost or injured due to a spill or release.

Other Illinois Agencies

[IDNR Office of Mines and Minerals](#): Carries out initial investigation of incidents involving crude oil and natural gas production sites, unless waters of the state are being impacted (in which case, the role is assumed by Illinois EPA).

[Illinois State Fire Marshall](#): Responds to incidents involving underground storage tanks (UST) and maintains the authority to require equipment inspection and testing. Responsibility for response to UST-involved spills or releases is shared with Illinois EPA.

[Illinois Commerce Commission](#): Investigates incidents involving railroad transport, and has authority over use, movement, and compliance of railroad equipment with U.S. Department of Transportation (DOT) regulations.

Role of Missouri Natural Resource Trustee: MDNR serves as Missouri's Natural Resource Trustee and will provide a SOSC for responses to a spill or release affecting or threatening jurisdictions within the State. The Director of MDNR will assign appropriate personnel to assess damage to natural resources and work with RPs to restore, replace, rehabilitate, or acquire the equivalent of the injured resource. Missouri promotes a "cooperative-based restoration" approach to NRDA. This method is intended to ensure a net environmental benefit for the public. Potentially responsible parties (PRP) are invited to participate throughout the assessment

and restoration process; thereby, expediting resource restoration and resolution of liability. This benefits all stakeholders by reducing overall costs, promoting better science, enhancing public involvement, and establishing good will among the involved parties.

During the emergency response phase, the MDNR's EER Section's Duty Officer will coordinate MDNR's activities and notify affected Missouri programs, MDNR regional offices, and programs in other states potentially impacted by the spill or release. Based on incident demands, an Incident Working Group consisting of EER personnel, MDNR program managers, and other State agencies staff may be established. All on-scene activities conducted by the State will be coordinated through the EER Duty Officer until the scene is deemed safe.

MDNR's Water Quality Monitoring Section is tasked with assessing damages to existing environmentally sensitive areas along streams in Missouri, including the Mississippi River. Teams can gather water quality data needed to assess the natural state of the area and the impact and recovery of affected areas.

MDNR's Water Pollution Control Branch is responsible for administering the CWA in Missouri and may become involved in the response when water resources are damaged. The EER duty officer will notify the Water Pollution Control Branch in case of a release of oil or other hazardous substances to the Mississippi River or its tributaries.

Role of Kentucky Natural Resource Trustees: KDEP serves as the natural resources trustee in the Commonwealth and will provide a SOSOC for responses to a spill or release affecting or threatening jurisdictions within the Commonwealth. In response to a spill or release event, KDEP is also the lead agency for state responses to oil and hazardous substance incidents.

An SOSOC will:

- Notify other departments and divisions within the Kentucky Energy and Environment Cabinet.
- Establish a state response structure that integrates with the local command structure.
- Provide the IC with information on environmental consequences of various response activities and response alternatives.
- Oversee the RP's environmental actions involving all aspects of the cleanup.
- Coordinate environmental cleanup activities with other environmental and public safety responders.
- Work with USFWS and other resource managers to identify, protect, and assess damages to natural resources.

The [Division of Water](#) within the Kentucky Energy and Environment Cabinet is responsible for administering the CWA in Kentucky and may become involved in the response when water resources are impacted. Division staff may support response efforts through water quality assessments, as well as ongoing ground and surface water monitoring. In such cases, technical support for these and other activities is available through the [Division of Environmental Program Support](#).

[KDEP's Division of Waste Management](#) responds to incidents involving USTs and/or hazardous waste. Staff operate from one central office and [10 regional offices](#) throughout the Commonwealth.

Federal Natural Resource Trustees

CERCLA §107(f)(2)(A) requires the President to designate in the NCP federal officials to act on behalf of the public as Trustees for natural resources under federal trusteeship. Section 300.600 of the NCP designates the

Secretaries of the following cabinet-level Departments to act as Trustees for the natural resources, subject to their respective management or control:

U.S. Department of Energy (DOE)

The Secretary of DOE has trusteeship over natural resources under its jurisdiction, custody, or control. DOE's landholdings include national research and development laboratories, facilities, and offices.

DOI, U.S. Fish and Wildlife Service

The Secretary of the Interior acts as trustee for resources managed or protected by DOI Bureaus, including USFWS and the U.S. Bureau of Reclamation. USFWS, an office within DOI, is responsible for management of migratory birds, federally listed endangered and threatened species, and interjurisdictional fishes within the GRSA. National Wildlife Refuge lands established in/near the GRSA include:

- Illinois: [Crab Orchard National Wildlife Refuge](#), [Cypress Creek National Wildlife Refuge](#), and [Middle Mississippi River National Wildlife Refuge](#) (lies partly in Missouri)
- Kentucky: [Clarks River National Wildlife Refuge](#) and [Reelfoot National Wildlife Refuge](#)
- Missouri: [Mingo National Wildlife Refuge](#) (lies outside the GRSA)

See Appendix I for more information on wildlife refuges and other environmentally sensitive areas in the GRSA.

When a spill occurs, the appropriate [USFWS office\(s\)](#)—in Rock Island, Marion, and Chicago, Illinois; Frankfort, Kentucky; or Columbia, Missouri—will provide timely advice on measures necessary to protect wildlife from exposure, as well as priority and timing of such measures. Protective measures may include preventing the oil from reaching areas where migratory birds and other wildlife are located, or deterring birds or other wildlife from entering areas by using wildlife hazing devices or other methods.

If exposure of birds and other wildlife to oil or hazardous substances cannot be prevented, an immediate decision will be made regarding rescue and rehabilitation of “oiled” birds and other wildlife. USFWS has statutory responsibilities for protecting migratory birds and federally listed threatened and endangered species. In such cases, the USFWS would serve as the lead administrative trustee, coordinating with other trustees and providing oversight of a qualified wildlife responder. If an incident does not involve migratory birds or federally listed threatened or endangered species, a State Natural Resource Trustee may serve as the lead agency.

Decisions to rescue and rehabilitate “oiled” wildlife must be made in conjunction with other federal and state natural resource agencies. Wildlife rehabilitators will need federal and state permits to collect, possess, and band migratory birds and threatened/endangered species. Further information is in Fish and Wildlife and Sensitive Environments sections of the [Region 4 RACP](#) (Annex C), [Region 7 RICP](#) (Appendix A.1), and [Appendix VII of the Region 5 RCP/ACP](#).

DOD, U.S. Army Corps of Engineers

Secretary of the DOD has trusteeship over the natural resources on all lands owned by DOD or the Army (including lands and facilities managed by the U.S. Army Corps of Engineers [USACE]), Navy, Air Force, and Defense Logistics Agency. These lands include military bases and training facilities, research and development facilities, and munitions plants. USACE has trusteeship over natural resources under its jurisdiction, custody, or control. USACE landholdings include national research and development laboratories, facilities, and offices.

U.S. Department of Agriculture (USDA)

USDA maintains trusteeship of national forest, wilderness areas, and wildlife within USDA-controlled forests, archaeological sites, range and farm lands, fisheries, and lands enrolled in the [Natural Resources Conservation Service Programs and initiatives](#). Through the U.S. Forest Service, USDA-managed land in the GRSA includes portions of the [Shawnee National Forest](#) within Pope, Jackson, Gallatin, and Massac Counties in southern Illinois. Additionally, the U.S. Forest Service manages the [Mark Twain National Forest](#), which includes 10,254 acres in the southern portion of Sainte Genevieve County, Missouri.

Tribal Natural Resource Trustees

Tribal Chairmen (or heads of the governing bodies of Indian Tribes), or persons designated by Tribal officials, shall act as Tribal Trustees for natural resources belonging to, managed by, controlled by, or appertaining to the Indian Tribe, or held in trust for the benefit of such Indian Tribe, or belonging to a member of an Indian Tribe, if such resources are subject to a trust restriction on alienation (40 CFR §300.610). The Secretary of the Interior may act as Trustee on behalf of a Tribe at the Tribe's request. Indian Tribe Trustees act on behalf of the Indian Tribe for natural resources, including their supporting ecosystems that fall under one or more of the following categories:

- Belong to, are managed by, are controlled by, or appertain to such Tribe
- Are held in trust for the benefit of the Tribe
- Belong to a member of the Tribe, if such resources are subject to a trust restriction on alienation.

Examples of resources under the trusteeship of Tribal groups include:

- Tribal-owned minerals
- Groundwater and surface water resources on Tribal lands
- Any other natural resources found on Tribal land.

13. State Historic Preservation Officers

[Section 106](#) of the National Historic Preservation Act requires federal agencies to take into account effects of their undertakings on historic properties and afford states a reasonable opportunity to comment on such undertakings. Section 106 specifies procedures federal agencies are to implement to meet these statutory responsibilities, to include coordination with State Historical Preservation Offices (SHPO) of affected and potentially affected states. Section 106 accommodates historic preservation concerns with needs of federal undertakings through consultation among the agency official and other parties with an interest in effects of the undertakings on historic properties, commencing at the early stages of planning. The goal of consultation is to identify historic properties potentially affected by the undertakings, assess effects of those undertakings, and seek ways to avoid, minimize, or mitigate adverse effects on historic properties. The Programmatic Agreement on Protection of Historic Properties during Emergency Response under the NCP can be accessed at [Programmatic Agreement on Protection](#), and contact information regarding SHPOs is available at [SHPO Contacts](#).

14. Tribal Historic Preservation Officers

In 1992 the U.S. Congress adopted amendments to the National Historic Preservation Act (P.L. 102-575) that allow federally recognized Indian tribes to take on more formal responsibility for the preservation of significant

historic properties on tribal lands. Specifically, [Section 101\(d\)\(2\)](#) allows tribes to assume any or all of the functions of a SHPO with respect to tribal land. The decision to participate or not participate in the program rests with the tribe. In accordance with Section 101(d)(2), the tribes on the National Park Services (NPS) list have formally assumed the responsibilities of the SHPO for purposes of Section 106 compliance on their tribal lands. They have designated Tribal Historic Preservation Officers (THPO) whom federal agencies consult in lieu of the SHPO for undertakings occurring on, or affecting historic properties on, tribal lands. Contact information for THPOs is available at the [National Association of THPOs website](#).

VI. ROLES OF RESPONSIBLE PARTIES

Under the CWA, an RP is required to immediately report to the NRC any discharge of oil producing a sheen on navigable water, adjoining shorelines, or the contiguous zone, as well as any release of a hazardous substance exceeding a reportable quantity as set forth in 40 CFR § 302.4. The RP may also be required to report these releases under various state and local statutes. OPA 90 § 1002 specifies RP responsibility for removal costs and damages. The RP is expected to cooperate with local public safety agencies during the emergency response phase of an incident, and to conduct any necessary response actions for which the RP's personnel are trained and equipped. RP response actions may include turning off valves, plugging or containing leaking containers, evacuating employees, and firefighting by industrial fire brigades. All these activities typically proceed under direction of an IC established by a local public safety agency.

Certain RPs (i.e., liquid petroleum pipeline operators and FRP facilities) are required to maintain authorized and Qualified Individuals available 24 hours a day to respond to a spill. The RP must also have sufficient funds available to cover the cost of pollution response to the limit of liability for a vessel or facility. Evolving priorities of an incident often include off-site and environmental concerns. The RP has the lead role in responding to these concerns, under oversight of state or federal agencies. The RP is also liable for restoring or replacing natural resources that may have been injured or lost due to the spill and should coordinate with the natural resource trustees (via NRDA Liaison) as part of the NRDA process. The RP will be placed at the command level of the response organization to represent the RP's interests and to help coordinate assets and response actions. The RP should conduct inquiries into the cause of an incident. This often occurs with participation or oversight of state or federal agencies such as OSHA and DOT.

While the RP has primary responsibility for cleanup of a spill or release, response operations and removal activities shall accord with the NCP and the RP's applicable response plan. If necessary, EPA or USCG may direct the RP's response activities. The FOSC also may "federalize" a response if it becomes evident that: (1) an adequate response is beyond the capability of the RP, or (2) the RP indicates an unwillingness to accept responsibility, or (3) the RP's identity is unknown. A UC structure that incorporates command personnel of the RP, local responders, and state and federal responders may be established to address concurrent public safety and environmental concerns.

VII. INTERSTATE NOTIFICATION PROTOCOL FOR SPILLS WITHIN THE GREAT RIVERS SUBAREA

This protocol is in place to enhance communication among agencies involved in response activities on the UMR, LMR, and/or Ohio River impacting the GRSA. It establishes a procedure for continued communication over the duration of an incident. Member agencies of the Great Rivers Coordination Group should utilize this notification protocol as part of their response to a spill or release to the UMR, LMR, and Ohio River within the GRSA.

Any person or organization responsible for a spill or release is required to notify the federal government when the amount reaches a federally determined limit. Separate reporting requirements exist for oil spills or hazardous materials releases. This protocol **does not** replace or override those existing regulatory requirements (e.g., notification of the NRC per the NCP).

1. Applicability

This spill notification protocol applies to all state and federal agency members of the Great Rivers Coordination Group.

- A. **Each state will be represented by only one contact or coordinating agency** who will represent and assume the "state" role for purposes of this protocol. It is assumed that this agency will be one which is responsible for environmental emergency response to a spill on a primary GRSA waterway. The coordinating agencies are listed in the spill notification rosters in Appendix C.
- B. **Each federal agency will be represented by only one contact point per federal region** for purposes of receiving notifications and updates. The contact points are listed in the spill notification rosters in Appendix C.

2. Initial Notification

The state which first becomes aware of a spill or release should confirm that notification to the [NRC](#), via phone or online form, has been completed and initiate the GRSA notification protocol. Under the GRSA protocol, when a spill to the UMR, LMR, or Ohio River occurs, **it is the responsibility of the first-aware state to notify other potentially affected states and appropriate federal response and natural resource agencies.** A state is to consider itself as first-aware if it has not previously been notified of the spill or release according to this protocol. Should a federal agency become first-aware of a spill or release, it will notify the state where the spill or release occurred (if known) or the state being impacted. That state will then be responsible for notifications according to this protocol. The initial notification protocol is as follows:

A. All spills or significant releases are to be reported.

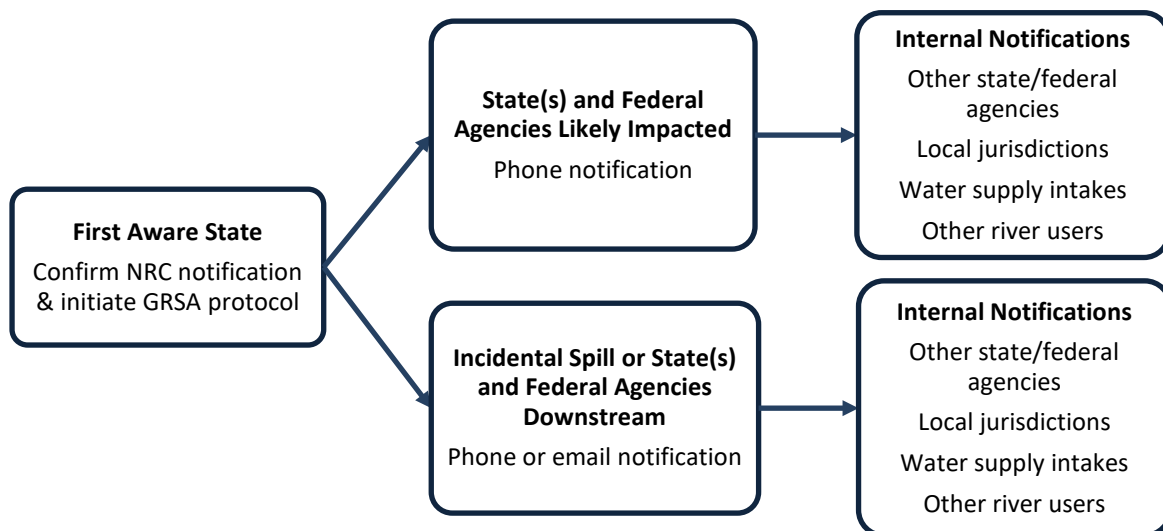
- 1) **Notification of spills or significant releases likely to impact adjoining states is to be made by voice immediately.** The notification is made to the coordinating agency via the 24-hour number listed in the notification rosters in Appendix C of this plan.
- 2) **Notification of incidental spills or releases or spills or releases that are far upstream of the notification recipient should be made during first available working hours by voice or email** utilizing the contact information provided in notification rosters in Appendix C of this plan.

The first-aware state should use its best judgment as to what is an incidental spill or release. Some factors that may affect this decision are: (1) the location of the spill or release relative to water

intakes, sensitive/critical fish and wildlife habitat, and major cities, and/or (2) the type and amount of material involved. In addition, news interest/coverage may make an otherwise environmentally insignificant spill or release into an incident which other states and federal agencies should be made aware. If there is any doubt as to the significance of the spill or release, notification should be made.

- B. Each state is responsible for its own intrastate notifications**, such as those to other agencies within state government, local jurisdictions, and water supply intakes.
- C. When a spill or release originates within a state, that state will be the designated coordinating state** unless another state agrees to take over that responsibility (perhaps because of the greater involvement by the second state in the spill response). When the spill or release occurs in or affects a primary waterway at a boundary between two states within the GRSA, these states will decide during initial notification as to which state will be the designated coordinating state.

FIGURE VII-2: GRSA SPILL NOTIFICATION PROTOCOL



Note: States are responsible for notifications to water intake managers within their respective jurisdictions.

3. Updates

Informal daily updates will be made to adjacent and downstream states by the designated coordinating state if the response is state led or by the FOSC if the response is federally led. An FOSC may negotiate with a state to provide daily updates if the FOSC maintains close communications and provides the necessary information to that designated coordinating state.

- A.** It is suggested that updates be emailed daily at a regular time which will meet agency management and public information needs, although urgent information should be sent immediately.
- B.** A state or federal agency which responds in any way to a spill or release is to update the designated coordinating state or FOSC on its activity and findings daily. The reports should contain a summary of all activity by that state/agency since its last report, including lab analyses and maps if appropriate. The reports should also list what future actions that state, or agency plans to undertake.

- C. When the designated coordinating state or FOSC determines that daily updates are no longer necessary, this will be communicated via a final update. It should be labeled prominently as “FINAL” and state why the updates are being discontinued.

4. UMR, LMR, and Ohio River Valley Spill Notification Rosters

Notification rosters pertaining to the UMR, LMR, and Ohio River Valley (USCG Sector Ohio Valley) within the GRSA are in Appendix C. These rosters list contacts to be used for spill notification and status reporting purposes. The lists contain primary contacts, which include state agencies, EPA, USACE, USCG, DOI, and USFWS. The primary contacts are those agencies that should receive first notice of a spill to the river. Additional key contacts, including downstream states and numerous federal agencies/offices are also included.

Call rosters in Appendix C include business hour numbers for the primary response/coordinating agency, a 24-hour number for the agency that accepts the initial spill reports, and an email contact where available. The telephone number for the primary coordinating agency is used for interstate or interagency coordination during business hours. The 24-hour number is used for initial spill reporting for spills which may affect interstate waters. The email contact is used for other notifications or updates to state or federal agencies. Note that additional UMR contact information can be found in the [UMR Spill Response Plan and Resource Manual](#).

VIII. GRSA RESPONSE PROTOCOL

A. INCIDENT COMMAND AND JURISDICTION

When warranted by the scope and complexity of the incident, the first responding local agency will establish an initial command post and an IC in accordance with NIMS/ICS. If the magnitude of the incident is such that an SOSC and/or FOSC respond, unified command will be established or a transition of command will take place from the local IC to either the SOSC or FOSC, based on the size and complexity of the event.

The NCP gives an FOSC authority to direct all response efforts at the scene of a spill or release. Typically, an FOSC will support actions of local and state governments. Any response actions an FOSC may initiate due to response, oversight authorities, and obligations shall be coordinated with other appropriate federal, state, local, and private response organizations.

Under any of the following circumstances, however, the FOSC may determine that he or she must use preemptive authority to direct all efforts at the scene:

- A discharge of oil is classified as “major” (over 10,000 gallons).
- A release of a hazardous substance is classified as “major” (a release that poses a substantial threat to public health or welfare of the United States or the environment or elicits significant public concern).
- The discharge or release is a “spill of national significance” (e.g., a spill with ramifications so complex because of its severity, size, location, actual or potential impact on the public health or welfare or the environment, or necessary response effort, that it requires extraordinary coordination of federal, state, local, and RP resources to contain and clean up the discharge).
- Because of the RP’s inability or unwillingness to respond, the FOSC decides to pay for the response with funds from CERCLA or OPA (“federalize” the response).
- Actions taken by the RP or local responders, or state responders are inappropriate, ill-advised, or inconsistent with the NCP.
- Lack of cooperation among the RP and local and state responders is impeding prompt and effective response.

An FOSC who decides to direct all response actions must notify the RP’s designated IC, the local government’s IC, and the SOSC of these intentions. These notifications ensure that all lead organizations are aware of the change of status. An FOSC who exercises this authority becomes the IC for the entire incident and must assure compliance with OSHA’s 1910.120 regulations regarding response to spills or releases.

B. CONTRACTOR OVERSIGHT

If the RP is capable and willing to respond to the spill or release, and is acting in accordance to federal and state statutes and regulations and the criteria set out in the NCP, governmental officials will maintain an oversight role. If no PRP is identified or the RP is unwilling or incapable of responding, the FOSC will pursue available options for using government funds to clean up the spill or release. If an established contractor responds to the spill who has business relationships with multiple response organizations, it will answer to the agency providing its funding unless all parties agree to supervision by another agency.

C. COORDINATION

Generally, the responding agencies will function within their normal roles, using established lines of authority, expertise, and resources while working as a team within the response organization to provide the most efficient response possible. Each local, state, and federal lead agency will be responsible for making secondary notifications and for coordinating assistance from its support agencies. The local IC, along with the SOSC and FOSC, will collaborate to make major decisions, with the RP's representative(s) included as appropriate.

IX. INCIDENT COMMAND

The senior on-scene official of the response organization first arriving at spill or release shall establish a response organization, as necessary, in accordance with NIMS procedures. If the incident is of sufficient magnitude to require involvement of multiple agencies and/or multiple levels of government, command operations should transition toward a UC structure. Additional information on NIMS and its applications is available at <http://www.fema.gov/national-incident-management-system>.

A. NIMS PROTOCOL ADDRESSING STATE AND FEDERAL RESPONDERS

NIMS/ICS shall be used as an “all-hazards” model for managing and responding to incidents. The most qualified on-scene authority shall assume the role of the IC. If the incident expands or requires implementation of a UC structure, each organization to be included in UC should meet one or more of the following criteria:

- Organization maintains jurisdictional authority within the impacted area.
- Incident impacts the organization’s area of responsibility (AOR).
- Organization has a specific responsibility to act/respond.
- Organization possesses resources to be deployed.

The ICS should be based on organization, terminology, and procedures recommended by NIMS, and should be applied in a broad sense to include all hazard control and mitigation response organizations including the RP, private responders, and local, state, and federal agencies. All such entities participating in a response are required by federal law to implement ICS and integrate it with the overall ICS (29 CFR 1910.120 or 40 CFR 311).

The ICS established will include a designated IC with expertise, capability, determination, and authority, selected from a local unit of government or from a county, state, or federal agency. This protocol recognizes that typically, but not necessarily, the IC will change as the incident progresses from primarily a public safety problem, with the local fire chief as IC, to an environmental incident, with a state or federal authority as the IC.

To document the incident planning process, jurisdictions should develop an Incident Action Plan based on ICS forms. The IC can use locally developed ICS forms or those made available by other agencies such as USCG. A list of the modified ICS forms can be downloaded at [dcms.uscg.mil ICS forms](https://dcms.uscg.mil/ICS-forms) or [response.epa.gov ICS forms](https://response.epa.gov/ICS-forms). The [USCG Incident Management Handbook](#) and [EPA Incident Management Handbook](#) have been developed to assist ICS implementation during incident response operations and planned events.

X. SITE SAFETY PLAN

A. INTEGRATION OF SITE SAFETY PLANS

During a major incident involving hazardous substances, several hazmat teams could participate in the response. These teams should consist of personnel trained to at least the technician level and should operate in complete compliance with OSHA's 1910.120 regulations. One of these requirements is a site safety plan (SSP), also known as a health and safety plan (HASP).

Hazmat teams possibly present during a response include teams from municipal FDs, contractors for RPs, state or federal agencies, a USCG Strike Team, military teams, and industrial mutual aid teams. Because each team normally develops its own SSP, conflict or confusion may ensue as the various teams initiate field operations. To ensure safety of responders and efficiency of response, procedures for coordinating safety plans should be implemented as follows:

If a site has a single IC, that commander will appoint a site safety officer (SSO) who will coordinate with the safety officers of all responding teams. The SSO will ensure compatibility of the various SSPs with the overall SSP. If UC is in place, the incident managers will appoint the SSO. Any safety officer who, after working with the SSO, disagrees with any portion of the SSP should communicate his/her concerns to his/her organization's senior on-site official. That official should discuss those concerns with the IC or UC. The IC or UC staff should then bring the matter to the attention of the SSO for resolution. The IC, who is ultimately responsible for the safety of everyone on site, provides final approval of the SSP.

B. REQUIREMENTS FOR SITE SAFETY PLANS

Site-specific safety plans are required of private employers of hazardous waste operations under 29 CFR 1910.120, and of governmental employers under 40 CFR 311. Both regulatory documents specify 11 categories that must be included in a site-specific safety plan. The required categories of an SSP are as follows:

- 1. Key Personnel and Hazards Communication:** Names of key personnel, such as: Project Manager, Field Operations Leader, Site Supervisor, and Site Health and Safety Officer. Identify communication procedures and provide for pre-activity briefings. (29 CFR 1910.120[b][2])
- 2. Task Risk or Hazard Analysis:** Hazards or risks associated with each task to be performed, including identification of chemical contaminants; affected media; concentrations, if known; and potential routes of exposures. (29 CFR 1910.120[b][4])
- 3. Employee Training Assignments:** Training required to enter the site (e.g., initial and annual health and safety training, first aid/cardiopulmonary resuscitation (CPR) training, emergency response training). (29 CFR 1910.120[e])
- 4. Medical Surveillance Requirements:** Baseline monitoring and site-specific medical monitoring required for all personnel entering the scene. (29 CFR 1910.120[f])
- 5. Personal Protective Equipment (PPE):** PPE to be used for each task. (29 CFR 1910.120[g])
- 6. Air and Personnel Monitoring:** Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques and equipment to be used, including methods of maintenance and calibration for equipment and instruments. (29 CFR 1910.120[h])

- 7. Site Control Measures:** Procedures to be used to minimize worker exposure to hazardous substances. These would include a site map, work zone definition, buddy system establishment, site communications, emergency alarm procedures, standard operating procedures for safe execution of tasks, and identification of nearest medical assistance. (29 CFR 1910.120[d])
- 8. Spill Containment Procedures:** Procedures to contain and isolate entire volume of any hazardous substance spilled during site activities. (29 CFR 1910.120[j])
- 9. Decontamination Procedures:** Procedures for decontaminating workers and equipment potentially exposed to hazmat. This section should also include methods to minimize contact with hazmat. (29 CFR 1910.120[k])
- 10. Emergency Response Plan:** How anticipated emergencies will be handled and how risks associated with an emergency will be minimized. This plan must be developed prior to commencement of hazardous waste activities. (29 CFR 1910.120[l])
- 11. Confined Space Entry Procedures:** If necessary, procedures for entering confined spaces. (29 CFR 1910.120[b][9]).

XI. ACCESS TO OIL SPILL LIABILITY TRUST FUND AND CERCLA REIMBURSEMENT

Current information on various aspects of the OSLTF is available through [USCG's National Pollution Funds Center home page](#) and through the [OSLTF home page](#).

A. OSLTF FUNDING PROCEDURES

Local, state, tribal, or federal agencies may obtain funding for removal costs ***through, and with the prior approval of, the FOSC***—or by submitting a claim to the NPFC. Funding will accord with EPA's "Guidance for Use of The Oil Spill Liability Trust Fund," (OSWER Dir. 9360.8-11), February 1997; and EPA's "Guidance for Use of Coast Guard Basic Ordering Agreements for Emergency Oil Spill Response Support," February 10, 1997.

B. OSLTF CLAIMS

Section 1012(d) (1) of OPA 90 authorizes use of the fund for "payment of claims in accordance with Section 1013 for uncompensated removal costs determined by the President to be consistent with the NCP for uncompensated damages." State or local government agencies may submit claims for uncompensated removal costs, including salaries, equipment, and administrative costs directly related to a specific incident. The claimant may submit claims even if the RP is unknown. While an incident specific RRT can facilitate the process, requests to access the OSLTF through a claim are coordinated through the FOSC. To submit a claim against the OSLTF, the state or local agency must:

- Submit a detailed description of the incident including what type of material was spilled or potentially spilled; what navigable water was impacted or potentially impacted; what response actions were taken to prevent, minimize, or mitigate the spill, and whether those actions were consistent with the NCP.
- Include a detailed summary of monies spent during the response action and provide backup documentation. The removal costs must have been incurred as a result of the response actions taken to prevent, minimize, or mitigate effects of the incident.
- Submit the package to the USCG NPFC for approval. The NPFC will review the claim to determine whether the costs are reasonable and whether the actions taken were consistent with the NCP, which may include confirming that the response was an OPA 90 incident.

Additional information on claims can be found in the [NPFC's Claimant Information Guide](#).

C. STATE ACCESS TO THE OSLTF

In cases not covered under a [Pollution Removal Funding Authorization \(PRFA\)](#) issued to the state by the FOSC, states may seek reimbursement of allowable removal costs through another mechanism. In accordance with regulations in Section 1012(d) (1) of OPA, the President, upon request of the state's governor or his/her designee, may obligate the OSLTF for payment in an amount not to exceed \$250,000 for removal costs consistent with the NCP that are required for immediate removal of a discharge or mitigation or prevention of a substantial threat of discharge of oil. Requests for access to the OSLTF under this provision must be made to the FOSC. The individual requesting access to the OSLTF must:

- Indicate that the request is a state access request under 33 CFR Part 133.

- Provide the name, title, department, and state.
- Describe the incident in sufficient detail to allow a determination of jurisdiction, including the date of the incident, type of product discharged, estimated quantity of discharge, the navigable water involved, and proposed removal actions for which the funds are being requested under Part 133.
- Indicate the amount of funds requested.

Further information is available through the USCG Technical Operating Procedures (TOP) for state access under Section 1012(d) (1) of OPA, which can be accessed at [NPFC TOP](#).

D. CERCLA LOCAL GOVERNMENTS REIMBURSEMENT PROGRAM

Section 123 of CERCLA and Section 1002 (b)(2)(F) of OPA authorize EPA to reimburse local governments for some (and in rare cases, possibly all) expenses incurred during temporary emergency measures in response to hazardous substance threats or releases—if those measures were necessary to prevent or mitigate injury to human health or the environment.

This provision is meant to reduce significant financial burdens incurred by a city, county, municipality, parish, township, town, federally recognized Native American Tribe, or other local unit of government that engages in response activities required because of hazardous substance threats. Traditional local responsibilities, such as routine firefighting, are not eligible for reimbursement. States are not eligible for this program and may not request reimbursement on their own behalf or on behalf of a political subdivision within a given state (40 CFR Part 310.20). The following criteria must be met before a request for reimbursement will be considered:

- Response actions were consistent with CERCLA, NCP, and EPCRA.
- The request contains assurances that the response does not supplant local funds normally provided for such activities.
- The applicant must have first attempted to recover expenses from all known PRPs and any other possible sources of reimbursement (state funds, insurance companies, etc.). Sixty days must be allowed for the RP to respond by making payment, expressing intent to pay, or demonstrating willingness to negotiate payment.
- The request must be received by EPA within 1 year of the date the response was completed.

CERCLA limits the reimbursement to \$25,000 per single response. If several agencies or departments are involved in a response, they must determine among themselves which agency will submit the request for reimbursement. Some allowable costs may include, but are not limited to, the following:

- Disposal of materials and supplies acquired and used specifically for the related response
- Employee compensation for response work not provided in the applicant's operating budget
- Rental or leasing of equipment
- Replacement costs of equipment contaminated beyond reuse or repair
- Decontamination of equipment
- Special technical services needed for the response such as those provided by experts or specialists
- Other special services such as utilities
- Laboratory analysis costs related to the response

- Costs associated with supplies, services, and equipment procured for a specific evaluation.

A review panel will evaluate each request and will rank the requests according to financial burden. Financial burden is based on the ratio of eligible response costs to the locality's per capita income adjusted for population. If a request is not reimbursed during the review period for which it is submitted, EPA's reimbursement official has the discretion to hold the request open for 1 year for reconsideration.

An application package can be obtained by contacting the [Local Government Reimbursement \(LGR\) Program](#) or LGR Program Helpline at 1-800-431-9209. The application package contains detailed, line-by-line instructions for completing the application.

XII. STATE DISPOSAL REGULATIONS

Table 2 overviews material disposal requirements in GRSA states.

TABLE XII-XII-1: OVERVIEW OF STATE DISPOSAL REGULATIONS

Material or Disposal Method	Illinois	Kentucky	Missouri
Non-Hazardous Debris and Soil	<ul style="list-style-type: none"> Clean debris and soil must go to a permitted sanitary landfill. Debris and soil above cleanup objectives must go to special waste landfill (permits), manifesting and licensed waste hauler required. Permits expedited through Illinois EPA 	<ul style="list-style-type: none"> Permitted Contained landfill On-site treatment on a site-specific basis 	<ul style="list-style-type: none"> Go to sanitary landfill Special waste permits may be required On-site treatment on a site-specific basis
RCRA Hazardous Debris and Soil	<ul style="list-style-type: none"> Illinois has 1 RCRA landfill, several incinerators, and other RCRA treatment facilities. Permits expedited through Illinois EPA Emergency Response. 	<ul style="list-style-type: none"> Must go to a Permitted RCRA TSDF facility 	<ul style="list-style-type: none"> Must go to RCRA facility Spiller must determine if RCRA hazardous material
Open Burning	<ul style="list-style-type: none"> Allowed with Illinois EPA permission for oil production spill residues when weather threatens environmental damage. Considerations are proximity to residences, visibility on roads, and atmospheric dispersion conditions. 	<ul style="list-style-type: none"> Allowed for non-impacted vegetative debris On-site burn requires permit / approval from KDEP's Division of Air Quality 	<ul style="list-style-type: none"> A permit is required from MDNR's air program before burning can be undertaken.
Emergency Response Contractors	<ul style="list-style-type: none"> Available from Illinois EPA. 	<ul style="list-style-type: none"> KDEP ERT will assist with request 	<ul style="list-style-type: none"> MDNR duty officer will assist with request
Petroleum-Contaminated Water	<ul style="list-style-type: none"> NPDES permit required for all direct discharges, including storm sewers; local approval required for discharge to sanitary sewer. 	<ul style="list-style-type: none"> Emergency discharge authorization must be obtained from KDEP's Division of Water prior to direct discharge Local approval required for discharge to sanitary sewer 	<ul style="list-style-type: none"> Emergency discharge authorization may be granted for decanting, may go to a Publicly Owned Treatment Works (POTW) with its approval

TABLE XII 2: OVERVIEW OF STATE DISPOSAL REGULATIONS

Material or Disposal Method	Illinois	Kentucky	Missouri
Land Farming	<ul style="list-style-type: none"> Possible, but demonstration permit may be required; significant containment and monitoring required. 	<ul style="list-style-type: none"> Permit required through KYDEP Division of Waste Management Monitoring required. KPDES permit required 	<ul style="list-style-type: none"> Various remedial technologies considered on a site-specific basis NPDES permit required
Pesticides and Fertilizers	<ul style="list-style-type: none"> Recovered liquids and solids may be applied to agricultural land at label application rates; permit needed from Illinois EPA or Illinois Department of Agriculture. 	<ul style="list-style-type: none"> Recovered liquids and solids may be used as product in accordance with Kentucky Department of Agriculture regulations. Application of product must be performed at label application rates. If deemed a waste then disposal must occur as a RCRA or special waste 	<ul style="list-style-type: none"> Recovered liquids and solids may be used as product in accord with Missouri Department of Agriculture regulations Waste disposed as a RCRA or special waste
Petroleum-Contaminated Soils	<ul style="list-style-type: none"> Generic permits available at some landfills; (see debris and soil and land-farming discussions). 	<ul style="list-style-type: none"> Generic permits available at some landfills (see debris and soil and land-farming discussions). Landfill disposal of crude oil waste may require profiling for Technologically Enhanced Naturally Occurring Radioactive Material (TENORM). 	<ul style="list-style-type: none"> Generic permits available at some landfills; (see debris and soil and land-farming discussions).

XIII. WORST-CASE SCENARIOS

This information is not available in the public-access version of this plan.

XIV. CORRECTIONS AND UPDATES FORM

Convey corrections, updates, or suggested additions to the GRSACP to OSC Sharon Kennedy (816-516-6641) at Kennedy.sharon@epa.gov.

Please complete the following information to effect a change in the subarea plan:

Page # of the plan: _____

Section and subsection numbers of the paragraph to be changed: _____

Other description (e.g., third sentence, in second full paragraph on page): _____

Corrections or suggested changes: _____

Address:

Sharon Kennedy
On-Scene Coordinator (OSC)
U.S. EPA – Region 7
Superfund Division
Kennedy.sharon@epa.gov
11201 Renner Blvd
Lenexa, KS 66219
816-516-6641

XV. RECORD OF CHANGE

The most current public access version of this document, including any changed pages, is available through EPA Region 7's websites at [Great Rivers Spill Coordination](#) and [Region 7 Subarea Plans](#). The following lists plan revisions made since 2012.

Change Number	Change Description	Section Number	Change Date
1	Replaced cover figure/map	Cover	July 2012
2	Added Federal On-Scene Coordinator (FOSC) Heath Smith as plan point-of-contact	Page i	July 2012
3	Moved table of contents to front of plan	Page TOC-1	July 2012
4	Updated contact information for local, state, and federal agencies	Pages ii-v	July 2012
5	Added new map of Great Rivers Subarea (GRSA)	Page ix	July 2012
6	Revised descriptions of relevant local plans	Section II	July 2012
7	Added descriptions of state agencies and their respective roles/responsibilities	Section II	July 2012
8	Revised description of Area Committees (AC) and Regional Contingency Plans (RCP); added description of Region 5 Regional Response Team (RRT); and added descriptions of Upper Mississippi River (UMR) Basin Spill Response Plan and Ohio River Umbrella Plan	Section II	July 2012
9	Revised "Rationale for Subarea Creation" to be consistent with other EPA Region 7 plans; and revised description of subarea geography and population centers	Section III	July 2012
10	Revised roles/responsibilities of local first responders, hazmat responders, state agencies, Environmental Protection Agency (EPA) Regions, and U.S. Coast Guard (USCG) units; and removed partial list of hazmat team contacts	Section IV	July 2012
11	Revised descriptions of various technical support agencies available to the FOSC and added state sources of technical support; revised and moved Natural Resource Damage Assessment (NRDA) subsection; and revised/moved subsection regarding State Historic Preservation Officers/Offices and contractors	Section IV	July 2012
12	Removed partial list of tentative staging areas within the GRSA	Section VII	July 2012
13	Revised list of acronyms and abbreviations	Appendix B	July 2012
14	Updated list of GRSA sensitive species	Appendix F	July 2012
15	Updated hyperlinks to agencies, regulations, and reference materials; and updated appendix list	Global and Appendix G	July 2012
16	Revised Corrections and Update Form	Appendix J	July 2012
17	Updated list of GRSA Risk Management Program (RMP) sites	Appendix K	July 2012
18	Updated list of GRSA Facility Response Plan (FRP) sites	Appendix L	July 2012
19	Updated list of GRSA Resource Conservation and Recovery Act (RCRA) sites	Appendix M	July 2012
20	Updated list of sensitive habitats within the GRSA	Appendix N	July 2012
21	Added new plan cover map	Cover	April 2020
22	Added "To Report a Spill" section to include spill numbers and logos for U.S. Environmental Protection Agency (EPA) regions, U.S. Coast Guard (USCG) District Commander and applicable sectors and marine safety units (MSU), and state agencies	Page ii	April 2020

Change Number	Change Description	Section Number	Change Date
23	Revised “Special Notice” to include plan’s web location and added reference to GRSA Contingency Plan (GRSACP) “Corrections and Updates Form”	Page iii	April 2020
24	Moved “Corrections and Updates Form” to front of plan for consistency with other EPA Region 7 plans	Page iv	April 2020
25	Added “Record of Change” listing most recent plan revisions; and added more complete “Record of Change” to end of plan	Page v and Appendix P	April 2020
26	Revised “sub-area” to “subarea” for consistency across EPA Region 7 plans	Global change	April 2020
27	Hyperlinked key terms, reference materials, and agency names/offices	Global change	April 2020
28	Revised description of “Initial Incident Action Plans” (IAP)	Section II.B	April 2020
29	Amended language describing local response plans and listed example hazardous materials (hazmat) response plans in place within the GRSA	Section II.C	April 2020
30	Added subsection describing state-level plans	Section II.D	April 2020
31	Revised description of ACs and RCPs; added reference to Central U.S. Earthquake Consortium; removed references to EPA Region 6 and, associated counties and agencies; and verified existing hyperlinks in plan	Section II.E and Global	April 2020
32	Revised description of Ohio River Umbrella Plan	Section II.E.2	April 2020
33	Updated description/statistics of GRSA and added reference to New Madrid Seismic Zone	Section III.B	April 2020
34	Added “Role of Hazardous Materials Responders” subsection with general description of GRSA hazmat response assets	Section IV.B.2	April 2020
35	Amended section to list agencies that administer State Emergency Response Commissions (SERC) within the GRSA; and replaced “Local Emergency Response Plans (LERP)” with “local hazmat response plans”	Section IV.B.3	April 2020
36	Added roles and responsibilities of key state agencies	Section IV.C	April 2020
37	Added references and hyperlinks to memorandum of agreement/understanding (MOA/MOU) between EPA regions; and clarified descriptions of jurisdictional boundaries between various EPA Regions	Sections IV.D1 and IV.D2	April 2020
38	Revised signatory date of EPA/USCG MOA; and listed USCG units with jurisdiction within the GRSA	Section IV.D3	April 2020
39	Revised language regarding cost recovery from responsible parties (RP)	Section IV.D4	April 2020
40	Revised description of EPA Consequence Management Advisory Team (CMAT), National Weather Service (NWS), U.S. Department of the Interior (DOI); revised description of RRTs, Area Committees (AC), and GRSA Subarea Committee; and added description of U.S. Geological Survey’s (USGS) response support capabilities	Section V, pages 2-3	April 2020
41	Added subsection describing the Great Rivers Coordination Group; moved and expanded description of NRDA into “Natural Resource Trustees” subsection; removed Appendix G (NRDA); and Appendix H (National Oceanic and Atmospheric Administration [NOAA] NRDA Regulations)	Section V, pages 4-5	April 2020

Change Number	Change Description	Section Number	Change Date
42	Added descriptions of State Natural Resource Trustees' roles/responsibilities and their respective supporting agencies	Section V, pages 5-7	April 2020
43	Added U.S. Department of Energy's (DOE) role as a Federal Natural Resource Trustee; expanded descriptions of trusteeships; and added examples of federal natural resources within the GRSA	Section V, pages 8-9	April 2020
44	Added subsections describing Tribal Natural Resource Trustees and Tribal Historic Preservation Officers; and revised subsection describing State Historic Preservation Offices/Officers	Section V, page 9	April 2020
45	Revised description of RP role/responsibilities	Section VI	April 2020
46	Added "Notification" section, including general protocols, references to contact lists in various appendices, notification to natural resource trustees, and interstate notification protocols	Section VII	April 2020
47	Removed subsection describing termination of incidents	Section VIII.E	April 2020
48	Expanded "Incident Command" (IC) section to include guidance on various types of IC structures and transition of command between structures; and added subsection describing federal preemption of incidents	Section IX	April 2020
49	Revised and reordered sections regarding Pollution Removal Funding Authorizations (PRFA), claims on The Oil Spill Liability Trust Fund (OSLTF), and state access to the OSLTF	Section XI	April 2020
50	Added table summarizing state disposal regulations	Section XII	April 2020
51	Added section describing worst-case discharge/release scenarios in the GRSA	Section XIII	April 2020
52	Added "GRSA Spill Notification Flowchart"	Appendix A	April 2020
53	Added table of State and Federal Natural Resource Trustee contacts	Appendix B	April 2020
54	Added spill notification contacts for UMR, Lower Mississippi River (LMR), and Ohio Valley	Appendix C	April 2020
55	Added table of additional state and federal contacts, including National Pollution Funds Center (NPFC), NWS offices, and downstream states	Appendix D	April 2020
56	Added table of GRSA emergency management agencies and Local Emergency Planning Committees (LEPC) contacts	Appendix E	April 2020
57	Added tables of fire department and hazmat team contacts	Appendix F	April 2020
58	Added contacts for other specialized teams and spill support organizations/agencies	Appendix G	April 2020
59	Added hyperlinked list of information and Geographic Information Systems (GIS) sources to assist GRSA planning and response	Appendix H	April 2020
60	Updated list of environmentally sensitive areas within the GRSA, to include locational information	Appendix I	April 2020
61	Replaced list of "sensitive species" with hyperlinked list of information sources for federally-listed species in the GRSA	Appendix J	April 2020
62	Updated lists of GRSA FRP sites, MTR sites, and RMP sites; and removed list of RCRA sites	Appendix K	April 2020
63	Added list of liquid and liquified petroleum gas pipelines operating within the GRSA, to include river crossings	Appendix L	April 2020
64	Added list of drinking water intakes in and downstream of the GRSA	Appendix M	April 2020
65	Updated and moved list of acronyms to back of plan	Appendix N	April 2020
66	Moved definitions to back of plan	Appendix O	April 2020

Change Number	Change Description	Section Number	Change Date
67	Added “Record of Change (Complete)” to establish a more comprehensive history of plan revisions	Appendix P	April 2020
68	Added language in indicating the GRSACP is “supplemental” to regional plans	Section I.B	May 2020
69	Removed language indicating USCG Eighth District was involved in updating RCPs in EPA Regions 4 and 5	Section II.E	May 2020
70	Added language indicating that other planning efforts (i.e., UMR Spill Response Plan) are consistent with and complimentary to the GRSACP, as indicated in the NCP	Section II.E	May 2020
71	Added additional references to the Ohio and Mississippi River miles covered by the plan	Section III.B	May 2020
72	Updated reference and link to the National Response Framework (NRF)	Section II.F	May 2020
73	Added role descriptions of Kentucky Emergency Management (KYEM) and Missouri State Emergency Management Agency (SEMA)	Section IV.C	May 2020
74	Removed reference to National Strike Force Coordination Center’s (NSFCC) role in response exercises and inspection of district response equipment	Section V, page 1	May 2020
75	Amended description of USCG District Response Group (DRG)	Section V, page 2	May 2020
76	Added language describing NOAA Scientific Support Coordinator’s (SSC) role to provide interface between USCG FOSC and scientific community	Section V, page 3	May 2020
77	Expanded description of DOI Regional Environmental Officer (REO) during a response	Section V, page 3	May 2020
78	Removed mistaken references to EPA Region 8, and South Dakota and Nebraska state agencies	Section V, page 4	May 2020
79	Added language indicating responsible parties (RP) and persons in-charge of vessels shall notify NRC of spills	Section VII, page 1	May 2020
80	Added language specifying natural resource trustees will be notified of discharges/releases affecting or potentially affecting designated critical habitats	Section VII.C	May 2020
81	Added reference to Appendix C, Spill Notification Rosters	Section VII.D	May 2020
82	Amended language clarifying cessation of daily incident updates will appear in the final update from the FOSC	Section VII.D	May 2020
83	Added language outlining differences between USCG-led and EPA-led responses	Section VIII.A	May 2020
84	Added link to USCG’s Incident Management Handbook (IMH) and ICS forms	Section IX.A	May 2020
85	Added references to Region 4 and 5 RCP/ACPs	Section IX.A	May 2020
86	Revised description of Pollution Removal Funding Authorizations (PRFA) to include USCG’s uses toward USFWS and NOAA support	Section XI.C	May 2020
87	Changed “release” to “discharge” when describing oil discharges; and changed “spill” to “release” when describing hazardous substance releases	Multiple	May 2020
88	Removed inaccurate reference to 40 CFR Part 310.30 regarding government reimbursement programs	Section XI.F	May 2020

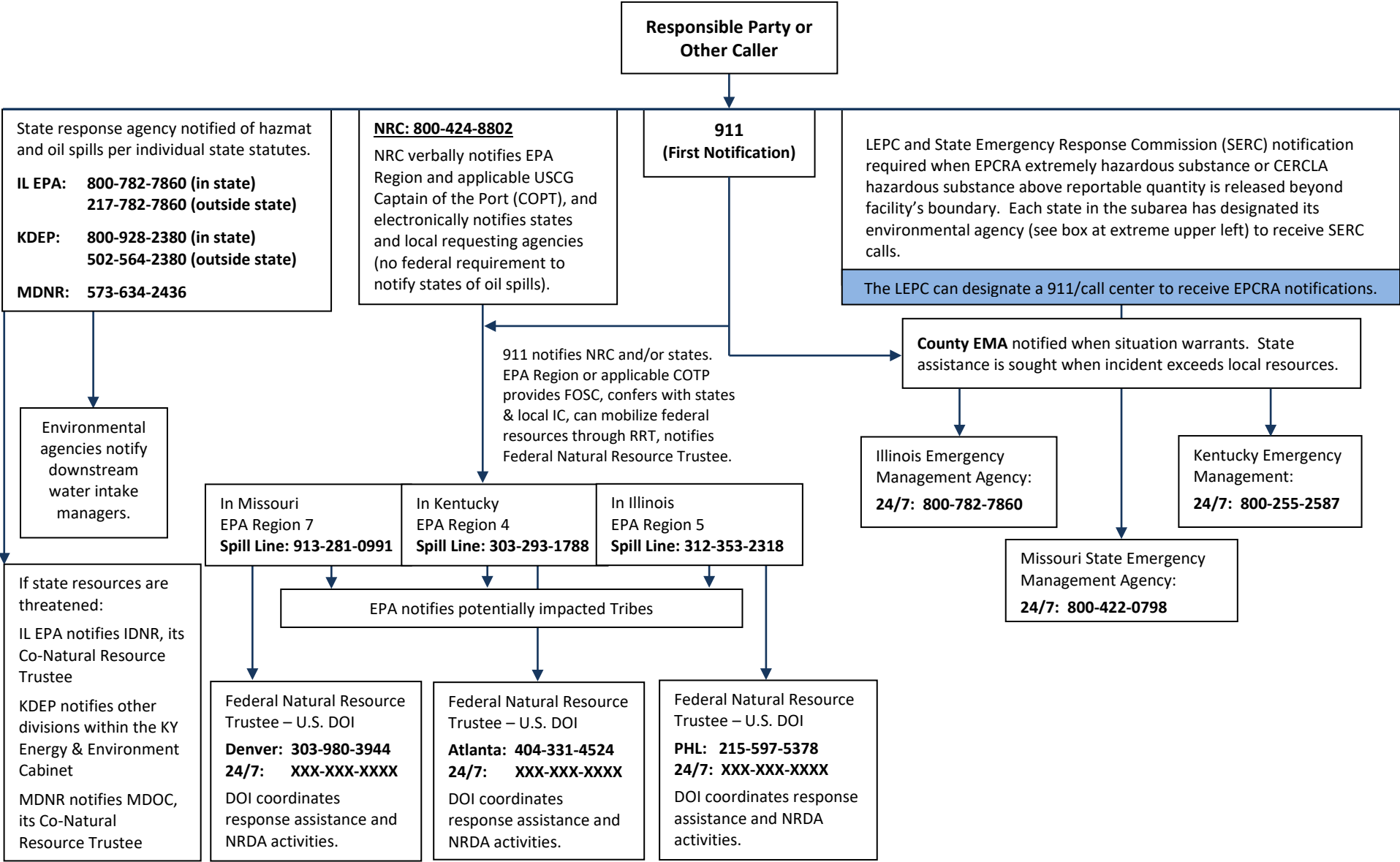
Change Number	Change Description	Section Number	Change Date
89	Revised Spill Notification Flow Chart to include NRC notification to USCG Captain of the Port (COPT) and responsibilities of the applicable EPA region or COTP	Appendix A	May 2020
90	Removed definitions of offshore facilities and deepwater ports	Appendix O	May 2020
91	Moved “Corrections and Updates Form” and “Record of Change” from front of plan to end of Base Plan; and created a new section for the form and the record	Sections XIV and XV	July 2020
92	Added Gallatin County to plan	Cover, Preamble, and Appendices E, F, I, and K	August 2020
93	Added footnote definitions for “spill” and “release” and replaced similar terms (i.e., discharge) accordingly	Introduction / Global change	August 2020
94	Revised description of local first responders’ responsibilities	Section IV.B	August 2020
95	Added National Response System (NRS) graphic; moved references to interregional EPA MOUs; removed description of EPA Region 4/6 boundaries; removed list of exceptions to conventional EPA Region 5/7 boundaries; revised description of FOSC responsibilities and added footnote to 40 CFR § 300.135; and removed reference to Superfund Technical Assistance and Response Team (START) personnel as responders.	Section IV.D	August 2020
96	Removed paragraph describing establishment and make-up of the GRSA Committee	Section V, page 5	August 2020
97	Removed subsections describing “Notification Protocol”, “GRSA Notification and Emergency Contacts List”, and “Notification of Natural Resource Trustees”, and moved language in Subsection D to Introduction	Section VII Introduction, VII.A, VII.B, VII.C, and VII.D	August 2020
98	Removed descriptions and organization charts for various types of ICS structures that may be established; and moved Subsection C (Federal Preemption) to Section VIII	Section IX.A, IX.B, and IX.C	August 2020
99	Removed subsections describing federal access to the OSLTF and the use of PERFAs	Sections XI.B and XI.C	August 2020
100	Updated Minnesota airport contacts (Table J19)	Appendix J	September 2021
101	Updated Nebraska airport contacts (Table J19)	Appendix J	September 2021
102	Updated Iowa airport contacts (Table J19)	Appendix J	October 2021
103	Updated SD public info sources (Table K32)	Appendix K	September 2021
104	Updated Nebraska public info sources (Table K22)	Appendix K	September 2021
105	Updated Minnesota public sources (Table K21)	Appendix K	September 2021
106	Updated Iowa public sources (Table K20)	Appendix K	September 2021

Change Number	Change Description	Section Number	Change Date
107	Updated Air Ambulance providers (Table I17)	Appendix I	September 2021
108	Updated hospitals in subarea (Table I16)	Appendix I	September 2021
109	Updated county sheriffs phone numbers (Table H15)	Appendix H	September 2021
110	Updated specialized response teams contact (Table G11)	Appendix G	September 2021
111	Updated fire departments contacts (Table F10)	Appendix F	September 2021
112	Updated fire departments contacts (Table F9)	Appendix F	September 2021
113	Updated fire departments contacts (Table F8)	Appendix F	September 2021
114	Updated fire departments contacts (Table F7)	Appendix F	September 2021
115	Updated local emergency management contacts (Table E6)	Appendix E	September 2021
116	Updated NFPC & region 7 contacts (Table D5)	Appendix D	September 2021
117	Updated Federal agency contacts (Table C4)	Appendix C	September 2021
118	Updated natural resource trustee contacts (Table B3)	Appendix B	September 2021
119	Added Doug Ferguson as EPA Subarea Coordinator	pages iv and v	October 2021
120	Updated Minnesota Natural Resource Trustee phone number for the Minnesota Pollution Control Agency (Table B3)	Section XIII Appendix B	October 2021
121	Updated USCG 8 th District phone number for the 24-hour command center (Table C4)	Section XIII Appendix C	October 2021
122	Updated Section XI Access to Oil Spill Liability Trust Fund and CERCLA Reimbursement	Section XI	October 2021
123	Updated lists of regulated facilities	Appendix O	December 2021
124	Updated lists of liquid and liquified gas pipeline operators	Appendix P	December 2021
125	Updated Missouri River water intakes and contacts	Appendix Q	December 2021
126	Updated United States Coast Guard phone number	Multiple	January 2022
127	Updated spill flowchart contacts	Appendix A	January 2022
128	Updated EPA Coordinator of the GRSA	Page iii	November 2022
129	Linked Federal regulations to websites	Page II-1	November 2022

Change Number	Change Description	Section Number	Change Date
130	Update link to Paducah Metropolis Initial IAP	Page II-2	November 2022
131	Updated link to ESF #10 Oil and Hazardous Materials Response	Page II-3	November 2022
132	Update link to UMRBA Spill Response Plan and Resource Manual	Page II-3	November 2022
133	Linked NIMS/ICS to FEMA NIMS .pdf	Page IV-2	November 2022
134	Deleted SE MABAS designation as MABAS website no longer has map of MABAS districts	Page IV-2	November 2022
135	Added links to all EMA not hyperlinked	IV-3,4,5	November 2022
136	Updated links for RRT and NRC	IV-8	November 2022
137	Updated link for 2001 MOA EPA/USFWS under ESA	IV-9	November 2022
138	Updated post response activity links for Region 5/7	IV-10	November 2022
139	Updated NSF link to homepage	V-1	November 2022
140	Updated SUPSALV site to USN link	V-2	November 2022
141	Updated Missouri DNR Water Quality Monitoring links	V-7	December 2022
142	Updated USFWS Midwest/Southeast region link	V-8	December 2022
143	Changed text to Natural Resources Conservation Service Programs and Initiatives to better reflect USDA trustee programs.	V9	December 2022
144	Updated NHPA Section 106 link	V9	December 2022
145	Updated NHPA Section 101(d)(2)	V10	January 2023
146	Updated UMR Spill Response Plan/Manual link	VII-3	January 2023
147	Updated link to EPA Incident Management Handbook	IX-1	January 2023
148	Updated Table B3 State/Federal Natural Resource Trustees	B1-2	January 2023
149	Updated Table C4 UMR Notification Roster	C1-2	January 2023
150	Updated Table C5 LMS/Ohio Valley Notification Roster	C2-3	January 2023
151	Updated Table C6 NPFC and other GRSC State Contacts	D1	January 2023
152	Updated Table E7 GRSC Local EMA/LEPC Contacts	E1	January 2023

Change Number	Change Description	Section Number	Change Date
153	Updated Table F11 Hazmat Teams Within the GRSA	F-3	January 2023
154	Updated Appendix J: Federally Listed Species in the GRSA	Appendix J	January 2023

APPENDIX A: GREAT RIVERS SUBAREA SPILL NOTIFICATION FLOWCHART



APPENDIX B: NATURAL RESOURCE TRUSTEE CONTACTS

Table BXV-1: STATE AND FEDERAL NATURAL RESOURCE TRUSTEES

U.S. Department of the Interior (DOI)		
Migratory birds, threatened and endangered species, archaeological/historical sites in park and wildlife refuge system units, public lands, Native American Indian allotments/trust, national parks and preserves, national historic sites, national monuments, national wildlife refuges, public lands, national recreation areas, national fish hatcheries, and Bureau of Reclamation reservoirs and dams.		
24-hour	John V. Nelson, DOI Regional Environmental Officer – Philadelphia Region4 (includes IL)	xxx-xxx-xxxx
Business Hours	John V. Nelson	215-266-5155 john_nelson@ios.doi.gov
24-hour	Joyce Stanley, DOI Regional Environmental Officer – Atlanta Region (includes KY)	xxx-xxx-xxxx
Business Hours	Joyce Stanley	404-331-4524 joyce_stanley@ios.doi.gov
24-hour	Courtney Hoover, DOI Regional Environmental Officer – Denver Region (includes MO)	xxx-xxx-xxxx
Business Hours	Courtney Hoover	303-980-3944 courtney_hoover@ios.doi.gov
U.S. Department of Agriculture (USDA), Forest Service		
National forest, wilderness areas, wildlife within USDA-controlled forests, archaeological sites, etc.		
Primary	Travis Haas (IL)	414-297-1546 travis.j.haas@usda.gov
Alternate	Gene Deener (IL)	224-337-2930 eugene.deener@usda.gov
Primary	Wallace Dillon (KY)	404-347-3849 wdillon@fs.fed.us
Alternate	Paul Gellerstedt (KY)	404-347-3872 pgellerstedt@fs.fed.us
Primary	Kurt Muenchow (MO)	303-275-5201 kmuenchow@fs.fed.us
Alternate	John LaCoste (MO)	573-261-9447 John.lacoste@usda.gov
Department of Defense		
Military bases and reservations, and U.S. Army Corps of Engineers (USACE) reservoirs and dams		
Primary	Alan Kersnick (IL)	757-341-0449 alan.kersnick@navy.mil
Primary	Joaquin Cardenas (KY)	404-562-5155 joaquin.a.cardenas@usace.army.mil
Primary	Jonathan Carlisle (MO)	816-308-6250 jonathan.m.carlisle@usace.army.mil
U.S. Department of Energy (DOE)		
DOE facilities and surrounding lands		
Primary	Steven Bettenhausen (IL)	630-252-9503 / 630-669-7604 sbettenhausen@anl.gov
Primary	Christina T. Edwards (KY)	803-952-6613 xxx-xxx-xxxx (DOE HQ EOC) christina.edwards@nnsa.srs.gov

Table BXV-1: STATE AND FEDERAL NATURAL RESOURCE TRUSTEES

Primary	Sybil Chandler, Primary (MO)	816-488-3417 sybil.chandler@nnsa.doe.gov
Alternate	Jessy Innocent (MO)	816-488-4261 jessy.innocent@nnsa.doe.gov
Illinois Natural Resource Co-Trustee		
Agency	Illinois Environmental Protection Agency	217-524-5027
24-hour	State Spill Line	217-782-7860
Email	Tony Falconio	Tony.falconio@illinois.gov
Local Office	Rock Island Field Office	309-794-3598
Other	Illinois Emergency Management Agency	217-782-2700 / 800-782-7860
Illinois Natural Resource Co-Trustee		
Agency	Illinois Department of Natural Resources	217-785-0075
24-hour	State Spill Line	217-782-7860
Email	Contaminant Assessment Section	beth.whetsell@illinois.gov
Local Office	Law Enforcement South Zone	marc.folden@illinois.gov
Other	Illinois Emergency Management Agency	217-782-2700 / 800-782-7860
Kentucky Natural Resource Trustee		
Agency	Kentucky Department for Environmental Protection	502-564-6360
24-hour	State Spill Line	217-782-7860
Email	James McCloud	james.mccloud@ky.gov
Local Office	Paducah Regional Office	270-898-8468
Missouri Natural Resources Trustee		
Agency	Missouri Department of Natural Resources	573-526-3315
24-hour	Missouri Department of Natural Resources	573-634-2436
Email	Sean Counihan	sean.counihan@dnr.mo.gov

Notes: USFWS contact numbers should be used only to report, or consult on, a spill that has already been reported to the NRC hotline (800-424-8802). Discussions with USFWS personnel do not constitute Natural Resource Trustee notification under OPA, CERCLA, or the NCP.

Contact information for Tribal Historic Preservation Officers (THPO) is available at the [National Association of THPOs website](#).

Contact information for State Historic Preservation Officers (SHPO) is available at the [National Conference of SHPOs website](#).

APPENDIX C: PRIMARY SPILL NOTIFICATION CONTACTS

TABLE CXV-2: UMR NOTIFICATION ROSTER – PRIMARY CONTACTS

Illinois		
Coordinating Agency	Illinois Environmental Protection Agency Office of Emergency Response	217-782-3637
24-hour	Illinois Emergency Management Agency	217-782-7860
Email	Tony Falconio	tony.falconio@illinois.gov
Iowa		
Coordinating Agency	Iowa Department of Natural Resources	515-725-8694
24-hour	Iowa Department of Natural Resources	515-725-8694
Email	Kurt Levetzow	kurt.levetzow@dnr.iowa.gov
Minnesota		
Coordinating Agency	Minnesota Pollution Control Agency Emergency Response Team	651-757-2161
24-hour	Minnesota Department of Public Safety	1-800-422-0798 or 651-649-5451
Email	Mike Rose	mike.rose@state.mn.us
Missouri		
Coordinating Agency	Missouri Department of Natural Resources	573-526-3315
24-hour	Missouri Department of Natural Resources	573-634-2436
Email	Sean Counihan	sean.counihan@dnr.mo.gov
Wisconsin		
Coordinating Agency	Wisconsin Department of Natural Resources	800-943-0003
24-hour	Wisconsin Emergency Management	800-943-0003
Email	Jason Schrank	jayson.schrank@wisconsin.gov
National Response Center - Washington, D.C.		
Business Hours	National Response Center	1-800-424-8802
24-hour	National Response Center	1-800-424-8802
Online Form	National Response Center	https://nrc.uscg.mil
U.S. Department of the Army, Army Corps of Engineers - Vicksburg, MS		
Business Hours	Mississippi Valley Division, Operations Chief	601-634-5866, Patrick Chambers – office
24-hour	Mississippi Valley Division, Operations Chief	xxx-xxx-xxxx, Patrick Chambers - cell
U.S. Environmental Protection Agency - Region 5, Chicago		
Coordinating Office	Emergency and Enforcement Response Branch	312-353-2318
24-hour	Emergency and Enforcement Response Branch	312-353-2318
U.S. Environmental Protection Agency - Region 7, Kansas City		
Coordinating Office	Emergency Response Program	913-281-0991

TABLE CXV-2: UMR NOTIFICATION ROSTER – PRIMARY CONTACTS

24-hour	Emergency Response Program	913-281-0991
U.S. Coast Guard – Sector UMR - St. Louis, MO		
Business Hours	Sector UMR	314-269-2500
24-hour	Sector UMR	1-866-360-3386 or 314-269-2332
Department of the Interior Regional Offices		
Coordinating Office / 24-hour	DOI Regional Environmental Officer for Region V (includes IL, MN, and WI)	xxx-xxx-xxxx
	DOI Regional Environmental Officer for Region VII (includes IA and MO)	xxx-xxx-xxxx

Contact information for Tribal Historic Preservation Officers (THPO) is available at the [National Association of THPOs website](#).

Contact information for State Historic Preservation Officers (SHPO) is available at the [National Conference of SHPOs website](#).

TABLE CXV-3: LMR AND OHIO VALLEY NOTIFICATION ROSTER – PRIMARY CONTACTS

Illinois		
Coordinating Agency	Illinois Environmental Protection Agency Office of Emergency Response	217-782-3637
24-hour	Illinois Emergency Management Agency	217-782-7860
Email	Tony Falconio	tony.falconio@illinois.gov
Kentucky		
Coordinating Agency	Kentucky Dept. for Environmental Protection	502-782-6360
24-hour	Kentucky Dept. for Environmental Protection	800-928-2380 (in state) 502-564-2380 (outside state)
Email	Robert Francis	robert.francis@ky.gov
Missouri		
Coordinating Agency	Missouri Department of Natural Resources	573-526-3315
24-hour	Missouri Department of Natural Resources	573-634-2436
Email	Sean Counihan	sean.counihan@dnr.mo.gov
National Response Center - Washington, D.C.		
Business Hours	National Response Center	1-800-424-8802
24-hour	National Response Center	1-800-424-8802
Online Form	National Response Center	https://nrc.uscg.mil
U.S. Department of the Army, Army Corps of Engineers - Vicksburg, MS		
Business Hours	Mississippi Valley Division, Operations Chief	601-634-5866, Dennis Norris - office
24-hour	Mississippi Valley Division, Operations Chief	xxx-xxx-xxxx, Dennis Norris - cell

TABLE CXV-3: LMR AND OHIO VALLEY NOTIFICATION ROSTER – PRIMARY CONTACTS

U.S. Environmental Protection Agency - Region 4, Atlanta		
Coordinating Office	Emergency Response	404-562-8700
24-hour	Emergency Response	404-562-8700
U.S. Environmental Protection Agency - Region 5, Chicago		
Coordinating Office	Emergency and Enforcement Response Branch	312-353-2318
24-hour	Emergency and Enforcement Response Branch	312-353-2318
U.S. Environmental Protection Agency - Region 7, Kansas City		
Coordinating Office	Emergency Response Program	913-281-0991
24-hour	Emergency Response Program	913-281-0991
U.S. Coast Guard - Sector LMR – Memphis		
Business Hours	Sector LMR	901-521-4804
24-hour	Sector LMR	901-521-4804 or 866-777-2784
U.S. Coast Guard - Sector Ohio Valley, Louisville, KY		
Business Hours	Sector Ohio Valley	502-779-5422/5424
24-hour	Sector Ohio Valley	800-253-7465
U.S. Coast Guard - Marine Safety Unit Paducah, Paducah KY		
Business Hours	Marine Safety Unit	270-442-1621
24-hour	Sector Ohio Valley	1-800-253-7465
Department of the Interior Regional Offices		
Coordinating Office / 24-hour	Regional Environmental Officer for Region 4 (includes KY)	404-909-0537
	Regional Environmental Officer for Region 5 (includes IL)	215-266-5155
	Regional Environmental Officer for Region 7 (includes MO)	303-478-3373

Contact information for Tribal Historic Preservation Officers (THPO) is available at the [National Association of THPOs website](#).

Contact information for State Historic Preservation Officers (SHPO) is available at the [National Conference of SHPOs website](#).

APPENDIX D: ADDITIONAL STATE AND FEDERAL CONTACTS

TABLE DXV-4: NPFC AND OTHER GRSA STATE CONTACTS

National Pollution Funds Center – Arlington, VA		
Business Hours	National Pollution Funds Center	703-872-6003
24-hour	NPFC Command Duty Officer	202-494-9118
Business Hours	Team 1 (includes MO)	202-795-6092 – Regional Manager 202-795-6092/6078/6077 – Case Officers
Business Hours	Team 2 (includes KY)	202-795-6069 – Regional Manager 202-795-6079/6075/6074 – Case Officers
Business Hours	Team 4 (includes IL)	202-795-6088 – Regional Manager 202-795-6080/6082 – Case Officers
Tennessee Department of Environment and Conservation – Nashville, TN		
Business Hours	Tennessee Department of Environment and Conservation	615-532-0109
24-hour	State Spill Line	800-262-3300
Business & Email	Barry Brawley, Director	615-741-8959 / xxx-xxx-xxxx (cell) barry.brawley@tn.gov
Other	Michael Rinehart, Tennessee Emergency Management Agency, Bureau of Response	615-741-0001 / 800-258-3300 (24-hour) michael.rinehart@tn.gov
Arkansas Department of Environmental Quality – North Little Rock, Arkansas		
Business Hours	Arkansas Department of Environmental Quality	501-682-0744 / 888-233-0326
24-hour	State Spill Line	800-322-4012
Business & Email	Christopher Krou, Compliance Inspections and Enforcement, Branch Manager	501-682-0877 krou@adeq.state.ar.us
Other	Arkansas Department of Emergency Management	800-322-4012
National Weather Service Forecast Offices		
24-hour (Unlisted Numbers)	Minneapolis, Minnesota	xxx-xxx-xxxx
	Milwaukee, Wisconsin	xxx-xxx-xxxx
	Davenport, Iowa	xxx-xxx-xxxx
	Des Moines, Iowa	xxx-xxx-xxxx
	Chicago, Illinois	xxx-xxx-xxxx
	West Paducah, Kentucky	xxx-xxx-xxxx
	St. Louis, Missouri	xxx-xxx-xxxx
24-hour	North Central River Forecast Center	xxx-xxx-xxxx /
	Lower Mississippi River Forecast Center	xxx-xxx-xxxx /
	Ohio River Forecast Center	xxx-xxx-xxxx

APPENDIX E: LOCAL EMERGENCY MANAGEMENT AGENCY AND LEPC CONTACTS**TABLE EXV-5: GREAT RIVERS SUBAREA LOCAL EMERGENCY MANAGEMENT AGENCY AND LEPC CONTACTS**

Agency	Emergency Manager	Office Number	Email
Illinois – Local Emergency Management Agencies and LEPC Chairs			
Alexander County	Mike Turner	618-306-3282	www.alexandercountyil.com/contact-us.html
Gallatin County	Steve Galt	618-269-3040/4288	gallatincountyema@gmail.com
Hardin County	Dustin Dahmer	618-499-5673	info@hardincountyil.org
Jackson County	Orval Rowe	618-687-4387	jacksoncountyema@gmail.com
Massac County	Brian Horn	618-524-2002	massacesda@djklinc.net
Pope County	Chris Hahn	618-683-4321	popeso@shawneelink.net
Pulaski County	Kenneth Kerley	618-748-9437	pulaski_co_il_esda@mail.com
Randolph County	Mike Hoelscher	618-826-5000/ext 227	mdlh83@outlook.com
Union County	Dana Pearson	618-833-7200	dpearson@unioncountyil.gov
Kentucky – Local Emergency Management Agencies and LEPC Chairs			
Ballard County	Travis Holder	270-665-9928	ballardoem@brtc.net
Carlisle County	Joshua Glover	270-628-0147	carlisle911@windstream.net
Crittenden County	David Travis	270-965-5251	crittendencosheriff@gmail.com
Fulton County	J L Atwill	270-236-3480	fcoem@bellsouth.net
Hickman County	Justin Jackson	270-653-4369	jjackson.hcoem@gmail.com
Livingston County	Brent Stringer	270-928-3177	lcoem2011@gmail.com
Marshall County	Carl Curtner	270-527-4739	curt.curtner@marshallcountky.gov
McCracken County	Jerome Mansfield	270-442-9163	jmansfield@mccrackenky.com
Missouri – Local Emergency Management Agencies and Local Emergency Planning Districts (LEPD) Chairs			
Cape Girardeau County / SEMO Regional LEPD	Mark Winkler / Sam Herndon	573-204-0911/ 573-783-2747	mawinkler@capecounty.us / Saherndon@capecounty.us
Mississippi County / Bootheel LEPD	Danny Harris / Jeff Riddle	573-683-2111 / 573-820-2020	dannyharris76@yahoo.com / kfd@cglw.net
New Madrid County / Bootheel LEPD	George DeLisle / Jeff Riddle	573-391-0800 / 573-820-2020	Gdelisle@new-madrid.mo.us / kfd@cglw.net
Perry County / SEMO Regional LEPD	Tom Grayson / Sam Herndon	573-547-4000 / 573-783-2747	tgrayson@perrycountymo.us / Saherndon@capecounty.us
Scott County / Bootheel LEPD	Trey Hardy / Jeff Riddle	573-545-3549 / 573-820-2020	ema@scottcountymo.com / kfd@cglw.net
Ste. Genevieve County / SEMO Regional LEPD	Felix Meyer/ Sam Herndon	573-883-3866 573-783-2747	fmeyer@stegencounty.org / Saherndon@capecounty.us

APPENDIX F: FIRE DEPARTMENTS / HAZMAT TEAMS WITHIN THE GREAT RIVERS SUBAREA**TABLE FXV-6: FIRE DEPARTMENTS WITHIN THE GRSA - ILLINOIS**

Alexander County		Jackson County			
Cairo Auxiliary FD	618-734-2211	Ava Volunteer FD	618-426-3641	Elkville FD	618-568-1341
Cairo FD	618-734-1947	City of Carbondale FD	618-457-3234	Fountain Bluff Fire Protection Area	618-763-4240
McClure E. Cape Girardeau FPD	618-661-1199	Campbell Hill Volunteer FD	618-426-3012	Gorham FD	618-565-2557
Horseshoe Lake FD	618-776-5175	Carbondale Township FD	618-549-4621	Tower Rock FPD	618-565-2400
Tamms Volunteer FD	618-747-2321	Makanda Township FD	618-549-0231	Murphysboro FD	618-684-3991
Thebes Volunteer FD	618-764-2231	DeSoto Township FPD	618-867-2315	Murphysboro Pomona Somerset FPD	618-687-1344
		Dowell Volunteer FD	618-568-1513	Vergennes FD	618-684-2211
Hardin County		Masaac County		Pope County	
Cave in Rock FD	618-289-3238	Brookport FD	618-564-3928	Golconda FD	618-683-3341
Elizabethtown FD	618-287-2191	Joppa FD	618-543-7320	Rural Pope County FPD	618-683-9525
		Massac County FPD	618-524-8612		
		Metropolis City FD	618-524-2121		
Gallatin County		Randolph County			
Equality FD	618-276-4248	Baldwin Community FPD	618-785-2520	Percy Volunteer FD	618-497-8242
New Haven	618-265-3304	Chester FD	618-826-1516	Prairie du Rocher Com. FD	618-284-7141
Omaha Volunteer FD	618-962-3145	Coulterville FPD	618-758-2221	Red Bud FD	618-282-2358
Ridgway FD	618-272-3341	Ellis Grove Volunteer FD	618-859-3473	Sparta FD	618-443-2917
Shawneetown FD	618-269-4203	Evansville FD	618-853-2613	Steelville FD	618-965-9251
Village of Old Shawneetown	618-269-3415			Tilden FD	618-587-2351
Pulaski County		Union County			
Karnak FD	618-634-2223	Anna FD	618-833-2231		
New Grand Chain Volunteer FD	911	Cobden Volunteer FD	618-893-2425		
Mound City FD	618-748-9695	Dongola Auxillary FD	618-827-3420		
Mounds FD	618-745-9516	Jonesboro FD	618-833-9590		
Olmstead FD	618-742-6486	Ware-Wolflake FPD	618-833-9501		
Ullin Volunteer FD	618-845-3612				

TABLE FXV-7: FIRE DEPARTMENTS WITHIN THE GRSA - KENTUCKY

Ballard County				Carlisle County	
Bandana FD	270-224-2045	LaCenter FD	270-665-9123	Bardwell FD	270-628-5472
Barlow City Volunteer FD	270-334-3641	LaCenter Rural FD	270-665-8300	Cunningham Volunteer FD	270-642-2141
Barlow Rural FD	270-334-3746	Lovellsville Volunteer FD	270-876-7001	Milburn Volunteer FD	270-694-3207
Blandville Rural Volunteer FD	270-876-7878	Kevil Rural FD	270-462-3104		
Crittenden County		Fulton County		Hickman County	
Crittenden County FD	270-965-0315	Cayve Volunteer FD	270-838-6881	Hickman County F&R	270-653-4681
Marion FD	270-965-0018	Fulton FD	270-472-1422	Columbus Volunteer FD	270-677-4034
Mattoon VFD	270-965-4550	Hickman FD	270-236-2529		
Tolu Comm VFD	270-965-2939				
Fredonia F&R	270-545-3270				
Salem Fire Station	270-988-2200				
Sheridan Community VFD	270-965-3253				
Livingston County		Marshall County		McCracken County	
Burna Community FD	270-988-2277	Aurora Ross FD	270-474-3056	Concord FPD	270-442-2496
Grand Lakes FD	270-928-3175	Aurora Ross Fire District	270-354-6900	Concord FPD Station 2	
Ledbetter FD	270-898-6838	Benton FD	270-527-3957	Hendron FD	270-554-5306
Salem Community VFD	270-988-2200	Briensburg FPD	270-527-2113	Lone Oak FD	270-554-5843
Smithland FD	270-928-3559	Calvert City FD	270-395-4809	Paducah FD	270-444-8521
		East Marshall FD	270-362-8532	Paducah Airport FD	270-744-0521
		Elva New Harmony Oak Level FD	270-851-4000	Reidland Farley FD	270-898-3191
				US Enrichment Corp Paducah	
		Gilbertsville FD	270-362-7061	FD	270-441-6031
		Harvey Brewers FD	270-529-7770	West McCracken FD	270-488-3112
		Possum Trot Sharpe FPD	270-898-6230		

TABLE FXV-8: FIRE DEPARTMENTS WITHIN THE GRSA - MISSOURI

Cape Girardeau County				Mississippi County	
Cape Girardeau FD	573-339-6330	Millersville Rural FPD Station 1	573-243-1660	Anniston Volunteer FD	573-649-5097
East County FPD	573-334-9981	Millersville Rural FPD	573-243-1660	Charleston Dept. Public Safety	573-683-3737
Fruitland Area FD	573-243-6565	Whitewater FPD	573-794-9059	East Prairie FD	573-649-3511
Jackson Fire Rescue	573-243-1010			Wyatt Volunteer FD	573-675-3314
New Madrid County				Perry County	
Gideon Volunteer FD	573-448-3500	New Madrid FD	573-748-2866	Biehle Community FD	573-547-3577
Lilbourn Volunteer FD	573-688-2584	Parma Volunteer FD	573-357-2006	Frohna Altenburg FD	573-824-5398
Marston Volunteer FD	573-643-2416	Portageville Rural FD	573-379-5445	Perryville FD	573-547-2200
Mathews Volunteer FD	573-471-3802	Risco Rural FD	573-396-5650	Perryville FD Station 2	
Morehouse Volunteer F&R	573-667-5251				
Scott County				Sainte Genevieve County	
Benton FD	573-545-3558	Oran FPD	573-262-2216	Ste. Genevieve FD	573) 883-5321
Miner FD	573-471-7653	Scott City FPD	573-264-2126	Bloomsdale FD	573) 483-2611
Morley Volunteer FD	573-262-3094	Scott County First Responders	573-703-4807	Kinsey VFD	573) 483-2409
NBC FPD	573-545-3599	Sikeston Dept. Public Safety	573-471-6200		

TABLE FXV-9: HAZMAT TEAMS WITHIN THE GRSA

Missouri Hazmat Teams	Number	Team Contact
Region E Homeland Security Response Team (HSRT) – Jackson, Sikeston, and Cape Girardeau – Type II Sikeston, MO	573-243-1010 xxx-xxx-xxxx (cell)	Shawn Mitchell smitchell@jacksonfire.org
Ozark Regional HSRT – (Decon Team) Poplar Bluff, MO	573-785-6049 xxx-xxx-xxxx (cell)	Bob Fredwell bfredwell@imsinternet.net
Illinois Hazmat Teams		
Illinois Mutual Aid Box Alarm System (MABAS) Hazmat Teams	Hazmat Team Locations Map MABAS Divisions and Operations Chief Contacts	
Kentucky Hazmat Teams		
Information To Be Added		

APPENDIX G: OTHER TECHNICAL SUPPORT RESOURCES

This information is not available in the public-access version of this plan.

APPENDIX H: WEB MAP APPLICATIONS AND RIVER NAVIGATION AIDS

The following information sources and geographic information systems (GIS) applications are available to assist GRSA planning and response activities:

[Mississippi River and Great Rivers Subarea](#) Web Map Application (login required, map link at bottom of webpage) is a custom GIS web mapping application developed to assist subarea stakeholders with hazard identification, vulnerability analysis, and risk assessment. The application uses the JAVA Web AppBuilder for ArcGIS platform to support GIS data display and customizable widgets such as Query, Trace Downstream, Situational Awareness, Emergency Response Guidebook, and Incident Report. The application is comprised of multiple data sets from local, state, and federal governments.

Note: In May 2020, a single web map application was developed that combines GRSA and Greater St. Louis Subarea jurisdictions into a single application.

[Upper Mississippi River Navigation Charts](#) cover the river from the head of navigation at river mile 866 in Minneapolis, Minnesota to the confluence with the Ohio River at Cairo, Illinois.

[Ohio River Charts](#) cover the river from Cairo, Illinois to Smithland, Kentucky within the GRSA, with additional charts extending upstream to Markland Locks Bridge at river mile 531.5.

[2015 Mississippi River Navigation Chart Folio, 63rd Addition](#) covers the Lower Mississippi River from Cairo, Illinois to the Gulf of Mexico. The site provides downloadable navigation charts and an online mapping application to browse and display static navigation charts.

APPENDIX I: ENVIRONMENTALLY SENSITIVE AREAS

TABLE IXV-10: ENVIRONMENTALLY SENSITIVE AREAS – ILLINOIS

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid) / Other Locational Notes
Devil's Island	Other State Land	Habitat or Species Management Area (H/SMA)	Alexander	Mississippi River	37.329746, -89.448185
Horseshoe Forest	Private Institution-Managed for Biodiversity	Protective Management Area (PMA)	Alexander	Mississippi River	3 37.117892, -89.337855
Brown's Bar	Private Institution-Managed for Biodiversity	PMA	Alexander	Mississippi River	37.306758, -89.020262 / Part of Cache River Lands
Horseshoe Lake Nature Preserve	Other State Land	PMA	Alexander	Mississippi River	37.121863, -89.341528
Cape Bend	Other State Land	H/SMA	Alexander	Not Applicable	37.144, -88.712
Bumgard Island	Private Institution-Managed for Biodiversity	PMA	Alexander	Mississippi River	37.042477, -89.362482
Burnham Island	Private Institution-Managed for Biodiversity	PMA	Alexander	Mississippi River	37.144, -88.712
Burke Branch	U.S. Forest Service (USFS)	PMA	Alexander	Mississippi River	37.140506, -89.412072 / Island on Mississippi River
Ozark Hill Prairies	USFS	PMA	Alexander	Mississippi River	37.482306, -88.627198 / Nearest town is Eddyville, IL
Horseshoe Lake State Conservation Area	Private Institution-Managed for Biodiversity	PMA	Alexander	Mississippi River	37.258254, -88.846589
Thebes Area	Private Institution-Managed for Biodiversity	PMA	Alexander	Mississippi River	37.276, -88.849
Buttonland Swamp Diehl Property Natural Heritage Landmark	Private Institution-Managed for Biodiversity	Historic / Cultural Area	Alexander	Mississippi River	37.219612, -89.460183
Gale North Geological Area	USFS	PMA	Alexander	Mississippi River	37.246650, -89.444977
Clear Creek	USFS	PMA	Alexander	Mississippi River	37.322171, -89.420031
Opossum Trot Trail	USFS	PMA	Alexander	Ohio River	37.524691, -89.315916
Gale Geological Area	Private Institution-Managed for Biodiversity	PMA	Alexander	Mississippi River	37.412950, -89.154005
Black Powder Hollow Geological Area	Private Institution-Managed for Biodiversity	PMA	Alexander	Mississippi River	37.853783, -89.231176
Horseshoe Lake Botanical Area	Private Institution-Managed for Biodiversity	PMA	Alexander	Mississippi River	37.273132, -88.860491

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid) / Other Locational Notes
South Tamms Marsh	Private Institution-Managed for Biodiversity	PMA	Alexander	Ohio River	37.969648, -89.667432
Unity Area	Private Institution-Managed for Biodiversity	PMA	Alexander	Mississippi River	37.231559, -88.762329
Cypress Creek WMA	U.S. Fish and Wildlife Service (USFWS)	WMA	Alexander & Pulaski	Not Applicable	37.719506, -89.021221
Shawnee National Forest	USFS	National Forest / National Grassland	Gallatin	Not Applicable	37.491481, -88.903517 / Lies between Mississippi and Ohio Rivers in southern Illinois.
Saline Co. State Fish and Wildlife Area	IDNR	WMA	Gallatin	Glen Jones Lake; Saline River	37.718338, -88.367050 / Extends east into Gallatin Co.
Garden of The Gods Wilderness NWA	USFS	Wilderness Area	Gallatin & Pope	Ohio River	37.605412 -88.369282 / Small portion in SW corner of Gallatin Co.
Zebra Mussel Habitat	USFS	Sensitive Habitat	Gallatin	Saline River	37.703700, -88.286400 / Saline River in Shawnee National Forest, 9 mi W Shawneetown, at Rt. 1 bridge
Zebra Mussel Habitat	USFWS	Sensitive Habitat	Gallatin	Ohio River	At River MMs 860.4, 859.4, 858.0, and 849.5 RDB; 854.7 LDB, and in/around Wabash Island
Cave In Rock State Park	Other State Land	State Park	Hardin	Ohio River	37.477347, -88.156361
Shawnee National Forest	USFS	National Forest / National Grassland	Hardin	Ohio River	37.491481, -88.903517 / Lies between Mississippi and Ohio Rivers in southern Illinois.
Lafarge Barker Bluff Land and Water Reserve	Other State Land	PMA	Hardin	Ohio River	37.554226, -88.110578
Lafarge Limestone Glade Nature Preserve	Other State Land	PMA	Hardin	Ohio River	37.515839, -88.089979
Collier Limestone Glade Nature Preserve	Other State Land	PMA	Hardin	Ohio River	37.479067, -88.104055
Trail of Tears	National Park Service	National Historic Trail	Hardin	Ohio River	37.452634, -88.291166 (location of Ohio River crossing)
Crab Orchard National Wildlife Refuge (NWR)	USFWS	Wildlife Management Area (WMA)/NWR	Jackson	Not Applicable	37.137626, -89.342864
Lovets Pond Nature Preserve	Other State Land	PMA	Jackson	Mississippi River	37.788120, -89.562561

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid) / Other Locational Notes
Clear Springs Wilderness NWA	USFS	Wilderness Area	Jackson	Mississippi River	37.551702, -88.622436 / Nearest town is Eddyville, IL
Panther Den Wilderness NWA	USFS	Wilderness Area	Jackson	Not Applicable	37.603217, -88.384534 / Spans Saline, Pope, and Hardin Counties
Bake Oven - Backbone North Geological Area	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.640348, -89.512283
Reeds Creek Canyon North	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.841037, -89.587953
Kinkaid Lake	Other State Land	H/SMA	Jackson	Mississippi River	37.802341, -89.420041
Larue - Pine Hills Research Natural Area (RNA)	USFS	RNA	Jackson	Mississippi River	37.511167, -88.609992
Little Grand Canyon - Cedar Creek	USFS	PMA	Jackson	Mississippi River	37.509024, -88.693125
Lovets Pond	Other State Land	PMA	Jackson	Mississippi River	37.579973, -89.438161
Lake Murphysboro	Other State Land	State Park	Jackson	Mississippi River	37.779317, -89.380252
Spivey's Bluff Natural Heritage Landmark	USFS	Historic / Cultural Area	Jackson	Mississippi River	37.773, -89.379
Fern Rocks Nature Preserve	Other State Land	PMA	Jackson	Not Applicable	37.198721, -89.053842
Campbell Lake Land and Water Reserve	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.890236, -89.638605
Mississippi River - Grand Tower	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.625119, -89.501563
Lake Murphysboro Hill Prairies Land And Water Reserve	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	38.701617, -90.091001
Mississippi River – Mudd's Landing	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.775564, -89.378690
Reeds Creek Canyon East	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.422134, -89.373358
Backbone South Geological Area	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.633788, -89.507450
Black Cave	USFS	PMA	Jackson	Mississippi River	37.633476, -89.507277
Fountain Bluff Geological Area	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.700178, -89.485827
Fountain Bluff North	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.700217, -89.496101
Faulkner-Franke Pioneer Railroad Prairie Nature Preserve	Private Institution-Managed for Biodiversity	PMA	Jackson	Not Applicable	37.219884, -88.903090

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid) / Other Locational Notes
Post Oak Glade	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.326527, -88.556548
Kinkaid Bluff	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	37.596292, -89.191705
Lake Murphysboro Site	Private Institution-Managed for Biodiversity	PMA	Jackson	Not Applicable	37.154529, -88.743921
Murphysboro Seep	Private Institution-Managed for Biodiversity	PMA	Jackson	Mississippi River	38.065360, -90.067855
Massac Tower Springs	USFS	PMA	Massac	Ohio River	37.145873, -88.679283
Massac Forest Nature Preserve	Other State Land	PMA	Massac	Ohio River	38.701617, -90.091001
Fort Massac	Other State Land	PMA	Massac	Ohio River	37.454239, -89.043252
Lewis Estate	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.521469, -89.022387
Fort Massac Land and Water Reserve	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.106171, -88.493999
Campbell Lake Natural Heritage Landmark	Private Institution-Managed for Biodiversity	Historic / Cultural Area	Massac	Ohio River	37.142258, -88.665108
Mermet Swamp Nature Preserve	Other State Land	PMA	Massac	Ohio River	37.618533, -89.195617
Post Creek Cutoff Site	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.614151, -88.708122
Mermet Lake Flatwoods Land and Water Reserve	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.304383, -88.923916
Sielbeck Forest Land and Water Reserve	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.229494, -88.759863
Mermet Swamp	Other State Land	PMA	Massac	Ohio River	37.246623, -88.826780
Lick Creek Geological Area	USFS	PMA	Massac	Ohio River	37.254009, -88.850288
Fort Massac State Park	Other State Land	PMA	Massac	Ohio River	37.146048, -88.710966
Halesia	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.895681, -89.819374
Poco Cemetery Barrens North	USFS	PMA	Massac	Ohio River	37.185469, -88.784327
Sielbeck Forest	Other State Land	PMA	Massac	Ohio River	37.890, -89.638
Flick Hill	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.276, -88.849
Ohio River - Hillerman	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.700359, -89.486965
Mermet Lake Flatwoods	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.272744, -88.858880

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid) / Other Locational Notes
Metropolis West Botanical Area	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.796959, -89.404553
Lino Laird Ravine	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.122600, -89.342823 / Area inside Horseshoe Lake Area
Mermet Lake East	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.387645, -89.278725
Sielbeck Forest Tract	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	38.088758, -90.099257
Halesia Nature Preserve	Private Institution-Managed for Biodiversity	PMA	Massac	Ohio River	37.125596, -89.292179
Round Pond Fee	The Nature Conservancy (TNC)	Private Conservation Land	Pope	Ohio River	37.129107, -88.476868
Larue/Trail of Tears Fee	TNC	Private Conservation Land	Pope	Ohio River	37.129718, -88.476144
Shawnee National Forest	USFS	National Forest / National Grassland	Pope	Not Applicable	37.491481, -88.903517 / Lies between Mississippi and Ohio Rivers in southern Illinois.
Bell Smith Springs	USFS	PMA	Pope	Not Applicable	37.471730, -89.252510
Big Brushy Ridge	USFS	PMA	Pope	Ohio River	37.51889, -88.656944 / Nearest town is Eddyville, IL
Bay Creek Wilderness NWA	USFS	Wilderness Area	Pope	Not Applicable	38.187365, -89.754679 / Northwest of Sparta, IL
Burden Falls Wilderness NWA	USFS	Wilderness Area	Pope	Ohio River	37.569671, -88.652566
Garden of The Gods Wilderness NWA	USFS	Wilderness Area	Pope	Ohio River	37.56333, -88.6425 / Closest town is Harrisburg IL
Lusk Creek Wilderness NWA	USFS	Wilderness Area	Pope	Ohio River	37.6175, -89.41944
Kickasola Cemetery Barrens and Seeps	USFS	PMA	Pope	Ohio River	37.592752, -89.075059
Big Grand Pierre Creek	USFS	PMA	Pope	Ohio River	37.485661, -88.436681
Jackson Hole	USFS	PMA	Pope	Ohio River	37.199650, -89.053709 / On East side of Ohio River
Jackson Hollow	USFS	PMA	Pope	Ohio River	37.067006, -89.176009 / Feeds into Ohio River
Lusk Creek Canyon	Other State Land	PMA	Pope	Ohio River	37.68028, -89.39472
Millstone Bluff	USFS	PMA	Pope	Ohio River	37.515282, -88.546852 / Canyon inside Lusk Creek Wilderness Area

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid) / Other Locational Notes
Sand Cave	USFS	PMA	Pope	Ohio River	37.533697, -89.306393 / Route inside Trail of Tears State Forest
Clear Creek Swamp	USFS	PMA	Pope	Ohio River	37.497956, -88.643318 / Cave inside of Shawnee National Forest
Big Grand Pierre Site	USFS	PMA	Pope	Ohio River	37.445667, -88.268839 / Island on Ohio River
Degognia Canyon	USFS	PMA	Pope	Ohio River	37.484406, -88.435722
Dog Creek Barrens	USFS	PMA	Pope	Not Applicable	37.454239, -89.043252
Double Branch Hole	USFS	PMA	Pope	Ohio River	37.512532, -88.591716
Gyp Williams Hollow	USFS	PMA	Pope	Ohio River	37.564487, -88.458929
Hayes Creek Sites	USFS	PMA	Pope	Ohio River	37.484888, -89.349225
Herman Hill Site	USFS	PMA	Pope	Ohio River	37.564108, -88.458974
Pine Hollow	USFS	PMA	Pope	Ohio River	37.425266, -88.424931
Cretaceous Hills	Other State Land	PMA	Pope	Ohio River	37.213438, -88.534439
Lusk Creek Canyon Nature Preserve	Other State Land	PMA	Pope	Ohio River	37.195806, -88.542031
Circle B Ranch Land and Water Reserve	Private Institution-Managed for Biodiversity	PMA	Pope	Ohio River	38.099893, -90.108237
Simmons Creek - Hurricane Hollow Area	Private Institution-Managed for Biodiversity	PMA	Pope	Ohio River	37.424423, -88.467048
Mina Gurley Crawford Woods Natural Heritage Landmark	Private Institution-Managed for Biodiversity	Historic / Cultural Area	Pope	Ohio River	37.426360, -88.467602
Round Pond	Private Institution-Managed for Biodiversity	PMA	Pope	Ohio River	37.129996, -88.475713
Lusk Creek North	USFS	PMA	Pope	Ohio River	37.512000, -88.540009
Manson Ford	USFS	PMA	Pope	Ohio River	37.528521, -88.528368
Miller Creek	USFS	PMA	Pope	Ohio River	37.450884, -88.5675479
Teal Pond	USFS	PMA	Pope	Not Applicable	37.542434, -88.642087
Brownfield Bluff	Private Institution-Managed for Biodiversity	PMA	Pope	Ohio River	37.542459, -88.642092
Robnett Creek Barrens	USFS	PMA	Pope	Ohio River	37.340473, -88.598424
Culley Barrens Land and Water Reserve	Private Institution-Managed for Biodiversity	PMA	Pope	Ohio River	37.593463, -88.551898
Reddick Hollow	USFS	PMA	Pope	Ohio River	37.594608, -88.549722
Lusk Creek	USFS	PMA	Pope	Ohio River	37.522992, -88.523397
Pleasant Valley Hill Prairie	USFS	PMA	Pope	Ohio River	37.393695, -88.525790

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid) / Other Locational Notes
Homberg Spring	Private Institution-Managed for Biodiversity	PMA	Pope	Ohio River	37.326510, -88.556765
Lower Cache River Macrosite Fee	TNC	Private Conservation Land	Pulaski	Ohio River	37.279671, -89.09591
Britten Spring	Private Institution-Managed for Biodiversity	PMA	Pulaski	Ohio River	37.130099, -89.205511
Chestnut Hills	Other State Land	PMA	Pulaski	Ohio River	37.198860, -89.053487
Cache River	Other State Land	PMA	Pulaski	Ohio River	37.796311, -89.436276 / Located East of Mississippi River
Section 8 Woods Nature Preserve	Other State Land	PMA	Pulaski	Ohio River	37.418797, -89.333637
Chestnut Hills Nature Preserve	Other State Land	PMA	Pulaski	Ohio River	37.518860, -88.540079
Olmsted Geological Area	Private Institution-Managed for Biodiversity	PMA	Pulaski	Ohio River	37.779492, -89.380176 / Just north of Big Muddy River
Sparta	Department of Defense (DOD)	Military Land	Randolph	Mississippi River	38.138682, -89.749578
Turkey Bluffs	Other State Land	H/SMA	Randolph	Not Applicable	37.884793, -89.748325 / Two miles south of Chester, IL on Hwy 3
Middle Mississippi River WMA	USFWS	WMA	Randolph	Mississippi River	37.878524, -89.904683
World Shooting Complex	Other State Land	Recreation Management Area	Randolph	Not Applicable	38.124013, -89.701961
Randolph County	Other State Land	PMA	Randolph	Mississippi River	37.583551, -89.440652 / East of Mississippi River, combined with Larue-Pine Hills Area
Riley Lake Area	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	38.060709, -89.776165
Swayne Hollow	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	37.888201, -89.649596
Demint Prairie/Prairie Du Rocher Herpetological Area	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	37.253195, -88.850456
Swayne Hollow Nature Preserve	Private Institution-Managed for Biodiversity	PMA	Randolph	Not Applicable	37.944854, -89.169328
Chester South Geological Area	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	37.883382, -89.787422
Blufftop Acres Land And Water Reserve	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	38.078207, -90.086419
Coles Mill Geological Area	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	37.452561, -89.306103
Caney Branch Glade	USFS	PMA	Randolph	Mississippi River	38.080654, -90.089253

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid) / Other Locational Notes
Prairie Du Rocher - South	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	37.176536, -89.422864
Lake Creek	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	38.004386, -89.985880
Modoc Northwest Geological Area	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	37.172088, -89.083077
Prairie of The Rock Overlook Land And Water Reserve	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	37.257947, -88.846912
Rockcastle Creek Area	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	37.787735, -89.351485
Sparta Site	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	37.226861, -89.267251
Prairie Of The Rock Nature Preserve	Private Institution-Managed for Biodiversity	PMA	Randolph	Mississippi River	38.122776, -89.701795
Piney Creek Ravine	Other State Land	PMA	Randolph and Jackson	Mississippi River	37.412950, -89.154005
Piney Creek Ravine Nature Preserve	Other State Land	PMA	Randolph/Jackson	Missouri	37.436056, -89.287061
Ozark Hill Prairie Early RNA	USFS	RNA	Union	Not Applicable	37.482580, -89.346283
Union County	Other State Land	PMA	Union	Not Applicable	37.277596, -89.089492 / Lies between Ohio and Mississippi Rivers
Atwood Ridge	USFS	RNA	Union	Mississippi River	37.420282, -89.334411
Bald Knob Wilderness National Wildlife Area (NWA)	USFS	Wilderness Area	Union	Mississippi River	37.557368, -89.376443 / Located in Illinois Shawnee Hills
Berryville Shale Glade Nature Preserve	Other State Land	PMA	Union	Mississippi River	37.451011, -89.295666
Brown Barrens Nature Preserve	Other State Land	PMA	Union	Mississippi River	37.464903, -89.296465
Spivey's Valley Glade Nature Preserve	USFS	PMA	Union	Mississippi River	37.451160, -89.293004 / Just East of Mississippi River
Badlands Geological Area	Private Institution-Managed for Biodiversity	PMA	Union	Mississippi River	37.452625, -89.306165 / Just East of Mississippi River
Larue Swamp Nature Preserve	USFS	PMA	Union	Mississippi River	37.534844, -89.440511
Trail of Tears	Other State Land	State Forest	Union	Mississippi River	37.468613, -88.6875
Route 127 South	USFS	PMA	Union	Mississippi River	36.994213, -89.277723
Guthrie Cave	Private Institution-Managed for Biodiversity	PMA	Union	Mississippi River	37.569149, -89.218813

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid) / Other Locational Notes
Giant City	Other State Land	State Park	Union	Not Applicable	37.605870, -89.185945
Cypress Pond	Private Institution-Managed for Biodiversity	PMA	Union	Mississippi River	37.521469, -89.022387 / Between Union and Johnson counties.
Guthrie Cave Land and Water Reserve	Private Institution-Managed for Biodiversity	PMA	Union	Mississippi River	37.602, -89.189
Cypress Pond Land and Water Reserve	Private Institution-Managed for Biodiversity	PMA	Union	Mississippi River	37.462555, -89.044344
Ozark Hills Nature Preserve	Other State Land	PMA	Union	Mississippi River	37.512442, -88.591723 Nearest town is Eddyville
Rich's Cave System	USFS	PMA	Union	Mississippi River	37.484172, -89.349536
Draper's Bluff	Private Institution-Managed for Biodiversity	PMA	Union	Ohio River	37.532079, -89.057780
McClure Shale Glade Nature Preserve	Other State Land	PMA	Union	Mississippi River	37.196258, -88.542121
Union County State Conservation Area	Private Institution-Managed for Biodiversity	PMA	Union	Mississippi River	37.387221, -89.363005
McClure Shale Glade	Other State Land	PMA	Union	Mississippi River	37.436494, -89.287064
Leisure City Glade	USFS	PMA	Union	Mississippi River	37.436175, -89.287090
Ren-Dill Shale Glade Nature Preserve	Private Institution-Managed for Biodiversity	PMA	Union	Mississippi River	37.449734, -89.291648
Brown Barrens	Other State Land	PMA	Union	Mississippi River	37.146118, -88.710968
Dongola Hollow Geological Area	Private Institution-Managed for Biodiversity	PMA	Union	Not Applicable	37.294289, -89.300857
Dongola North Geological Area	Private Institution-Managed for Biodiversity	PMA	Union	Not Applicable	37.412190, -89.153988
Roaring Spring Area	Private Institution-Managed for Biodiversity	PMA	Union	Mississippi River	37.246410, -89.444656
Big Grand Pierre Glade	Other State Land	State Other	Union	Mississippi River	37.378017, -89.230892
Ozark Hills	Other State Land	PMA	Union	Ohio River	37.6814394, -89.507319
Giant City State Park Geological Area	Private Institution-Managed for Biodiversity	PMA	Union	Mississippi River	37.886093, -89.429143
Weaver's Woods	Private Institution-Managed for Biodiversity	PMA	Union	Mississippi River	37.187598, -88.794216 / North of Ohio River
Clear Springs Wilderness	USFS	Wilderness Area	Union	Mississippi River	37.183182, -88.784417

TABLE IXV-11: ENVIRONMENTALLY SENSITIVE AREAS – KENTUCKY

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid)
Boatwright Wildlife Management Area (WMA)	State Fish and Wildlife	Habitat or Species Management Area (H/SMA)	Ballard	Ohio River	37.045186, -89.111050
Ballard WMA	State Fish and Wildlife	H/SMA	Ballard	Ohio River	37.060914, -89.154432
Crittenden Springs Glade	TNC	Private Conservation Land	Crittenden	Not Applicable	37.345136, -88.083318
Big Rivers	State Fish and Wildlife	H/SMA	Crittenden	Ohio River	37.411132, -88.330717
Winford WMA	State Fish and Wildlife	H/SMA	Carlisle	Mississippi River	36.932542, -89.058654
Reelfoot WMA	U.S. Forest Service (USFS)	WMA	Fulton	Mississippi River	36.515074, -89.321797
Obion Creek WMA	State Fish and Wildlife	H/SMA	Fulton	Mississippi River	36.619977, -89.114525
Columbus-Belmont State Park	State Park & Recreation	State Park	Hickman	Mississippi	36.765936, -89.110947
Mantle Rock Fee	The Nature Conservancy (TNC)	Private Conservation Land	Livingston	Ohio River	37.358691, -88.425339
Bald Knob Glade Fee	TNC	Private Conservation Land	Livingston	Ohio River	37.156312, -88.341986
Mantle Rock Easement	Private Conservation Land	Private Conservation Land	Livingston	Ohio River	37.333834, -88.439471
Newman's Bluff State Natural Area	State Cultural Affairs	Protective Management Area (PMA)	Livingston	Ohio River	37.311218, -88.444590
Livingston County WMA	State Fish and Wildlife	H/SMA	Livingston	Ohio River	37.348689, -88.449959
Cypress Creek Swamp Easement	Private Conservation Land	Private Conservation Land	Marshall	Not Applicable	36.985588, -88.310590
Clarks River National Wildlife Refuge (NWR)	U.S. Fish and Wildlife Service	WMA/NWR	Marshall	Ohio River	36.923449, -88.441446
Kentucky Dam Village SP	State Park & Recreation	State Park	Marshall	Ohio River	36.998008, -88.288930
Metropolis Lake State Nature Preserve	State Cultural Affairs	PMA	McCracken	Ohio River	37.145964, -88.768986
West Kentucky WMA	State Fish and Wildlife	H/SMA	McCracken	Ohio River	37.109722, -88.828263

TABLE IXV-12: ENVIRONMENTALLY SENSITIVE AREAS – MISSOURI

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid)
Trail of Tears State Park	Other State Land	State Park	Cape Girardeau	Mississippi River	37.470456, -89.491762
Apple Creek Conservation Area (CA)	Missouri Department of Conservation (MDC)	Protective Management Area (PMA)	Cape Girardeau	Mississippi River	37.549786, -89.561523
SW Kinkaid Route 3	U.S. Forest Service (USFS)	PMA	Cape Girardeau	Mississippi River	37.437301, -89.481488
Maintz Wildlife Preserve	MDC	PMA	Cape Girardeau	Mississippi River	37.481460, -89.796290

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid)
Vancill Hollow Nature Area	Other State Land	PMA	Cape Girardeau	Mississippi River	37.460690, -89.479180
Lake Girardeau CA	MDC	PMA	Cape Girardeau	Mississippi River	37.283341, -89.841730
Old Plantation Access	MDC	PMA	Cape Girardeau	Not Applicable	37.466822, -89.848945
Cape Woods CA	MDC	PMA	Cape Girardeau	Mississippi River	37.323762, -89.570334
Juden Creek CA	MDC	PMA	Cape Girardeau	Mississippi River	37.338640, -89.497722
Bollinger Mill State Historic Site	Other State Land	Historic / Cultural Area	Cape Girardeau	Not Applicable	37.366064, -89.803620
Red Star Access	MDC	PMA	Cape Girardeau	Mississippi River	37.315701, -89.512655
Southeast Regional Office	County Land	State Other	Cape Girardeau	Mississippi River	37.346206, -89.591018
Headwaters Access	County Land	Access Area	Cape Girardeau	Mississippi River	37.245635, -89.566043
Kelso Sanctuary Nature Area	State Land Board	PMA	Cape Girardeau	Mississippi River	37.339551, -89.502993
Block Hole Access	Private Institution- Managed for Biodiversity	Access Area	Cape Girardeau	Not Applicable	37.212873, -89.842083
Seven Island CA	MDC	PMA	Mississippi	Mississippi River	36.614480, -89.300452
Ten Mile Pond CA	MDC	PMA	Mississippi	Mississippi River	36.718590, -89.326630
Delaney (Robert G.) Lake CA	MDC	PMA	Mississippi	Mississippi River	36.957440, -89.374290
Towosahgy State Historic Site	Other State Land	Historic / Cultural Area	Mississippi	Mississippi River	36.693060, -89.235590
Big Oak Tree Nature Area	Other State Land	PMA	Mississippi	Mississippi River	36.641980, -89.291380
Seven Island Access	Private Institution- Managed for Biodiversity	Access Area	Mississippi	Mississippi River	36.591274, -89.259803
Bird's Blue Hole	Private Institution- Managed for Biodiversity	PMA	Mississippi	Mississippi River	36.962471, -89.127423
Big Oak Tree State Park	Other State Land	State Park	Mississippi	Mississippi River	36.642948, -89.297963
Dorena Access	MDC	PMA	Mississippi	Mississippi River	36.613841, -89.207918
Moore (Jos Hunter) Access	Private Institution- Managed for Biodiversity	Access Area	Mississippi	Mississippi River	36.912812, -89.122616
Thirty-Four Corner Blue Hole	Private Institution- Managed for Biodiversity	PMA	Mississippi	Mississippi River	36.773518, -89.178783
Donaldson Point Nature Area	MDC	PMA	New Madrid	Mississippi River	36.543850, -89.429402
Girvin (J. L. & G.) CA	MDC	PMA	New Madrid	Mississippi River	36.355640, -89.544600
Swift Ditch Access	MDC	PMA	New Madrid	Mississippi River	36.755940, -89.529250
Donaldson Point CA	MDC	PMA	New Madrid	Mississippi River	36.543850, -89.429400
St. John's Bayou Access	Private Institution- Managed for Biodiversity	Access Area	New Madrid	Mississippi River	36.590584, -89.511452
New Madrid Bend Access	MDC	PMA	New Madrid	Mississippi River	36.578397, -89.556016
New Madrid Forestry Office	MDC	PMA	New Madrid	Mississippi River	36.584328, -89.550527
Hunter-Dawson State Historic Site	Other State Land	Historic / Cultural Area	New Madrid	Mississippi River	36.596311, -89.523351
Seventy-Six CA	MDC	PMA	Perry	Mississippi River	37.723411, -89.623797

Location Name	Owning Organization	Habitat Type	County	Adjacent Waterway	Latitude, Longitude (Centroid)
Perry County Community Lake	MDC	PMA	Perry	Mississippi River	37.722450, -89.909760
Perry Towersite	MDC	PMA	Perry	Not Applicable	37.620621, -90.012025
Ball Mill Resurgence Nature Area	Local Land Trust	PMA	Perry	Mississippi River	37.804094, -89.889453
Tower Rock CA	MDC	PMA	Perry	Mississippi River	37.631716, -89.51509
Tower Rock Nature Area	MDC	PMA	Perry	Mississippi River	37.631690, -89.514819
Cape Lacroix Bluffs CA	MDC	PMA	Scott	Mississippi River	37.242680, -89.515020
General Watkins CA	MDC	PMA	Scott	Mississippi River	37.069890, -89.603710
Sand Prairie CA	MDC	PMA	Scott	Mississippi River	37.098130, -89.499670
Tywappity Community Lake	MDC	PMA	Scott	Mississippi River	37.190682, -89.638821
Tywappity Towersite	MDC	PMA	Scott	Mississippi River	37.194922, -89.636764
Commerce Access	MDC	PMA	Scott	Mississippi River	37.159363, -89.442962
Hawn State Park	Other State Land	State Park	Ste. Genevieve	Not Applicable	37.815776, -90.231359
Mark Twain National Forest	U.S. Forest Service	National Park	Ste. Genevieve	Not Applicable	37.723279, -90.159985
Pickle Springs Nature Area	MDC	PMA	Ste. Genevieve	Not Applicable	37.956409, -90.243982
Horton Farm CA	MDC	PMA	Ste. Genevieve	Not Applicable	38.017254, -90.176493
Hickory Canyons Nature Area	MDC	PMA	Ste. Genevieve	Not Applicable	38.068493, -90.243497
St. Mary Access	MDC	PMA	Ste. Genevieve	Mississippi River	38.014863, -90.093103
Magnolia Hollow CA	MDC	PMA	Ste. Genevieve	Mississippi River	38.069919, -90.191924

APPENDIX J: FEDERALLY-LISTED SPECIES IN THE GRSA

For an indexed inventory of Federally listed Threatened, Endangered, Proposed, and Candidate Species, see the U.S. Fish & Wildlife Service (USFWS) listing for the applicable GRSA state.

Listings for all GRSA counties, as well as specific locations within counties, can be obtained through USFWS's [Information for Planning and Consultation \(IPaC\)](#) tool.

Critical Habitats Within the GRSA. The Rabbitsfoot (*quadrula cylindrica cylindrica*), a freshwater mussel, is a threatened species. A [Critical Habitat Final Rule](#) delineating the protected domain of the rabbitsfoot was published April 2015. It is found in rivers and streams in Alabama, Arkansas, Georgia, Kansas, Kentucky, Illinois, Indiana, Louisiana, Mississippi, Missouri, Ohio, Oklahoma, Pennsylvania, Tennessee, and West Virginia. Within the GRSA, critical habitats for rabbitsfoot exist in the Ohio and Tennessee Rivers in the following areas:

- Ohio River Miles 932.5 (confluence with Tennessee River) to 964.5 (Olmstead Dam)
- Tennessee River Miles 0.0 (confluence with Ohio River) to 22.4 (Kentucky Lake Dam).

APPENDIX K: REGULATED FACILITIES**TABLE KXV-13: FACILITY RESPONSE PLAN (FRP) SITES**

Source: U.S. EPA Region FRP Database, December 2019

State	City	County	FRP Number	Facility Name	Address	Zip	Latitude	Longitude
IL	Cairo	Alexander	FRP05A0411	Bunge North America Inc	203 34th St.	62914	37.015833	-89.178055
KY	Calvert City	Marshall	FRP04KY250	TVA Marshall County Combustion Turbine Plant	6264 Industrial Pkwy	42029	37.052222	-88.65527
KY	Paducah	McCracken	FRP04KY035	Marathon Ashland Petroleum LLC	201 Ashland Rd	42003	37.028333	-88.52611
KY	Paducah	McCracken	FRP04KY110	TransMontaigne Paducah Terminal	233 Elizabeth Street	42003	37.068333	-88.588055
KY	Paducah	McCracken	FRP04KY070	Paducah Terminal Complex	1350 S 3rd St	42003	37.0750	-88.591666
KY	Paducah	McCracken	FRP04KY245	Midwest Terminal Inc	725 North 5th Street	42001	37.09250	-88.60330
KY	Paducah	McCracken	FRP04KY170	U.S. DOE Paducah Gaseous Diffusion Plant	5600 Hobbs Road	42001	37.115277	-88.76250
MO	Cape Girardeau	Cape Girardeau	FRP07A0081	Trans-Montaigne - Cape Girardeau Terminal	1400 South Giboney Street	63703	37.28528	-89.52833
MO	New Madrid	New Madrid	FRP07A0087	Heartland Asphalt Materials	297 South Hwy 61	63869	36.5788	-89.55833
MO	Scott City	Scott	FRP07A0122	Enterprise Products - Cape Girardeau District, Scott City Terminal	10653 State Hwy N	63780	37.22627	-89.48213

TABLE KXV-14: MARINE TRANSPORTATION-RELATED (MTR) SITES IN THE GRSA

Source: U.S. Coast Guard (USCG) MTR Database, March 2019

Facility Name	Material Stored	Address	County	City	State	Latitude	Longitude	COTP Zone
TransMontaigne-Cape Girardeau	Gasoline, Diesel	1400 South Giboney Street	Cape Girardeau	Cape Girardeau	MO	37.28527	-89.528333	OV*
Girardeau Stevedores	Ammonium Nitrate	107 Rushing Road	Cape Girardeau	Scott City	MO	37.24562	-89.49909	OV*
Custom Fuel Wyatt	Petroleum Products	Foot of Highway 80	Mississippi	Wyatt	MO	36.94000	-89.27500	OV*
First Missouri Terminal Corp	None	94 Airport Rd	Cape Girardeau	Scott City	MO	36.57891	-89.55382	OV*
Crop Production Services	Ammonium Thiosulfate Solution (ATS)	500 County 406	New Madrid	Marston	MO	36.53223	-89.57065	OV*
Marquis Missouri Terminals	Oils	241 Meredith Blvd.	Pemiscot	Hayti	MO	36.23587	-89.75457	LMR
Oakley Missouri	Ammonium Sulfate/Ammonium Nitrate	241 Meredith Blvd	Pemiscot	Hayti	MO	36.46587	-89.75457	LMR

- Notes:
- COTP USCG Captain of the Port
 - * Marine Safety Unit Paducah’s area of responsibility (AOR) within Sector Ohio Valley (OV)
 - LMR Sector Lower Mississippi River

TABLE KXV-15: RISK MANAGEMENT PROGRAM (RMP) SITES IN THE GRSA

Sources: EPA Region 7 RMP Database, December 2018 and EPA Facility Registry Service (FRS), May 2020

Facility Name	Address	City	County	State	Zip Code	Latitude	Longitude
Gibbs Fertilizer Service Inc,	4750 Walnut Lane	Junction	Gallatin	IL	62954	37.739444	-88.285556
Wabash Valley Service Co. - Howard Bros	11725 Shawneetown New Haven Rd.	Junction	Gallatin	IL	62954	37.744029	-88.183332
Wabash Valley Service Co. -Ridgway	1007 West Main	Ridgway	Gallatin	IL	62979	37.799011	-88.270204
Brown Fertilizer & Chemical LLC	5425 Chapman Rd	Ridgway	Gallatin	IL	62979	37.828222	-88.273697
City of New Haven	12640 Highway 141	New Haven	Gallatin	IL	62867	37.907333	-88.143361
Southern FS, Inc - Jacob Nh3 Site	8 Buffalo Lane	Jacob	Jackson	IL	62950	37.744331	-89.534281
Southern FS Inc	17950 Hwy 127	Murphysboro	Jackson	IL	62966	37.85109	-89.32116
Kinkaid Area Water System	1763 Water Plant Road	Murphysboro	Jackson	IL	62966	37.805105	-89.403927
Southern FS, Inc - Brookport NH3 Site	Route 45 South	Metropolis	Massac	IL	62960	37.159485	-88.639226
Honeywell International Inc	2768 N Us 45	Metropolis	Massac	IL	62960	37.171208	-88.75731
Southern FS Inc. Karnak Loc #73	4223 State Highway 169 East	Karnak	Pulaski	IL	62956	37.291709	-88.989436
Southern FS Inc. - Ullin/Pulaski	169 Seed Corn Rd.	Pulaski	Pulaski	IL	62976	37.243631	-89.189208
Baldwin Energy Complex	10901 Baldwin Road	Baldwin	Randolph	IL	62217	38.2050	-89.8550
Ardent Mills LLC	101 Water St.	Chester	Randolph	IL	62233	37.893292	-89.816306
Evansville, Il 473 Satellite	8290 St Leo's Road	Evansville	Randolph	IL	62242	38.11256	-89.99882
Gateway FS, Inc. Percy - Nh3	5174 Percy Road	Percy	Randolph	IL	62272	37.994799	-89.62175
Gateway FS, Inc. Pr. Durocher - NH3	6990 Bluff Road	Prairie Du Rocher	Randolph	IL	62277	38.065563	-90.068939
Gateway FS, Inc. Red Bud - NH3	201 Power St	Red Bud	Randolph	IL	62278	38.21612	-89.99536
Gateway FS, Inc. Sparta - NH3	1395 West Broadway	Sparta	Randolph	IL	62286	38.127037	-89.730889
Marissa, Il 461	11300 State Route 4	Marissa	Saint Clair	IL	62257	38.217645	-89.70326
Southern FS Inc. Jonesboro Loc. # 77	400 S Main St.	Jonesboro	Union	IL	62952	37.4483	-89.26838
Southern FS, Inc - Ware NH3 Site	Route 146 And Route 3 Junction	Wolf Lake	Union	IL	62998	37.449455	-89.396202
Crop Production Services 4024	6696 Paducah Rd	Kevil	Ballard	KY	42053	37.079589	-88.93409
La Center	475 West Kentucky Drive	La Center	Ballard	KY	42056	37.068769	-88.976913
La Center, Ky	100 Needmore Road	La Center	Ballard	KY	42056	37.14685	-88.94601
Bardwell, Satellite	2351 Us 51 N	Bardwell	Carlisle	KY	42023	36.898384	-89.025998
Speed Ag Services, LLC	345 St. Rt. 166 West	Hickman	Fulton	KY	42050	36.51570	-89.04360
Clinton	245 Gin Road	Clinton	Hickman	KY	42031	36.680194	-89.00075
Clinton, Ky 4140	750 State Route 123 West	Clinton	Hickman	KY	42031	36.657379	-89.008009

Facility Name	Address	City	County	State	Zip Code	Latitude	Longitude
Wacker Chemical Corporation, Polymers Division	854 North Main Street	Calvert City	Marshall	KY	42029	37.05288	-88.335967
Arkema Inc	4444 Industrial Pkwy	Calvert City	Marshall	KY	42029	37.04902	-88.3692
Brenntag Mid-South, Inc.	4510 Gilbertsville Road	Calvert City	Marshall	KY	42029	37.039711	-88.336564
ISP Chemicals Inc.	455 N Main St	Calvert City	Marshall	KY	42029	37.047737	-88.35866
Sekisui Specialty Chemicals America LLC	408 North Main Street	Calvert City	Marshall	KY	42029	37.043889	-88.35250
Calvert City Terminal	2337 Industrial Parkway	Calvert City	Marshall	KY	42029	37.046389	-88.330556
Airgas Merchant Gases - Calvert City	2746 Industrial Parkway	Calvert City	Marshall	KY	42029	37.046904	-88.328765
Westlake Vinyls Inc	2468 Industrial Pkwy	Calvert City	Marshall	KY	42029	37.051111	-88.334167
Westlake Vinyls, Inc - Pvc Plant	230 Johnson Riley Rd	Calvert City	Marshall	KY	42029	37.045833	-88.350556
Hardin, 662	1266 Brewers Highway	Hardin	Marshall	KY	42048	36.76470	-88.32751
Mid-America Conversion Services LLC - Depleted Uranium Hexafluoride Conversion F	5600 Hobbs Rd	Kevil	McCracken	KY	42053	37.120138	-88.811111
Tennessee Valley Authority - Shawnee Fossil Plant	7900 Metropolis Lake Rd	West Paducah	McCracken	KY	42086	37.151899	-88.777272
Biokyowa, Inc.	5469 Nash Road	Cape Girardeau	Cape Girardeau	MO	63702	37.239722	-89.600278
Cape Rock Treatment Plant #1	20 E. Cape Rock Dr.	Cape Girardeau	Cape Girardeau	MO	63701	37.327500	-89.500028
Coop Service Center	506 East Washington Street	Jackson	Cape Girardeau	MO	63755	37.381416	-89.662326
MFA Agri Service - Jackson	1770 Lee Avenue	Jackson	Cape Girardeau	MO	63755	37.366389	-89.675000
Midwest Sterilization Corporation - Jackson	1204 Lenco Avenue	Jackson	Cape Girardeau	MO	63755	37.370621	-89.686958
Southern FS Inc. - Whitewater	8759 Route A	Whitewater	Cape Girardeau	MO	63785	37.235611	-89.796332
Pinnacle Agriculture Distribution, Inc.	3468 W. Hwy 80	East Prairie	Mississippi	MO	63845	36.786396	-89.414704
New Madrid Power Plant	41 St. Jude Road	Marston	New Madrid	MO	63866	36.515833	-89.564722
Unilever Ice Cream Sikeston South	1010 County Line Road	Sikeston	New Madrid	MO	63801	36.867500	-89.558889
McBride, MO Satellite	166 Main St	McBride	Perry	MO	63776	37.831161	-89.84059
MFA Anhydrous Plant - Perryville	3501 South Hwy. 61	Perryville	Perry	MO	63775	37.696111	-89.817778
TG Missouri Corporation	2200 Platin Road	Perryville	Perry	MO	63775	37.747231	-89.868332
MFA Agri Service - Chaffee	1980 Cummins	Chaffee	Scott	MO	63740	37.191111	-89.675833
Kelso Milling Co.	1205 Main St.	Scott City	Scott	MO	63780	37.217574	-89.520932
Americold - Sikeston	2500 Rose Parkway	Sikeston	Scott	MO	63801	36.926666	-89.620555
Unilever - Sikeston One Plant	2400 Rose Parkway	Sikeston	Scott	MO	63801	36.925048	-89.619974
Sainte Genevieve, MO	23860 Bourbon Road	Ste. Genevieve	Ste. Genevieve	MO	63670	37.948690	-90.021095
MFA Agri Service Ste. Genevieve	10940 Industrial Drive	Ste. Genevieve	Ste. Genevieve	MO	63670	37.964701	-90.062015
MFA Anhydrous Plant	8970 Little Rock Road	Ste. Genevieve	Ste. Genevieve	MO	63670	37.995556	-90.051944

APPENDIX L: LIQUID AND LIQUIFIED GAS PIPELINES

TABLE LXV-16: LIQUID AND LIQUEFIED GAS PIPELINES

Source: Pipeline and Hazardous Materials Safety Administration's National Pipeline Mapping System (2019)

Owning Company	System / Subsystem Name	Product	Counties of Operation	State	River Crossing Mile Marker (MM)
Permian Express Partners LLC	District 09 - Dakotas	Crude Oil	Randolph Perry	IL MO	Mississippi River MM 107.8
Enterprise Products Operating LLC	Texas Eastern Products Pipeline Company (TEPPCO) Mainline	Liquid Petroleum Gas	Alexander, Union	IL	Mississippi River MM 46.3
			Scott	MO	
Enterprise Products Operating LLC	ATEX	Other Highly Volatile Liquids	Alexander, Union	IL	Mississippi River MM 44.7
			Scott	MO	
Marathon Pipeline LLC	Capline Pipeline	Crude Oil	Massac	IL	Ohio River MM 952.8
			McCracken, Ballard, Carlisle, Hickman, Fulton	KY	
Dakota Access Pipeline – Energy Transfer Crude Oil Pipeline (ETCOP) Operations Management, LLC	ETCOP Dyersburg Discharge	Crude Oil	McCracken, Ballard, Carlisle, Hickman, Fulton	KY	Ohio River MM 952.3
			Massac	IL	
Marathon Pipeline LLC	Beaumont – Creal Springs	Petroleum Product	Massac	IL	Ohio River MM 952.2
			McCracken, Ballard, Carlisle, Hickman, Fulton	KY	
Enterprise Products Operating LLC	TEPPCO Southern Region	Other Highly Volatile Liquids	Marshall, Livingston	KY	Ohio River MM 924.6
			Union, Massac, Pope	IL	

APPENDIX M: WATER INTAKES IN AND DOWNSTREAM OF THE GRSA
TABLE MXV-17: DRINKING WATER AND INDUSTRIAL WATER INTAKES

This information is not available in the public-access version of this plan.

APPENDIX N: ACRONYMS AND ABBREVIATIONS

§	Article or Section
A	
AC	Area Committee
ACP	Area Contingency Plan
AOR	Area of Responsibility
C	
CA	Conservation Area
CAA	Clean Air Act
CAER	Community Awareness Emergency Response
CANAPS	Ceiling and Number Assignment Processing System
CDC	Centers for Disease Control and Prevention
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COTP	Captain of the Port
CPO	Conservation Police Officer
CWA	Clean Water Act (Federal Water Pollution Control Act)
D	
DHS	Department of Homeland Security
DOC	Department of Commerce
DOD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DOT	Department of Transportation
DRAT	District Response Advisory Team
DRG	District Response Group
E	
EAS	Emergency Alert System
EER	Environmental Emergency Response Section
EMA	Emergency Management Agency
EOC	Emergency Operations Center
EOU	Emergency Operations Unit
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right To Know Act (SARA Title III)
ERRS	Emergency and Rapid Response Services (EPA contract)
ERT	Environmental Response Team
ERU	Emergency Response Unit
EOU	Emergency Operations Unit
ESA	Endangered Species Act
ESF	Emergency Support Function
F	
F&R	Fire and Rescue
FD	Fire Department

FEMA	Federal Emergency Management Agency
FOSC	Federal On-Scene Coordinator
FPD	Fire Protection District
FRP	Facility Response Plan
FRS	Facility Registry Service
FWPCA	Federal Water Pollution Control Act

G

GIS	Geographic Information System
GRSA	Great Rivers Subarea
GRSACP	Great Rivers Subarea Contingency Plan
GRP	Geographic Response Plan
GSA	General Services Administration

H

HA	Hazard Analysis
Hazmat	Hazardous Materials
HAZWOPER	Hazardous Waste Operations and Emergency Response
HASP	Health and Safety Plan
HHS	Department of Health and Human Services
HSPD	Homeland Security Presidential Directive

I

IAP	Incident Action Plan
IC	Incident Command/Commander
ICP	Integrated Contingency Plan
ICS	Incident Command System
IDNR	Illinois Department of Natural Resources
IEMA	Illinois Emergency Management Agency
IL	Illinois
Illinois EPA	Illinois Environmental Protection Agency
IMPA	(District) Incident Management and Preparedness Advisor (USCG)
IPaC	Information for Planning and Consultation
ISRRT	Incident-Specific Regional Response Team

K

KDEP	Kentucky Department for Environmental Protection
KDF&W	Kentucky Department of Fish and Wildlife
KY	Kentucky
KYEM	Kentucky Emergency Management

L

LDB	Left Descending Bank
LEOP	Local Emergency Operations Plan
LEPC	Local Emergency Planning Committee
LEPD	Local Emergency Planning District
LGR	Local Government Reimbursement
LMR	Lower Mississippi River

M

MAA	Mutual Aid Agreement
MABAS	Mutual Aid Box Alarm System (Illinois)
MDC	Missouri Department of Conservation
MDNR	Missouri Department of Natural Resources
MERC	Missouri Emergency Response Commission
MHz	Megahertz
MO	Missouri
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSU	Marine Safety Unit
MTR	Marine Transportation-Related

N

NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPFC	National Pollution Funds Center
NPS	National Park Service
NRC	National Response Center
NRDA	Natural Resource Damage Assessment
NRF	National Response Framework
NRS	National Response System
NRT	National Response Team
NSF	National Strike Force
NSFCC	National Strike Force Coordination Center
NWR	National Wildlife Reserve
NWS	National Weather Service

O

OEM	Office of Emergency Management
OER	Office of Emergency Response
OPA 90	Oil Pollution Act of 1990
OPA	Oil Pollution Act
ORSANCO	Ohio River Valley Water Sanitation Commission
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
OSLTF	Oil Spill Liability Trust Fund
OSRO	Oil Spill Removal Organization
OSWER	Office of Solid Waste and Emergency Response
OV	Ohio Valley

P

PIAT	Public Information Assist Team
PIO	Public Information Officer
PMA	Protective Management Area
POLREP	Pollution Report in Message Format
POTW	Publicly Owned Treatment Works

PPE	Personal Protective Equipment
PREP	National Preparedness for Response Exercise Program
PRFA	Pollution Removal Funding Authorization
PRP	Potentially Responsible Party

Q

QARG	Quick Action Response Guide
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R

RDB	Right Descending Bank
RCP	Regional Contingency Plan
RICP	Regional Integrated Contingency Plan (Region 7)
RCRA	Resource Conservation and Recovery Act
RERT	Radiological Emergency Response Team
RMP	Risk Management Program
RP	Responsible Party
RPM	Remedial Project Manager
RRI	Response Resource Inventory
RRT	Regional Response Team

S

SACP	Subarea Contingency Plan
SARA Title III	Title III of the Superfund Amendments and Reauthorization Act of 1986
SARA	Superfund Amendments and Reauthorization Act of 1986
SEMA	State Emergency Management Agency
SEOC	State Emergency Operations Center
SERC	State Emergency Response Commission
SHPO	State Historic Preservation Office/Officer
SMOA	Superfund Memorandum of Agreement
SONS	Spills of National Significance
SOSC	State On-Scene Coordinator
SP	State Park
SPCC	Spill Prevention Control and Countermeasures
SSC	Scientific Support Coordinator
SSO	Site Safety Officer
SSP	Site Safety Plan
START	Superfund Technical Assessment and Response Team
SUPSALV	Supervisor of Salvage, United States Navy

T

TENORM	Technologically Enhanced Naturally Occurring Radioactive Material
THPO	Tribal Historic Preservation Office
TOP	Technical Operating Procedure
TN	Tennessee
TNC	The Nature Conservancy
TVA	Tennessee Valley Authority

U

UC	Unified Command
U.S.C.	<i>United States Code</i>

UMR	Upper Mississippi River
UMRBA	Upper Mississippi River Basin Association
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service

W

WCD	Worst-case discharge
WMA	Wildlife Management Area

APPENDIX O: DEFINITIONS

Appendix O provides definitions for words or phrases that might be encountered during a response. Inclusion of definitions for various materials or treatment techniques should not be interpreted as endorsement or approval of their uses.

Activation means notification by telephone or other expeditious manner or, when required, assembly of some or all appropriate members of the RRT or NRT.

Area Committee (AC), as provided for by CWA sections 311(a)(18) and (j)(40), means the entity appointed by the President consisting of members from qualified personnel of federal, state, and local agencies with responsibilities that include preparing an area contingency plan for an area designated by the President.

Area Contingency Plan (ACP), as provided for by CWA sections 311(a)(19) and (j)(4), means the plan prepared by an AC that is developed to be implemented in conjunction with the NCP and RCP, in part to address removal of a worst-case discharge and to mitigate or prevent a substantial threat of such a discharge from a vessel, offshore facility, or onshore facility operating in or near an area designated by the President.

Bioremediation Agents means microbiological cultures, enzyme additives, or nutrient additives deliberately introduced into an oil discharge, and that will significantly increase the rate of biodegradation to mitigate effects of the discharge.

CERCLA is the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA).

Chemical Agents means those elements, compounds, or mixtures that coagulate, disperse, dissolve, emulsify, foam, neutralize, precipitate, reduce, solubilize, oxidize, concentrate, congeal, entrap, fix, make the pollutant mass more rigid or viscous, or otherwise facilitate mitigation of deleterious effects or removal of a pollutant from water. Chemical agents include biological additives, dispersants, sinking agents, miscellaneous oil spill control agents, and burning agents, but do not include sorbents.

Claim, for purposes of a release under CERCLA, means a demand in writing for a sum certain; for purposes of a discharge under CWA, it means a request, made in writing for a sum certain, for compensation for damages or removal costs resulting from an incident.

Cleanup, under the *Code of Iowa* Chapter 455B. 381(1), means actions necessary to contain, collect, control, identify, analyze, clean up, treat, disperse, remove, or dispose of a hazardous substance.

Cleanup costs, under the *Code of Iowa* Chapter 455B. 381(2), means costs incurred by the State or its political subdivisions or their agents, or by any other person participating with the approval of the director in prevention or mitigation of damages from a hazardous condition or cleanup of a hazardous substance involved in a hazardous condition.

Coast Guard District Response Group (DRG), as provided for by CWA sections 311(a)(20) and (j)(3), means the entity established by the Secretary of the department in which the USCG is operating, within each USCG district, and shall consist of: the combined USCG personnel and equipment, including marine firefighting equipment, of each port in the district; additional prepositioned response equipment; and a district response advisory team.

Community Awareness Emergency Response (CAER) groups support spill response capacity through activities including arranging training and exercise for the members, developing shared equipment caches and mutual aid pacts, and conducting area planning.

Crude Oil is petroleum as it occurs naturally, as it comes from an oil well, or after extraneous substances (as entrained water, gas, and minerals) have been removed.

Bakken crude oil, found in large areas of northwestern North Dakota, northeastern Montana, southern Saskatchewan, and southwestern Manitoba, is characterized as sweet meaning it has little or no hydrogen sulfide. This crude oil is shipped with gas and other chemicals to keep it in liquid form, consequently making it highly combustible.

Tar sands oil is a combination of clay, sand, water, and bitumen—a heavy, black, viscous oil. Tar sands can be mined and processed to extract the oil-rich bitumen, which is then refined into oil. The bitumen in tar sands cannot be pumped from the ground in its natural state; instead, tar sand deposits are mined, usually by application of strip mining or open pit techniques, or the oil is extracted by underground heating with additional upgrading. The Canadian tar sands industry is centered in Alberta, and Canada has the only large-scale commercial tar sands industry. This crude oil is heavy crude oil and is especially difficult to clean up because it sinks to the bottom of waterways.

West Texas Intermediate Oil, also known as Texas light sweet, is a grade of crude oil. This grade is described as light because of its relatively low density, and sweet because of its low sulfur content.

Discharge, as defined by section 311(a)(2) of the CWA, includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil, but excludes any of the following: (1) discharges in compliance with a permit under section 402 of the CWA; (2) discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under section 402 of the CWA, and subject to a condition in such permit; and (3) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of the CWA, that are caused by events occurring within the scope of relevant operating or treatment systems. For purposes of the NCP, discharge also means substantial threat of discharge.

Dispersants means those chemical agents that emulsify, disperse, or solubilize oil into a water column or promote surface spreading of oil slicks to facilitate dispersal of oil into a water column.

Environment, as defined by section 101(8) of CERCLA, means navigable waters, waters of the contiguous zone, and ocean waters natural resources of which are under the exclusive management authority of the United States under the Magnuson Fishery Conservation and Management Act (16 U.S.C. 1801 et seq.); and any other surface water, groundwater, drinking water supply, land surface or subsurface strata, or ambient air within the United States or under the jurisdiction of the United States.

Facility, as defined by section 101(9) of CERCLA, means any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or any site or area, where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise has come to be located; but does not include any consumer product in consumer use or any vessel. As defined by section 1001 of the OPA, it means any structure, group of structures, equipment, or device (other than a vessel) used for one or more of the following purposes: exploring for, drilling for, producing, storing, handling, transferring, processing, or

transporting oil. This term includes any motor vehicle, rolling stock, or pipeline used for one or more of these purposes.

Federal On-Scene Coordinator (FOSC), under subpart E of the NCP, means the federal official predesignated by EPA or USCG to coordinate and direct responses under subpart D of the NCP, or the government official designated by the lead agency to coordinate and direct removal actions.

First Federal Official means the first federal representative of a participating agency of the NRT to arrive at the scene of a discharge or a release. This official coordinates activities under the NCP and may initiate, in consultation with the OSC, any necessary actions until the arrival of the predesignated OSC. A state with primary jurisdiction over a site covered by a cooperative agreement will act in the stead of the First Federal Official for any incident at the site.

Fund or Trust Fund means the Hazardous Substance Superfund established by section 9507 of the Internal Revenue Code of 1986.

Groundwater, as defined by section 101(12) of CERCLA, means water in a saturated zone or stratum beneath the surface of land or water.

Hazardous condition, under the *Iowa Administrative Code* 567.1-131.1 (455B), means any situation involving actual, imminent, or probable spillage, leakage, or release of a hazardous substance onto the land, into a water of the state, or into the atmosphere which, because of the quantity, strength, and toxicity of the hazardous substance, its mobility in the environment, and its persistence, creates an immediate or potential danger to the public health or safety or to the environment.

Hazardous substance (Iowa), under the *Iowa Administrative Code* 567.1-131.1 (455B), means any substance or mixture of substances that presents a danger to public health or safety and includes, but is not limited to, a substance that is toxic, corrosive, or flammable, or that is an irritant or that, in confinement, generates pressure through decomposition, heat, or other means. The following are examples of substances which, in sufficient quantity, may be hazardous: acids; alkalis; explosives; fertilizers; heavy metals such as chromium, arsenic, mercury, lead, and cadmium; industrial chemicals; paint thinners; paints; pesticides; petroleum products; poisons; radioactive materials; sludges; and organic solvents. Hazardous substances may include any hazardous waste identified or listed by the administrator of EPA under the Solid Waste Disposal Act as amended by RCRA of 1976, or any toxic pollutant listed under section 307 of the Federal Water Pollution Control Act as amended January 1, 1977, or any hazardous substance designated under section 311 of the Federal Water Pollution Control Act as amended January 1, 1977, or any hazmat designated by the Secretary of Transportation under the Hazardous Materials Transportation Act (49 CFR § 172.101).

Hazardous substance, as defined by section 101(14) of CERCLA, means any substance designated pursuant to section 311(b)(2)(A) of the CWA; any element, compound, mixture, solution, or substance designated pursuant to section 102 of CERCLA; any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (but not including any waste regulation under the Solid Waste Disposal Act [42 U.S.C. 6901 et seq.] suspended by Act of Congress); any toxic pollutant listed under section 307(a) of the CWA; any hazardous air pollutant listed under section 112 of the CAA (42 U.S.C. 7521 et seq.); and any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act (15 U.S.C. 2601 et seq.). The term does not include petroleum, including crude oil or any fraction thereof not otherwise specifically listed or designated as a hazardous substance in the first sentence of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Inland waters, for the purposes of classifying the size of discharges, means those waters of the United States inland zone, waters of the Great Lakes, and specified ports and harbors on inland rivers.

Lead Administrative Trustee means a natural resource Trustee designated incident-by-incident for pre-assessment and assessment of damage that has occurred, chosen by the other Trustees whose natural resources are affected by the incident. During response operations, the Lead Administrative Trustee facilitates effective and efficient communication between the NPFC and the other natural resource trustees conducting activities associated with damage assessment, and is responsible for applying to the NPFC on behalf of all trustees for access to response operations resources to initiate a damage assessment.

Lead agency means the agency that provides the FOSC/RPM to plan and implement response actions under the NCP. The lead agency for a response action may be EPA, USCG, another federal agency, or a state or political subdivision of a state operating pursuant to a contract or cooperative agreement executed pursuant to section 104(d)(1) of CERCLA, or designated pursuant to a Superfund Memorandum of Agreement (SMOA) entered into pursuant to subpart F of the NCP or other agreements. Regarding a release of a hazardous substance, pollutant, or contaminant, DOD or DOE will be the lead agency if the release is on, or the sole source of the release is from, any facility or vessel under jurisdiction, custody, or control of DOD or DOE. If the release is on, or the sole source of the release is from, any facility or vessel under jurisdiction, custody, or control of a federal agency other than EPA, USCG, DOD, or DOE, that agency will be the lead agency for remedial removal actions other than emergencies. The lead federal agency maintains lead status if the remedy is selected by that federal agency for non-National Priorities List sites, or by EPA and that federal agency, or by EPA alone under CERCLA section 120. The lead agency will consult with the support agency, if one exists, throughout the response process.

Miscellaneous oil spill control agent is any product, other than a dispersant, sinking agent, surface washing agent, surface collecting agent, bioremediation agent, burning agent, or sorbent, that can be used to enhance oil spill cleanup, removal, treatment, or mitigation.

National Incident Management System (NIMS) is a system mandated by Presidential Homeland Security Policy Directive-5 that provides a consistent, nationwide approach for federal, state, local, and tribal governments; the private sector; and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents regardless of cause, size, or complexity. To provide for interoperability and compatibility among federal, state, local, and tribal capabilities, NIMS includes a core set of concepts, principles, and terminology. HSPD-5 identifies these as ICS; multi-agency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and collection, tracking, and reporting of incident information and incident resources.

National Pollution Funds Center (NPFC) means the entity established by the Secretary of Transportation to administer the OSLTF. Among the NPFC's duties are: providing appropriate access to the OSLTF by federal agencies and states for removal actions, and by federal trustees for initiating assessment of natural resource damages; providing appropriate access to the OSLTF for claims; and coordinating cost recovery efforts.

National Response Framework (NRF) presents the guiding principles that enable responders to prepare for and provide a unified national response to disasters and emergencies ranging from the smallest incident to the largest catastrophe. The NRF establishes a comprehensive, national, all-hazards approach to domestic response. It defines the key principles, roles, and structures that will lead to an organized response. It describes how communities, tribes, states, the Federal Government, and private-sector and nongovernmental partners apply those principles for a coordinated, effective, national response. The NRF identifies special circumstances under

which the Federal Government exercises a larger role, including incidents involving federal interests and catastrophic incidents requiring significant support for a state.

National Response System (NRS) is the mechanism for coordinating response actions by all levels of government in support of the OSC/RPM. The NRS is composed of the NRT, RRTs, OSC/RPM, ACs, and Special Teams and related support entities. The NRS is capable of expanding or contracting to accommodate the response effort required by the size or complexity of the discharge or release.

National Strike Force Coordination Center (NSFCC), authorized as the National Response Unit by CWA sections 311 (a)(23) and (j)(2), means the entity established by the Secretary of the Department in which the USCG is operating at Elizabeth City, North Carolina, with responsibilities that include administering USCG Strike Teams, maintaining response equipment inventories and logistic networks.

Natural resources means land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the exclusive economic zone defined by the Magnuson Fishery Conservation and Management Act of 1976); any state or local government; any foreign government; any Indian tribe; or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe.

Navigable waters, as defined by 40 CFR 110.1, means the waters of the United States, including the territorial seas. The term includes all of the following:

- (1) All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to ebb and flow of the tide.
- (2) Interstate waters, including interstate wetlands.
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce, including any such waters:
 - (i) That are or could be used by interstate or foreign travelers for recreational or other purposes
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or for commerce.
- (4) All impoundments of waters otherwise defined as navigable waters under this section.
- (5) Tributaries of waters identified in paragraphs (1) through (4) of this definition, including adjacent wetlands.
- (6) Wetlands adjacent to waters identified in paragraphs (1) through (5) of this definition—provided that waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding determination of an area's status as prior converted cropland by any other federal agency, for the purposes of CWA, the final authority regarding CWA jurisdiction remains with EPA.

Oil, as defined by section 311(a)(1) of CWA, means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

Oil, also defined by section 1001 of the OPA, means oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil, but does not include

petroleum, including crude oil or any fraction thereof, which is specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of section 101(14) of CERCLA (42 U.S.C. 9601), and which is subject to the provisions of CERCLA.

Oil Spill Liability Trust Fund (OSLTF) means the fund established under section 9509 of the Internal Revenue Code of 1986 (26 U.S.C. 9509).

Onshore Facility, as defined by section 101(18) of CERCLA, means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under any land or non-navigable water within the United States; and, as defined by section 311(a)(10) of the CWA, means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under any land within the United States other than submerged land.

On-site means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action.

Person, as defined by section 101(21) of CERCLA, means an individual, firm, corporation, association, partnership, consortium, joint venture, commercial entity, United States government, state, municipality, commission, political subdivision of a state, or any interstate body. As defined by section 1001 of OPA, “person” means an individual, corporation, partnership, association, state, municipality, commission, or political subdivision of a state, or any interstate body.

Person having control over a hazardous substance, under the *Code of Iowa* Chapter 455B 381(7), means a person who at any time produces, handles, stores, uses, transports, refines or disposes of a hazardous substance release of which creates a hazardous condition, including bailees, carriers, and any other person in control of a hazardous substance when a hazardous condition occurs, whether the person owns the hazardous substance or is operating under a lease, contract, or other agreement with the legal owner of the hazardous substance.

Pollutant or contaminant, as defined by section 101(33) of CERCLA, shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chain, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. The term does not include petroleum, including crude oil or any fraction thereof, that is not otherwise specifically listed or designated as a hazardous substance under section 101(14)(A) through (F) of CERCLA; nor does it include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas). For purposes of the NCP, the term pollutant or contaminant means any pollutant or contaminant that may present an imminent and substantial danger to public health or welfare of the United States.

Public vessel, as defined by section 311(a)(4) of the CWA, means a vessel owned or bareboat-chartered and operated by the United States, or by a state or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce.

Remove or removal, as defined by section 311(a)(8) of the CWA, refers to containment and removal of oil or hazardous substances from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare of the United States (including, but not limited to, fish, shellfish, wildlife, public and private property, and shorelines and beaches) or to the environment. For the purpose of the NCP, the term also includes monitoring of action to remove a discharge. As defined by section

101(23) of CERCLA, remove or removal means cleanup or removal of released hazardous substances from the environment; such actions as may be necessary taken in the event of the threat of release of hazardous substances in the environment; such actions as may be necessary to monitor, assess, and evaluate release or threat of release of hazardous substances; disposal of removed material; or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare of the United States or to the environment, which may otherwise result from a release or threat of release. The term includes, in addition, without being limited to, security fencing or other measures to limit access, provision of alternative water supplies, temporary evacuation and housing of threatened individuals not otherwise provided for, action taken under section 104(b) of CERCLA, post-removal site control (where appropriate), and any emergency assistance that may be provided under the Disaster Relief Act of 1974. For the purpose of the NCP, the term also includes enforcement activities related thereto.

Removal costs, as defined by section 1001 of OPA, means the costs of removal incurred after a discharge of oil, or in any case involving a substantial threat of a discharge of oil, and costs to prevent, minimize, or mitigate oil pollution from such an incident.

Respond or response, as defined by section 101(25) of CERCLA, means removal, remedy, or remedial action, including enforcement activities related thereto.

Responsible party (RP), as defined by section 1001 of OPA, means the following:

- (1) Vessels—In the case of a vessel, any person owning, operating, or demise chartering the vessel.
- (2) Onshore Facilities—In the case of an onshore facility (other than a pipeline), any person owning or operating the facility, except a federal agency, state, municipality, commission, or political subdivision of a state, or any interstate body that as the owner transfers possession and right to use the property to another person by lease, assignment, or permit.
- (3) Pipelines—In the case of a pipeline, any person owning or operating the pipeline.
- (4) Abandonment—In the case of an abandoned vessel, onshore facility, deep water port, pipeline, or offshore facility, the person who would have been the RP immediately prior to abandonment of the vessel or facility.

Superfund Amendments and Reauthorization Act of 1986 (SARA) includes amendments to CERCLA, the Solid Waste Disposal Act, and the Internal Revenue Code in addition to certain free-standing provisions of law. Among the free-standing provisions of law is Title III of SARA, also known as the "Emergency Planning and Community Right-to-Know Act of 1986" and Title IV of SARA, also known as the "Radon Gas and Indoor Air Quality Research Act of 1986." Title V of SARA amending the Internal Revenue Code is also known as the "Superfund Revenue Act of 1986."

Sinking agents means those additives applied to oil discharges to sink floating pollutants below the water surface. Per NCP, sinking agents are not authorized for use.

Size classes of discharges refers to the following size classes of oil discharges that are provided as guidance to the OSC and serve as the criteria for actions delineated in subpart D of the NCP. They are not meant to imply associated degrees of hazard to public health or welfare of the United States; nor are they a measure of environmental injury. Any oil discharge that poses a substantial threat to public health or welfare of the United States or the environment, or results in significant public concern, shall be classified as a major discharge regardless of the following quantitative measures:

- (1) Minor discharge means a discharge to the inland waters of less than 1,000 gallons of oil or a discharge to the coastal waters of less than 10,000 gallons of oil.
- (2) Medium discharge means a discharge of 1,000 to 10,000 gallons of oil to the inland waters or a discharge of 10,000 to 100,000 gallons of oil to the coastal waters.
- (3) Major discharge means a discharge of more than 10,000 gallons of oil to the inland waters or more than 100,000 gallons of oil to the coastal waters.

Size classes of releases refers to the following size classifications provided as guidance to the OSC for meeting pollution reporting requirements in subpart B of the NCP. The OSC will make the final determination of the appropriated classification of a release based on consideration of the particular release (e.g., size, location, impact, etc.):

- (1) Minor release means a release of a quantity of hazardous substance(s), pollutant(s), or contaminants(s) that poses minimal threat to public health or welfare of the United States or the environment.
- (2) Medium release means a release not meeting the criteria for classification as a minor or major release.
- (3) Major release means a release of any quantity of hazardous substance(s), pollutant(s), or contaminant(s) that poses a substantial threat to public health or welfare of the United States or the environment, or results in significant public concern.

Sorbents means essentially inert and insoluble materials used to remove oil and hazardous substances from water through adsorption, whereby the oil or hazardous substance is attracted to the sorbent surface and then adheres to it; absorption, in which the oil or hazardous substance penetrates the pores of the sorbent material; or a combination of the two. Sorbents are generally manufactured in particulate form for spreading over an oil slick or as sheets, rolls, pillows, or booms.

Source control action is construction or installation and startup of those actions necessary to prevent continued release of hazardous substances or pollutants or contaminants (primarily from a source on top of or within the ground, or in buildings or other structures) into the environment.

Source control maintenance measures are those measures intended to maintain effectiveness of source control actions once such actions are operating and functioning properly, such as maintenance of landfill caps and leachate collection systems.

Spill of National Significance means a spill that—due to its severity, size, location, actual or potential impact on public health and welfare or the environment, or the necessary response effort—is so complex that it requires extraordinary coordination of federal, state, local, and RP resources to contain and clean up the discharge.

State means the several states of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, the Commonwealth of the Northern Marianas, and any other territory of possession over which the United States has jurisdiction. For purposes of the NCP, the term includes Indian tribes as defined in the NCP except where specifically noted. Section 126 of CERCLA provides that the governing body of an Indian tribe shall be afforded substantially the same treatment as a state with respect to certain provisions of CERCLA. Section 300.515(b) of the NCP describes the requirements pertaining to Indian tribes that wish to be treated as states under CERCLA.

Support agency means the agency or agencies that provide the support agency coordinator to furnish necessary data to the lead agency, review response data and documents, and provide other assistance as requested by the

OSC or RPM. EPA, USCG, another federal agency, or a state may be a support agency for a response action if operating pursuant to a contract executed under section 104(d)(1) of CERCLA or designated pursuant to an SMOA entered into pursuant to subpart F of the NCP or other agreement. The support agency may also concur on decision documents.

Surface collecting agents means those chemical agents that form a surface film to control the layer thickness of oil.

Surface washing agent is any product that removes oil from solid surfaces, such as beaches and rocks, through a detergent mechanism, and does not involve dispersing or solubilizing the oil into the water column.

Tank vessel, as defined by section 1001 of the OPA, means a vessel constructed or adapted to carry oil, or that carries oil or hazmat in bulk as cargo or cargo residue, and that operates under any of the following circumstances:

- Is a vessel of the United States
- Operates on the navigable waters
- Transfers oil or hazmat in a place subject to the jurisdiction of the United States.

Threat of discharge or release. See definitions of discharge and release.

Threat of release. See definition of release.

Trustee means an official of a federal natural resources management agency designated in subpart G of NCP, or a designated state official or Indian tribe, or, in the case of discharges covered by OPA, a foreign government official, who may pursue claims for damages under section 107(f) of CERCLA or section 1006 of OPA.

United States, when used in relation to section 311(a)(5) of the CWA, means the states, the District of Columbia, the Commonwealth of Puerto Rico, the Northern Mariana Islands, Guam, American Samoa, the United States Virgin Islands, and the Pacific Island Governments. United States, when used in relation to section 101(27) of CERCLA and section 1001(36) of OPA, includes the several states of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Commonwealth of the Northern Marianas, and any other territory or possession over which the United States has jurisdiction.

Vessel as defined by section 101(28) of CERCLA, means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water; and, as defined by section 311(a)(3) of the CWA, means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel.

Worst-case discharge, as defined by section 311(a)(24) of the CWA, means, in the case of a vessel, a discharge under adverse weather conditions of its entire cargo, and, in the case of an offshore facility or onshore facility, the largest foreseeable discharge under adverse weather conditions.