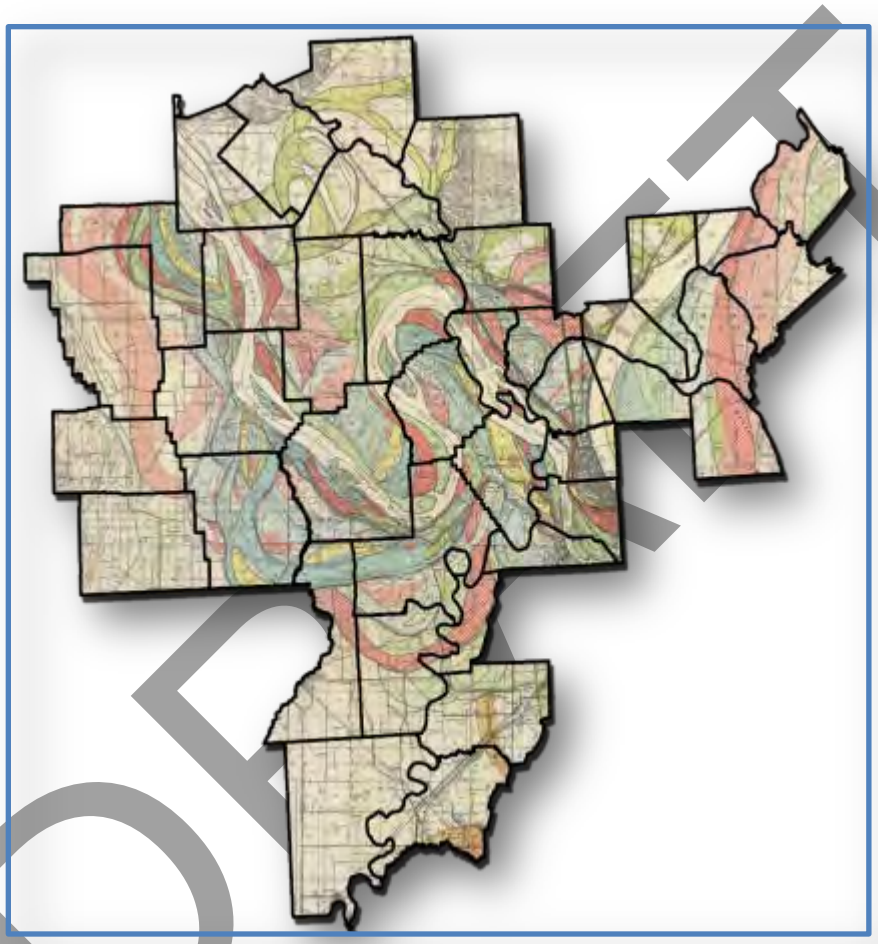
# U.S. Environmental Protection Agency
# Great Rivers Sub-Area Contingency Plan



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To report spills, call the:

**National Response Center**

United States Coast Guard Headquarters
Washington, D.C.

**(800) 424-8802**

## State Emergency Contact Information:

**Arkansas**

**800-322-4012**

**Arkansas Department of Emergency Management**

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**Illinois**

**800-782-7860** **(in Illinois)**
**217-782-7860** **(out-of-state)**

**Illinois Emergency Management Agency**

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**Kentucky**

**800-928-2380**
**502-564-2380**

**Kentucky Department for Environmental Protection**

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**Missouri**

**573- 634-2436**

**Missouri Department of Natural Resources –**
**Environmental Emergency Response**

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**Tennessee**

**(731) 422-3300**

**Tennessee Emergency Management Agency – West Region**

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***Special Notice***

The Great Rivers Sub-Area Contingency Plan (GRSACP) is intended for broad dissemination. Questions regarding this plan should be addressed to:

Great Rivers Sub-Area On-Scene Coordinator
U.S. Environmental Protection Agency
SUPR/ERSB
11201 Renner Blvd
Lenexa, KS 66219

The latest version of this plan will be available on the internet at: http:// www.epaosc.org/greatrivers

To request changes or special access to the plan, please contact:

**Heath Smith**
**On-Scene Coordinator**
**U.S. EPA – Region 7**
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**Lenexa, KS 66219**
**(913) 551-7903**

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**Preamble**

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

This Plan is not intended to supplant any local, state, regional, or national level response or contingency plan. Rather, it should be reviewed in conjunction with the relevant regional, state, and local plans. It is designed as a tool and source of information for first responders facing the unique physical conditions and blend of governmental jurisdictions within the Great Rivers Sub-Area. The Sub-Area includes the following counties:

- In Arkansas: Mississippi County
- In Illinois: Alexander, Hardin, Jackson, Massac, Pope, Pulaski, Randolph, and Union Counties
- In Kentucky: Ballard, Carlisle, Crittenden, Fulton, Hickman, Livingston, McCracken, Marshall, and Union Counties
- In Missouri: The Bootheel Local Emergency Planning District (LEPD) (Dunklin, Mississippi, New Madrid, Pemiscot, Scott, and Stoddard Counties); Southeast Missouri LEPD (Bollinger, Cape Girardeau, Madison, Iron, Perry, Saint Francois, and Sainte Genevieve Counties); and Ozark Foothills LEPD (Butler, Carter, Reynolds, Ripley, and Wayne Counties)
- In Tennessee: Lake, Dyer, and Lauderdale Counties.

A map of the Great Rivers Sub-Area is shown on Figure 1. This plan will be updated annually. More frequent revisions could occur if developments warrant. Corrections or suggestions may be submitted using the Corrections and Updates Form in Appendix I, or by e-mail to the contact(s) listed on Page i.

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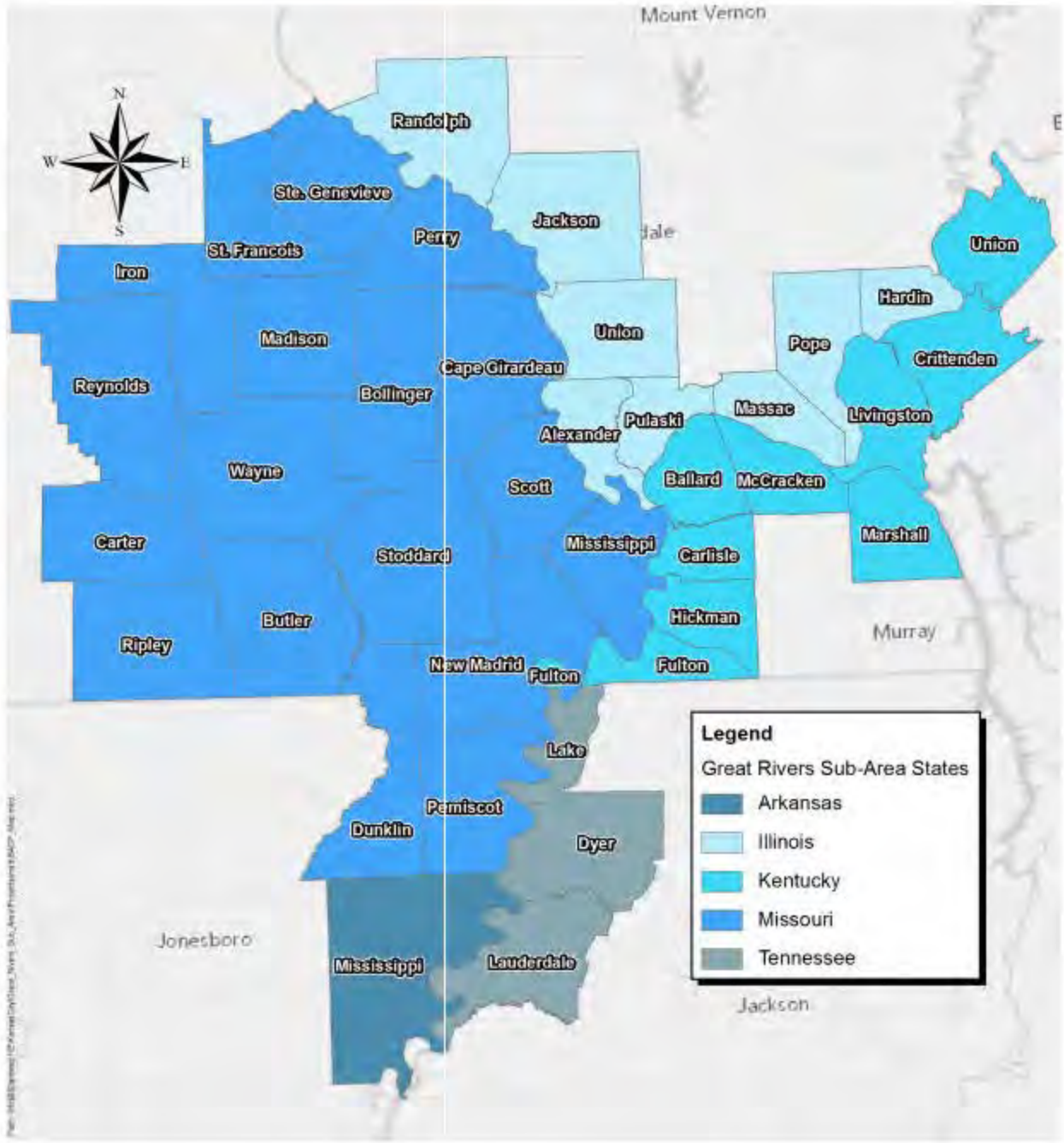
**Figure 1: Map of the Great Rivers Sub-Area**



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# I. Introduction

## A. Purpose and Objective

The purpose of the Great Rivers Sub-Area Contingency Plan (GRSACP) is to facilitate a timely, effective, and cooperative response by representatives of private, local, state, and federal agencies to a discharge of oil or release of hazardous substances within the Great Rivers Sub-Area (GRSA).

## B. Sub-Area Statutory Authority

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, U.S. Environmental Protection Agency (EPA) Regions 4, 5, 6 and 7 Regional Contingency Plan (RCP)/Area Contingency Plans (ACP), and state and local plans, will apply to discharges of oil and/or releases of hazardous substances as defined in Section 300.3 of the NCP. The GRSACP is intended as a supplement to the respective regional EPA RCP/ACPs.

## 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. Response equipment, notifications lists, environmentally or economically sensitive area listings, and other relevant data may be updated or incorporated into the plan as these become available.

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# 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 releases or discharges 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 A):

- EPA's Oil Pollution Prevention Regulation (Spill Prevention Control and Countermeasures [SPCC] 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)
- Bureau of Ocean Energy Management, Regulation and Enforcement (BOEM) Facility Response Plan Regulation – 30 CFR part 254
- Research and Special Programs Administration's (RSPA) Pipeline Response Plan Regulation – 49 CFR part 194
- 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 Safety Standard – 29 CFR 1910.119
- OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) Regulation – 29 CFR 1910.120, and 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 in order to comply with federal regulatory requirements. Facilities are free to continue maintaining multiple plans in lieu of an ICP to demonstrate federal regulatory compliance. A brief discussion of facility emergency response plans, specifically those pertaining to the NCP, OPA 90, and CWA, follows.
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 ACP or RCP.

As defined in OPA 90, each responsible party (RP) for a vessel or a facility that discharges oil or poses a substantial threat of a discharge into or upon the navigable waters or adjoining shorelines or the

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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 and ACP;

(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 the availability of, private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge (including a discharge resulting from fire or explosion), and to mitigate or prevent a substantial threat of such a discharge;

(iv) describe the 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 the safety of the vessel or the facility and to mitigate or prevent the discharge, or substantial threat of a discharge;

(v) be updated periodically; and

(vi) be resubmitted for approval of each significant change.

## B. 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.

## C. Area and Regional Contingency Plans

Section 300.210(b) of the NCP provides for establishment of Regional Response Teams (RRTs) and sets their role in the implementation of RCPs. The NCP, § 300.210(c), provides for establishment of Area Committees (ACs) and implementation of ACPs. Regions 4, 5, 6, and 7 have opted to integrate these requirements through creation of a Regional Integrated Contingency Plan (RICP). The RICPs also include elements of Emergency Support Function (ESF) 10 (Hazardous Materials) of the NRF and of the National Incident Management System (NIMS), published March 1, 2004. The NRF superseded corresponding sections of the National Response Plan (NRP) on March 28, 2008. The NRP was originally published in December 2004 and was revised in 2006.

### 1. Regional Response Teams

| Team | Jurisdiction within the GRSA | RRT Website |
|---|---|---|
| **R4 RRT** | Kentucky and Tennessee | http://www.rrt4.nrt.org/ |
| **R5 RRT** | Illinois | http://www.rrt5.org/ |
| **R6 RRT** | Arkansas | http://www.epaosc.org/region6rrt |
| **R7 RRT** | Missouri | http://www.rrt7.nrt.org/ |

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#### 2. Upper Mississippi River Basin Spill Response Plan (R5)

The Upper Mississippi River Hazardous Spills Coordination Group has developed a specific response plan for the interstate Upper Mississippi River (UMR), called the 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 updated and maintained by the Spills Coordination Group in conjunction with Upper Mississippi River Basin Association (UMRBA).[1]

#### 3. Ohio River Umbrella Plan (R4)

The Ohio River Umbrella Plan includes a discussion of authorities, roles, and responsibilities of FOSCs pertaining to an inland river response. Under NCP, EPA is the lead federal agency, and provides the FOSC for an oil discharge or hazardous substance release within the Ohio River Basin, except where the discharge 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 Understanding (MOUs). The Umbrella Planning Document describes the geographic response boundaries along the Ohio River.[2]

### D. 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.

#### 2. National Response Framework

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 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 National Response Framework (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, along with the ESF Annexes and Support Annexes, is available on the Internet at the NRF Resource Center: http://www.fema.gov/national-planning-frameworks.

## III. Description of Great Rivers Sub-Area

### A. Rationale for Sub-Area Creation

Sub-Area 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 in order to provide more coordinated, efficient, and thorough responses by local, state, and federal agencies to releases of oil. The NCP incorporated hazardous substances into this process because of the advantages

[1] http://www.umrba.org/spillplans.htm
[2] http://www.nrt.org/production/NRT/RRTHome.nsf/resources/RRTIVa/$File/OhioValleyUmbrellaPlan.pdf

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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, 5, and 6 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 the FRP into RICPs.

The respective ACs determined to create several Sub-Area plans within their regions. Initial emphasis focused on areas where multiple governmental jurisdictions are involved and areas with special environmental or economic qualities that necessitate a prompt response.

The GRSA was created to bridge the jurisdictional boundaries where the Great Ohio and Mississippi Rivers converge. The region is an important economic and ecological hub, and is particularly vulnerable because of the proximity of the New Madrid seismic zone. The Ohio and Mississippi River valleys are particularly important to commercial transportation due to the convergence of barge, highway, and rail corridors that traverse the area. They are also important ecologically as migratory bird flyways , and habitat for threatened and endangered species. Additionally, the area contains a high relative abundance of native species because of convergence of ecological zones including gulf coastal plain, ozark, appalachian, eastern tall grass prairie, and big river fauna. Earthquakes, flooding, or man-made accidental releases have high potential to expose human populations as well as fish and wildlife to hazardous substances, disrupting economic and ecological functions of the region.

## B. Geography of the Sub-Area

The Great Rivers Sub-Area is roughly centered near the town of Sikeston, Missouri. This Sub-Area includes the following counties: Mississippi county in Arkansas; Alexander, Hardin, Jackson, Massac, Pope, Pulaski, Randolph, and Union counties in Illinois; Ballard, Carlisle, Crittenden, Fulton, Hickman, Livingston, McCracken, Marshall, and Union counties in Kentucky; the Bootheel LEPD [Dunklin, Mississippi, New Madrid, Pemiscot, Scott, and Stoddard Counties], Southeast Missouri LEPD [Bollinger, Cape Girardeau, Madison, Iron, Perry, Saint Francois, and Sainte Genevieve Counties], and Ozark Foothills LEPD [Butler, Carter, Reynolds, Ripley, and Wayne Counties] in Missouri; and Lake, Dyer, and Lauderdale Counties in Tennessee.

The GRSA geographically coincides with the convergence of the Mississippi and Ohio Rivers. The system of geologic faults known as the New Madrid Seismic Zone lies within the GRSA. Strategically located, the GRSA includes counties from five states that border the Mississippi River in the area. Due to historical flooding and seismic events, the counties of this region share a common interest in preparedness. Flooding in the area is common during the spring months, attracting national attention since the early 20th Century.[3] The last major seismic activity was the infamous 1811-1812 New Madrid event.

The GRSA has a subtropical climate, with annual temperatures ranging from a mean low of 24 degrees Fahrenheit (°F) in January to a mean high of 90°F in July. Precipitation occurs throughout the year in this area, but is 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 8 and 12 inches. Severe weather in the area is a normal occurrence, with peak tornado, thunderstorm, and damaging hail activity between April and July of each year. Measurable precipitation occurs about 100 days a year—nearly half of these events are severe weather events.

[3] http://www.apfm.info/pdf/case_studies/cs_usa_mississippi.pdf



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Cape Girardeau, Missouri is the largest population center within the GRSA. With a population of 37,941[4], Cape Girardeau is situated directly on the Mississippi River. Paducah, Kentucky also lies within the GRSA. Paducah is situated on the Ohio River and hosts a population of 25,135[4]. Large metropolitan areas exist just outside of the Sub-Area, including St. Louis to the north and Memphis to the south. With locations near the confluence of the Ohio and Mississippi Rivers, these cities and their surroundings are hubs of the shipping industry throughout the area. The Ohio and Mississippi Rivers also are transportation corridors.

# IV. Roles and Authorities of Government Agencies

## A. Introduction and Assumptions

NIMS was adopted as the standard for incident management on March 1, 2004. It is presumed that organizations or agencies responding to an incident within the GRSA will be familiar with the NIMS process and will be prepared to integrate themselves into the NIMS framework.

## B. Local Governments

### 1. Roles and Responsibilities of Local First Responders

During any fire or discharge of oil or hazardous substance, the local fire department with jurisdiction will respond and will initially provide an incident commander (IC) as the response begins and while threats to life and human safety continue. The local police department will be responsible for traffic and crowd control on public property. If terrorism is suspected or if there is any reason to suspect a crime has been committed, local law enforcement will secure the 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 will provide assistance if it is necessary to divert or prevent the flow of contaminated materials through the stormwater or sewer system. Following Sub-Area Contingency Plan (SACP) 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. The fire department commander, State On-Scene Coordinators (SOSCs), the FOSC, and the RP—if one is identified and involved—may agree to establish a Unified Command System (UCS). (See Section IX. Incident Command.)

### 2. Roles and Procedures of Local Emergency Management Agencies

#### *a) Local Emergency Planning Committees*

LEPCs and Local Emergency Planning Districts (LEPDs) were set up as a result of SARA Title III. LEPCs/LEPDs may include representatives from local governmental agencies, emergency responders, environmental groups, and local industry. Several local emergency plans may exist within each district. The Local Emergency Response Plan (LERP), developed under Sections 301-303 of EPCRA, must include identitities 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 State Emergency Response Commission (SERC) must review

[4] 2010 US Census



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each LERP. If a natural disaster produces an emergency, the county Emergency Management Agencies (EMAs) may utilize their general (All-hazards) plan along with portions of their LERP.

#### *b) Regional Emergency Management Agencies*

If an incident produces, or threatens to produce, an emergency that could affect large numbers of people or off-site environments, or otherwise appears beyond the capacity of the local responders, the EMA will become involved and may activate its Emergency Operations Center (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 RRT member also represents and coordinates RRT involvement of various other state, county, and municipal organizations

## D. Federal

### 1. National Response System (NRS) and Policies

NRS is the mechanism for coordinating response actions by all levels of government in support of the On-Scene Coordinator (OSC)/Remedial Project Manager (RPM). The NRS is composed of the NRT, RRTs, OSC/RPM, Area Committees, and Special Teams and related support entities. The NCP § 300.105 describes the general organization of the federal agencies, the NRT, the RRT, the FOSC, and the AC. Sections 300.110 and 300.115 detail the structure of the NRT and the RRT. The NCP provides for an RRT whose agency membership would parallel that of the NRT, and for inclusion of state and local representation.

### 2. Region 4 / 5 Jurisdictional Boundaries within the GRSA

EPA Region 4 is responsible for responses to discharges or releases, or a substantial threat of discharges or releases of a pollutant from a source originating from EPA Region 4 into the Ohio River. Responsibility begins at the water line on the Right Descending Bank (RDB), extending to the south. The RDB is the right bank when traveling downstream toward the mouth of the river. Included are discharges or releases from unknown sources or those classified as “mystery spills.”

EPA Region 5 is responsible for responses to discharges or releases, or a substantial threat of discharges or releases of a pollutant from a source originating from EPA Region 5 onto the Ohio River. Responsibility begins at the water line on the RDB, extending to the north. If a discharge or release enters the water, EPA Region 5 will be responsible for the response effort.

The USCG is responsible for responses to discharges or releases that originate from a commercial vessel, a vessel transfer operation, or a marine-transportation related facility.

### 3. Region 4 / 6 Jurisdictional Boundaries within the GRSA

Responsibilities are divided as specified below regarding the boundaries common to the Lower Mississippi River Valley (LMRV), Arkansas, Mississippi, and Tennessee (LMRV Mile 828 to Mile 504), and boundaries shared between Regions 4 and 6.

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EPA Region 4 is responsible for all response actions necessary and/or required to the water line on the RDB of the river or the levee of the RDB. All discharges or releases, or a substantial threat of such a discharge or release, of a pollutant originating east of the water line or levee of the RDB will be the responsibility of EPA Region 4.

Included are discharges or releases from unknown sources or those classified as "mystery spills."

EPA Region 6 is responsible for responses to all discharges or releases, or a substantial threat of such a discharge or release, originating west of the water line or levee on the RDB. If a discharge or release reaches and/or enters the water, EPA Region 6 will be responsible for the response effort.

The USCG is responsible for responses to discharges or releases that originate from a commercial vessel, a vessel transfer operation, or a marine-transportation related facility.

### 4. Region 4 / 7 Jurisdictional Boundaries within the GRSA

EPA Region 4 is responsible for responses to discharges or releases, or the substantial threat of a discharge or release of pollutant from a source originating within EPA Region 4 into the LMRV. Responsibility begins at the water line or levee on the RDB, extending to the east. Included are discharges or releases from unknown sources or those classified as "mystery spills."

EPA Region 7 is responsible for responses to discharges or releases, or a substantial threat of a discharge or release of a pollutant from a source originating within EPA Region 7 into the LMRV. Responsibility begins at the water line or levee on the RDB extending to the west. If a discharge or release enters the water, EPA Region 7 will be responsible for the response effort.

The USCG is responsible for responses to discharges or releases that originate from a commercial vessel, a vessel transfer operation, or a marine-transportation related facility.

### 5. Region 5 / 7 Jurisdictional Boundaries within the GRSA

EPA Region 7 will provide OSCs for investigating and responding to releases to the main stem of the UMR when either Iowa or Missouri is the principal first responding state. EPA Region 5 will have jurisdiction for such releases within the State of Minnesota and where Minnesota, Wisconsin, or Illinois is the first principal responding state. When releases to the UMR main stem would result in significant response by more than one state, or when which states should respond or are responding is uncertain, Region 7 will provide OSCs for such releases occurring between Cairo, Illinois, and Keokuk, Iowa (miles 0.0 to 354.5). Region 5 will provide OSCs for such releases above that point.

For spills from shore facilities and non-waterborne sources, OSCs will be provided by the region in which the source is located.

The USCG is responsible for responses to discharges or releases that originate from a commercial vessel, a vessel transfer operation, or a marine-transportation related facility.

### 6. USCG

Under a MOU between the EPA and the USCG signed March 13, 1993, the USCG will assist the pre-designated EPA OSC to the fullest extent possible consistent with agency responsibilities and authorities.

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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 provide the OSC and will carry out all of the FOSC's responsibilities, including the decision to direct any necessary removal activity or access the Oil Spill Liability Trust Fund (OSLTF). If an incident originates from another or an unknown source, the USCG will assist the EPA/OSC to the fullest extent possible within the NCP or the RCP. Upon the request of the pre-designated EPA/OSC, the COTP may act upon the FOSC's behalf.

The GRSA contains 3 COTP Zones: Sector Upper Mississippi River, Sector Lower Mississippi River, and Sector Ohio Valley/MSU Paducah. The COTP specific Area of Responsibility (AOR) is defined by river miles. Mile markers (MM) have been established along the navigable rivers to aid in navigation.

Sector Upper Mississippi River's AOR runs from Upper Mississippi River MM 138 to MM 109.9. Sector Lower Mississippi River's AOR runs from Lower Mississippi River MM 770 to 869. Sector Ohio Valley/MSU Paducah's AOR runs from Upper Mississippi River MM 109.9 to MM 0, Lower Mississippi River MM 953.8-869, and Ohio River MM 981-867.3.

| USCG Sector | Jurisdictional Boundaries along the Rivers |
|---|---|
| **Sector Upper Mississippi River** | UMR 138 to 109.9 |
| **Sector Lower Mississippi River** | LMR 770 to 869 |
| **Sector Ohio Valley/MSU Paducah** | UMR 109.0 to 0<br>LMR 953.8 to 869<br>Ohio 981 to 867.3 |

## 7. Roles and Responsibilities of the FOSC

The FOSC may direct response efforts and coordinate all other efforts at the scene of a discharge or release in accordance with the NCP. FOSCs shall be designated by the EPA Regional Administrator. The Department of Defense (DOD) and Department of Energy (DOE) shall designate a FOSC, according to NCP § 300.120(c) and (d), if their facilities or properties are involved in the discharge or release. Other federal agencies are responsible for ***nonemergency*** removals, as stated in NCP § 300.120(c)(2).

The FOSC will direct federal resources and coordinate all federal containment, removal, and disposal efforts during an incident. The FOSC is the point of contact between federal resources and other entities involved such as RPs, state responders, and local response communities. The FOSC may work within an established Incident Command structure or coordinate all agencies/parties into a UCS, and may direct the response activities of other parties in accordance with the NCP. In extreme circumstances, when it is evident that the RP is unwilling or unable to respond adequately to a spill or release, the FOSC can assume full authority over the cleanup, including funding through Superfund or the OSLTF—i.e., "federalize" the response. In such instances, notice will be provided to the RP in writing and efforts will be made to recover costs from the RP. The Regional RRT can be convened to provide guidance to the FOSC or help coordinate efforts during a major event.

Tasks such as air monitoring during the emergency phase of an incident can be provided by the FOSC responding with members of the Superfund Technical Assessment and Response Team (START). Such actions would be conducted within an ICS or UCS, with transfer of command responsibilities to the FOSC or the OSC of the affected state during the cleanup and recovery phase. FOSCs, to the extent

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practicable, should ensure that their on-scene representatives are adequately trained and prepared to carry out actions under the NCP and the respective regional plans.

The normal sequence of actions a FOSC should take when a discharge of oil is reported are detailed in NCP § 300.320 as follows:

(a) When the OSC 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, major) 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 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 OSC shall immediately notify the RRT and the NRC.

(ii) When the investigation shows that an actual or potential medium discharge exists, the OSC shall recommend activation of the RRT, if appropriate.

(iii) When the investigation shows that an actual or potential minor discharge exists, the OSC shall monitor the situation to ensure that proper removal action is being taken.

(3) If the OSC 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 responsible party or other person is properly carrying out removal. Removal is being done properly when:

(i) The responsible party 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 OSC supplements responsible party resources with government resources, the spill response will not be considered improper, unless specifically determined by the OSC.

(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 OSC may arrange funding to support these actions.

(5) Ensure prompt notification of 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

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Wildlife Sensitive Environments Plan, have been performed. If they have not been performed, the OSC will perform those notifications and subsequent actions.

(7) When appropriate, activate federal response using the OSLTF for oil discharges or the CERCLA Hazardous Substances Response Trust Fund for hazardous substances releases.

(b) Removal shall be considered complete when so determined by the OSC in consultation with the governor or governors of the affected states. When the OSC considers removal complete, OSLTF removal funding shall end. This determination shall not preclude additional removal actions under applicable state law.

## 8. Responsibilities of the FOSC and the USFWS under the Endangered Species Act (ESA)

The following is a summary of FOSC/IC and U.S. Fish and Wildlife Service (USFWS) responsibilities under the ESA, implementing regulations, and the Inter-agency Memorandum of Agreement (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 Endangered Species Act.

### *a) During Response*

(1) FOSC/IC responsibilities:

i. If fish and wildlife resources may be affected by a discharge or release, notify federal and state natural resource trustees and managers, and consult with them on removal actions to be taken.

ii. 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.

iii. Keep USFWS and the DOI (Department of the Interior) RRT/AC Representative apprised of ongoing response actions.

iv. Document any adverse effects (including incidental take) to listed species or their habitat.

v. Maintain a record of all oral and written communications with the USFWS during the response.

(2) USFWS responsibilities:

i. Provide the FOSC/IC timely recommendations on actions to avoid or minimize impacts to listed species and/or their habitats throughout the duration of the response.

ii. Respond to requests for emergency consultation pursuant to the ESA, implementing regulations, and the ESA MOA.

iii. If incidental take is anticipated, so advise the FOSC/IC.

iv. Upon request, participate in the ICS/UCS.

v. Maintain a record of all oral and written communications with the FOSC/IC during the response.

### *b) Post Response*

(1) FOSC/IC responsibilities:

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i. If listed species or critical habitat have been adversely affected by response activities, initiate formal consultation with USFWS pursuant to the ESA, implementing regulations, and the ESA MOA.

(2) USFWS responsibilities:

i. Respond to requests for formal consultation in accordance with the ESA, 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:

## 1. The USCG National Strike Force (NSF)

### *a) The three USCG Strike Teams (Atlantic, Gulf and Pacific)*

USCG's Strike Teams' phones are answered 24 hours a day. If the Strike Team contacted is already committed, another Strike Team will be accessed. The three Strike Teams provide trained personnel and specialized equipment to assist the OSC in training for spill response, stabilizing and containing the spill, and monitoring or directing the response actions of the RPs and/or contractors. Within the GRSA, Missouri and Illinois are covered by the Atlantic Strike Team based out of Lakehurst, New Jersey. Kentucky, Tennessee, and Arkansas are covered by the Gulf Strike Team based out of Mobile, Alabama.

### *b) The National Strike Force Coordination Center (NSFCC)*

The NSFCC 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, and conducting national exercise programs including pollution response exercises. The NSFCC offers the following: technical assistance and equipment for spill response, assistance in coordinating resources during oil discharge response, ACP or RCP review, coordination of spill response resources information, and inspection of district response equipment. 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 the response actions of the RPs and/or contractors.

### *c) Public Information Assist Team (PIAT)*

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

## 2. The EPA Environmental Response Team (ERT)

In the event of a continuing release or discharge, the FOSC has access to EPA's ERT based in Edison, New Jersey. The ERT provides Scientific Support Coordinators (SSCs) 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),

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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 and communication with the scientific community, and on assistance requests to state and federal agencies.

The ERT also 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. The 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 OSC 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 EPA's special teams; (2) other federal partners including the Department of Homeland Security (DHS), Federal Bureau of Investigation (FBI), 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 with 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 OSC may request assistance directly from SUPSALV. Formal requests are routed through the Chief of Naval Operations (N312).

### 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 OSC by providing technical assistance, personnel, and equipment, including pre-positioned equipment. Each DRG consists of all categories of USCG personnel and equipment, including marine firefighting equipment, additional pre-positioned equipment, and a District Response Advisory Team (DRAT) available to provide support to the OSC if a spill exceeds local response capabilities.

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### 7. USCG National Pollution Funds Center (NPFC)

The NPFC is responsible for implementing those portions of Title I of the OPA delegated to the Secretary of the department in which the Coast Guard is operating. The 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 assessments.

### 8. National Oceanic and Atmospheric Administration (NOAA)

#### *a) National Weather Service*

The National Weather Service, a federal organization within NOAA, can provide various types of support to an IC in the Great Rivers area through its office in Paducah, Kentucky.

#### *b) Scientific Support Coordinators (SSCs)*

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 do 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 on chemistry, gas chromatography/mass spectrometry fingerprinting, 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.

### 9. Department of the Interior

DOI can provide information concerning lands and resources specifically under DOI jurisdiction, as well as technical expertise related to geology, hydrology, minerals, fish and wildlife, cultural resources, and recreation resources. DOI can also provide communications and other equipment in the event of an extended response.

### 10. Contractors

Many RPs have contracts with Oil Spill Removal Organizations (OSROs) or Hazmat responders to handle spills that may occur. RPs are responsible for National Resource Damage Assessments (NRDAs) in conjunction with the natural resource trustee, and may retain contractors to conduct such assessments. EPA Regions 4, 5, 6, and 7 have region-specific 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 supervision by other agencies.

### 11. Multi-Agency Response and Planning Groups

#### *a) Regional Response Team and Area Committee*

The RRT's origin and reference to the NCP are briefly discussed in Sections II. C. and IV. C. 1. of this SACP. The role of the RRT has two principal components. One is as the standing team whose duties are

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communications systems and procedures, planning, coordination, training, evaluation, preparedness, and related matters on a regionwide basis. The RRT also may assemble an incident-specific team, as determined by the operational requirements of a response to a specific discharge or release. The RRT has responsibility for developing an RCP and for assisting the FOSC if 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 virtually any federal agency that could 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. In addition, members of the RRT serve as the AC, which has responsibility to produce ACPs within its area. Generally within the GRSA, the area and the region are coincident within each EPA Region. Typically, the AC is more planning oriented and aims to be more inclusive of industry and other nongovernmental entities as it undertakes planning. The RRT is more response oriented. Semiannual meetings of RRTs and ACs occur in spring and fall of each year.

## 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 trusteeship (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 (Office of Solid Waste and Emergency Response [OSWER] Directive 9200-4.22A; CERCLA Coordination with Natural Resource Trustees, 1997).

### *a) 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 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:

- Within the boundary of the State
- Belonging to, managed by, controlled by, or appertaining to the State.

Examples of resources under the trusteeship of individual state officials include:

- State forest lands
- State-owned minerals



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- State parks and monuments
- State rare, threatened, and endangered species
- State wildlife refuges and fish hatcheries.

The office and/or group responsible for each of these resources varies among states.

### *b) 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 into any 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.

### *c) 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 Departments to act as Trustees for the natural resources, subject to their respective management or control:

#### *United States Department of Agriculture (USDA)*

Examples of resources under the trusteeship of the Secretary of the USDA include:

- Federal rangeland
- Federally managed fisheries
- Federally owned or managed farmland
- Land enrolled in the Wetlands Reserve Program
- National forest land.

The following offices within the USDA are responsible for management and/or protection of the resources listed above: Forest Service; Natural Resources Conservation Service; and Conservation Reserve Program.

#### *Department of Commerce (DOC)*

Examples of resources under the trusteeship of the Secretary of DOC include:



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- Coastal environments, including salt marshes, tidal flats, estuaries, or other tidal wetlands
- Designated Estuarine Research Reserves or Marine Sanctuaries
- Endangered marine species
- Marine mammals
- Rivers or tributaries to rivers that historically support or presently support anadromous fish (fish that spend a portion of their lifetimes in both fresh and salt water [e.g., salmon]).

The DOC Secretary delegated Trustee responsibility to the Administrator of NOAA. The following offices or groups within NOAA have responsibilities that include protection and management of natural resources: National Marine Fisheries Service, Office of Ocean and Coastal Resource Management, Office of Oceanography and Marine Services, and the General Counsel. For cases involving resources in coastal waters and anadromous fish streams, DOC acts as a co-Trustee with the DOI.

### *Department of Defense (DOD)*

The Secretary of DOD has trusteeship over the natural resources on all lands owned by DOD or the Army, Navy, Air Force, and Defense Logistics Agency. These lands include military bases and training facilities, research and development facilities, and munitions plants.

### *Department of Energy (DOE)*

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

### *Department of the Interior (DOI)*

Examples of resources under the trusteeship of the Secretary of DOI include:

- Certain anadromous fish
- Certain endangered species
- Certain marine mammals
- Federally owned minerals
- Migratory birds
- National Wildlife Refuges and Fish Hatcheries
- National Parks and Monuments
- Tribal resources, in cases where the U.S. acts on behalf of the Indian Tribe.

The following offices within DOI are responsible for management and protection of the resources listed above: Bureau of Indian Affairs, Bureau of Land Management, Bureau of Mines, Bureau of Reclamation, USFWS, Minerals Management Service, National Park Service, and United States Geological Survey (USGS).

Specific information about each Secretary's responsibilities can be found in the NCP at 40 CFR §300.600.

## 13. Natural Resource Damage Assessment (NRDA)

Following a hazardous release or discharge, natural resource trustees may have responsibility for assessing injury to the environment as a result of the spill. 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 and determine the dollar amount necessary to restore

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injured trust resources or compensate for lost use of resources and seek recovery of those damages from the RP. NRDAs are typically initiated concurrent with response activities.

Initiation of an 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. Because NRDA activities could duplicate those conducted as part of the response, all sampling and field work by natural resource trustees should be coordinated with the lead response agency.

If natural resources are injured by a discharge or release of a mixture of oil and hazardous substances, DOI regulations apply. NOAA regulations apply only in assessing damages that may result from discharges of oil. Additional details are included in Appendix G.

### 14. State Historic Preservation Officers (SHPOs)

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Council a reasonable opportunity to comment on such undertakings. The procedures in this part define how federal agencies meet these statutory responsibilities. The Section 106 process seeks to accommodate historic preservation concerns with the needs of federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, commencing at the early stages of project planning. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects, and seek ways to avoid, minimize, or mitigate any adverse effects on historic properties.

### 15. Tribal Historic Preservation Officers (THPOs)

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## VI. Roles of Responsible Parties

Under the CWA, RPs are 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. RPs may also be required to report these releases under various state and local statutes. OPA 90 § 1002 makes RPs responsible for removal costs and damages. (See Section II A for additional detail and planning requirements.) RPs are 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 their 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 of these activities typically proceed under the direction of an IC from a local public safety agency.

While the RP has primary responsibility for cleanup of a discharge or release, the response shall be conducted in accordance with the NCP and the RP's applicable response plan. If necessary, EPA or USCG may direct the response activities of the RP. The FOSC also may "federalize" a response (see Section IV D7) 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 UCS that

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incorporates the command structures of the RP, local responders, and state and federal responders may be established to address simultaneous public safety and environmental concerns.

# VII. Notification

The discovery of a spill and notification procedures can follow a number of paths. RPs, private citizens, or the news media may notify local, state, or federal agencies by calling 911, or the state or EPA spill line, or the NRC. In some instances, notification by and of various agencies may occur as a matter of courtesy. The following sections describe notification procedures for those responsible for responding to oil or hazardous substance releases within the GRSA.

## A. Protocol

Prompt notification of all appropriate agencies is critical for an effective coordinated response. The organization first aware of a release is responsible for notifying other appropriate and potentially affected agencies. All initial notifications should be by voice telephone, not by facsimile copy or electronic mail. Each agency is to consider itself the first notified unless it has been notified according to protocol. When an agency is notified by another responding agency/organization, it must ascertain whether the agencies it is responsible for notifying have been contacted, and then notify those agencies that have not been contacted. The following criteria shall be used in determining whether to make notifications:

(1) The release could affect the jurisdiction of another agency.
(2) Assistance might be requested from another agency.

Although another agency might not be affected or requested to provide assistance, that agency will be notified out of courtesy if it likely will receive inquiries from other sources such as citizens, companies, or news media.

When an agency is notified of a spill, it should meet its statutory notification responsibilities before commencing notifications set forth in this protocol.

## B. Notification of Natural Resource Trustees

OSCs are responsible for notifying the appropriate natural resource trustee(s) if the release affects or threatens to affect environmentally sensitive areas, migratory waterfowl, or state or federally listed threatened or endangered species. SOSCs will notify their state's trustees, and FOSCs will notify USFWS. SOSCs and FOSCs will coordinate notifications when incidents threaten both state and federal resources.

## C. Great Rivers Sub-area SACP Notifications

Just as a discharge of oil or a release of hazardous substances can emanate from numerous sources, the discovery of a spill and initiation of notification procedures can proceed along a number of paths. As examples, RPs, private citizens or the news media may notify agencies at the local, state or federal level by calling 911, a state spill line, an EPA spill line, or the NRC. Depending upon the severity of a spill or discharge, notification may not only be required by statute, but may be essential to protecting human health and the environment. In other instances notification by and of various agencies may be done as a matter of courtesy. The following sections describe how notifications will be made among those responsible for responding to most releases of oil or discharges of hazardous substances in the GRSA.

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### 1. Protocol

Prompt notification is critical for an effective coordinated response among all organizations that might be involved during an incident. Each organization that first becomes aware of a release of oil or a hazardous substance in the GRSA has the responsibility to notify other appropriate and potentially affected agencies. All initial notifications should be by voice telephone, not by facsimile copy or email. Each organization is to consider itself the first agency aware of a release, if it has not previously been notified of the release according to this protocol. When an agency is notified by another responding organization, it must confirm that other agencies that it is responsible for notifying have been contacted, and then proceed to notify those agencies that have not yet been made aware of the release. The following criteria shall be used in determining whether to make these additional notifications:

1. The release has the potential to affect the jurisdiction of another agency.
2. Assistance might be requested from another agency.

### 2. Notification of Natural Resource Trustees

The appropriate state and/or federal natural resource trustee(s) should be notified in the event of any discharge or release affecting or threatening to affect environmentally sensitive areas, migratory waterfowl or state or federally listed threatened or endangered species. Responsibility for notification will rest with the respective OSC, i.e., SOSCs will notify their state's trustees and FOSCs will notify the DOI RRT/trustee representative. SOSCs and FOSCs will coordinate notifications affecting state and federal resources.

### 3. Great Rivers SACP Notifications

After making all appropriate notifications under internal plans, Emergency Managers and Incident Commanders, through their EMA or 911 Dispatch, are encouraged to notify any other agency with a potential interest in an incident. Neighboring, across-the-river and downstream jurisdictions, which might be contacted for mutual assistance or could be impacted by an incident, should be notified.

A Notification Flowchart and additional details on notifications and contact information are inlucded in the Appendices of this document.

# VIII. Great Rivers Response Protocol

## A. Incident Command and Jurisdiction

The first responding local agency will establish an initial command post and an Incident Command System (ICS). If jurisdiction is unclear, the responding agencies will confer to determine which agency has jurisdiction. Once jurisdiction has been determined, the local agency having jurisdiction will either assume command or request that establishment of a UCS at the local level.

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If jurisdiction is not determined, the initial responding local agency will either maintain command or request a UCS. When the SOSC and the FOSC arrive at the site, they will confer with the IC. By mutual agreement, they will determine whether the SOSC and FOSC will integrate into the local ICS, whether the SOSC or FOSC will take the lead, or whether they will jointly establish a UCS. If the responding agencies cannot agree on the issue of command, the FOSC has preemptive authority under the NCP.

### B. Contractor Oversight

If the RP is capable and willing to respond to the release, governmental officials will work with the RP to mitigate the spill while maintaining general oversight. If no Potentially Responsible Party (PRP) is identifiable or an RP is unwilling or incapable of responding, the IC and OSCs will pursue available options for using government funds to clean up the release. If a contractor responds to the spill, it will answer to the agency providing its funding unless all parties agree to supervision by other agencies.

### C. Coordination

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

### D. Public Information

The IC may appoint a Public Information Officer (PIO) responsible for developing and releasing information to the media and the public. The PIO will advise and represent the IC on all public information matters, gather incident data, obtain media information useful to operations and media planning, develop news releases or information for release to the public, and establish and operate a media center (when designated by the IC). PIO functions must be coordinated and integrated across jurisdictional and functional agencies (federal, state, local, tribal partners, private-sector, and nongovernmental organizations). The PIO will coordinate with the IC to establish a timeline for providing information updates to the media.

### E. Termination

When the IC terminates an incident, a notice of termination will be sent to all responding agencies. After the termination and to the extent feasible, the IC and the SOSC and FOSC will work together to coordinate the following: (1) issuance of their respective reports, (2) efforts to recover costs, and (3) a critique of the incident.

## IX. Incident Command

The senior on-scene official of the first response team to arrive at an oil or hazardous release incident shall establish an ICS. The ICS should be established in accordance with NIMS, adopted March 1, 2004. In accordance with NIMS procedures, Incident Command should transition toward a Unified Command when the incident is of sufficient magnitude to involve multiple agencies from various levels of government. Additional information on NIMS and its applications is available at http://www.fema.gov/national-incident-management-system

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# 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).

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

If a site has a single IC, that commander will appoint an Site Safety Officer (SSO) who will coordinate with the safety officers of all responding Hazmat teams. The SSO will ensure compatibility of the various SSPs with the overall SSP. If a UCS is in place, the Unified Commanders 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 UCS. The IC or Unified Commanders will bring the matter to the attention of the SSO for resolution. The IC, who is ultimately responsible for the safety of everyone on site, has 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 the authority of 29 CFR 1910.120, and of governmental employers under the authority of 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:** Personal Protective Equipment (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])

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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 (http://www.uscg.mil/npfc/) and through the Oil Spill Liability Trust Fund home page (http://www.uscg.mil/npfc/About_NPFC/osltf.asp).

## 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 be in accordance 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. Federal Access to the OSLTF

To access the OSLTF, the Eighth Coast Guard District Office in New Orleans, Louisiana, must be contacted at (504) 589-6225 (24-hour number). The District Office will issue an eight-digit case number and authorize a spending ceiling. After receiving a number and ceiling from the District, the federal agency providing an FOSC must contact its contracting officer within 48 hours to issue a delivery order for services under the applicable Basic Ordering Agreements (BOAs).

## C. State Access to the OSLTF

In accordance with regulations in Section 1012(d) (1) of OPA, the President, upon request of the State's Governor, 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.

State access to the Fund provides an avenue for states to receive federal funds for immediate removal costs. The individual requesting access the OSLTF must:

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- 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 the 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 (TOPs) for state access under Section 1012(d) (1) of OPA, which can be accessed on-line at: http://www.uscg.mil/npfc/urg/urg_chapter_5.asp

## D. Pollution Removal Funding Authorization

State and local agencies and other federal agencies may perform removal actions ***under the direct supervision of an FOSC*** through a Pollution Removal Funding Authorization (PRFA). The PRFA is issued by the FOSC and commits the OSLTF to payment, via reimbursement, of costs incurred during pollution response activities undertaken by another government agency working for the FOSC. To ensure reimbursement, responding agencies should obtain a PRFA prior to incurring costs. State or local involvement in use of the OSLTF through a PRFA can be accomplished as follows:

The appropriate agency notifies the EPA of the spill immediately.

- An FOSC travels to the site and discusses with the state or local representative what actions should be taken. The FOSC and the representative reach an agreement and document the specific goods and services to be provided in the form of a scope of work, and provide a good-faith estimate of the total anticipated costs. A PRFA is prepared by the authorizing federal agency and signed by the FOSC to fund the State's actions.
- During the response, the state or local government must document costs and submit them to the FOSC daily for approval. The requesting agency is responsible for payment of invoices incurred by response contractors.

When the removal is complete, the requesting agency submits cost documentation to the NPFC via the FOSC for reimbursement. Reimbursement generally proceeds through a single check to the other agency from the USCG after completion of the cleanup.

More information is available in Chapter 10 of the Technical Operation Procedures for Resource Documentation at: http://www.uscg.mil/npfc/Response/Cost%20Documentation/prfa.asp

## E. Claims

Section 1012(d) (1) of OPA 90 authorizes use of the Fund for "the 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. To submit a claim against the OSLTF, the state or local agency must:

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Submit a detailed description of the incident including what type of material was released or potentially released; what navigable water was impacted or potentially impacted; what response actions were taken to prevent, minimize, or mitigate the release, 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 the 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 at: http://www.uscg.mil/npfc/Claims/default.asp

## F. 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 by 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 Parts 310.20 and 310.30).

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 amount of 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 of the allowable costs may include, but are not limited to, the following:

- Disposal of materials and supplies acquired and used specifically for the related response



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- Employee compensation for response work that is not provided in the applicant's operating budget
- Rental or leasing of equipment
- Replacement costs of equipment contaminated to the extent that it is 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 on the basis of 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 one-year reconsideration.

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

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# APPENDIX A. ACRONYMS AND ABBREVIATIONS

| | |
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| § | Article |
| $^{o}$F | Degrees Fahrenheit |

A

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| AC | Area Committee |
| ACP | Area Contingency Plan |
| ADEM | Arkansas Department of Emergency Management |
| ADEQ | Arkansas Department of Environmental Quality |
| AOR | Area of Responsibility |
| ARAR | Applicable or Relevant and Appropriate Requirement |
| ATSDR | Agency for Toxic Substances and Disease Registry |

B

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| BOA | Basic Ordering Agreement |
| BOEM | Bureau of Ocean Energy Management |

C

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|---|---|
| CAA | Clean Air Act |
| CBRN | Chemical, Biological, Radiological, & Nuclear |
| CDC | Centers for Disease Control and Prevention |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR | *Code of Federal Regulations* |
| CHEMTREC | Chemical Transportation Emergency Center |
| CHRIS | Chemical Hazard Response Information System |
| CIC | Community Involvement Coordinator |
| CIP | Community Involvement Plan |
| CMAT | Consequence Management Advisory Team |
| COE | United States Army Corps of Engineers |
| COTP | Captain of the Port |
| CPR | Cardiopulmonary resuscitation |
| CWA | Clean Water Act (Federal Water Pollution Control Act) |

D

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| 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 |

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E

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| EER | Environmental Emergency Response Section |
| EHS | Extremely Hazardous Substance |
| EMA | Emergency Management Agency |
| EMAC | Emergency Management Assistance Compact |
| EOC | Emergency Operations Center |
| EPA | U.S. Environmental Protection Agency |
| EPCRA | Emergency Planning and Community Right To Know Act (SARA Title III) |
| ER&R | Emergency Response and Removals |
| ERRS | Emergency and Rapid Response Services (EPA contract) |
| ERT | Environmental Response Team |
| ESA | Endangered Species Act |
| ESF | Emergency Support Function |

F

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|---|---|
| FBI | Federal Bureau of Investigation |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| FOSC | Federal On-scene Coordinator |
| FRP | Federal Response Plan |
| FWPCA | Federal Water Pollution Control Act |

G

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| GIS | Geographic Information System |
| GRSA | Great Rivers Sub-Area |
| GRSACP | Great Rivers Sub-Area Area Contingency Plan |
| GSA | General Services Administration |

H

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|---|---|
| Hazmat | Hazardous Materials |
| HAZWOPER | Hazardous Waste Operations and Emergency Response |
| HHS | Department of Health and Human Services |
| HSERP | Hazardous Substance Emergency Response Plan |
| HSPD | Homeland Security Presidential Directive |

I

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|---|---|
| IC | Incident Commander |
| ICP | Integrated Contingency Plan |
| ICS | Incident Command System |
| IDNR | Illinois Department of Natural Resources |
| IEMA | Illinois Emergency Management Agency |
| IEPA | Illinois Environmental Protection Agency |

J

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| JFO | Joint Field Office |

K

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| KDEP | Kentucky Department for Environmental Protection |
| KYEM | Kentucky Emergency Management |

L

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| LDB | Left Descending Bank |
| LEOP | Local Emergency Operations Plan |
| LEPC | Local Emergency Planning Committee |
| LEPD | Local Emergency Planning District |
| LERP | Local Emergency Response Plan |
| LFA | Lead Federal Agency |
| LGR | Local Governments Reimbursement |
| LMRV | Lower Mississippi River Valley |

M

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|---|---|
| MAA | Mutual Aid Agreement |
| MDNR | Missouri Department of Natural Resources |
| MERC | Missouri Emergency Response Commission |
| MHz | Megahertz |
| MMS | Minerals Management Service |
| MOA | Memorandum of Agreement 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 Endangered Species Act |
| MOU | Memorandum of Understanding |
| MSD | Marine Safety Detachment |
| MSDS | Material Safety Data Sheet |

N

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| 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 |
| NPL | National Priorities List |
| NRC | National Response Center |
| NRCS | Natural Resources Conservation Service |
| NRDA | Natural Resource Damage Assessment |
| NRF | National Response Framework |
| NRP | National Response Plan |
| NRS | National Response System |
| NRT | National Response Team |
| NSF | National Strike Force |
| NSFCC | National Strike Force Coordination Center |

O

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| ODP | Office of Domestic Preparedness |
| OEM | Office of Emergency Management |

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| OER | Office of Emergency Response |
| OHMTADS | Oil & Hazardous Materials Technical Assistance Data System (EPA) |
| OPA 90 | Oil Pollution Act of 1990 |
| OPA | Oil Pollution Act |
| OPS | Office of Pipeline Safety |
| ORP | Office of Radiation Programs |
| 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 |

P

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| PFO | Principal Federal Official |
| PIAT | Public Information Assist Team |
| PIO | Public Information Officer |
| 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

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| QARG | Quick Action Response Guide |

R

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|---|---|
| RA | Regional Administrator |
| RACES | Radio Amateur Civil Emergency Services |
| RAT | Radiological Assistance Team |
| RDB | Right Descending Bank |
| RCP | Regional Contingency Plan |
| RCRA | Resource Conservation and Recovery Act |
| REO | Regional Environmental Officer |
| RERT | Radiological Emergency Response Team (Region 7) |
| RICP | Regional Integrated Contingency Plan |
| RMP | Risk Management Plan |
| RP | Responsible Party |
| RPM | Remedial Project Manager |
| RRC | Regional Response Center |
| RRT | Regional Response Team |
| RSMo | Revisited Statutes of Missouri |
| RSPA | Research and Special Programs Administration |

S

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| SACP | Sub-Area Contingency Plan |

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| 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 Officer |
| SKIM | Spill Cleanup Inventory System |
| SMOA | Superfund Memorandum of Agreement |
| SONS | Spills of National Significance |
| SOSC | State On-Scene Coordinator |
| 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 and Diving |

T

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| TEMA | Tennessee Emergency Management Agency |
| TEMP | Tennessee Emergency Management Plan |
| TERC | Tribal Emergency Response Committee |
| THPO | Tribal Historic Preservation Officer |
| TNC | The Nature Conservancy |
| TOP | Technical Operating Procedure |
| TVA | Tennessee Valley Authority |

U

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|---|---|
| U.S.C. | *United States Code* |
| UCS | Unified Command System |
| UHF | Ultra high frequency |
| UMR | Upper Mississippi River |
| UMRBA | Upper Mississippi River Basin Association |
| URL | Uniform Resource Location (on the Internet) |
| USCG | United States Coast Guard |
| USDA | United States Department of Agriculture |
| USFS | United States Forest Service |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |

V

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| VHF | Very high frequency |

W

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| WCD | Worst-case discharge |

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# APPENDIX B. DEFINITIONS

*(Appendix B 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 use. )*

**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)(4), 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 the 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.

**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 discharges in compliance with a permit under section 402 of the CWA, 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, or 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 the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

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**Environment**, as defined by section 101(8) of CERCLA, means the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources 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 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) which is 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 Response Plan** (FRP) means the agreement signed by 27 federal departments and agencies in April 1987 and developed under the authorities of the Earthquake Hazards Reduction Act of 1977 (42 U.S.C. 7701 et seq.), and the Disaster Relief Act of 1974 (42 U.S.C. 3231 et seq.), as amended by the Stafford Disaster Relief Act of 1988.

**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 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 the regulation of which under the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.) has been 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, which is 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).

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

**Joint Field Office** (JFO) means a temporary federal facility established locally to provide a central point for federal, state, local, and tribal executives with responsibility for incident oversight, direction, and/or assistance to effectively coordinate protection, prevention, preparedness, response and recovery actions. The JFO combines the traditional functions of the Joint Operations Center, the Federal Emergency Management Agency's (FEMA) Disaster Field Office, and the Joint Information Center within a single federal facility.

**Lead Administrative Trustee** means a natural resource trustee who is designated on an incident-by-incident basis for the purpose of pre-assessment and damage assessment, and chosen by the other trustees whose natural resources are affected by the incident. The lead administrative trustee facilitates effective and efficient communication during response operations between the OSC and the other natural resource trustees conducting activities associated with damage assessment, and is responsible for applying to the OSC for access to response operations resources on behalf of all trustees for initiation of a damage assessment.

**Lead agency** means the agency that provides the OSC/RPM to plan and implement response actions under the NCP. EPA, the 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 may be the lead agency for a response action. In the case of a release of a hazardous substance, pollutant, or contaminant, where the release is on, or the sole source of the release is from, any facility or vessel under the jurisdiction, custody, or control of DOD or DOE, then DOD or DOE will be the lead agency. Where the release is on, or the sole source of the release is from, any facility or vessel under the jurisdiction, custody or control of a federal agency other than EPA, the USCG, DOD, or DOE, then that agency will be the lead agency for remedial actions and removal actions other than emergencies. The federal agency maintains its lead agency responsibilities whether the remedy is selected by the federal agency for non-NPL sites or by EPA and the 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.

**Management of migration** means actions that are taken to minimize and mitigate the migration of hazardous substances or pollutants or contaminants, and the effects of such migration. Measures may include, but are not limited to, management of a plume of contamination, restoration of a drinking water aquifer, or surface water restoration.

**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

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capabilities, the NIMS includes a core set of concepts, principles, and terminology. HSPD-5 identifies these as the 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 whose function is administration of the OSLTF. Among the NPFC's duties are: providing appropriate access to the OSLTF for federal agencies and states for removal actions, and for federal trustees to initiate the 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 Plan** (NRP) is an all-discipline, all-hazards plan that established a single, comprehensive framework for management of domestic incidents. The NRP, approved in 2004 and revised in 2006, provided the structure and mechanisms for coordination of federal support to state, local, and tribal incident managers, and for exercising direct federal authorities and responsibilities. Portions of the NRP were superseded when the NRF became official on March 28, 2008.

**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, Area Committees, 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** (NSF) is a special team established by USCG, including the three USCG Strike Teams, the PIAT, and the NSFCC. The NSF is available to assist OSCs/ RPMs in their preparedness and response duties.

**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 administration of the USCG Strike Teams, maintenance of response equipment inventories and logistic networks, and conducting a national exercise program.

**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

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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:

(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 that are subject to the 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;

(iii) That are used or could be used for industrial purposes by industries in interstate 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; and

(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.

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

**Oil**, as defined by section 311(a)(1) of the 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, as 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 that Act.

**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).

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

**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 waters within the United States; and, as defined by section 311(a)(10) of the CWA, means any facility

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(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 the OPA, "person" means an individual, corporation, partnership, association, state, municipality, commission, or political subdivision of a state, or any interstate body.

**Principal Federal Official** (PFO) is the federal official designated by the Secretary of Homeland Security to act as his/her representative locally to oversee, coordinate, and execute the Secretary's incident management responsibilities under HSPD-5 for Incidents of National Significance.

**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 chains, 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, which 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 the 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 into the environment; such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances; the 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

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appropriate, and any emergency assistance which 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 the OPA, means the costs of removal that are incurred after a discharge of oil has occurred, or in any case in which there is a substantial threat of a discharge of oil, the costs to prevent, minimize, or mitigate oil pollution from such an incident.

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

**Responsible party**, as defined by section 1001 of the 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) Offshore Facilities—In the case of an offshore facility (other than a pipeline or a deepwater port licensed under the Deepwater Port Act of 1974 (33 U.S.C. 1501 et seq.)), the lessee or permittee of the area in which the facility is located or the holder of a right of use and easement granted under applicable state law or the Outer Continental Shelf Lands Act (43 U.S.C. 1301-1356) for the area in which the facility is located (if the holder is a different person than the lessee or permittee), except a federal agency, state, municipality, commission, or political subdivision of a state, or any interstate body that as owner transfers possession and right to use the property to another person by lease, assignment, or permit.

(4) Deepwater Ports—In the case of a deepwater port licensed under the Deepwater Port Act of 1974 (33 U.S.C. 1501-1524), the licensee.

(5) Pipelines—In the case of a pipeline, any person owning or operating the pipeline.

(6) Abandonment—In the case of an abandoned vessel, onshore facility, deepwater port, pipeline, or offshore facility, the person who would have been responsible parties immediately prior to the abandonment of the vessel or facility.

**SARA** is the Superfund Amendments and Reauthorization Act of 1986. In addition to certain free-standing provisions of law, it includes amendments to CERCLA, the Solid Waste Disposal Act, and the Internal Revenue Code. 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."

**Size classes** of discharges refers to the following size classes of oil discharges which are provided as guidance to the OSC and serve as the criteria for the 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:

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(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 that are provided as guidance to the OSC for meeting pollution reporting requirements in subpart B of the NCP. The final determination of the appropriated classification of a release will be made by the OSC 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 that are used to remove oil and hazardous substances from water through adsorption, in which 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. The sorbent material may consist of, but is not limited to, the following materials:

(1) Organic Products --

(i) Peat moss or straw;

(ii) Cellulose fibers or cork;

(iii) Corn cobs;

(iv) Chicken, duck, or other bird feathers.

(2) Mineral compounds --

(i) Volcanic ash or perlite;

(ii) Vermiculite or zeolite.

(3) Synthetic products --

(i) Polypropylene;

(ii) Polyethylene;

(iii) Polyurethane;

(iv) Polyester.

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**Source control** action is construction or installation and start-up of those actions necessary to prevent the 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 the effectiveness of source control actions once such actions are operating and functioning properly, such as the maintenance of landfill caps and leachate collection systems.

**Spill of National Significance** (SONS) means a spill that due to its severity, size, location, actual or potential impact on the 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 or 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 support agencies for a response action if operating pursuant to a contract executed under section 104(d)(1) of CERCLA or designated pursuant to a Superfund MOA 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 detergency 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, or that carries oil or hazardous material in bulk as cargo or cargo residue, and that:

(1) is a vessel of the United States;

(2) operates on the navigable waters; or

(3) transfers oil or hazardous materials 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.

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

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

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# APPENDIX C. INDUSTRY AND AGENCY CONTACTS

## Agency

NOTE: Contacting any one of these organizations does not relieve a PRP of the requirement to make all required notifications of hazardous substance releases. These numbers are provided for the convenience of PRPs and are not to be considered an all-inclusive list of required notifications.

To report spills, call the:

**National Response Center**

United States Coast Guard Headquarters
Washington, D.C.

**(800) 424-8802**

### U.S. Environmental Protection Agency

| 24 Hour US EPA Emergency Response Duty Officer | | | |
|---|---|---|---|
| **Region 4** | Region 5 | Region 6 | Region 7 |
| **(404) 562-8700** | **(312) 353-2318** | **(270) 442-1621** | **(913) 281-0991** |

### U.S Coast Guard

| 24 Hour USCG Duty Officer | | |
|---|---|---|
| USCG Sector Ohio Valley Marine Safety Unit MSU Paducah, KY | Lower Mississippi River Memphis, TN | Sector Upper Mississippi River St. Louis, MO |
| **(270) 442-1621** | **(901) 521-4747** | **(314) 269-2540** |

### State Response Agencies

| State Spill Response Numbers | | | | |
|---|---|---|---|---|
| Arkansas | Illinois | Kentucky | Missouri | Tennessee |
| **ADEQ – Emergency Response** | **IEMA** | **KDEP Environmental Emergencies** | **MDNR Emergency Response** | **TEMA** |
| **(800) 322-4012** | **(217) 782-7860** | **(502) 564-2380** | **(573) 634-2436** | **(731) 422-3300** |

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## Local Emergency Planning Committees

### Missouri

| | | |
|---|---|---|
| Bootheel LEPC<br>911 or<br>Coordinator: (800) 609-1559 | Southeast Missouri LEPC<br>911 or<br>Coordinator: (573) 547-8357 | Ozarks Foothills LEPC<br>911 or<br>Coordinator: (573) 785-6402 |

### Illinois

| | |
|---|---|
| **Alexander County LEPC**<br>618-734-3452 | **Pope County LEPC**<br>618-683-4321 |
| **Hardin County LEPC**<br>618-285-6090 | **Pulaski County LEPC**<br>618-748-9437 |
| **Jackson County LEPC**<br>618-684-3137 | **Randolph County LEPC**<br>618-826-5000 x 227 |
| **Massac County LEPC**<br>618-524-2002 | **Union County LEPC**<br>618-697-0760 |

### Kentucky

| | |
|---|---|
| **Ballard County LEPC**<br>(270) 665-9928 | **Livingston County LEPC**<br>(270) 928-3177 |
| **Carlisle County LEPC**<br>(270) 628-3355 | **McCracken County LEPC**<br>(270) 444-1333 |
| **Fulton County LEPC**<br>(270) 236-3480 | **Marshall County LEPC**<br>(270) 527-4739 |
| **Hickman County LEPC**<br>(270) 653-5871 | **Union County LEPC**<br>(270) 333-4006 |

### Tennessee

| | |
|---|---|
| **Dyer County LEPC**<br>(731) 286-7831 | **Lake County LEPC**<br>(731) 986-1936 |

### Arkansas

| | |
|---|---|
| **Mississippi County Local Emergency Planning Committee (LEPC)**<br>Joseph Richmond<br>(870) 563-1309 | |

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## Natural Resource Trustees

| Federal Natural Resource Trustee U.S. Department of the Interior | | | |
|---|---|---|---|
| Arkansas | Illinois | Kentucky/Tennessee | Missouri |
| Office of Environmental Policy and Compliance<br>Albuquerque Region<br>1001 Indian School Road, NW, Suite 348<br>Albuquerque, New Mexico 87104<br>Phone: (505) 563-3572<br>Fax: (505) 563-3066 | Office of Environmental Policy and Compliance<br>Philadelphia Region<br>Custom House, Room 244<br>200 Chestnut Street<br>Philadelphia, PA 19106<br>Telephone: (215) 597-5378<br>Fax: (215) 597-9845 | Office of Environmental Policy and Compliance<br>Atlanta Region<br>Suite 1144<br>75 Spring Street, S.W.<br>Atlanta, GA 30303<br>Telephone: (404) 331-4524<br>Fax: (404) 331-1736 | Denver Region<br>P.O. Box 25007 (D-108)<br>Denver Federal Center<br>Denver, CO 80225-0007<br>(located in Building 67, Room 118)<br>Telephone: (303) 445-2500<br>Fax: (303) 445-6320 |

| State Natural Resource Trustees | | | | |
|---|---|---|---|---|
| Arkansas | Illinois | Kentucky | Missouri | Tennessee |
| [Reserved] | [Reserved] | KDEP<br>300 Fair Oaks Lane<br>Frankfort, KY 40601<br>(502) 564-0323 | MDNR<br>P.O. Box 176<br>Jefferson City, MO 65102<br>Staff Contact: NRD Coordinator<br>Telephone 573-526-3353,<br>Fax 573-751-9277 | TDEC<br>401 Church Street, L&C Annex, 1st Floor<br>Nashville, TN 37243<br>(615) 532-0109 |

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## State Historic Preservation Officers

| State Historic Preservation Office | |
|---|---|
| **Arkansas** | ***Arkansas Historic Preservation Program***<br>*323 Center Street, Suite 1500 - Little Rock, Arkansas 72201*<br>*Phone: (501) 324-9880 - Fax: (501) 324-9184 –*<br>*E-Mail: info@arkansaspreservation.org*<br>*http://www.arkansaspreservation.com/* |
| **Illinois** | ***Illinois Historic Preservation Agency***<br>*Preservation Services*<br>*#1 Old State Capitol Plaza*<br>*Springfield IL 62701-1507*<br>*http://www.state.il.us/hpa/ps/* |
| **Kentucky** | ***Kentucky Heritage Council / State Historic Preservation Office***<br>*300 Washington Street*<br>*Frankfort, KY 40601*<br>*(502) 564-7005 office*<br>*(502) 564-5820 fax*<br>*http://heritage.ky.gov/* |
| **Missouri** | ***Missouri State Historic Preservation Office***<br>*P.O. Box 176*<br>*Jefferson City, MO 65102*<br>*800-361-4827*<br>*573-751-7858*<br>*E-mail: moshpo@dnr.mo.gov*<br>http://www.dnr.mo.gov/shpo/ |
| **Tennessee** | ***Tennessee State Historic Preservation Office***<br>*2941 Lebanon Road*<br>*Nashville, TN 37243-0442*<br>*Overnight shipping of packages use 37214*<br>*615-532-1550*<br>*http://www.tennessee.gov/environment/hist/* |

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## FRP Facilities

| FRP Facilities | | | | | |
|---|---|---|---|---|---|
| Facility Name | Address | City | State | Zip | County |
| Trans-Montaigne - Cape Girardeau Terminal | 1400 South Giboney Street | Cape Girardeau | MO | 63703 | Cape Girardeau |
| Heartland Asphalt Materials | 297 South Hwy 61 | New Madrid | MO | 63869 | New Madrid |
| Enterprise Products - Cape Girardeau District, Scott City Terminal | 10653 State Hwy N | Scott City | MO | 63780 | Scott |
| Bunge North America Inc | 203 34th St. | Cairo | IL | 62914 | Alexander |
| Marathon Ashland Petroleum LLC | 201 Ashland Rd | Paducah | KY | 42003 | McCracken |
| Paducah Terminal | 233 Elizabeth Street | Paducah | KY | 42003 | McCracken |
| TransMontaigne Terminal | 1350 S 3rd St | Paducah | KY | 42003 | McCracken |
| Midwest Terminal Inc | 725 North 5th Street | Paducah | KY | 42001 | McCracken |
| US Doe Paducah Gas Diffusion Plant | 5600 Hobbs Road | Paducah | KY | 42001 | McCracken |

## RCRA Facilities

| RCRA Facilities | | | | |
|---|---|---|---|---|
| Facility Name | Address | City | State | Zip |
| Nucor Corporation | 7301 East County Road 142 | Blytheville | AR | 72315 |
| Nucor Yamato Steel | 5929 E. State Hwy. 18 | Blytheville | AR | 72316 |
| Maverick Tube LP Blythev L | 4950 N. County Rd. 967 | Blytheville | AR | 72315 |
| Cyro Industries | 1500 Richard Prewitt Dr. | Osceola | AR | 72370 |
| American Greetings | 1400 Ohlendorf Rd. | Osceola | AR | 72370 |
| Clark Oil 1843 | 162 E Vienna St | Anna | IL | 62906 |
| Southern Illinois University | 1400 Poultry Center Drive | Carbondale | IL | 62901 |
| Central Products Co | 2200 North Mccoy Drive | Carbondale | IL | 62901 |
| IL Central Mgmt Serv Dept Of Vehicles | Rte 13 W | Carbondale | IL | 62901 |
| Beazer East Inc | 1555 N Marion St | Carbondale | IL | 62901 |
| Ameren Cips - Grand Tower | 1820 Power Plant Road | Grand Tower | IL | 62942 |

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| RCRA Facilities | | | | |
|---|---|---|---|---|
| **Facility Name** | **Address** | **City** | **State** | **Zip** |
| Honeywell International Inc | 2768 Us Highway 45 North | Metropolis | IL | 62960 |
| American Minerals Inc | Depot & Ferrell | Rosiclare | IL | 62982 |
| Street J D & Co Inc | Hwy 51 North | Urbandale | IL | 62914 |
| Dyno Nobel Inc. | 5570 State Rte. 3 N. | Wolf Lake | IL | 62998 |
| Alcan Composites USA Inc | 208 West 5th Street | Benton | KY | 42025 |
| Texas Gas Transmission Corporation | 93 Texas Gas Lane | Benton | KY | 42025 |
| Air Products & Chemicals/Draffens Whse | 119 N Main St | Calvert City | KY | 42029 |
| BF Goodrich Company | Kentucky Highway 1523 | Calvert City | KY | 42029 |
| American Environmental Services Inc | 1689 Shar-Cal Road | Calvert City | KY | 42029 |
| Atofina Chemicals Incorporated | 4444 Industrial Parkway | Calvert City | KY | 42029 |
| Air Products & Chemicals Incorporated | 412 North Main Street | Calvert City | KY | 42029 |
| Estron Chemical Incorporated | Highway 95 409 North Main | Calvert City | KY | 42029 |
| International Specialty Products Chemicals Incorporated | Hwy. 95 | Calvert City | KY | 42029 |
| Noveon, Inc. | 2468 Industrial Parkway | Calvert City | KY | 42029 |
| Celanese Limited | 408 North Main Street | Calvert City | KY | 42029 |
| Rail Services | 640 Gary Johnson Lane | Calvert City | KY | 42029 |
| General Environmental Services LLC | 2475 Industrial Parkway | Calvert City | KY | 42029 |
| Westalake Pvc Corporation | 230 Johnson Riley Road | Calvert City | KY | 42029 |
| Degussa Corporation | 5150 Gilbertville Highway | Calvert City | KY | 42029 |
| Rayloc | 3710 Highway 60 North | Morganfield | KY | 42437 |
| Dawson Manufacturing Morganfield Plant | 3564 U.S. Highway 60 East | Morganfield | KY | 42437 |
| Browns Plating Service Incorporated | 1010 Krebs Station Rd. | Paducah | KY | 42003 |
| Trinity Marine Products Incorporated | 700 Terrace Lane | Paducah | KY | 42003 |
| Vmv Enterprises Incorporated | 1300 Kentucky Avenue | Paducah | KY | 42003 |
| Us Doe Paducah Gas Diffusion Plt | 5600 Hobbs Road | Paducah | KY | 42001 |
| United States Enrichment Corporation | 5600 A Hobbs Road | Paducah | KY | 42001 |
| Lone Star Industries Incorporated | 2524 South Sprigg Street | Cape Girardeau | MO | 63701 |
| Trinity Caruthersville | 265 County Highway 346 | Caruthersville | MO | 63830 |

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| RCRA Facilities | | | | |
|---|---|---|---|---|
| Facility Name | Address | City | State | Zip |
| Trinity Marine Barge Cover Fabrication | County Road 337 | Caruthersville | MO | 63830 |
| Arvinmeritor | 1207 Arvin Road | Dexter | MO | 63841 |
| W W Wood Products Inc | 12140 Main St | Dudley | MO | 63936 |
| Loxcreen Company Incorporated | Highway 84 West | Hayti | MO | 63851 |
| Nordenia Usa Incorporated | 14591 State Highway 177 | Jackson | MO | 63755 |
| Noranda Aluminum Incorporated | 391 Saint Jude Industrial Park | New Madrid | MO | 63869 |
| Alloy Research Incorporated | 1 Hope Way | New Madrid | MO | 63869 |
| C P S Trailer Co | 500 Rosati St | Oran | MO | 63771 |
| T G Missouri Corporation | 2200 Plattin Road | Perryville | MO | 63775 |
| Sabreliner Corporation | 1390 Highway H | Perryville | MO | 63775 |
| Tnt Plastics Incorporated | 701 Industrial Drive | Perryville | MO | 63775 |
| Briggs & Stratton | 731 Highway 142 | Poplar Bluff | MO | 63901 |
| Caseys General Store 1142 | 1995 S Broadway | Poplar Bluff | MO | 63901 |
| Plastene Supply Division Of Siegel Robert | 101 Meatte Street Suite A | Portageville | MO | 63873 |
| Cutmart Transportation Shop | 3365 Oakshire Dr | Scott City | MO | 63780 |
| Bekaert Corporation | 1 Bekaert Rd. Industrial Park | Dyersburg | TN | 38024 |
| Quebecor World - Dyersburg Div | 2030 Sylvan Road | Dyersburg | TN | 38024 |
| Returns Distribution Specialists Rds Ll | 175 Pressler Road | Dyersburg | TN | 38024 |
| Heco Realty Inc | 2005A Forrest Street | Dyersburg | TN | 38024 |
| Siegel Robert Automotive - Newbern | 100 Fabrite Road | Newbern | TN | 38059 |
| Pac Tec Incorporated Ray O Lite Division | 635 S. Washington St. | Ripley | TN | 38063 |
| Sr Of Tennessee | 2483 Highway 209 North | Ripley | TN | 38063 |

Risk Management Plan (RMP) Facilities

| RMP Facilities | | | | | | |
|---|---|---|---|---|---|---|
| Facility | Address | City | County | State | Zip | Phone |
| AG DISTRIBUTORS INCORPORATED - DEERING, MISSOURI | 6325 STATE HIGHWAY J | DEERING | PEMISCOT | MO | 63840 | 573-757-6253 |

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| RMP Facilities | | | | | | |
|---|---|---|---|---|---|---|
| Facility | Address | City | County | State | Zip | Phone |
| AG DISTRIBUTORS INCORPORATED - KENNETT, MISSOURI | 19303 STATE HIGHWAY 25 NORTH | KENNETT | DUNKLIN | MO | 63857 | 573-888-5361 |
| AG DISTRIBUTORS INCORPORATED - PORTAGEVILLE, MISSOURI | 122 STATE HIGHWAY T | PORTAGEVILLE | PEMISCOT | MO | 63873 | 573-379-5421 |
| AGRICHEM INCORPORATED DOING BUSINESS AS FARMERS GIN | 245 FARMERS GIN ROAD | CLINTON | HICKMAN | KY | 42031 | 270-653-2731 |
| AGRI-CHEM, INCORPORATED - BARDWELL | 2351 UNITED STATES HIGHWAY 51 NORTH | BARDWELL | CARLISLE | KY | 42023 | 270-628-3311 |
| AIR PRODUCTS AND CHEMICALS, INCORPORATED - MAIN PLANT | 412 NORTH MAIN STREET | CALVERT CITY | MARSHALL | KY | 42029 | 270-395-2254 |
| AIR PRODUCTS AND CHEMICALS, INCORPORATED - VAM DISTRIBUTION | STATE HIGHWAY 1523 | CALVERT CITY | MARSHALL | KY | 42029 | 270-395-2254 |
| ARKEMA INCORPORATED - CALVERT CITY PLANT | 4444 INDUSTRIAL PARKWAY | CALVERT CITY | MARSHALL | KY | 42029 | 270-395-7121 |
| ASSOCIATED ELECTRIC - NEW MADRID POWER PLANT | 41 SAINT JUDE INDUSTRIAL PARK ROAD | MARSTON | NEW MADRID | MO | 63866 | 573-643-2211 |
| ATLAS COLD STORAGE | 2500 ROSE PARKWAY | SIKESTON | SCOTT | MO | 63801 | 573-471-7727 |
| BALLARD COUNTY COOPERATIVE | BROADWAY | LACENTER | BALLARD | KY | 42056 | 270-665-5101 |
| BANDANA AG INCORPORATED | 100 NEEDMORE ROAD | BANDANA | BALLARD | KY | 42022 | 270-224-2134 |
| BIOKYOWA INCORPORATED | 5469 NASH ROAD | CAPE GIRARDEAU | CAPE GIRARDEAU | MO | 63701 | 573-335-4849 |
| BRENNTAG MID-SOUTH INCORPORATED | 4510 GILBERTSVILLE HIGHWAY | CALVERT CITY | MARSHALL | KY | 42029 | 270-395-8395 |
| CAPE ROCK TREATMENT PLANT 1 | 20 EAST CAPE ROCK DRIVE | CAPE GIRARDEAU | CAPE GIRARDEAU | MO | 63701 | 573-874-8080 |
| CELANESE CORPORATION - CALVERT CITY PLANT | 246 JOHNSON AND RILEY ROAD | CALVERT CITY | MARSHALL | KY | 42029 | 270-395-8546 |
| CITY OF DYERSBURG WASTEWATER PLANT | HONEYDEW LANE | DYERSBURG | DYER | TN | 38024 | |
| CONAGRA FOOD MILLS | 101 WATER STREET | CHESTER | RANDOLPH | IL | 62233 | 618-826-2371 |
| COOPERATIVE SERVICE CENTER | 166 MAIN STREET | MCBRIDE | PERRY | MO | 63776 | 573-547-2561 |
| COOPERATIVE SERVICE CENTER INCORPORATED | 8759 STATE HIGHWAY A | WHITEWATER | CAPE GIRARDEAU | MO | 63785 | 573-794-2211 |
| COOPERATIVE SERVICE CENTER INCORPORATED | 506 EAST WASHINGTON STREET | JACKSON | CAPE GIRARDEAU | MO | 63755 | 573-243-3563 |
| COUNTY LINE AG SERVICES DOING BUSINESS AS KELSO MILLING COMPANY | 1205 MAIN STREET | SCOTT CITY | SCOTT | MO | 63780 | 573-264-4002 |
| CROP PRODUCTION SERVICES | 4770 UNITED STATES HIGHWAY 60 WEST | MORGANFIELD | UNION | KY | 42437 | 270-389-0268 |
| CROP PRODUCTION SERVICES - MARISSA | 11300 STATE ROUTE 4 | MARISSA | RANDOLPH | IL | 62257 | 618-587-7411 |

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| RMP Facilities | | | | | | |
|---|---|---|---|---|---|---|
| Facility | Address | City | County | State | Zip | Phone |
| CROP PRODUCTION SERVICES - RUMA SATELLITE | 8290 SAINT LEO'S ROAD | EVANSVILLE | RANDOLPH | IL | 62242 | 618-282-2741 |
| CROP PRODUCTION SERVICES - WAVERLY | 4630 UNITED STATES HIGHWAY 60 EAST | WAVERLY | UNION | KY | 42462 | 270-389-0400 |
| CROP PRODUCTION SERVICES - WINE HILL | 12100 WINE HILL ROAD | STEELEVILLE | RANDOLPH | IL | 62288 | 618-965-3454 |
| CROP PRODUCTION SERVICES INCORPORATED - HARDIN | 1266 BREWERS HIGHWAY | HARDIN | MARSHALL | KY | 42048 | 270-437-4000 |
| DELTA GROWERS ASSOCIATION | 313 SOUTH STATE HIGHWAY 105 | CHARLESTON | MISSISSIPPI | MO | 63834 | 573-649-3036 |
| DELTA SUPPLY INCORPORATED | STATE HIGHWAY 25 WEST | DELTA | CAPE GIRARDEAU | MO | 63744 | 573-794-2222 |
| DYNEGY MIDWEST GENERATION | 10901 BALDWIN ROAD | BALDWIN | RANDOLPH | IL | 62217 | 618-785-2294 |
| FLEXIBLE FOAM PRODUCTS. INCORPORATED - CAIRO PLANT | 3600 SYCAMORE STREET | CAIRO | ALEXANDER | IL | 62914 | 618-734-3911 |
| GATEWAY FS, INCORPORATED | 6990 BLUFF ROAD | PRAIRIE DU ROCHER | RANDOLPH | IL | 62277 | 618-284-7200 |
| GATEWAY FS, INCORPORATED - PERCY (NH3) | 207 ALMOND STREET | PERCY | RANDOLPH | IL | 62272 | 618-497-2135 |
| GATEWAY FS, INCORPORATED - RED BUD (NH3) | 201 POWER STREET | RED BUD | RANDOLPH | IL | 62278 | 618-282-2646 |
| GATEWAY FS, INCORPORATED - SPARTA (NH3) | 1395 WEST BROADWAY STREET | SPARTA | RANDOLPH | IL | 62286 | 618-443-2181 |
| GOOD HUMOR / BREYERS - SIKESTON NORTH | 2400 ROSE PARKWAY | SIKESTON | SCOTT | MO | 63801 | 573-472-8100 |
| GOOD HUMOR CORPORATION - SIKESTON SOUTH | 1010 COUNTY LINE ROAD | SIKESTON | NEW MADRID | MO | 63801 | 573-471-7051 |
| HONEYWELL INTERNATIONAL - METROPOLIS WORKS | 2768 NORTH UNITED STATES HIGHWAY 45 ROAD | METROPOLIS | MASSAC | IL | 62960 | 618-524-6201 |
| ILLINOIS AMERICAN WATER - CAIRO TREATMENT PLANT | 4100 OHIO STREET | CAIRO | ALEXANDER | IL | 62914 | 618-734-4671 |
| INTERNATIONAL SPECIALTY PRODUCTS CHEMICALS INCORPORATED | 455 NORTH MAIN STREET | CALVERT CITY | MARSHALL | KY | 42029 | 270-395-4165 |
| J. P. ROSS COTTON COMPANY, INCORPORATED | 200 CLAY STREET | ESSEX | STODDARD | MO | 63846 | 573-283-5313 |
| KAGOME CREATIVE FOODS, INCORPORATED | 710 NORTH PEARL STREET | OSCEOLA | MISSISSIPPI | AR | 72370 | 870-563-2601 |
| KINDER MORGAN OPERATING LIMITED PARTNERSHIP | 6162 EAST STATE HIGHWAY 18 | BLYTHEVILLE | MISSISSIPPI | AR | 72315 | 870-763-0800 |
| KINKAID AREA WATER SYSTEM | 1763 WATER PLANT ROAD | MURPHYSBORO | JACKSON | IL | 62966 | |
| LOIDA AG SERVICE LIMITED LIABILITY COMPANY | 23860 BOURBON ROAD | SAINTE GENEVIEVE | STE GENEVIEVE | MO | 63670 | 573-883-3552 |
| MEADWESTVACO CORPORATION - WICKLIFFE CARBON PLANT | 2025 BEECH GROVE ROAD | WICKLIFFE | BALLARD | KY | 42087 | 270-335-4800 |
| MISSOURI FARMERS ASSOCIATION AGRI SERVICE - ADVANCE | 104 EAST SOUTH STREET | ADVANCE | STODDARD | MO | 63730 | 573-722-3541 |

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| RMP Facilities | | | | | | |
|---|---|---|---|---|---|---|
| Facility | Address | City | County | State | Zip | Phone |
| MISSOURI FARMERS ASSOCIATION AGRI SERVICE - BENTON | 11 MFA ROAD | BENTON | SCOTT | MO | 63736 | 573-545-3939 |
| MISSOURI FARMERS ASSOCIATION AGRI SERVICE - BERNIE | 311 NORTH DRAKE STREET | BERNIE | STODDARD | MO | 63822 | 573-293-5311 |
| MISSOURI FARMERS ASSOCIATION AGRI SERVICE - CHAFFEE | 1980 CUMMINS DRIVE | CHAFFEE | SCOTT | MO | 63740 | 573-887-3568 |
| MISSOURI FARMERS ASSOCIATION AGRI SERVICE - JACKSON | 1770 LEE AVENUE | JACKSON | CAPE GIRARDEAU | MO | 63755 | 573-243-3549 |
| MISSOURI FARMERS ASSOCIATION AGRI SERVICE - SAINTE GENEVIEVE | 10940 INDUSTRIAL DRIVE | SAINTE GENEVIEVE | STE GENEVIEVE | MO | 63670 | 573-883-3538 |
| MISSOURI FARMERS ASSOCIATION ANHYDROUS PLANT - PERRYVILLE | 3501 SOUTH UNITED STATES HIGHWAY 61 | PERRYVILLE | PERRY | MO | 63775 | 573-547-5622 |
| MISSOURI FARMERS ASSOCIATION ANHYDROUS PLANT - SAINTE GENEVIEVE | 8970 LITTLE ROCK ROAD | SAINTE GENEVIEVE | STE GENEVIEVE | MO | 63670 | 573-883-3538 |
| MRM AG SERVICES INCORPORATED | 3468 WEST STATE HIGHWAY 80 | EAST PRAIRIE | MISSISSIPPI | MO | 63845 | 573-649-3533 |
| NEWPAGE CORPORATION | 1724 WESTVACO ROAD | WICKLIFFE | BALLARD | KY | 42087 | 270-335-4000 |
| PADUCAH GASEOUS DIFFUSION PLANT | 5600 HOBBS ROAD | PADUCAH | MCCRACKEN | KY | 42001 | 301-564-3200 |
| PADUCAH WATER WORKS | 1800 NORTH 8TH STREET | PADUCAH | MCCRACKEN | KY | 42001 | |
| PEACH ORCHARD GIN COMPANY | 1522 STATE HIGHWAY EE | GIDEON | PEMISCOT | MO | 63848 | 573-448-3888 |
| POPLAR BLUFF WATER TREATMENT PLANT | 108 JOHNSON DRIVE | POPLAR BLUFF | BUTLER | MO | 63901 | |
| SARA LEE FOODS - NEWBERN | 2000 BIFFLE ROAD | NEWBERN | DYER | TN | 38059 | 731-627-3271 |
| SEMSTREAM LIMITED PARTNERSHIP - DEXTER TERMINAL | 19905 STATE HIGHWAY 114 | DEXTER | STODDARD | MO | 63841 | 573-624-8127 |
| SOUTHEAST COOPERATIVE SERVICE COMPANY INCORPORATED | 25564 COUNTY ROAD 326 | ORAN | STODDARD | MO | 63771 | 573-733-4242 |
| SOUTHERN FS, INCORPORATED - JACOB (NH3) SITE | 21 BUFFALO LANE | JACOB | JACKSON | IL | 62950 | 618-763-4654 |
| SOUTHERN FS, INCORPORATED - JONESBORO | 400 SOUTH MAIN STREET | JONESBORO | UNION | IL | 62952 | 618-833-2494 |
| SOUTHERN FS, INCORPORATED - METROPOLIS (NH3) SITE | STATE HIGHWAY 145 SOUTH | GRANTSBURG | POPE | IL | 62943 | 618-949-3857 |
| SOUTHERN FS, INCORPORATED - MURPHYSBORO (NH3) SITE | 17950 STATE HIGHWAY 127 | MURPHYSBORO | JACKSON | IL | 62966 | 618-687-3032 |
| SOUTHERN FS, INCORPORATED - ULLIN (NH3) SITE | 285 EAST CACHE AVENUE | ULLIN | PULASKI | IL | 62992 | 618-845-3333 |
| SOUTHERN FS, INCORPORATED - WARE (NH3) SITE | 4630 STATE ROUTE 3 NORTH | WOLF LAKE | UNION | IL | 62998 | 618-833-3276 |
| SOUTHERN STATES COOPERATIVE INCORPORATED / HENDERSON COOPERATIVE - MORGANFIELD BRANCH | 304 NORTH TOWNSEND STREET | MORGANFIELD | UNION | KY | 42437 | 270-389-1656 |
| SPEED AG SERVICES LIMITED LIABILITY COMPANY | 345 STATE HIGHWAY 166 WEST | HICKMAN | FULTON | KY | 42050 | 270-883-0000 |

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| RMP Facilities | | | | | | |
|---|---|---|---|---|---|---|
| Facility | Address | City | County | State | Zip | Phone |
| TARGA RESOURCES LIMITED PARTNERSHIP - CALVERT CITY TERMINAL | 2337 INDUSTRIAL PARKWAY | CALVERT CITY | MARSHALL | KY | 42029 | 270-395-4570 |
| THE DOE RUN COMPANY - BRUSHY CREEK FACILITY | STATE HIGHWAY KK | BUNKER | REYNOLDS | MO | 63629 | 573-689-2228 |
| THE DOE RUN COMPANY - FLETCHER FACILITY | STATE HIGHWAY TT | BUNKER | REYNOLDS | MO | 63629 | 573-689-2251 |
| TYSON FOODS INCORPORATED - DEXTER | 1001 EAST STODDARD STREET | DEXTER | STODDARD | MO | 63841 | 573-624-4548 |
| VISKASE CORPORATION | 2221 EAST STATE HIGHWAY 198 | OSCEOLA | MISSISSIPPI | AR | 72370 | 865-458-2071 |
| WESTLAKE PVC CORPORATION | 230 JOHNSON AND RILEY ROAD | CALVERT CITY | MARSHALL | KY | 42029 | 270-395-4860 |
| WESTLAKE VINYLS INCORPORATED | 2672 INDUSTRIAL PARKWAY | CALVERT CITY | MARSHALL | KY | 42029 | 270-395-4151 |

| Pipeline Operators | | | | | | |
|---|---|---|---|---|---|---|
| OPERATOR NAME | SYSTEM NAME | DIA. | COMMODITY CATEGORY | PERSON TO CONTACT | CONTACT ADDRESS | PHONE/FAX/EMAIL |
| ENTERPRISE PRODUCTS OPERATING LLC | TEPPCO MAINLINE | 20 | Liquefied Petroleum Gas | Michael McLaughlin (Manager, Public Awareness & Damage Prevention) | PO Box 4735, , Houston TX 77210 | Phone: (713) 381-2802<br>Fax:<br>Email: MMclaughlin@eprod.com |
| SHELL PIPELINE CO., L.P. | CAPLINE CRUDE (CRD - TER) | 40 | Crude Oil | Deborah Price (Senior Associate Engineer) | 777 Walker Street, , Houston TX 77002 | Phone: (713) 241-2035<br>Fax:<br>Email: deborah.price@shell.com |
| EXXONMOBIL PIPELINE CO | PATOKA-CORSICANA CRUDE | 20 | Crude Oil | Patrick Henretty | P. O. Box 2220, , Houston TX 77252 | Phone: (713) 656-5431<br>Fax: (713) 656-9579<br>Email: Patrick.b.henretty@exxonmobil.com |
| ANR PIPELINE CO | ANR | 36 | Natural Gas | | 5250 Corporate Drive, , Troy MI 48098 | Phone: (248) 205-7596<br>Fax:<br>Email: us_crossings@transcanada.com |
| CENTERPOINT ENERGY - MISSISSIPPI RIVER GAS TRANSMISSION CORP | ML1 | 0 | Natural Gas | Alicia Dixon (Manager Operations Media Relations) | P.O. Box 1700, HOUSTON TX 77252 | Phone: (713) 207-5885<br>Fax: (713) 207-9996<br>Email: alicia.dixon@CenterPointEnergy.com |

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| Pipeline Operators | | | | | | |
|---|---|---|---|---|---|---|
| **OPERATOR NAME** | **SYSTEM NAME** | **DIA.** | **COMMODITY CATEGORY** | **PERSON TO CONTACT** | **CONTACT ADDRESS** | **PHONE/FAX/EMAIL** |
| CENTERPOINT ENERGY GAS TRANSMISSION | JM-16 | 0 | Natural Gas | Alicia Dixon (Manager Operations Media Relations) | P.O. Box 1700, HOUSTON TX 77252 | Phone: (713) 207-5885 Fax: (713) 207-9996 Email: alicia.dixon@CenterPointEnergy.com |
| NATURAL GAS PIPELINE CO OF AMERICA (KMI) | NORTH REGION | 3 | Natural Gas | Joe McLaughlin (Director North Region) | 23725 W COUNTY FARM RD, SHOREWOOD IL 60431 | Phone: (815) 272-9104 Fax: (303) 984-3220 Email: Joe_McLaughlin@kindermorgan.com |
| OZARK GAS TRANSMISSION SYSTEM | SROC-EOLN | 11 | Natural Gas | Dwayne Teschendorf (Principal Engineer) | 5400 Westheimer Court, Houston TX 77056 | Phone: (713) 627-5573 Fax: (713) 386-4468 Email: deteschendorf@spectraenergy.com |
| TEXAS EASTERN TRANSMISSION LP (SPECTRA ENERGY CORP) | LICK-NORC | 24 | Natural Gas | Dwayne Teschendorf (Principal Engineer) | 5400 Westheimer Ct, Houston TX 77056 | Phone: (713) 627-5573 Fax: Email: none |
| TEXAS GAS TRANSMISSION LLC | MAIN LINE SYSTEM [20-1 ] | 0 | Natural Gas | | P.O. Box 20008, 3800 Frederica Street, Owensboro KY 42301 | Phone: (270) 688-6800 Fax: Email: Mike.K.Nance@txgt.com |
| TRUNKLINE GAS CO | DYERSBURG DISCHARGE | 36 | Natural Gas | Eric Amundsen (Vice President) | 5444 Westheimer Ct., Suite 922, Houston TX 77056 | Phone: (713) 989-7460 Fax: (713) 989-1188 Email: eric.amundsen@sug.com |
| WESTLAKE PVC CORPORATION | NATURAL GAS TO MONOMERS | 6 | Natural Gas | Bob Gold (Supervisor-Transportation) | 2468 Industrial Parkway, Box 1027, Calvert City KY 42029 | Phone: (270) 395-3441 Fax: (270) 395-4001 Email: bgold@westlake.com |
| MARATHON PIPE LINE LLC | BEAUMONT - CREAL SPRINGS 24IN-26IN PROD* | 26 | Non-HVL Product | Craig Potts (Public Awareness Coordinator) | 539 South Main Street, Findlay OH 45840 | Phone: (419) 421-3260 Fax: Email: capotts@marathonpetroleum.com |
| ATMOS ENERGY CORPORATION - KY/MID-STATES (KENTUCKY) | MID-STATES TRANSMISSION | 4 | Natural Gas | Roger Mullins (Manager, Engineering Services) | 810 Crescent Centre Drive, Suite 600, Franklin TN 37067 | Phone: (615) 771-8466 Fax: Email: roger.mullins@atmosenergy.com |
| ATMOS ENERGY CORPORATION - KY/MID-STATES (MID-STATES) | MID-STATES TRANSMISSION | 6 | Natural Gas | Roger Mullins (Manager, Engineering Services) | 810 Crescent Centre Dr, Suite 600, Franklin TN 37067 | Phone: (615) 771-8466 Fax: (615) 771-8302 Email: |

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| Pipeline Operators | | | | | | |
|---|---|---|---|---|---|---|
| **OPERATOR NAME** | **SYSTEM NAME** | **DIA.** | **COMMODITY CATEGORY** | **PERSON TO CONTACT** | **CONTACT ADDRESS** | **PHONE/FAX/EMAIL** |
| | | | | | | Roger.Mullins@AtmosEnergy.com |
| COMPRESSED ENERGY SYSTEMS, INC | GRAYSON HILL ENERGY | 4.3 | Natural Gas | Darin Houchin (Vice President U.S.D.I., P.E.) | 1927 Miller Drive, Olney IL 62450 | Phone: (618) 392-5502<br>Fax: (618) 392-2261<br>Email: darin@usdi.us |
| DTE METHANE RESOURCES, LLC | DTE METHANE RESOURCES | 6 | Natural Gas | Mark Benefiel (Facility Manager) | 20227 Thorn Road, Thompsonville IL 62890 | Phone: (618) 982-9710<br>Fax: (618) 928-2696<br>Email: benefielm@dteenergy.com |
| PADUCAH POWER SYSTEM | PADUCAH POWER | 13 | Natural Gas | Michael Wendling (Gas Engineer) | 1927 Miller Drive, P.O. Box 276, Olney IL 62450 | Phone: (618) 392-5502<br>Fax: (618) 392-2261<br>Email: mwendling@usdi.us |
| SOLD | GENESIS | 4 | Natural Gas | | | Phone: (703) 317-6294<br>Fax:<br>Email: npms-nr@mbakercorp.com |
| SOUTHERN ILLINOIS POWER COOPERATIVE | SOUTHERN ILLINOIS POWER COOPERTIVE | 8.6 | Natural Gas | Darin Houchin (Vice President U.S.D.I., P.E.) | 1927 Miller Drive, Olney IL 62450 | Phone: (618) 392-5502<br>Fax: (618) 392-2261<br>Email: darin@usdi.us |

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# APPENDIX D. FIRE DEPARTMENTS / HAZMAT TEAMS WITHIN THE GREAT RIVERS SUB-AREA

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## Missouri

**Southeast Missouri HazMat**
**Jackson, Sikeston and Cape Girardeau**

Chief Drew Juden 573-471-6200
drewj@sikeston.org
Sikeston DPS
215 N. New Madrid
Sikeston, MO 63801

Ken Dicus 573-471-6200
kend@sikeston.org
Sikeston DPS
215 N. New Madrid
Sikeston, MO 63801

**Kennett Fire Department HazMat**

John Mallott 573-888-6575 (home)
kfd@clgw.net
Kennett Fire Dept 573-888-5337 (work)
200 Cedar Street 573-717-6442 (cell)
Kennett, MO 63857

**Ozark Regional Homeland Security Team**

Bob Fredwell 573-718-3244
bfredwell@imsinternet.net
Poplar Bluff, MO

Jackson Bostic 573-619-1407
jackson.bostic@dnr.mo.gov
Poplar Bluff, MO

## Kentucky

**Hazmat Response Team 1:**
Class A Trailer

Steve Kyle 270-519-8919
skyle@ci.paducah.ky.us

**Hazmat Response Team 2:**
Class B Trailer

Brent Francis 270-365-2022

ARKANSAS

[RESERVED]

ILLINOIS

[RESERVED]

KENTUCKY

[RESERVED]

TENNESSEE

[RESERVED]

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# APPENDIX E. SENSITIVE SPECIES OF THE GRSA

| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Acaulon muticum | Mosses | St Francois MO |
| Accipiter cooperii | Birds | Wayne MO, Ste Genevieve MO, Bollinger MO, Butler MO, Carter MO, Reynolds MO |
| Accipiter striatus | Birds | Ste Genevieve MO, Carter MO, Reynolds MO, McCracken KY |
| Acipenser fulvescens | Fishes | Mississippi MO, Alexander IL, Hardin IL, Pulaski IL, Randolph IL, Union IL, Ballard KY, Fulton KY, Hickman KY, Pope IL, Cape Girardeau MO, Perry MO, Scott MO, Livingston KY, McCracken KY, Union KY |
| Acmella oppositifolia | Flowering Plants | Lake TN |
| Actaea rubifolia | Flowering Plants | Hardin IL, Jackson IL, Massac IL, Pope IL, Livingston KY |
| Actinonaias ligamentina | Mollusks | Livingston KY |
| Aesculus pavia | Flowering Plants | Carlisle KY, Hickman KY, McCracken KY |
| Agalinis auriculata | Flowering Plants | Jackson IL, Carter MO, Reynolds MO |
| Agalinis heterophylla | Flowering Plants | Bollinger MO, Dunklin MO |
| Agalinis purpurea | Flowering Plants | Stoddard MO, Ste Genevieve MO, Butler MO, Carter MO, Reynolds MO, Ripley MO |
| Agalinis skinneriana | Flowering Plants | Ste Genevieve MO, Union IL, St Francois MO |
| Agalinis viridis | Flowering Plants | Stoddard MO, Dunklin MO, Butler MO |
| Agrimonia gryposepala | Flowering Plants | Marshall KY |
| Alasmidonta marginata | Mollusks | Wayne MO, Bollinger MO, Butler MO, Carter MO, Madison MO |
| Alliaria petiolata | Flowering Plants | Jackson IL, Perry MO |
| Allium burdickii | Flowering Plants | Ste Genevieve MO, St Francois MO |
| Allocapnia pygmaea | Insects | Carter MO, Reynolds MO |
| Alopecurus aequalis | Flowering Plants | Bollinger MO, Carter MO, Reynolds MO |
| Alosa alabamae | Fishes | Randolph IL, Fulton KY, New Madrid MO, Perry MO, Livingston KY, Marshall KY |
| Ambystoma annulatum | Amphibians | Ste Genevieve MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Ambystoma talpoideum | Amphibians | Stoddard MO, Fulton KY, Bollinger MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO |
| Ambystoma tigrinum | Amphibians | Carter MO, Perry MO |
| Ambystoma tigrinum tigrinum | Amphibians | Carter MO, Perry MO |
| Ameiurus nebulosus | Fishes | Wayne MO, Stoddard MO, Bollinger MO, Cape Girardeau MO, New Madrid MO, Pemiscot MO |
| Amianthium muscitoxicum | Flowering Plants | Wayne MO, Butler MO, Carter MO, Madison MO, Reynolds MO, Ripley MO |
| Ammocrypta clara | Fishes | Wayne MO, Stoddard MO, Ste Genevieve MO, Jackson IL, Randolph IL, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Perry MO |
| Ammocrypta vivax | Fishes | Wayne MO, Stoddard MO, Bollinger MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Scott MO, Marshall KY |
| Ammodramus henslowii | Birds | Ste Genevieve MO, Randolph IL, Pope IL, Livingston KY, McCracken KY, Marshall KY |
| Amorpha nitens | Flowering Plants | Pope IL |
| Amphiagrion saucium | Insects | Ballard KY |
| Amphiuma tridactylum | Amphibians | Wayne MO, Stoddard MO, Mississippi MO, Fulton KY, Hickman KY, Bollinger MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO, Scott MO, Lake TN |
| Anas discors | Birds | Fulton KY, Union KY |
| Anax longipes | Insects | Wayne MO, Reynolds MO, Ripley MO |
| Anhinga anhinga | Birds | Pemiscot MO, Lake TN |
| Anodonta suborbiculata | Mollusks | Wayne MO, Stoddard MO, Mississippi MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Scott MO |
| Apalone mutica | Turtles | Mississippi MO, Jackson IL, Massac IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Livingston KY, McCracken KY, Marshall KY, Union KY |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Apalone mutica mutica | Turtles | Mississippi MO, Massac IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Apios priceana | Flowering Plants | Hardin IL, Livingston KY, Marshall KY |
| Arabis glabra | Flowering Plants | Jackson IL, Perry MO |
| Arabis hirsuta | Flowering Plants | Livingston KY |
| Arcidens confragosus | Mollusks | Wayne MO, Stoddard MO, Mississippi MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO |
| Ardea alba | Birds | Mississippi MO, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Mississippi AR, Pemiscot MO, Livingston KY, Marshall KY, Union KY, Dyer TN, Lake TN |
| Ardea herodias | Birds | Wayne MO, Ste Genevieve MO, Mississippi MO, Union IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Cape Girardeau MO, New Madrid MO, Carter MO, Madison MO, Reynolds MO, Perry MO, Ripley MO, Scott MO, St Francois MO, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Arigomphus maxwelli | Insects | Carlisle KY, Hickman KY |
| Aristida desmantha | Flowering Plants | Scott MO |
| Aristida lanosa | Flowering Plants | Stoddard MO, Dunklin MO, Scott MO |
| Aristolochia serpentaria | Flowering Plants | Alexander IL, Massac IL, Pulaski IL, Union IL |
| Armoracia lacustris | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Pulaski IL, Ballard KY, Fulton KY, Bollinger MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Livingston KY, McCracken KY, Union KY, Lake TN |
| Asclepias meadii | Flowering Plants | Reynolds MO |
| Asio flammeus | Birds | Randolph IL |
| Asplenium bradleyi | Ferns and relatives | Jackson IL, Randolph IL, Union IL |
| Asplenium resiliens | Ferns and relatives | Union IL |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Atractosteus spatula | Fishes | Mississippi MO, Alexander IL, Massac IL, Randolph IL, Ballard KY, Carlisle KY, Fulton KY, Cape Girardeau MO, Butler MO, Perry MO, Livingston KY, McCracken KY, Dyer TN, Lake TN |
| Baetisca obesa | Insects | Mississippi MO, New Madrid MO, Dunklin MO |
| Baptisia bracteata | Flowering Plants | Livingston KY, McCracken KY, Marshall KY |
| Bartonia paniculata | Flowering Plants | Stoddard MO, Pope IL |
| Bartonia virginica | Flowering Plants | Ste Genevieve MO |
| Bazzania trilobata | Liverworts | Ste Genevieve MO |
| Berberis canadensis | Flowering Plants | Jackson IL |
| Berchemia scandens | Flowering Plants | Fulton KY, Hickman KY, Pope IL |
| Bidens laevis | Flowering Plants | Dunklin MO, Ripley MO |
| Boltonia decurrens | Flowering Plants | Alexander IL, Union IL, Cape Girardeau MO, Dunklin MO, Scott MO |
| Botaurus lentiginosus | Birds | Wayne MO, Scott MO |
| Botrychium biternatum | Ferns and relatives | Wayne MO, Stoddard MO, Jackson IL, Pope IL, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Perry MO, Ripley MO |
| Bouteloua gracilis | Flowering Plants | Dunklin MO |
| Bromus latiglumis | Flowering Plants | Wayne MO, Ste Genevieve MO, Reynolds MO, St Francois MO |
| Bromus nottowayanus | Flowering Plants | Wayne MO, Bollinger MO, Carter MO, Madison MO, Reynolds MO, Perry MO, St Francois MO |
| Bryoxiphium norvegicum | Mosses | Ste Genevieve MO |
| Bubulcus ibis | Birds | Fulton KY, New Madrid MO |
| Buteo lineatus | Birds | Alexander IL, Hardin IL, Jackson IL, Massac IL, Pulaski IL, Pope IL, Butler MO, Carter MO, Reynolds MO, Ripley MO, McCracken KY, Union KY |
| Buteo platypterus | Birds | New Madrid MO, Reynolds MO |
| Cabomba caroliniana | Flowering Plants | Ballard KY, Carlisle KY, Fulton KY, Marshall KY |
| Calamagrostis canadensis var. macouniana | Flowering Plants | Pulaski IL, Ballard KY |
| Calamagrostis porteri | Flowering Plants | Pope IL, St Francois MO |
| Calamagrostis porteri ssp. insperata | Flowering Plants | Pope IL, St Francois MO |
| Calamagrostis stricta | Flowering Plants | Ripley MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Calamagrostis stricta ssp. inexpansa | Flowering Plants | Ripley MO |
| Calephelis muticum | Insects | Wayne MO, Carter MO, St Francois MO |
| Callicarpa americana | Flowering Plants | Ripley MO |
| Calliergonella cuspidata | Mosses | Reynolds MO, Ripley MO |
| Callirhoe triangulata | Flowering Plants | Mississippi MO, Alexander IL, Scott MO |
| Calopogon tuberosus | Flowering Plants | Carter MO, Reynolds MO, St Francois MO |
| Calycocarpum lyonii | Flowering Plants | Union KY |
| Calylophus serrulatus | Flowering Plants | Fulton KY, Lake TN |
| Cambarellus puer | Crustaceans | McCracken KY |
| Cambarellus shufeldtii | Crustaceans | Mississippi MO, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, New Madrid MO, Lake TN |
| Cambarus hubrichti | Crustaceans | Carter MO, Ripley MO |
| Campylium radicale | Mosses | Bollinger MO, Carter MO |
| Campylium stellatum | Mosses | Ste Genevieve MO, Reynolds MO |
| Carex abscondita | Flowering Plants | Dunklin MO, Ripley MO |
| Carex alata | Flowering Plants | Wayne MO, Stoddard MO, Pope IL, Butler MO, Reynolds MO, Ripley MO, Scott MO |
| Carex albicans | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Jackson IL, Randolph IL, Union IL, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Madison MO, Reynolds MO, Pemiscot MO, Ripley MO, St Francois MO |
| Carex albicans var. australis | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Jackson IL, Randolph IL, Union IL, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Madison MO, Reynolds MO, Pemiscot MO, Ripley MO, St Francois MO |
| Carex albolutescens | Flowering Plants | Wayne MO, Stoddard MO, Bollinger MO, Dunklin MO, Butler MO, Carter MO, Ripley MO |
| Carex arkansana | Flowering Plants | Stoddard MO, Dunklin MO |
| Carex atlantica | Flowering Plants | Wayne MO, Stoddard MO, Pope IL, Madison MO |
| Carex atlantica ssp. atlantica | Flowering Plants | Wayne MO, Stoddard MO, Madison MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Carex bromoides | Flowering Plants | Wayne MO, Pope IL, Bollinger MO, Butler MO, Madison MO, Reynolds MO, Ripley MO |
| Carex buxbaumii | Flowering Plants | Wayne MO, Stoddard MO, Pulaski IL, Ballard KY, Dunklin MO, Butler MO, Carter MO, Reynolds MO, Ripley MO |
| Carex cherokeensis | Flowering Plants | Wayne MO, Stoddard MO, Dunklin MO, Butler MO, Carter MO, Ripley MO |
| Carex communis | Flowering Plants | Stoddard MO, Pope IL, Reynolds MO |
| Carex comosa | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Cape Girardeau MO, Dunklin MO, Butler MO, Carter MO, Madison MO, Reynolds MO, Ripley MO, Scott MO, Lake TN |
| Carex debilis | Flowering Plants | Wayne MO, Stoddard MO, Ripley MO, St Francois MO |
| Carex decomposita | Flowering Plants | Pulaski IL, Union IL, Carlisle KY, Hickman KY, Pope IL, Bollinger MO, Dunklin MO, Carter MO, Reynolds MO, Ripley MO, Marshall KY |
| Carex flaccosperma | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Fulton KY, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Scott MO, Lake TN |
| Carex floridana | Flowering Plants | Stoddard MO, Butler MO, Carter MO |
| Carex gigantea | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Alexander IL, Massac IL, Pulaski IL, Union IL, Ballard KY, Fulton KY, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Ripley MO, Scott MO, Lake TN |
| Carex gracillima | Flowering Plants | Reynolds MO |
| Carex hyalina | Flowering Plants | Dyer TN |
| Carex hystericina | Flowering Plants | McCracken KY, Marshall KY |
| Carex intumescens | Flowering Plants | Alexander IL, Pulaski IL, Pope IL |
| Carex joorii | Flowering Plants | Dunklin MO, Butler MO |
| Carex lacustris | Flowering Plants | Mississippi MO, Alexander IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, New Madrid MO, Scott MO, Dyer TN |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Carex laevivaginata | Flowering Plants | Stoddard MO, Carter MO, St Francois MO |
| Carex laxiculmis | Flowering Plants | Wayne MO, Stoddard MO, Ste Genevieve MO, Alexander IL, Union IL, Bollinger MO, Cape Girardeau MO, Butler MO, Carter MO, Madison MO, Reynolds MO, Ripley MO, Scott MO |
| Carex laxiflora | Flowering Plants | Cape Girardeau MO |
| Carex laxiflora var. laxiflora | Flowering Plants | Cape Girardeau MO |
| Carex microdonta | Flowering Plants | Reynolds MO |
| Carex molestiformis | Flowering Plants | Reynolds MO |
| Carex nigromarginata | Flowering Plants | Wayne MO, Stoddard MO, Ste Genevieve MO, Hardin IL, Union IL, Dunklin MO, Butler MO, Carter MO, Reynolds MO, Ripley MO |
| Carex normalis | Flowering Plants | Mississippi AR |
| Carex oklahomensis | Flowering Plants | Stoddard MO, Dunklin MO, Butler MO, Carter MO, Scott MO |
| Carex oxylepis | Flowering Plants | Stoddard MO, Alexander IL, Hardin IL, Union IL, Pope IL, Bollinger MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Pemiscot MO, Ripley MO, Scott MO, Union KY |
| Carex pellita | Flowering Plants | Pulaski IL, Ballard KY |
| Carex plantaginea | Flowering Plants | Jackson IL |
| Carex prasina | Flowering Plants | Stoddard MO, Pope IL, Scott MO |
| Carex reniformis | Flowering Plants | Stoddard MO, Massac IL, Dunklin MO |
| Carex socialis | Flowering Plants | Stoddard MO, Mississippi MO, Alexander IL, Union IL, Bollinger MO, Cape Girardeau MO, Dunklin MO, Butler MO, Pemiscot MO, Perry MO, Scott MO |
| Carex sterilis | Flowering Plants | Ste Genevieve MO, Madison MO, Reynolds MO, Ripley MO, St Francois MO |
| Carex stricta | Flowering Plants | Wayne MO, Butler MO, Carter MO, Reynolds MO, St Francois MO |
| Carex swanii | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO, Scott MO |
| Carex tetanica | Flowering Plants | Wayne MO, Ripley MO, St Francois MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Carex texensis | Flowering Plants | Wayne MO, Stoddard MO, Bollinger MO, Cape Girardeau MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Reynolds MO, Pemiscot MO, Scott MO |
| Carex tonsa var. rugosperma | Flowering Plants | Reynolds MO |
| Carex tonsa var. tonsa | Flowering Plants | Ste Genevieve MO |
| Carex triangularis | Flowering Plants | Wayne MO, Stoddard MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Scott MO, St Francois MO |
| Carex trichocarpa | Flowering Plants | Carter MO, Reynolds MO |
| Carex vesicaria | Flowering Plants | Butler MO, Reynolds MO |
| Carex virescens | Flowering Plants | Stoddard MO, Ste Genevieve MO, Cape Girardeau MO, Madison MO, Reynolds MO, St Francois MO |
| Carex willdenowii | Flowering Plants | Hardin IL, Jackson IL, Union IL, Pope IL, Reynolds MO |
| Carpiodes velifer | Fishes | Wayne MO, Stoddard MO, Hickman KY, Dunklin MO, Pemiscot MO, Ripley MO |
| Carya aquatica | Flowering Plants | Alexander IL, Pulaski IL, Union IL, Ballard KY, Livingston KY, McCracken KY, Marshall KY |
| Carya pallida | Flowering Plants | Stoddard MO, Alexander IL, Union IL, Scott MO |
| Catocala marmorata | Insects | Stoddard MO |
| Catocala pretiosa | Insects | Wayne MO, Stoddard MO, Bollinger MO |
| Catocala pretiosa texarkana | Insects | Wayne MO, Stoddard MO, Bollinger MO |
| Cayaponia quinqueloba | Flowering Plants | Stoddard MO, Mississippi MO, Fulton KY, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Scott MO, Livingston KY, McCracken KY, Lake TN |
| Celithemis verna | Insects | Mississippi MO, Alexander IL, Pulaski IL, Ballard KY, Carlisle KY, McCracken KY |
| Cemophora coccinea | Reptiles | Scott MO |
| Cemophora coccinea copei | Reptiles | Scott MO |
| Centaurea americana | Flowering Plants | Stoddard MO, Ste Genevieve MO, New Madrid MO, Dunklin MO, St Francois MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Centrarchus macropterus | Fishes | Wayne MO, Stoddard MO, Mississippi MO, Bollinger MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO |
| Centrosema virginianum | Flowering Plants | Carter MO, Reynolds MO |
| Ceratophyllum echinatum | Flowering Plants | Butler MO |
| Certhia americana | Birds | Ballard KY, Marshall KY, Union KY |
| Chalybion zimmermanni | Insects | Wayne MO |
| Chalybion zimmermanni zimmermanni | Insects | Wayne MO |
| Chamaelirium luteum | Flowering Plants | Hardin IL, Massac IL, Pope IL |
| Chamaesyce geyeri | Flowering Plants | Scott MO |
| Chamaesyce geyeri var. geyeri | Flowering Plants | Scott MO |
| Chasmanthium laxum | Flowering Plants | Butler MO, Ripley MO |
| Cheilanthes alabamensis | Ferns and relatives | Ste Genevieve MO |
| Chelone obliqua | Flowering Plants | Wayne MO, Carlisle KY, Hickman KY, Dunklin MO, Butler MO, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Chelone obliqua var. speciosa | Flowering Plants | Carlisle KY, Hickman KY, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Chimaphila maculata | Flowering Plants | Hardin IL, Pope IL |
| Chionanthus virginicus | Flowering Plants | Cape Girardeau MO |
| Chondestes grammacus | Birds | Mississippi MO, Hardin IL, Carlisle KY, Fulton KY, Hickman KY, New Madrid MO, Livingston KY, Union KY, Lake TN |
| Chrysemys dorsalis | Turtles | Carlisle KY, Fulton KY, Hickman KY |
| Circus cyaneus | Birds | Randolph IL, Pope IL |
| Cirsium undulatum | Flowering Plants | Wayne MO |
| Cistothorus platensis | Birds | Ballard KY, Fulton KY, Hickman KY, Ripley MO, Livingston KY, Union KY |
| Cladonia leporina | Lichens | Carter MO |
| Cladrastis kentukea | Flowering Plants | Wayne MO, Alexander IL |
| Clematis crispa | Flowering Plants | Mississippi MO, Alexander IL, Pulaski IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY |
| Clematis viorna | Flowering Plants | Wayne MO, Bollinger MO, New Madrid MO, Scott MO |
| Coelorachis cylindrica | Flowering Plants | Stoddard MO, Mississippi MO, New Madrid MO, Dunklin MO |
| Conyza canadensis | Flowering Plants | Stoddard MO, Butler MO, Ripley MO, Scott MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Conyza canadensis var. pusilla | Flowering Plants | Stoddard MO, Butler MO, Ripley MO, Scott MO |
| Coreopsis pubescens | Flowering Plants | McCracken KY |
| Corispermum pallasii | Flowering Plants | Jackson IL, Perry MO |
| Corvus ossifragus | Birds | Mississippi MO, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Pope IL, New Madrid MO, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Corydalis micrantha | Flowering Plants | Mississippi MO, Bollinger MO, New Madrid MO, Dunklin MO, Butler MO, Scott MO |
| Corydalis micrantha ssp. australis | Flowering Plants | Mississippi MO, Bollinger MO, New Madrid MO, Dunklin MO, Butler MO, Scott MO |
| Corynorhinus rafinesquii | Mammals | Alexander IL, Jackson IL, Pulaski IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Pope IL, Dyer TN |
| Cottus sp. 8 | Fishes | Perry MO |
| Crangonyx anomalus | Crustaceans | Pope IL |
| Crangonyx packardi | Crustaceans | Hardin IL, Union IL, Pope IL |
| Crataegus harbisonii | Flowering Plants | Lake TN |
| Crataegus marshallii | Flowering Plants | Wayne MO, Stoddard MO, Dunklin MO, Butler MO, Carter MO, Ripley MO |
| Crotalus horridus | Reptiles | Alexander IL, Hardin IL, Jackson IL, Randolph IL, Union IL, Pope IL |
| Crotaphytus collaris | Reptiles | Ste Genevieve MO, Carter MO, Madison MO, Reynolds MO, Perry MO, St Francois MO |
| Croton michauxii | Flowering Plants | Scott MO |
| Cryptobranchus alleganiensis | Amphibians | Carter MO, Ripley MO, Marshall KY |
| Cryptobranchus alleganiensis alleganiensis | Amphibians | Marshall KY |
| Cryptobranchus alleganiensis bishopi | Amphibians | Carter MO, Ripley MO |
| Crystallaria asprella | Fishes | Wayne MO, Stoddard MO, Alexander IL, Union IL, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Perry MO |
| Cumberlandia monodonta | Mollusks | Massac IL, Livingston KY, McCracken KY, Marshall KY |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Cycleptus elongatus | Fishes | Wayne MO, Stoddard MO, Ste Genevieve MO, Mississippi MO, Alexander IL, Jackson IL, Randolph IL, Fulton KY, Hickman KY, Cape Girardeau MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Pemiscot MO, Perry MO, Ripley MO, Scott MO, Dyer TN |
| Cyclonaias tuberculata | Mollusks | Massac IL, Pulaski IL, Ballard KY, McCracken KY |
| Cynosciadium digitatum | Flowering Plants | Stoddard MO, Mississippi MO, Jackson IL, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO |
| Cyperus compressus | Flowering Plants | Stoddard MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Scott MO |
| Cyperus croceus | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO, Scott MO |
| Cyperus diandrus | Flowering Plants | Butler MO |
| Cyperus flavicomus | Flowering Plants | Stoddard MO, Ripley MO |
| Cyperus grayoides | Flowering Plants | Stoddard MO, Mississippi MO, New Madrid MO, Scott MO |
| Cyperus hystricinus | Flowering Plants | Stoddard MO, Scott MO |
| Cyperus lancastriensis | Flowering Plants | Massac IL, Pulaski IL, Ballard KY, Pope IL |
| Cyperus odoratus | Flowering Plants | Dunklin MO |
| Cyperus plukenetii | Flowering Plants | Stoddard MO, Bollinger MO, New Madrid MO, Dunklin MO, Carter MO, Ripley MO, Scott MO |
| Cyperus polystachyos | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO, Scott MO |
| Cyperus polystachyos var. texensis | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO, Scott MO |
| Cyperus retroflexus | Flowering Plants | Mississippi MO, New Madrid MO, Dunklin MO, Butler MO, Scott MO |
| Cyperus retrofractus | Flowering Plants | Stoddard MO, Mississippi MO, Alexander IL, New Madrid MO, Dunklin MO, Butler MO, Scott MO |
| Cyperus retrorsus | Flowering Plants | Dunklin MO |
| Cyprinella venusta | Fishes | Mississippi MO, Massac IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, New Madrid MO, McCracken KY |
| Cypripedium candidum | Flowering Plants | Carter MO, Reynolds MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Cypripedium reginae | Flowering Plants | Carter MO, Reynolds MO |
| Cyprogenia aberti | Mollusks | Wayne MO, Stoddard MO, Bollinger MO, Butler MO, Madison MO, Ripley MO |
| Cyprogenia stegaria | Mollusks | Livingston KY |
| Cystopteris tenuis | Ferns and relatives | Ste Genevieve MO |
| Decodon verticillatus | Flowering Plants | Stoddard MO, Mississippi MO, Bollinger MO, Reynolds MO |
| Deirochelys reticularia | Turtles | Wayne MO, Stoddard MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO |
| Deirochelys reticularia miaria | Turtles | Wayne MO, Stoddard MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO |
| Dendroica cerulea | Birds | Wayne MO, Jackson IL, Union IL, Mississippi AR, Carter MO, Reynolds MO |
| Dennstaedtia punctilobula | Ferns and relatives | Ste Genevieve MO, Pope IL, Madison MO, St Francois MO |
| Descurainia pinnata | Flowering Plants | Stoddard MO, Mississippi MO, Fulton KY, New Madrid MO, Dunklin MO, Pemiscot MO, Scott MO, Lake TN |
| Desmodium nuttallii | Flowering Plants | Wayne MO, Stoddard MO, Ste Genevieve MO, Bollinger MO, Cape Girardeau MO, Carter MO, Madison MO, Reynolds MO, Perry MO, Ripley MO, St Francois MO |
| Desmodium ochroleucum | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO |
| Desmodium strictum | Flowering Plants | Stoddard MO, Scott MO |
| Desmodium viridiflorum | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO |
| Desmognathus conanti | Amphibians | Pulaski IL, Ballard KY |
| Diarrhena americana | Flowering Plants | Butler MO |
| Dichanthelium boreale | Flowering Plants | Ripley MO |
| Dichanthelium leibergii | Flowering Plants | Carter MO, Reynolds MO |
| Dichanthelium ravenelii | Flowering Plants | Hardin IL |
| Dichondra carolinensis | Flowering Plants | Pemiscot MO |
| Didiplis diandra | Flowering Plants | Ballard KY, Carlisle KY, Hickman KY, Dyer TN |
| Dioclea multiflora | Flowering Plants | Massac IL |
| Dodecatheon frenchii | Flowering Plants | Ste Genevieve MO, Hardin IL, Jackson IL, Union IL, Pope IL, Livingston KY |
| Draba aprica | Flowering Plants | Ste Genevieve MO, Madison MO, Reynolds MO, St Francois MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Draba cuneifolia | Flowering Plants | Randolph IL |
| Dreissena polymorpha | Mollusks | Scott MO |
| Dromus dromas | Mollusks | Livingston KY |
| Dryopteris carthusiana | Ferns and relatives | Stoddard MO, Hickman KY, Butler MO, Madison MO, Scott MO, St Francois MO |
| Dryopteris celsa | Ferns and relatives | Carter MO |
| Dryopteris goldiana | Ferns and relatives | Jackson IL, Bollinger MO, Madison MO, Perry MO |
| Dryopteris intermedia | Ferns and relatives | Ste Genevieve MO |
| Echinacea angustifolia | Flowering Plants | Alexander IL, Union IL, Cape Girardeau MO |
| Echinodorus berteroi | Flowering Plants | Fulton KY |
| Egretta caerulea | Birds | Mississippi MO, Alexander IL, Mississippi AR, Pemiscot MO, Scott MO, Dyer TN |
| Egretta thula | Birds | Mississippi MO, Pemiscot MO, Scott MO |
| Egretta tricolor | Birds | Mississippi AR |
| Elassoma zonatum | Fishes | Wayne MO, Stoddard MO, Mississippi MO, Bollinger MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO, Scott MO |
| Eleocharis atropurpurea | Flowering Plants | Scott MO |
| Eleocharis lanceolata | Flowering Plants | Wayne MO, Butler MO, Carter MO, Reynolds MO, Ripley MO |
| Eleocharis wolfii | Flowering Plants | Stoddard MO, Bollinger MO |
| Ellipsaria lineolata | Mollusks | Massac IL, Pulaski IL, Ballard KY, Livingston KY, McCracken KY |
| Elliptio crassidens | Mollusks | Wayne MO, Massac IL, Pulaski IL, Ballard KY, Bollinger MO, Butler MO, Ripley MO, McCracken KY |
| Elodea canadensis | Flowering Plants | Wayne MO, Carter MO, Ripley MO |
| Elodea nuttallii | Flowering Plants | Lake TN |
| Empidonax minimus | Birds | Dyer TN |
| Ephemerum serratum | Mosses | Scott MO |
| Epifagus virginiana | Flowering Plants | Stoddard MO, Union IL, Bollinger MO, Cape Girardeau MO, Perry MO, Scott MO |
| Epioblasma florentina | Mollusks | Wayne MO, Bollinger MO, Ripley MO |
| Epioblasma florentina curtisi | Mollusks | Wayne MO, Bollinger MO, Ripley MO |
| Epioblasma triquetra | Mollusks | Wayne MO, Bollinger MO, Ripley MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Eragrostis glomerata | Flowering Plants | Dunklin MO, Butler MO |
| Erimyzon sucetta | Fishes | Wayne MO, Stoddard MO, Mississippi MO, Massac IL, Ballard KY, Fulton KY, Hickman KY, Bollinger MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Carter MO, Madison MO, Pemiscot MO, Scott MO, Livingston KY, McCracken KY |
| Eriogonum longifolium var. longifolium | Flowering Plants | Ripley MO |
| Eryngium prostratum | Flowering Plants | Alexander IL, Massac IL, Pope IL |
| Esox niger | Fishes | Massac IL, Pulaski IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Pope IL, Livingston KY, McCracken KY, Marshall KY |
| Etheostoma chienense | Fishes | Fulton KY, Hickman KY |
| Etheostoma euzonum | Fishes | Carter MO, Ripley MO |
| Etheostoma euzonum erizonum | Fishes | Carter MO, Ripley MO |
| Etheostoma fusiforme | Fishes | Fulton KY, Hickman KY, Butler MO |
| Etheostoma histrio | Fishes | Stoddard MO, Mississippi MO, Bollinger MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO, Scott MO, Union KY |
| Etheostoma microperca | Fishes | Mississippi MO |
| Etheostoma parvipinne | Fishes | Stoddard MO, Butler MO |
| Etheostoma proeliare | Fishes | Pulaski IL, Ballard KY, Fulton KY, Hickman KY, Livingston KY, McCracken KY, Marshall KY |
| Euonymus americanus | Flowering Plants | Stoddard MO, Hardin IL, Pulaski IL, Pope IL, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO |
| Eupatorium hyssopifolium var. calcaratum | Flowering Plants | Wayne MO, Butler MO, Carter MO, Reynolds MO, Ripley MO |
| Eupatorium incarnatum | Flowering Plants | Alexander IL, Massac IL, Pulaski IL, Union IL, Pope IL |
| Eupatorium rotundifolium | Flowering Plants | Wayne MO, Butler MO, Carter MO, Ripley MO |
| Eupatorium semiserratum | Flowering Plants | Stoddard MO, Dunklin MO, Butler MO, Carter MO, Ripley MO, Scott MO |
| Euphyes dukesi | Insects | Stoddard MO, Ballard KY, Fulton KY, Butler MO, McCracken KY, Marshall KY, Union KY |
| Eurybia furcata | Flowering Plants | Ste Genevieve MO, Madison MO, St Francois MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Eurybia macrophylla | Flowering Plants | Madison MO |
| Eurycea spelaea | Amphibians | Wayne MO, Carter MO |
| Falco peregrinus | Birds | Lake TN |
| Fallicambarus fodiens | Crustaceans | Wayne MO, Stoddard MO, Bollinger MO, Reynolds MO, Ripley MO |
| Fallicambarus hortoni | Crustaceans | Dyer TN |
| Farancia abacura | Reptiles | Wayne MO, Stoddard MO, Mississippi MO, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Bollinger MO, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Pemiscot MO, Ripley MO, Scott MO, Livingston KY, McCracken KY, Marshall KY |
| Farancia abacura reinwardtii | Reptiles | Wayne MO, Stoddard MO, Mississippi MO, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Bollinger MO, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Pemiscot MO, Ripley MO, Scott MO, Livingston KY, McCracken KY, Marshall KY |
| Faxonella clypeata | Crustaceans | Stoddard MO, Butler MO, Ripley MO |
| Filipendula rubra | Flowering Plants | Reynolds MO, St Francois MO |
| Fimbristylis littoralis | Flowering Plants | Wayne MO, Stoddard MO |
| Fimbristylis puberula | Flowering Plants | Livingston KY |
| Fontigens antroecetes | Mollusks | Perry MO |
| Forbesichthys agassizii | Fishes | Cape Girardeau MO, Scott MO |
| Fulica americana | Birds | Union KY |
| Fundulus chrysotus | Fishes | Mississippi MO, Fulton KY, Lake TN |
| Fundulus dispar | Fishes | Wayne MO, Stoddard MO, Mississippi MO, Union IL, Fulton KY, Hickman KY, Bollinger MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Scott MO, Lake TN |
| Fusconaia ebena | Mollusks | Wayne MO, Hardin IL, Massac IL, Pulaski IL, Ballard KY, Pope IL, Butler MO, Ripley MO, Livingston KY, McCracken KY, Union KY |
| Fusconaia subrotunda | Mollusks | Livingston KY, McCracken KY, Marshall KY |
| Gaillardia aestivalis | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO, Scott MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Gallinula chloropus | Birds | Wayne MO, Jackson IL, Massac IL, Randolph IL, Union IL, Bollinger MO, Union KY, Lake TN |
| Gammarus bousfieldi | Crustaceans | Hardin IL, Massac IL, Pulaski IL, Ballard KY, McCracken KY |
| Gastrophryne carolinensis | Amphibians | Hardin IL, Jackson IL, Randolph IL, Union IL, Pope IL, Perry MO |
| Gaylussacia baccata | Flowering Plants | Ste Genevieve MO, Jackson IL, Union IL, Cape Girardeau MO, Perry MO |
| Gentiana andrewsii | Flowering Plants | Ste Genevieve MO |
| Gentiana andrewsii var. andrewsii | Flowering Plants | Ste Genevieve MO |
| Gentiana saponaria | Flowering Plants | Dunklin MO |
| Geococcyx californianus | Birds | Madison MO, Ripley MO |
| Geum virginianum | Flowering Plants | Wayne MO, Ste Genevieve MO, Reynolds MO |
| Glandularia canadensis | Flowering Plants | Fulton KY, Hickman KY |
| Gleditsia aquatica | Flowering Plants | Fulton KY, Hickman KY, Livingston KY, McCracken KY |
| Glyceria acutiflora | Flowering Plants | Wayne MO, Carter MO, Reynolds MO |
| Glyceria arkansana | Flowering Plants | Alexander IL, Jackson IL, Union IL |
| Gomphus hybridus | Insects | Hardin IL, Union KY |
| Gomphus ozarkensis | Insects | Wayne MO, Stoddard MO, Madison MO |
| Grimmia olneyi | Mosses | Carter MO, Madison MO |
| Gryllotalpa major | Insects | New Madrid MO, Pemiscot MO |
| Gymnopogon ambiguus | Flowering Plants | Marshall KY |
| Halesia carolina | Flowering Plants | Massac IL, Pulaski IL, Ballard KY |
| Haliaeetus leucocephalus | Birds | Wayne MO, Stoddard MO, Ste Genevieve MO, Mississippi MO, Alexander IL, Hardin IL, Jackson IL, Massac IL, Pulaski IL, Randolph IL, Union IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Pope IL, Bollinger MO, Cape Girardeau MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Madison MO, Pemiscot MO, Perry MO, Ripley MO, Scott MO, Livingston KY, Marshall KY, Union KY, Lake TN |
| Hamamelis virginiana | Flowering Plants | Wayne MO, Reynolds MO |
| Hedeoma hispida | Flowering Plants | Hickman KY, Marshall KY |
| Helenium virginicum | Flowering Plants | Cape Girardeau MO |
| Helianthemum canadense | Flowering Plants | Stoddard MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Helianthus angustifolius | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Massac IL, Pope IL, Dunklin MO, Butler MO, Carter MO, Ripley MO, Scott MO |
| Hemidactylium scutatum | Amphibians | Wayne MO, Ste Genevieve MO, Carter MO, Madison MO, Reynolds MO, Ripley MO |
| Hesperia metea | Insects | Pope IL |
| Hesperochernes occidentalis | Spiders and Other Chelicerates | Carter MO, Madison MO |
| Heteranthera limosa | Flowering Plants | Ballard KY, Fulton KY, Marshall KY |
| Heteranthera reniformis | Flowering Plants | Alexander IL, Union IL, Pope IL |
| Heterodon nasicus | Reptiles | Mississippi MO, Scott MO |
| Heterodon nasicus gloydi | Reptiles | Mississippi MO, Scott MO |
| Heuchera parviflora | Flowering Plants | Wayne MO, Jackson IL, Carter MO, Madison MO, Reynolds MO, Perry MO |
| Heuchera parviflora var. parviflora | Flowering Plants | Wayne MO, Jackson IL, Carter MO, Madison MO, Reynolds MO, Perry MO |
| Hexalectris spicata | Flowering Plants | Hardin IL, Jackson IL, Randolph IL |
| Hieracium longipilum | Flowering Plants | Marshall KY |
| Hiodon tergisus | Fishes | Wayne MO, Randolph IL, Cape Girardeau MO, Butler MO, Pemiscot MO, Perry MO |
| Hottonia inflata | Flowering Plants | Wayne MO, Stoddard MO, Bollinger MO, Cape Girardeau MO, Dunklin MO, Butler MO, Carter MO, Reynolds MO, Ripley MO, Lake TN |
| Huperzia porophila | Ferns and relatives | Ste Genevieve MO, Jackson IL, Pope IL, Madison MO, St Francois MO |
| Hybognathus argyritis | Fishes | Perry MO, Scott MO |
| Hybognathus hayi | Fishes | Mississippi MO, Alexander IL, Pulaski IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Dunklin MO, Butler MO, Pemiscot MO, McCracken KY |
| Hybognathus nuchalis | Fishes | Wayne MO, Ste Genevieve MO, Mississippi MO, Randolph IL, Fulton KY, Bollinger MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Perry MO, Ripley MO, Scott MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Hybognathus placitus | Fishes | Ste Genevieve MO, Mississippi MO, Alexander IL, Randolph IL, Union IL, Ballard KY, Fulton KY, Cape Girardeau MO, Mississippi AR, New Madrid MO, Pemiscot MO, Perry MO, Scott MO |
| Hybopsis amnis | Fishes | Stoddard MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO, Marshall KY |
| Hydrocotyle ranunculoides | Flowering Plants | Wayne MO, Stoddard MO, Alexander IL, Jackson IL, Union IL |
| Hydrolea ovata | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO, McCracken KY, Marshall KY |
| Hydrolea uniflora | Flowering Plants | Jackson IL, Pulaski IL, Union IL, Ballard KY, Carlisle KY, Livingston KY, McCracken KY |
| Hyla avivoca | Amphibians | Alexander IL, Jackson IL, Massac IL, Pulaski IL, Union IL, Ballard KY, Fulton KY, Hickman KY, Pope IL, Livingston KY, Marshall KY, Union KY |
| Hyla cinerea | Amphibians | Wayne MO, Stoddard MO, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Bollinger MO, Dunklin MO, Butler MO, Madison MO, Ripley MO, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Hyla gratiosa | Amphibians | Livingston KY |
| Hylotelephium telephioides | Flowering Plants | Hardin IL, Fulton KY, Pope IL, Livingston KY |
| Hypericum adpressum | Flowering Plants | Mississippi MO, Alexander IL, Pulaski IL, Ballard KY, Carlisle KY, Scott MO, McCracken KY |
| Hypericum lobocarpum | Flowering Plants | Wayne MO, Stoddard MO, Dunklin MO, Butler MO, Carter MO, Ripley MO |
| Hypnum imponens | Mosses | Ste Genevieve MO, St Francois MO |
| Ichthyomyzon castaneus | Fishes | Mississippi MO, Alexander IL, Massac IL, Pulaski IL, Ballard KY, Fulton KY, Livingston KY, McCracken KY, Marshall KY, Union KY, Dyer TN |
| Ichthyomyzon fossor | Fishes | Dyer TN |
| Ichthyomyzon gagei | Fishes | Wayne MO, Carter MO, Madison MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Ichthyomyzon greeleyi | Fishes | Massac IL, McCracken KY, Dyer TN |
| Ictinia mississippiensis | Birds | Wayne MO, Stoddard MO, Mississippi MO, Alexander IL, Jackson IL, Massac IL, Pulaski IL, Randolph IL, Union IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Cape Girardeau MO, New Madrid MO, Dunklin MO, Pemiscot MO, Perry MO, Scott MO, McCracken KY, Union KY, Dyer TN, Lake TN |
| Ictiobus niger | Fishes | Mississippi MO, Hardin IL, Massac IL, Pulaski IL, Ballard KY, Fulton KY, Hickman KY, Pope IL, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Ilex verticillata | Flowering Plants | Madison MO |
| Inscudderia taxodii | Insects | Wayne MO, Stoddard MO, Mississippi MO, Bollinger MO, Scott MO |
| Iresine rhizomatosa | Flowering Plants | Massac IL |
| Iris brevicaulis | Flowering Plants | Hickman KY, Livingston KY, McCracken KY |
| Iris fulva | Flowering Plants | Mississippi MO, Fulton KY, New Madrid MO, Dyer TN, Lake TN |
| Isolepis molestus | Flowering Plants | Dunklin MO |
| Isoperla burksi | Insects | Ste Genevieve MO, Madison MO |
| Isotria medeoloides | Flowering Plants | Randolph IL, Bollinger MO |
| Isotria verticillata | Flowering Plants | Stoddard MO, Ste Genevieve MO, Pope IL, Butler MO, St Francois MO |
| Ixobrychus exilis | Birds | Jackson IL, Massac IL, Pulaski IL, Union IL, Ballard KY, Fulton KY, Union KY, Lake TN |
| Juglans cinerea | Flowering Plants | Wayne MO, Stoddard MO, Ste Genevieve MO, Bollinger MO, Cape Girardeau MO, Dunklin MO, Butler MO, Carter MO, Madison MO, Reynolds MO, St Francois MO, Livingston KY |
| Juncus bufonius var. bufonius | Flowering Plants | Stoddard MO, Madison MO, Ripley MO, St Francois MO |
| Juncus debilis | Flowering Plants | Ripley MO |
| Juncus elliottii | Flowering Plants | Pulaski IL, Ballard KY |
| Juncus nodosus | Flowering Plants | Wayne MO, Butler MO |
| Juncus validus | Flowering Plants | Wayne MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Justicia ovata | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Alexander IL, Pulaski IL, Fulton KY, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Pemiscot MO, Ripley MO, Scott MO, Lake TN |
| Justicia ovata var. lanceolata | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Fulton KY, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Pemiscot MO, Ripley MO, Scott MO, Lake TN |
| Koeleria macrantha | Flowering Plants | Livingston KY |
| Lactuca hirsuta | Flowering Plants | Stoddard MO, Ste Genevieve MO, Mississippi MO, Alexander IL, Hardin IL, Jackson IL, Pope IL, Cape Girardeau MO, New Madrid MO, Madison MO, Reynolds MO, Scott MO |
| Lampetra aepyptera | Fishes | Hardin IL, Pope IL |
| Lampetra appendix | Fishes | Bollinger MO, Cape Girardeau MO, Butler MO, Carter MO, Ripley MO, Livingston KY, Marshall KY, Dyer TN |
| Lampsilis abrupta | Mollusks | Wayne MO, Massac IL, Hickman KY, Butler MO, Ripley MO, Livingston KY, McCracken KY, Marshall KY |
| Lampsilis ovata | Mollusks | Massac IL, Pulaski IL, Ballard KY, Pope IL, Livingston KY, McCracken KY, Marshall KY |
| Lampsilis reeveiana | Mollusks | Wayne MO, Butler MO, Madison MO, Reynolds MO, St Francois MO |
| Lampsilis reeveiana brittsi | Mollusks | Wayne MO, Butler MO, Madison MO, Reynolds MO, St Francois MO |
| Lanius ludovicianus | Birds | Alexander IL, Jackson IL, Massac IL, Pulaski IL, Randolph IL, Union IL, Pope IL |
| Leitneria floridana | Flowering Plants | Wayne MO, Stoddard MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Pemiscot MO, Ripley MO |
| Lemna minuta | Flowering Plants | Cape Girardeau MO, Reynolds MO |
| Lemna obscura | Flowering Plants | Stoddard MO, Mississippi MO, Dunklin MO, Butler MO |
| Lemna trisulca | Flowering Plants | Carter MO, Ripley MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Lepomis marginatus | Fishes | Wayne MO, Stoddard MO, Fulton KY, Hickman KY, Bollinger MO, Butler MO, Ripley MO, McCracken KY, Marshall KY |
| Lepomis miniatus | Fishes | Mississippi MO, Hardin IL, Massac IL, Pulaski IL, Union IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, McCracken KY, Marshall KY |
| Lepomis symmetricus | Fishes | Wayne MO, Stoddard MO, Alexander IL, Pulaski IL, Union IL, Bollinger MO, Dunklin MO, Butler MO |
| Leptochloa panicoides | Flowering Plants | Fulton KY, New Madrid MO |
| Leptoxis praerosa | Mollusks | McCracken KY |
| Lespedeza stuevei | Flowering Plants | McCracken KY, Marshall KY |
| Lethe appalachia | Insects | Wayne MO, Stoddard MO, Bollinger MO, Dunklin MO, Butler MO |
| Leucotrichia pictipes | Insects | Cape Girardeau MO, Perry MO |
| Liatris scariosa | Flowering Plants | Reynolds MO, St Francois MO |
| Liatris scariosa var. nieuwlandii | Flowering Plants | Reynolds MO, St Francois MO |
| Ligumia recta | Mollusks | Wayne MO, Massac IL, Pulaski IL, Ballard KY, Bollinger MO, Butler MO, Carter MO, Madison MO, Ripley MO, McCracken KY |
| Lilium superbum | Flowering Plants | Carlisle KY, Bollinger MO, Cape Girardeau MO, Perry MO |
| Limnobium spongia | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Ballard KY, Fulton KY, Bollinger MO, Cape Girardeau MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO |
| Limnosciadium pinnatum | Flowering Plants | Stoddard MO, Dunklin MO, Butler MO, Ripley MO |
| Limnothlypis swainsonii | Birds | Wayne MO, Mississippi MO, Alexander IL, Jackson IL, Pulaski IL, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Dyer TN, Lake TN |
| Lindera melissifolia | Flowering Plants | Butler MO, Ripley MO |
| Lioplax sulculosa | Mollusks | Massac IL, Livingston KY, McCracken KY |
| Liparis loeselii | Flowering Plants | Wayne MO, Bollinger MO, Butler MO, Carter MO, Madison MO |
| Lipocarpha drummondii | Flowering Plants | Mississippi MO, Perry MO, Scott MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Lithasia armigera | Mollusks | Ballard KY, Carlisle KY, Pope IL, Livingston KY, Marshall KY, Union KY |
| Lithasia geniculata | Mollusks | Livingston KY, McCracken KY, Marshall KY |
| Lithasia obovata | Mollusks | Union KY |
| Lithasia salebrosa | Mollusks | Livingston KY |
| Lithasia verrucosa | Mollusks | Ballard KY, Carlisle KY, Pope IL, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Lithobates areolatus | Amphibians | Ballard KY, Carlisle KY, Hickman KY, Dunklin MO, Livingston KY, McCracken KY, Marshall KY |
| Lithobates areolatus circulosus | Amphibians | Ballard KY, Carlisle KY, Hickman KY, Dunklin MO, Livingston KY, McCracken KY, Marshall KY |
| Lithobates sylvaticus | Amphibians | Ste Genevieve MO, Reynolds MO, Ripley MO |
| Lobelia puberula | Flowering Plants | Dunklin MO |
| Lonicera flava | Flowering Plants | Jackson IL, Randolph IL, Pope IL |
| Lontra canadensis | Mammals | Alexander IL, Jackson IL, Massac IL, Pulaski IL, Randolph IL, Union IL, Pope IL, Butler MO, Livingston KY, McCracken KY, Union KY |
| Lophodytes cucullatus | Birds | Ballard KY, Carlisle KY, Fulton KY, Mississippi AR, Livingston KY, McCracken KY, Union KY |
| Lota lota | Fishes | Massac IL, Livingston KY, McCracken KY |
| Ludwigia leptocarpa | Flowering Plants | Stoddard MO, Ste Genevieve MO, Mississippi MO, Alexander IL, Randolph IL, Union IL, Fulton KY, Bollinger MO, Cape Girardeau MO, New Madrid MO, Butler MO, Pemiscot MO, Scott MO, Dyer TN |
| Ludwigia microcarpa | Flowering Plants | Carter MO, Ripley MO |
| Luxilus chrysocephalus | Fishes | Bollinger MO, Cape Girardeau MO, Perry MO |
| Lycopodium dendroideum | Ferns and relatives | Ste Genevieve MO |
| Lycopodium digitatum | Ferns and relatives | Wayne MO, Bollinger MO, Cape Girardeau MO, Carter MO, Madison MO, Reynolds MO |
| Lycopodium tristachyum | Ferns and relatives | Ste Genevieve MO |
| Lycopus uniflorus | Flowering Plants | Ste Genevieve MO, Butler MO |
| Lysimachia fraseri | Flowering Plants | Pope IL, Marshall KY |
| Lysimachia radicans | Flowering Plants | Pulaski IL |
| Lysimachia terrestris | Flowering Plants | Ballard KY, Marshall KY |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Lythrum salicaria | Flowering Plants | Mississippi MO, New Madrid MO, Pemiscot MO, Scott MO |
| Lytrosis permagnaria | Insects | Wayne MO |
| Maccaffertium bednariki | Insects | Ste Genevieve MO, Bollinger MO, Carter MO, Madison MO, Reynolds MO, Ripley MO |
| Macrhybopsis gelida | Fishes | Mississippi MO, Alexander IL, Jackson IL, Randolph IL, Ballard KY, Carlisle KY, Hickman KY, Cape Girardeau MO, Perry MO, Scott MO |
| Macrhybopsis meeki | Fishes | Mississippi MO, Alexander IL, Randolph IL, Union IL, Ballard KY, Carlisle KY, Hickman KY, Cape Girardeau MO, Mississippi AR, Pemiscot MO, Perry MO, Scott MO, Lake TN |
| Macrhybopsis storeriana | Fishes | Randolph IL, New Madrid MO, Perry MO |
| Macrobrachium ohione | Crustaceans | Alexander IL, Massac IL, Cape Girardeau MO, Livingston KY, Dyer TN |
| Macrochelys temminckii | Turtles | Wayne MO, Stoddard MO, Mississippi MO, Union IL, Ballard KY, Carlisle KY, Hickman KY, . Bollinger MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO, St Francois MO, . Livingston KY, McCracken KY, Marshall KY |
| Macromia pacifica | Insects | Wayne MO, Madison MO, Ripley MO, St Francois MO |
| Magnolia pyramidata | Flowering Plants | Fulton KY |
| Malaxis unifolia | Flowering Plants | Wayne MO, Ste Genevieve MO, Butler MO, Carter MO, Reynolds MO |
| Malus angustifolia | Flowering Plants | Stoddard MO, Pope IL, Bollinger MO, New Madrid MO, Dunklin MO, Scott MO, Livingston KY, McCracken KY, Marshall KY |
| Malvastrum hispidum | Flowering Plants | St Francois MO |
| Masticophis flagellum | Reptiles | Randolph IL |
| Matelea decipiens | Flowering Plants | Jackson IL, Union IL |
| Matelea obliqua | Flowering Plants | Hardin IL, Pope IL |
| Mecardonia acuminata | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Alexander IL, Dunklin MO, Butler MO, Carter MO, Ripley MO, Scott MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Melanthera nivea | Flowering Plants | Massac IL, Pulaski IL, Ballard KY, Carlisle KY, Hickman KY, McCracken KY |
| Melanthium virginicum | Flowering Plants | Jackson IL |
| Melica mutica | Flowering Plants | Massac IL |
| Melothria pendula | Flowering Plants | Alexander IL, Hardin IL, Jackson IL, Pulaski IL, Union IL, Pope IL |
| Menidia beryllina | Fishes | Mississippi MO, Alexander IL, Hardin IL, Massac IL, Pulaski IL, Ballard KY, Carlisle KY, Fulton KY, Pope IL, New Madrid MO, Livingston KY, McCracken KY, Marshall KY |
| Mentha arvensis | Flowering Plants | Mississippi AR |
| Menyanthes trifoliata | Flowering Plants | Reynolds MO |
| Metaleptea brevicornis | Insects | Wayne MO, St Francois MO |
| Metzgeria conjugata | Liverworts | Ste Genevieve MO |
| Mimulus glabratus | Flowering Plants | Ste Genevieve MO, Randolph IL |
| Mirabilis albida | Flowering Plants | Pulaski IL, Ballard KY |
| Mitreola petiolata | Flowering Plants | Wayne MO, Stoddard MO, Mississippi AR, Dunklin MO, Butler MO, Ripley MO |
| Monarda clinopodia | Flowering Plants | Butler MO |
| Monarda punctata | Flowering Plants | Stoddard MO, Mississippi MO, New Madrid MO, Dunklin MO, Scott MO, Livingston KY, McCracken KY |
| Monarda punctata var. villicaulis | Flowering Plants | Stoddard MO, Mississippi MO, New Madrid MO, Dunklin MO, Scott MO |
| Moxostoma anisurum | Fishes | Ripley MO |
| Muhlenbergia bushii | Flowering Plants | Pulaski IL, Ballard KY |
| Muhlenbergia glabrifloris | Flowering Plants | McCracken KY |
| Mustela frenata | Mammals | Ste Genevieve MO, Bollinger MO, Cape Girardeau MO, Madison MO, Perry MO |
| Myotis austroriparius | Mammals | Wayne MO, Alexander IL, Hardin IL, Massac IL, Pulaski IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Pope IL, New Madrid MO, Livingston KY, McCracken KY, Marshall KY |
| Myotis grisescens | Mammals | Wayne MO, Alexander IL, Hardin IL, Jackson IL, Pulaski IL, Pope IL, Carter MO, Madison MO, Reynolds MO, Ripley MO, Livingston KY, Union KY |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Myotis leibii | Mammals | Carter MO, Madison MO, Reynolds MO |
| Myotis septentrionalis | Mammals | Wayne MO, Ste Genevieve MO, Butler MO, Carter MO, Madison MO, Reynolds MO |
| Myotis sodalis | Mammals | Wayne MO, Ste Genevieve MO, Alexander IL, Hardin IL, Jackson IL, Pulaski IL, Union IL, Ballard KY, Carlisle KY, Hickman KY, Pope IL, Madison MO, Reynolds MO, Livingston KY, McCracken KY, Union KY |
| Myriophyllum heterophyllum | Flowering Plants | Fulton KY, Livingston KY, McCracken KY |
| Myriophyllum pinnatum | Flowering Plants | Livingston KY |
| Najas gracillima | Flowering Plants | Wayne MO, Stoddard MO, Bollinger MO, Butler MO, Carter MO, Madison MO, Reynolds MO |
| Nardia lescurii | Liverworts | Ste Genevieve MO |
| Necturus maculosus | Amphibians | Wayne MO, Pulaski IL, Union IL, Ballard KY, Cape Girardeau MO, Dunklin MO, Butler MO, Madison MO, Reynolds MO, Perry MO, Ripley MO |
| Necturus maculosus louisianensis | Amphibians | Wayne MO, Cape Girardeau MO, Dunklin MO, Butler MO, Reynolds MO, Ripley MO |
| Nemastylis geminiflora | Flowering Plants | Ste Genevieve MO, Randolph IL, Madison MO, St Francois MO |
| Nemophila aphylla | Flowering Plants | Massac IL, Fulton KY, Hickman KY |
| Neoconocephalus retusus | Insects | Mississippi MO, St Francois MO |
| Neotoma floridana | Mammals | Wayne MO, Jackson IL, Union IL, Butler MO, Carter MO, St Francois MO |
| Neotridactylus apicialis | Insects | Mississippi MO |
| Nerodia cyclopion | Reptiles | Union IL, Fulton KY, Hickman KY, Mississippi AR, Dunklin MO, Butler MO, Lake TN |
| Nerodia erythrogaster | Reptiles | Massac IL, Pulaski IL, Pope IL, Livingston KY, Union KY |
| Nerodia erythrogaster neglecta | Reptiles | Massac IL, Pulaski IL, Pope IL, Livingston KY, Union KY |
| Nerodia fasciata | Reptiles | Massac IL, Fulton KY |
| Nerodia fasciata confluens | Reptiles | Fulton KY |
| Neviusia alabamensis | Flowering Plants | Butler MO |
| Notropis boops | Fishes | Alexander IL, Jackson IL, Randolph IL, Union IL, Perry MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Notropis buccatus | Fishes | Wayne MO, Ste Genevieve MO, Bollinger MO, Cape Girardeau MO, Madison MO, Reynolds MO, Perry MO, Scott MO, St Francois MO |
| Notropis buchanani | Fishes | Ste Genevieve MO, Randolph IL, Cape Girardeau MO, Perry MO, Scott MO |
| Notropis chalybaeus | Fishes | Mississippi MO, New Madrid MO, Dunklin MO, Pemiscot MO, Scott MO |
| Notropis heterolepis | Fishes | Madison MO |
| Notropis hudsonius | Fishes | Mississippi MO, Alexander IL, Ballard KY |
| Notropis maculatus | Fishes | Stoddard MO, Mississippi MO, Massac IL, Pulaski IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Bollinger MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, McCracken KY |
| Notropis ozarcanus | Fishes | Carter MO, Madison MO, Reynolds MO, Ripley MO |
| Notropis sabinae | Fishes | Butler MO |
| Notropis texanus | Fishes | Wayne MO, Stoddard MO, Mississippi MO, Bollinger MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO, Scott MO |
| Noturus eleutherus | Fishes | Wayne MO, Butler MO |
| Noturus flavater | Fishes | Wayne MO, Carter MO, Ripley MO |
| Noturus stigmosus | Fishes | Massac IL, Pulaski IL, Ballard KY, McCracken KY |
| Nyctanassa violacea | Birds | Massac IL, Pulaski IL, Ballard KY, Hickman KY, Marshall KY, Union KY |
| Nycticeius humeralis | Mammals | Mississippi MO, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, McCracken KY, Marshall KY, Union KY |
| Nycticorax nycticorax | Birds | Mississippi MO, Pemiscot MO, Scott MO |
| Nyssa biflora | Flowering Plants | Stoddard MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Obolaria virginica | Flowering Plants | Stoddard MO, Ste Genevieve MO, Alexander IL, Jackson IL, Union IL, Cape Girardeau MO, Madison MO, Perry MO, Scott MO, St Francois MO |
| Obovaria jacksoniana | Mollusks | Bollinger MO, Madison MO |
| Obovaria olivaria | Mollusks | Bollinger MO, Cape Girardeau MO, Dunklin MO |
| Obovaria retusa | Mollusks | Massac IL, Ballard KY, Livingston KY, McCracken KY, Marshall KY |
| Ochrotomys nuttalli | Mammals | Wayne MO, Stoddard MO, Alexander IL, Hardin IL, Jackson IL, Union IL, Pope IL, Bollinger MO, Cape Girardeau MO, Butler MO, Carter MO |
| Oenothera fruticosa | Flowering Plants | Carter MO, Reynolds MO |
| Oenothera fruticosa ssp. glauca | Flowering Plants | Carter MO, Reynolds MO |
| Oenothera perennis | Flowering Plants | Carter MO, Reynolds MO, Marshall KY |
| Oenothera triloba | Flowering Plants | Cape Girardeau MO, St Francois MO |
| Oldenlandia boscii | Flowering Plants | Dunklin MO, Butler MO, Carter MO, Ripley MO, Scott MO |
| Oldenlandia uniflora | Flowering Plants | Stoddard MO, Hickman KY, Dunklin MO, Scott MO, Marshall KY |
| Oligoneuron riddellii | Flowering Plants | Wayne MO, Bollinger MO, Madison MO, Reynolds MO |
| Oncopodura hoffi | Diplurans, Springtails and Proturans | Perry MO |
| Onosmodium molle | Flowering Plants | Livingston KY |
| Onosmodium molle ssp. occidentale | Flowering Plants | Livingston KY |
| Ophioglossum petiolatum | Ferns and relatives | Pemiscot MO |
| Ophioglossum vulgatum | Ferns and relatives | Wayne MO, Stoddard MO, Ste Genevieve MO, Randolph IL, Bollinger MO, Cape Girardeau MO, New Madrid MO, Butler MO, Carter MO, Madison MO, Pemiscot MO, Perry MO, Ripley MO, Scott MO, St Francois MO |
| Ophiogomphus westfalli | Insects | Carter MO, Madison MO, Reynolds MO, Ripley MO |
| Opsopoeodus emiliae | Fishes | Wayne MO, Stoddard MO, Mississippi MO, Randolph IL, Bollinger MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Perry MO, Ripley MO, Scott MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Opuntia macrorhiza | Flowering Plants | Reynolds MO |
| Orconectes harrisonii | Crustaceans | Wayne MO, St Francois MO |
| Orconectes indianensis | Crustaceans | Hardin IL, Pope IL |
| Orconectes kentuckiensis | Crustaceans | Hardin IL |
| Orconectes lancifer | Crustaceans | Mississippi MO, Alexander IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Dunklin MO, Pemiscot MO, McCracken KY |
| Orconectes luteus | Crustaceans | Ste Genevieve MO, Randolph IL, Perry MO |
| Orconectes margorectus | Crustaceans | Livingston KY |
| Orconectes palmeri palmeri | Crustaceans | Ballard KY, Carlisle KY, Hickman KY, McCracken KY |
| Orconectes pardalotus | Crustaceans | Massac IL, Pulaski IL, Ballard KY, McCracken KY |
| Orconectes peruncus | Crustaceans | Wayne MO, Madison MO, St Francois MO |
| Orconectes placidus | Crustaceans | Hardin IL, Jackson IL, Massac IL, Pope IL, Perry MO, Livingston KY, McCracken KY |
| Orconectes quadruncus | Crustaceans | Wayne MO, Madison MO, St Francois MO |
| Oryzomys palustris | Mammals | Wayne MO, Stoddard MO, Alexander IL, Jackson IL, Massac IL, Pulaski IL, Union IL, Pope IL, Bollinger MO, Cape Girardeau MO, New Madrid MO |
| Oxalis illinoensis | Flowering Plants | Hardin IL, Jackson IL, Pope IL |
| Pandion haliaetus | Birds | Massac IL, Pulaski IL, Ballard KY, Mississippi AR, Carter MO, Livingston KY, McCracken KY, Marshall KY |
| Panicum verrucosum | Flowering Plants | Scott MO |
| Panorpa braueri | Insects | Carter MO |
| Pantherophis emoryi | Reptiles | Randolph IL |
| Papaipema sp. 5 | Insects | Ballard KY, Carlisle KY, Hickman KY, McCracken KY, Marshall KY |
| Paroxya hoosieri | Insects | Stoddard MO, Mississippi MO, New Madrid MO, Dunklin MO, Butler MO |
| Paspalum bifidum | Flowering Plants | Stoddard MO, Scott MO |
| Paspalum dissectum | Flowering Plants | Dunklin MO, Butler MO |
| Passerculus sandwichensis | Birds | Livingston KY |
| Pellaea glabella | Ferns and relatives | Carter MO, Reynolds MO |
| Pellaea glabella ssp. missouriensis | Ferns and relatives | Carter MO, Reynolds MO |
| Penstemon pallidus | Flowering Plants | Pope IL |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Penstemon tubiflorus | Flowering Plants | Alexander IL |
| Percina copelandi | Fishes | Carter MO |
| Percina nasuta | Fishes | Wayne MO, Stoddard MO, Butler MO, Madison MO |
| Percina shumardi | Fishes | Wayne MO, Stoddard MO, Ste Genevieve MO, Mississippi MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Perry MO, Scott MO |
| Percina uranidea | Fishes | Wayne MO, Butler MO, Ripley MO |
| Percopsis omiscomaycus | Fishes | Perry MO |
| Perideridia americana | Flowering Plants | Hardin IL, Carter MO, Reynolds MO, St Francois MO, Union KY |
| Peromyscus gossypinus | Mammals | Wayne MO, Stoddard MO, Carlisle KY, Bollinger MO, New Madrid MO, Dunklin MO, Pemiscot MO, Scott MO, McCracken KY |
| Peucaea aestivalis | Birds | Mississippi MO, Hardin IL, Carlisle KY, Fulton KY, Hickman KY, New Madrid MO, Madison MO, McCracken KY, Union KY, Lake TN |
| Phacelia ranunculacea | Flowering Plants | Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Lake TN |
| Phaeophyscia leana | Lichens | Hardin IL, Massac IL, Ballard KY, Pope IL, Livingston KY, McCracken KY, Union KY |
| Phalacrocorax auritus | Birds | Ballard KY, Fulton KY |
| Philadelphus pubescens | Flowering Plants | Livingston KY |
| Phlox amplifolia | Flowering Plants | Wayne MO, Reynolds MO |
| Phlox bifida ssp. stellaria | Flowering Plants | Cape Girardeau MO |
| Phlox carolina | Flowering Plants | Cape Girardeau MO, Carter MO, Ripley MO |
| Phlox carolina ssp. angusta | Flowering Plants | Ripley MO |
| Phlox maculata | Flowering Plants | Ste Genevieve MO, Carter MO, Reynolds MO, St Francois MO |
| Phlox maculata ssp. pyramidalis | Flowering Plants | Ste Genevieve MO, Carter MO, Reynolds MO, St Francois MO |
| Photinia melanocarpa | Flowering Plants | Stoddard MO |
| Physcomitrella patens | Mosses | Stoddard MO, Butler MO, Pemiscot MO |
| Physostegia intermedia | Flowering Plants | Mississippi MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO, St Francois MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Pimephales tenellus | Fishes | Wayne MO, Stoddard MO, Bollinger MO, Butler MO, Madison MO |
| Pimephales tenellus parviceps | Fishes | Wayne MO, Bollinger MO, Butler MO, Madison MO |
| Pimephales tenellus tenellus | Fishes | Stoddard MO |
| Pinus echinata | Conifers and relatives | Jackson IL, Randolph IL, Union IL |
| Piptatherum racemosum | Flowering Plants | Carter MO, Reynolds MO |
| Pituophis melanoleucus | Reptiles | Marshall KY |
| Pituophis melanoleucus melanoleucus | Reptiles | Marshall KY |
| Plagiothecium denticulatum | Mosses | Ste Genevieve MO |
| Planera aquatica | Flowering Plants | Alexander IL, Massac IL, Pulaski IL, Pope IL |
| Plantago cordata | Flowering Plants | Wayne MO, Ste Genevieve MO, Jackson IL, Pope IL, Butler MO, Carter MO, Madison MO, Reynolds MO, Ripley MO, St Francois MO |
| Plantago patagonica | Flowering Plants | Wayne MO, Scott MO |
| Platanthera ciliaris | Flowering Plants | Wayne MO, Stoddard MO, Carter MO, Ripley MO, St Francois MO |
| Platanthera clavellata | Flowering Plants | Wayne MO, Stoddard MO, Pope IL, Bollinger MO, Dunklin MO, Butler MO, Carter MO, Madison MO, Ripley MO, St Francois MO |
| Platanthera flava var. flava | Flowering Plants | Wayne MO, Massac IL, Butler MO, Carter MO, Reynolds MO, Perry MO |
| Platanthera flava var. herbiola | Flowering Plants | Butler MO, Carter MO, Ripley MO, Scott MO, St Francois MO |
| Platanthera leucophaea | Flowering Plants | Carter MO |
| Platanthera peramoena | Flowering Plants | Wayne MO, Stoddard MO, Bollinger MO, Cape Girardeau MO, Dunklin MO, Butler MO, Reynolds MO, Ripley MO, St Francois MO |
| Platygobio gracilis | Fishes | Ste Genevieve MO, Mississippi MO, Alexander IL, Randolph IL, Union IL, Ballard KY, Fulton KY, Cape Girardeau MO, Pemiscot MO, Perry MO, Scott MO |
| Platylomella lescurii | Mosses | Ste Genevieve MO, Carter MO, Madison MO |
| Plectomerus dombeyanus | Mollusks | Wayne MO, Stoddard MO, Dunklin MO, Butler MO, Ripley MO |
| Plethobasus cicatricosus | Mollusks | Union KY |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Plethobasus cooperianus | Mollusks | Massac IL, Pulaski IL, Ballard KY, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Plethobasus cyphyus | Mollusks | Massac IL, Pulaski IL, Ballard KY, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Pleurobema clava | Mollusks | Pope IL, Livingston KY, Marshall KY |
| Pleurobema cordatum | Mollusks | Massac IL, Pulaski IL, Ballard KY, McCracken KY |
| Pleurobema plenum | Mollusks | Union KY |
| Pleurobema rubrum | Mollusks | Ballard KY, Pope IL, Dunklin MO, Livingston KY, McCracken KY, Marshall KY |
| Pleurocera curta | Mollusks | Livingston KY, Marshall KY |
| Pluchea foetida var. foetida | Flowering Plants | Butler MO |
| Poa alsodes | Flowering Plants | Jackson IL, Pope IL |
| Poanes viator | Insects | Fulton KY, Hickman KY |
| Podilymbus podiceps | Birds | Mississippi MO, Jackson IL, Pulaski IL, Union IL, Fulton KY, New Madrid MO, Union KY |
| Pogonia ophioglossoides | Flowering Plants | Reynolds MO |
| Polygala incarnata | Flowering Plants | Pope IL |
| Polygonella americana | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO, Scott MO |
| Polygonum arifolium | Flowering Plants | Stoddard MO, Butler MO |
| Polygonum densiflorum | Flowering Plants | Stoddard MO, Dunklin MO |
| Polygonum robustius | Flowering Plants | New Madrid MO, Dunklin MO, Scott MO |
| Polymnia laevigata | Flowering Plants | Fulton KY, Hickman KY, Pemiscot MO |
| Polyodon spathula | Fishes | Wayne MO, Mississippi MO, Alexander IL, Jackson IL, Randolph IL, Union IL, Fulton KY, Hickman KY, Cape Girardeau MO, Mississippi AR, New Madrid MO, Pemiscot MO, Perry MO, Scott MO |
| Polypremum procumbens | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO, Scott MO |
| Pontederia cordata | Flowering Plants | Fulton KY |
| Pooecetes gramineus | Birds | Dyer TN |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Potamilus capax | Mollusks | Mississippi MO, Hardin IL, Massac IL, Carlisle KY, Pope IL, Mississippi AR, Dunklin MO, Livingston KY, McCracken KY, Marshall KY, Union KY |
| Potamilus purpuratus | Mollusks | Wayne MO, Stoddard MO, Mississippi MO, Massac IL, Pulaski IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Bollinger MO, Butler MO, Madison MO, Ripley MO, St Francois MO, McCracken KY |
| Potamogeton epihydrus | Flowering Plants | Reynolds MO |
| Potamogeton illinoensis | Flowering Plants | Ballard KY |
| Potamogeton pulcher | Flowering Plants | Wayne MO, Bollinger MO, Butler MO, Carter MO, Reynolds MO, Ripley MO, McCracken KY |
| Potamogeton pusillus ssp. pusillus | Flowering Plants | Wayne MO, Ste Genevieve MO, Jackson IL, Randolph IL, Union IL, Bollinger MO, Cape Girardeau MO, Butler MO, Madison MO, Perry MO, Scott MO, St Francois MO |
| Prenanthes aspera | Flowering Plants | Livingston KY, McCracken KY |
| Procambarus viaeviridis | Crustaceans | Ballard KY, Fulton KY, Hickman KY, Livingston KY, Marshall KY |
| Prostoia completa | Insects | Union IL |
| Prostoia similis | Insects | Reynolds MO |
| Pseudacris streckeri | Amphibians | Stoddard MO, Mississippi MO, New Madrid MO, Dunklin MO, Pemiscot MO, Scott MO |
| Pseudacris streckeri illinoensis | Amphibians | Stoddard MO, Mississippi MO, New Madrid MO, Dunklin MO, Pemiscot MO, Scott MO |
| Pseudemys concinna | Turtles | Alexander IL, McCracken KY, Union KY |
| Pseudemys concinna concinna | Turtles | Union KY |
| Pseudotaxiphyllum distichaceum | Mosses | Madison MO |
| Psinidia fenestralis | Insects | Scott MO |
| Pteronotropis hubbsi | Fishes | Union IL |
| Ptilimnium capillaceum | Flowering Plants | Hickman KY, St Francois MO, Marshall KY |
| Ptilimnium costatum | Flowering Plants | Livingston KY |
| Ptilimnium nuttallii | Flowering Plants | Jackson IL, Randolph IL, Hickman KY, Marshall KY |
| Ptychobranchus occidentalis | Mollusks | Wayne MO, Bollinger MO, Butler MO, Carter MO, Madison MO, Ripley MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Pueraria montana | Flowering Plants | Wayne MO, Stoddard MO, Bollinger MO, Cape Girardeau MO, Dunklin MO, Butler MO, Carter MO, Madison MO, Reynolds MO, Ripley MO, Scott MO |
| Pycnanthemum albescens | Flowering Plants | Union IL |
| Pycnanthemum muticum | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO |
| Pycnanthemum torrei | Flowering Plants | Stoddard MO, Pope IL, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO |
| Pyganodon grandis | Mollusks | Wayne MO, Stoddard MO |
| Pyganodon grandis corpulenta | Mollusks | Wayne MO, Stoddard MO |
| Quadrula cylindrica | Mollusks | Wayne MO, Stoddard MO, Massac IL, Pulaski IL, Ballard KY, Butler MO, Madison MO, Livingston KY, McCracken KY, Marshall KY |
| Quadrula nodulata | Mollusks | Stoddard MO, Mississippi MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO |
| Quercus nigra | Flowering Plants | Dunklin MO, Butler MO, Ripley MO |
| Quercus phellos | Flowering Plants | Alexander IL, Massac IL, Pulaski IL, Union IL |
| Quercus prinus | Flowering Plants | Alexander IL, Hardin IL, Jackson IL, Union IL |
| Quercus texana | Flowering Plants | Alexander IL, Pulaski IL, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO, Scott MO |
| Rallus elegans | Birds | Fulton KY |
| Ramalina intermedia | Lichens | Ste Genevieve MO |
| Ranunculus flabellaris | Flowering Plants | Lake TN |
| Ranunculus laxicaulis | Flowering Plants | Union KY |
| Regina grahamii | Reptiles | Mississippi AR |
| Reithrodontomys humulis | Mammals | Mississippi AR |
| Rhexia mariana | Flowering Plants | Jackson IL, Massac IL, Pope IL |
| Rhynchosia difformis | Flowering Plants | Dunklin MO, Scott MO |
| Rhynchospora glomerata | Flowering Plants | Pope IL |
| Rhynchospora harveyi | Flowering Plants | Dunklin MO, Pemiscot MO |
| Riccardia multifida | Liverworts | Ste Genevieve MO, Carter MO |
| Riccia sullivantii | Liverworts | Bollinger MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Riparia riparia | Birds | Ballard KY, Fulton KY, Hickman KY, Livingston KY, McCracken KY, Union KY, Dyer TN |
| Rosa virginiana | Flowering Plants | Lake TN |
| Rubus alumnus | Flowering Plants | Union KY |
| Rudbeckia missouriensis | Flowering Plants | Randolph IL |
| Rudbeckia subtomentosa | Flowering Plants | Ballard KY, McCracken KY |
| Sabatia brachiata | Flowering Plants | Butler MO |
| Saccharum giganteum | Flowering Plants | Wayne MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO |
| Sacciolepis striata | Flowering Plants | Mississippi MO, Scott MO |
| Sagittaria australis | Flowering Plants | Pope IL |
| Sagittaria graminea | Flowering Plants | Fulton KY, Lake TN |
| Sagittaria platyphylla | Flowering Plants | Fulton KY, Cape Girardeau MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO, Scott MO, Lake TN |
| Salix amygdaloides | Flowering Plants | Mississippi MO, Ballard KY, Carlisle KY |
| Sanicula smallii | Flowering Plants | Hardin IL, Ripley MO |
| Satyrium favonius | Insects | McCracken KY |
| Satyrium favonius ontario | Insects | McCracken KY |
| Saxifraga virginiensis | Flowering Plants | Hardin IL |
| Scaphiopus holbrookii | Amphibians | Mississippi MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Scott MO |
| Scaphirhynchus albus | Fishes | Ste Genevieve MO, Mississippi MO, Alexander IL, Randolph IL, Union IL, Ballard KY, Fulton KY, Hickman KY, Cape Girardeau MO, New Madrid MO, Pemiscot MO, Perry MO, Scott MO, Dyer TN, Lake TN |
| Schoenoplectus americanus | Flowering Plants | Ste Genevieve MO, St Francois MO |
| Schoenoplectus californicus | Flowering Plants | Reynolds MO |
| Schoenoplectus fluviatilis | Flowering Plants | Ballard KY, Fulton KY |
| Schoenoplectus hallii | Flowering Plants | Alexander IL, Scott MO |
| Schoenoplectus purshianus | Flowering Plants | Carter MO |
| Schoenoplectus subterminalis | Flowering Plants | Bollinger MO |
| Scientific Name | Species Group (Broad) | Pope IL |
| Scirpus divaricatus | Flowering Plants | New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Scirpus polyphyllus | Flowering Plants | Wayne MO, Stoddard MO, Hardin IL, Pope IL, Bollinger MO, Carter MO, Madison MO, Reynolds MO, Ripley MO |
| Scleria ciliata | Flowering Plants | Marshall KY |
| Scleria pauciflora | Flowering Plants | Hardin IL, Randolph IL, Union IL, Pope IL |
| Scleria verticillata | Flowering Plants | Carter MO, Reynolds MO, Ripley MO |
| Scutellaria elliptica | Flowering Plants | Ste Genevieve MO, Cape Girardeau MO, St Francois MO |
| Sedum ternatum | Flowering Plants | Butler MO, Madison MO, Reynolds MO, St Francois MO |
| Serratella frisoni | Insects | Reynolds MO, St Francois MO |
| Sida elliottii | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Alexander IL, Bollinger MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO, Scott MO |
| Sideroxylon lycioides | Flowering Plants | Mississippi AR, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO, Lake TN |
| Sigara mathesoni | Insects | Carter MO |
| Silene ovata | Flowering Plants | Hardin IL, Union KY |
| Silene regia | Flowering Plants | Ste Genevieve MO, Jackson IL, Randolph IL, Union IL, Bollinger MO, Cape Girardeau MO, Madison MO, Perry MO, St Francois MO |
| Silphium laciniatum var. robinsonii | Flowering Plants | Ballard KY, McCracken KY |
| Simpsonaias ambigua | Mollusks | Pope IL, Livingston KY |
| Sistrurus miliarius | Reptiles | Wayne MO, Butler MO, Carter MO, Madison MO, Reynolds MO |
| Sistrurus miliarius streckeri | Reptiles | Wayne MO, Butler MO, Carter MO, Madison MO, Reynolds MO |
| Sisyrinchium atlanticum | Flowering Plants | Stoddard MO, Mississippi MO, Fulton KY, Bollinger MO, New Madrid MO, Dunklin MO, Butler MO, Ripley MO, Scott MO |
| Smallanthus uvedalius | Flowering Plants | Wayne MO, Stoddard MO, Ste Genevieve MO, Alexander IL, Randolph IL, Union IL, Bollinger MO, Cape Girardeau MO, New Madrid MO, Butler MO, Carter MO, Reynolds MO, Pemiscot MO, Scott MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Solidago buckleyi | Flowering Plants | Livingston KY, McCracken KY, Marshall KY |
| Somatochlora hineana | Insects | Wayne MO, Reynolds MO, Ripley MO, St Francois MO |
| Somatochlora ozarkensis | Insects | Reynolds MO |
| Sorex cinereus | Mammals | Union KY |
| Sorex longirostris | Mammals | Lake TN |
| Spermolepis divaricata | Flowering Plants | New Madrid MO, Dunklin MO, Scott MO |
| Sphagnum affine | Mosses | Stoddard MO |
| Sphagnum angustifolium | Mosses | Carter MO |
| Sphagnum bartlettianum | Mosses | Ste Genevieve MO |
| Sphagnum capillifolium | Mosses | Ste Genevieve MO, Carter MO |
| Sphagnum compactum | Mosses | Ste Genevieve MO |
| Sphagnum fimbriatum | Mosses | Stoddard MO |
| Sphagnum henryense | Mosses | Ste Genevieve MO |
| Sphenopholis pensylvanica | Flowering Plants | Stoddard MO |
| Spilogale putorius | Mammals | Bollinger MO, Carter MO, Madison MO, Reynolds MO, Ripley MO, St Francois MO |
| Spilogale putorius interrupta | Mammals | Bollinger MO, Carter MO, Madison MO, Reynolds MO, Ripley MO, St Francois MO |
| Spiraea alba var. alba | Flowering Plants | Scott MO |
| Spiraea tomentosa | Flowering Plants | Stoddard MO, New Madrid MO, Dunklin MO, Madison MO |
| Spiranthes lacera | Flowering Plants | Carter MO, Reynolds MO |
| Spiranthes lucida | Flowering Plants | Ste Genevieve MO, Carter MO, Reynolds MO, Ripley MO, St Francois MO |
| Spiranthes ovalis var. erostellata | Flowering Plants | Wayne MO, Mississippi MO, Fulton KY, New Madrid MO, Dunklin MO, Butler MO, Madison MO, Reynolds MO, St Francois MO |
| Spiranthes vernalis | Flowering Plants | Jackson IL, Pope IL |
| Sporobolus clandestinus | Flowering Plants | Livingston KY |
| Sporobolus heterolepis | Flowering Plants | Livingston KY |
| Steinchisma hians | Flowering Plants | Wayne MO, Stoddard MO, Bollinger MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO |
| Stellaria longifolia | Flowering Plants | Marshall KY |
| Stellaria pubera | Flowering Plants | Hardin IL, Pope IL |
| Stenanthium gramineum | Flowering Plants | Pulaski IL, Pope IL |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Sternula antillarum | Birds | Mississippi MO, Alexander IL, Massac IL, Pulaski IL, Randolph IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Pope IL, Cape Girardeau MO, Mississippi AR, New Madrid MO, Pemiscot MO, Perry MO, Scott MO, Livingston KY, McCracken KY, Marshall KY, Union KY, Dyer TN, Lake TN |
| Sternula antillarum athalassos | Birds | Mississippi MO, Alexander IL, Massac IL, Pulaski IL, Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Pope IL, Cape Girardeau MO, Mississippi AR, New Madrid MO, Pemiscot MO, Perry MO, Scott MO, Livingston KY, McCracken KY, Marshall KY, Union KY, Dyer TN, Lake TN |
| Stygobromus heteropodus | Crustaceans | Ste Genevieve MO |
| Stylisma pickeringii | Flowering Plants | Scott MO |
| Stylisma pickeringii var. pattersonii | Flowering Plants | Scott MO |
| Styrax americanus | Flowering Plants | Alexander IL, Massac IL, Pulaski IL, Union IL, Pope IL, Union KY |
| Styrax grandifolius | Flowering Plants | Alexander IL |
| Sylvilagus aquaticus | Mammals | Wayne MO, Stoddard MO, Mississippi MO, Carlisle KY, Hickman KY, Bollinger MO, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Carter MO, Pemiscot MO, Ripley MO, Scott MO |
| Symphyotrichum divaricatum | Flowering Plants | Stoddard MO, Alexander IL, Union IL, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Scott MO |
| Symphyotrichum dumosum | Flowering Plants | Wayne MO, Cape Girardeau MO, Butler MO, Reynolds MO, Ripley MO |
| Symphyotrichum dumosum var. strictior | Flowering Plants | Wayne MO, Cape Girardeau MO, Butler MO, Reynolds MO, Ripley MO |
| Symphyotrichum puniceum | Flowering Plants | Carter MO, Reynolds MO, St Francois MO |
| Synandra hispidula | Flowering Plants | Jackson IL |
| Syrrhopodon texanus | Mosses | Ste Genevieve MO |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Tachopteryx thoreyi | Insects | Wayne MO, Ste Genevieve MO, Butler MO, Carter MO, Madison MO, Reynolds MO, Ripley MO, St Francois MO |
| Tachycineta bicolor | Birds | Mississippi AR |
| Talinum calycinum | Flowering Plants | Randolph IL |
| Talinum parviflorum | Flowering Plants | Massac IL, Union IL, Pope IL |
| Tantilla gracilis | Reptiles | Randolph IL, Union IL |
| Taxodium distichum | Conifers and relatives | Union KY |
| Terrapene ornata | Turtles | Randolph IL |
| Tettigidea armata | Insects | Stoddard MO, Ripley MO |
| Thalia dealbata | Flowering Plants | Stoddard MO, Mississippi MO, Alexander IL, Cape Girardeau MO, New Madrid MO, Butler MO, Ripley MO, Scott MO |
| Thalictrum pubescens | Flowering Plants | Union KY |
| Thamnobryum alleghaniense | Mosses | Ste Genevieve MO |
| Thamnophis proximus | Reptiles | Ballard KY, Fulton KY |
| Thamnophis sauritus | Reptiles | Massac IL, Pulaski IL, Carlisle KY, Fulton KY, Hickman KY, Pope IL, McCracken KY, Marshall KY |
| Thelypteris noveboracensis | Ferns and relatives | Pope IL |
| Thryomanes bewickii | Birds | Pope IL, Marshall KY, Lake TN |
| Tilia americana | Flowering Plants | Hardin IL, Massac IL, Pulaski IL |
| Tilia americana var. heterophylla | Flowering Plants | Hardin IL, Massac IL, Pulaski IL |
| Tipularia discolor | Flowering Plants | Wayne MO, Stoddard MO, Bollinger MO, Butler MO, Carter MO, Madison MO |
| Torreyochloa pallida | Flowering Plants | Wayne MO, Stoddard MO, Mississippi MO, Alexander IL, Jackson IL, Union IL, Ballard KY, Bollinger MO, Cape Girardeau MO, New Madrid MO, Butler MO, Reynolds MO, Ripley MO, Scott MO, Livingston KY, McCracken KY |
| Toxicodendron pubescens | Flowering Plants | Mississippi MO, Carter MO, Scott MO |
| Toxolasma lividum | Mollusks | Wayne MO, Pope IL, Bollinger MO, Butler MO, Madison MO, Ripley MO, St Francois MO, McCracken KY |
| Toxolasma texasense | Mollusks | Mississippi MO, Carlisle KY, Fulton KY, Hickman KY, New Madrid MO, Dunklin MO, Marshall KY, Union KY |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Trepocarpus aethusae | Flowering Plants | Mississippi MO, Fulton KY, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Scott MO, McCracken KY, Marshall KY, Lake TN |
| Triadenum tubulosum | Flowering Plants | Wayne MO, Stoddard MO, Bollinger MO, Cape Girardeau MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Ripley MO |
| Trichomanes boschianum | Ferns and relatives | Hardin IL, Pope IL |
| Trichophorum planifolium | Flowering Plants | Alexander IL, Bollinger MO, Carter MO, Madison MO, Reynolds MO |
| Trichostema setaceum | Flowering Plants | Stoddard MO, Scott MO |
| Trifolium reflexum | Flowering Plants | Wayne MO, Ste Genevieve MO, Hardin IL, Jackson IL, Massac IL, Union IL, Pope IL, Bollinger MO, Cape Girardeau MO, Butler MO, Carter MO, Madison MO, Reynolds MO, Ripley MO, St Francois MO, Livingston KY, McCracken KY, Marshall KY |
| Trifolium stoloniferum | Flowering Plants | Wayne MO, Dunklin MO, Butler MO, Carter MO, Madison MO |
| Trillium viride | Flowering Plants | Union IL |
| Triplasis purpurea | Flowering Plants | Pulaski IL, Ballard KY, Fulton KY |
| Typhlichthys subterraneus | Fishes | Wayne MO, Carter MO, Ripley MO |
| Tyto alba | Birds | Stoddard MO, Jackson IL, Massac IL, Pulaski IL, Randolph IL, Union IL, Carlisle KY, Hickman KY, Pope IL, Cape Girardeau MO, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO, Perry MO, Scott MO, Livingston KY, McCracken KY, Marshall KY |
| Ulmus crassifolia | Flowering Plants | Mississippi AR, Dunklin MO, Butler MO |
| Ulmus thomasii | Flowering Plants | Butler MO |
| Umbra limi | Fishes | Fulton KY, Hickman KY, New Madrid MO, McCracken KY, Marshall KY, Lake TN |
| Urtica chamaedryoides | Flowering Plants | Mississippi MO, Alexander IL, Union IL, Bollinger MO, New Madrid MO, Perry MO |
| Utricularia macrorhiza | Flowering Plants | Carlisle KY, Fulton KY, Hickman KY |

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| Sub Area Sensitive Species | | |
|---|---|---|
| **Species Scientific Name** | **Species Category** | **Counties in which Located** |
| Utricularia subulata | Flowering Plants | Reynolds MO, Ripley MO |
| Vaccinium stamineum | Flowering Plants | Hardin IL, Pope IL |
| Valerianella ozarkana | Flowering Plants | Madison MO |
| Vermivora bachmanii | Birds | Mississippi AR |
| Vertigo gouldii | Mollusks | Carter MO |
| Viburnum recognitum | Flowering Plants | Madison MO, St Francois MO |
| Villosa lienosa | Mollusks | Wayne MO, Stoddard MO, Union IL, Fulton KY, Hickman KY, Pope IL, Bollinger MO, Butler MO, Madison MO, Ripley MO, St Francois MO |
| Viola cucullata | Flowering Plants | Wayne MO, Stoddard MO, Carter MO, Reynolds MO, Ripley MO |
| Viola macloskeyi ssp. pallens | Flowering Plants | Ste Genevieve MO |
| Viola pedatifida | Flowering Plants | Dunklin MO |
| Vireo bellii | Birds | Livingston KY, McCracken KY, Union KY |
| Vitis rotundifolia | Flowering Plants | Stoddard MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO |
| Vitis rotundifolia var. rotundifolia | Flowering Plants | Stoddard MO, Mississippi AR, New Madrid MO, Dunklin MO, Butler MO, Pemiscot MO |
| Waldsteinia fragarioides | Flowering Plants | Pope IL |
| Webbhelix multilineata | Mollusks | Ballard KY, Carlisle KY, Fulton KY, Hickman KY, Union KY, Dyer TN, Lake TN |
| Wolffia columbiana | Flowering Plants | Stoddard MO, Bollinger MO, Dunklin MO, Butler MO |
| Wolffiella gladiata | Flowering Plants | Wayne MO, Stoddard MO, Bollinger MO, Dunklin MO |
| Woodwardia areolata | Ferns and relatives | Stoddard MO, Bollinger MO, Butler MO, Carter MO, Ripley MO |
| Xyris jupicai | Flowering Plants | Scott MO |
| Xyris torta | Flowering Plants | Ripley MO |
| Zanthoxylum americanum | Flowering Plants | Dyer TN |
| Zapus hudsonius | Mammals | Reynolds MO, Lake TN |
| Zizania palustris | Flowering Plants | New Madrid MO |
| Zizania palustris var. interior | Flowering Plants | New Madrid MO |
| Zizaniopsis miliacea | Flowering Plants | Fulton KY, Hickman KY |
| Zosteractis interminata | Millipedes and Centipedes | Madison MO |

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# APPENDIX F. SENSITIVE HABITATS

| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Eaker Air Force Base (Closed) | Department of Defense (DOD) | Military Land | Arkansas |
| Hampson- Archeological Museum State Park | State Park & Recreation | State Park | Arkansas |
| Big Lake National Wildlife Refuge | Fish and Wildlife Service (USFWS) | National Wildlife Refuge | Arkansas |
| St. Francis Sunken Lands | State Fish and Wildlife | Habitat or Species Management Area | Arkansas |
| Big Lake | State Fish and Wildlife | Habitat or Species Management Area | Arkansas |
| Wayside Park | State Department of Transportation | State Other | Arkansas |
| Big Lake Wilderness | Fish and Wildlife Service (USFWS) | Wilderness Area | Arkansas |
| Sparta | Department of Defense (DOD) | Military Land | Illinois |
| Round Pond Fee | The Nature Conservancy (TNC) | Private Conservation Land | Illinois |
| Lower Cache River Macrosite Fee | The Nature Conservancy (TNC) | Private Conservation Land | Illinois |
| Larue/Trail Of Tears Fee | The Nature Conservancy (TNC) | Private Conservation Land | Illinois |
| Cache River Wetlands Fee | The Nature Conservancy (TNC) | Private Conservation Land | Illinois |
| Shawnee National Forest | Forest Service (USFS) | National Forest-National Grassland | Illinois |
| Ozark Hill Prairie Early Rna | Forest Service (USFS) | Research Natural Area | Illinois |
| Turkey Bluffs | Other State Land | Habitat or Species Management Area | Illinois |
| Keeling Hill | Forest Service (USFS) | Protective Management Area | Illinois |
| Klondike Spring | Forest Service (USFS) | Protective Management Area | Illinois |
| Horseshoe Lake-Alexander | Other State Land | Protective Management Area | Illinois |
| Crab Orchard National Wildlife Refuge | Fish and Wildlife Service (USFWS) | National Wildlife Refuge | Illinois |
| Cypress Creek National Wildlife Refuge | Fish and Wildlife Service (USFWS) | National Wildlife Refuge | Illinois |
| Union County | Other State Land | Protective Management Area | Illinois |
| Barker Bluff | Forest Service (USFS) | Protective Management Area | Illinois |
| Bell Smith Springs | Forest Service (USFS) | Protective Management Area | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Big Brushy Ridge | Forest Service (USFS) | Protective Management Area | Illinois |
| Devil'S Island | Other State Land | Habitat or Species Management Area | Illinois |
| Cave Spring Cave System | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Conant Sites | Fish and Wildlife Service (USFWS) | Protective Management Area | Illinois |
| Golconda Marina | Other State Land | Recreation Management Area | Illinois |
| Lovets Pond Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Atwood Ridge | Forest Service (USFS) | Research Natural Area | Illinois |
| Ava Cave | Forest Service (USFS) | Protective Management Area | Illinois |
| Bald Knob Geological Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Atwood Ridge Early Rna | Forest Service (USFS) | Research Natural Area | Illinois |
| Middle Mississippi River National Wildlife Refuge | Fish and Wildlife Service (USFWS) | National Wildlife Refuge | Illinois |
| Dixon Springs | Other State Land | State Park | Illinois |
| World Shooting Complex | Other State Land | Recreation Management Area | Illinois |
| Wolf Creek Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Campbell Lake | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Bald Knob Wilderness Nwa | Forest Service (USFS) | Wilderness Area | Illinois |
| Bay Creek Wilderness Nwa | Forest Service (USFS) | Wilderness Area | Illinois |
| Burden Falls Wilderness Nwa | Forest Service (USFS) | Wilderness Area | Illinois |
| Clear Springs Wilderness Nwa | Forest Service (USFS) | Wilderness Area | Illinois |
| Garden Of The Gods Wilderness Nwa | Forest Service (USFS) | Wilderness Area | Illinois |
| Lusk Creek Wilderness Nwa | Forest Service (USFS) | Wilderness Area | Illinois |
| Panther Den Wilderness Nwa | Forest Service (USFS) | Wilderness Area | Illinois |
| Cave-In-Rock | Other State Land | State Park | Illinois |
| Mermet Lake | Other State Land | Protective Management Area | Illinois |
| Horseshoe Forest | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Kaskaskia Woods | Forest Service (USFS) | Protective Management Area | Illinois |
| Kickasola Cemetery Barrens And Seeps | Forest Service (USFS) | Protective Management Area | Illinois |
| Britten Spring | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Frailey'S Landing Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Berryville Shale Glade Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Brown Barrens Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Spivey'S Valley Glade Nature Preserve | Forest Service (USFS) | Protective Management Area | Illinois |
| Badlands Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Big Creek | Forest Service (USFS) | Protective Management Area | Illinois |
| Big Grand Pierre Creek | Forest Service (USFS) | Protective Management Area | Illinois |
| Big Grand Pierre Land And Water Reserve | Forest Service (USFS) | Protective Management Area | Illinois |
| Bake Oven - Backbone North Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Massac Tower Springs | Forest Service (USFS) | Protective Management Area | Illinois |
| Metropolis North Geological Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Abbot Geological Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Mounds West Geological Area | Fish and Wildlife Service (USFWS) | Protective Management Area | Illinois |
| Barker Bluff Early Rna | Forest Service (USFS) | Research Natural Area | Illinois |
| Whoopie Cat Mountain | Forest Service (USFS) | Protective Management Area | Illinois |
| Larue Swamp Nature Preserve | Forest Service (USFS) | Protective Management Area | Illinois |
| Panther Hollow Early Rna | Forest Service (USFS) | Research Natural Area | Illinois |
| Whoopie Cat Early Rna | Forest Service (USFS) | Research Natural Area | Illinois |
| Gibbons Creek Barrens | Other State Land | State Other | Illinois |
| Randolph County | Other State Land | Protective Management Area | Illinois |
| Reeds Creek Canyon North | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Reily Lake Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Kaskaskia River | Other State Land | Habitat or Species Management Area | Illinois |
| Kinkaid Lake | Other State Land | Habitat or Species Management Area | Illinois |
| Chestnut Hills | Other State Land | Protective Management Area | Illinois |
| Cache River | Other State Land | Protective Management Area | Illinois |
| Jackson Hole | Forest Service (USFS) | Protective Management Area | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Jackson Hollow | Forest Service (USFS) | Protective Management Area | Illinois |
| Larue - Pine Hills Research Natural Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Little Grand Canyon - Cedar Creek | Forest Service (USFS) | Protective Management Area | Illinois |
| Lovets Pond | Other State Land | Protective Management Area | Illinois |
| Lower Cache River Swamp | Other State Land | Protective Management Area | Illinois |
| Lusk Creek Canyon | Other State Land | Protective Management Area | Illinois |
| Section 8 Woods Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Millstone Bluff | Forest Service (USFS) | Protective Management Area | Illinois |
| Brown'S Bar | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Trail Of Tears | Other State Land | State Forest | Illinois |
| Union State Tree Nursery | Other State Land | State Other | Illinois |
| Route 127 South | Forest Service (USFS) | Protective Management Area | Illinois |
| Sw Kinkaid Route 3 | Forest Service (USFS) | Protective Management Area | Illinois |
| Sand Cave | Forest Service (USFS) | Protective Management Area | Illinois |
| Horseshoe Lake Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Clear Creek Swamp | Forest Service (USFS) | Protective Management Area | Illinois |
| Massac Forest Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Lake Murphysboro | Other State Land | State Park | Illinois |
| Cape Bend | Other State Land | Habitat or Species Management Area | Illinois |
| Spivey*S Bluff Natural Heritage Landmark | Forest Service (USFS) | Historic / Cultural Area | Illinois |
| Guthrie Cave | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Cave Spring Cave | Forest Service (USFS) | Protective Management Area | Illinois |
| Bennet Hills - Robbs Tract Natural Heritage Landmark | Forest Service (USFS) | Historic / Cultural Area | Illinois |
| Cave Spring Cave Natural Heritage Landmark | Forest Service (USFS) | Historic / Cultural Area | Illinois |
| Cedar/Draper'S Bluff Land And Water Reserve | Forest Service (USFS) | Protective Management Area | Illinois |
| Giant City | Other State Land | State Park | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Collier Limestone Glade | Other State Land | State Other | Illinois |
| Cypress Pond | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Guthrie Cave Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Fort Massac | Other State Land | Protective Management Area | Illinois |
| Pounds Hollow | Forest Service (USFS) | Protective Management Area | Illinois |
| Provo Cemetery Barrens | Forest Service (USFS) | Protective Management Area | Illinois |
| Bumgard Island | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Burnham Island | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Big Grand Pierre Site | Forest Service (USFS) | Protective Management Area | Illinois |
| Burke Branch | Forest Service (USFS) | Protective Management Area | Illinois |
| Degognia Canyon | Forest Service (USFS) | Protective Management Area | Illinois |
| Swayne Hollow | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Cypress Pond Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Degognia Canyon Land And Water Reserve | Forest Service (USFS) | Protective Management Area | Illinois |
| Dog Creek Barrens | Forest Service (USFS) | Protective Management Area | Illinois |
| Double Branch Hole | Forest Service (USFS) | Protective Management Area | Illinois |
| Dutch Creek Chert Woodlands | Forest Service (USFS) | Protective Management Area | Illinois |
| Ozark Hills Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Gyp Williams Hollow | Forest Service (USFS) | Protective Management Area | Illinois |
| Hayes Creek Sites | Forest Service (USFS) | Protective Management Area | Illinois |
| Herman Hill Site | Forest Service (USFS) | Protective Management Area | Illinois |
| Ozark Hill Prairies | Forest Service (USFS) | Protective Management Area | Illinois |
| Panther Hollow | Forest Service (USFS) | Protective Management Area | Illinois |
| Pine Hollow | Forest Service (USFS) | Protective Management Area | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Rich'S Cave System | Forest Service (USFS) | Protective Management Area | Illinois |
| Cache River Land And Water Reserve | Other State Land | Protective Management Area | Illinois |
| Draper'S Bluff | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Pyramid | Other State Land | State Park | Illinois |
| Layoff Cave | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Lewis Estate | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Cretaceous Hills | Other State Land | Protective Management Area | Illinois |
| Fort Massac Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Lusk Creek Canyon Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Campbell Lake Natural Heritage Landmark | Private Institution-Managed for Biodiversity | Historic / Cultural Area | Illinois |
| Chestnut Hills Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Cretaceous Hills Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Fern Rocks Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Mcclure Shale Glade Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Mermet Swamp Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Piney Creek Ravine Nature Preserve | Other State Land | Protective Management Area | Illinois |
| Demint Prairie/Prairie Du Rocher Herpetological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Campbell Lake Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Circle B Ranch Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Devil'S Den | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Swayne Hollow Nature Preserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Post Creek Cutoff Site | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Mississippi River - Grand Tower | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Mermet Lake Flatwoods Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Simmons Creek - Hurricane Hollow Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Horseshoe Lake State Conservation Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Mina Gurley Crawford Woods Natural Heritage Landmark | Private Institution-Managed for Biodiversity | Historic / Cultural Area | Illinois |
| Lake Murphysboro Hill Prairies Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Lewis Estate North | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Rattlesnake Creek Natural Heritage Landmark | Private Institution-Managed for Biodiversity | Historic / Cultural Area | Illinois |
| Mississippi River - Mudds Landing | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Round Pond | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Sielbeck Forest Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Union County State Conservation Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Thebes Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Reeds Creek Canyon East | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Buttonland Swamp Diehl Property Natural Heritage Landmark | Private Institution-Managed for Biodiversity | Historic / Cultural Area | Illinois |
| Mcclure Shale Glade | Other State Land | Protective Management Area | Illinois |
| Mermet Swamp | Other State Land | Protective Management Area | Illinois |
| Campbell Pond | Other State Land | Habitat or Species Management Area | Illinois |
| Hosick Creek | Forest Service (USFS) | Protective Management Area | Illinois |
| Lamb Site | Forest Service (USFS) | Protective Management Area | Illinois |
| Leisure City Glade | Forest Service (USFS) | Protective Management Area | Illinois |
| Lick Creek Geological Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Little Saline River | Forest Service (USFS) | Protective Management Area | Illinois |
| Lusk Creek North | Forest Service (USFS) | Protective Management Area | Illinois |
| Magazine Mine Hollow | Forest Service (USFS) | Protective Management Area | Illinois |
| Manson Ford | Forest Service (USFS) | Protective Management Area | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Martha'S Woods Site | Forest Service (USFS) | Protective Management Area | Illinois |
| Miller Creek | Forest Service (USFS) | Protective Management Area | Illinois |
| Melcher Hill Limestone Glade | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| East Fork Botanical Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Eddyville East Botanical Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Frieze Cave | Forest Service (USFS) | Protective Management Area | Illinois |
| Gale North Geological Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Spivey Valley Glade | Forest Service (USFS) | Protective Management Area | Illinois |
| Sulphur Springs Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Teal Pond | Forest Service (USFS) | Protective Management Area | Illinois |
| Toothless Cave | Forest Service (USFS) | Protective Management Area | Illinois |
| Brownfield Bluff | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Ren-Dill Shale Glade Nature Preserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Robnett Creek Barrens | Forest Service (USFS) | Protective Management Area | Illinois |
| Rock Creek | Forest Service (USFS) | Protective Management Area | Illinois |
| Russell Cemetery Glade | Forest Service (USFS) | Protective Management Area | Illinois |
| Snow Springs | Forest Service (USFS) | Protective Management Area | Illinois |
| Clear Springs Geological Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Cooper Creek Hollow Mine | Forest Service (USFS) | Protective Management Area | Illinois |
| Copperous Branch Hill Prairie | Forest Service (USFS) | Protective Management Area | Illinois |
| Crow Knob | Forest Service (USFS) | Protective Management Area | Illinois |
| Dean Cemetery East Barrens | Forest Service (USFS) | Protective Management Area | Illinois |
| Fort Massac Area | Other State Land | Protective Management Area | Illinois |
| Chester South Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Brown Barrens | Other State Land | Protective Management Area | Illinois |
| Blufftop Acres Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Clear Lake | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Coles Mill Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Cane Creek Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Caney Branch Glade | Forest Service (USFS) | Protective Management Area | Illinois |
| Halesia | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Griffith Cave | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Poco Cemetery Barrens East | Forest Service (USFS) | Protective Management Area | Illinois |
| Poco Cemetery Barrens North | Forest Service (USFS) | Protective Management Area | Illinois |
| Culley Barrens Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Backbone South Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Reddick Hollow | Forest Service (USFS) | Protective Management Area | Illinois |
| Black Cave | Forest Service (USFS) | Protective Management Area | Illinois |
| Brown'S Hole Cave | Forest Service (USFS) | Protective Management Area | Illinois |
| Clear Creek | Forest Service (USFS) | Protective Management Area | Illinois |
| Goreville Interchange Geological Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Haney Creek | Forest Service (USFS) | Protective Management Area | Illinois |
| Lusk Creek | Forest Service (USFS) | Protective Management Area | Illinois |
| Old Zion Cemetery Geological Area | Forest Service (USFS) | Protective Management Area | Illinois |
| Opossum Trot Trail | Forest Service (USFS) | Protective Management Area | Illinois |
| Peters Creek | Forest Service (USFS) | Protective Management Area | Illinois |
| Pleasant Valley Hill Prairie | Forest Service (USFS) | Protective Management Area | Illinois |
| Dongola Hollow Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Dongola North Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Gale Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Piney Creek Ravine | Other State Land | Protective Management Area | Illinois |
| Roaring Spring Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Sielbeck Forest | Other State Land | Protective Management Area | Illinois |
| Tunnel Hill | Other State Land | State Park | Illinois |
| Big Grand Pierre Glade | Other State Land | State Other | Illinois |
| Flick Hill | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Fountain Bluff Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Fountain Bluff North | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Ohio River - Hillerman | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Ozark Hills | Other State Land | Protective Management Area | Illinois |
| Hicks Dome Plug Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Hicks Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Saline Landing | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Faulkner-Franke Pioneer Railroad Prairie Nature Preserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Homberg Spring | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Black Powder Hollow Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Castle Rock - Randolph County | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Post Creek Cutoff Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Post Oak Glade | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Prairie Du Rocher - South | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Giant City State Park Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Lake Creek | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Kinkaid Bluff | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Mermet Lake Flatwoods | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Metropolis West Botanical Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Thornton Ravine | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Horseshoe Lake Botanical Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Horseshoe Lake South | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Lake Murphysboro Site | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Lewis Estate South | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Lino Laird Ravine | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Olmsted Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Open Pond | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Orr'S Landing Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Weaver'S Woods | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Modoc Northwest Geological Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Mermet Lake East | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Murphysboro Seep | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Prairie Of The Rock Overlook Land And Water Reserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Rockcastle Creek Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Sielbeck Forest Tract | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| South Tamms Marsh | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Soward Limestone Glade | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Unity Area | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Sparta Site | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Susan*S Glade Natural Heritage Landmark | Private Institution-Managed for Biodiversity | Historic / Cultural Area | Illinois |
| Halesia Nature Preserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Prairie Of The Rock Nature Preserve | Private Institution-Managed for Biodiversity | Protective Management Area | Illinois |
| Round Pond - Harris Tract Natural Heritage Landmark | Private Institution-Managed for Biodiversity | Historic / Cultural Area | Illinois |
| Clear Springs Wilderness | Forest Service (USFS) | Wilderness Area | Illinois |
| Crab Orchard Wilderness | Fish and Wildlife Service (USFWS) | Wilderness Area | Illinois |
| Lake Barkley | Department of Defense (DOD) | Military Land | Kentucky |
| Mantle Rock Fee | The Nature Conservancy (TNC) | Private Conservation Land | Kentucky |
| Cypress Creek Swamp Easement | Private Conservation Land | Private Conservation Land | Kentucky |
| Bald Knob Glade Fee | The Nature Conservancy (TNC) | Private Conservation Land | Kentucky |
| Mantle Rock Easement | Private Conservation Land | Private Conservation Land | Kentucky |
| Clarks River Nwr | Fish and Wildlife Service (USFWS) | National Wildlife Refuge | Kentucky |
| Kentucky Reservoir | Tennessee Valley Authority (TVA) | Not Designated | Kentucky |
| Boatwright Wma | State Fish and Wildlife | Habitat or Species Management Area | Kentucky |
| Reelfoot National Wildlife Refuge | Fish and Wildlife Service (USFWS) | National Wildlife Refuge | Kentucky |
| Obion Creek Wma | State Fish and Wildlife | Habitat or Species Management Area | Kentucky |
| Higginson-Henry Wma | State Fish and Wildlife | Habitat or Species Management Area | Kentucky |
| Metropolis Lake State Nature Preserve | State Cultural Affairs | Protective Management Area | Kentucky |
| Westvaco Wma | Private Conservation Land | Habitat or Species Management Area | Kentucky |
| Kentucky Lake Wma | Tennessee Valley Authority (TVA) | Habitat or Species Management Area | Kentucky |
| Columbus-Belmont Sp | State Park & Recreation | State Park | Kentucky |
| Newman'S Bluff State Natural Area | State Cultural Affairs | Protective Management Area | Kentucky |
| Bissell Bluff State Natural Area | State Cultural Affairs | Protective Management Area | Kentucky |
| West Kentucky Wma | State Fish and Wildlife | Habitat or Species Management Area | Kentucky |
| Ballard Wma | State Fish and Wildlife | Habitat or Species Management Area | Kentucky |
| Wickliffe Mounds Shs | State Park & Recreation | Historic / Cultural Area | Kentucky |
| Livingston County Wma | State Fish and Wildlife | Habitat or Species Management Area | Kentucky |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Kenlake Srp | State Park & Recreation | State Park | Kentucky |
| Sloughs Wma | State Fish and Wildlife | Habitat or Species Management Area | Kentucky |
| Winford Wma | State Fish and Wildlife | Habitat or Species Management Area | Kentucky |
| Kentucky Dam Village Srp | State Park & Recreation | State Park | Kentucky |
| Clearwater Lake | Department of Defense (DOD) | Military Land | Missouri |
| Wappapello Lake | Department of Defense (DOD) | Military Land | Missouri |
| Wappapello Training Site | Department of Defense (DOD) | Military Land | Missouri |
| Gayoso Bend Ca | State Department of Conservation | Protective Management Area | Missouri |
| Warbler Woods Ca | State Department of Conservation | Protective Management Area | Missouri |
| Cash (Ben) Mem Ca | State Department of Conservation | Protective Management Area | Missouri |
| Hornersville Swamp Ca | State Department of Conservation | Protective Management Area | Missouri |
| Cash Swamp Na | State Department of Conservation | Protective Management Area | Missouri |
| Black Island Ca | State Department of Conservation | Protective Management Area | Missouri |
| Cash (Ben) Mem Ca - Largent (S&L) Annex | State Department of Conservation | Protective Management Area | Missouri |
| Desoto Ca | State Department of Conservation | Protective Management Area | Missouri |
| Little River Ca | State Department of Conservation | Protective Management Area | Missouri |
| Reynolds (S. P.) Access | Private Institution-Managed for Biodiversity | Access Area | Missouri |
| Hornersville Access | State Department of Conservation | Protective Management Area | Missouri |
| Caruthersville Rookery Ca | State Department of Conservation | Protective Management Area | Missouri |
| Seventy-Six Ca | State Department of Conservation | Protective Management Area | Missouri |
| Trail Of Tears State Park | Other State Land | State Park | Missouri |
| Sank Ca | State Department of Conservation | Protective Management Area | Missouri |
| Mark Twain National Forest - Potosi-Salem Unit | Forest Service (USFS) | National Forest-National Grassland | Missouri |
| Aquilla Access | State Department of Conservation | Protective Management Area | Missouri |
| Donaldson Point Na | State Department of Conservation | Protective Management Area | Missouri |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Mark Twain National Forest - Poplar Bluff Unit | Forest Service (USFS) | National Forest-National Grassland | Missouri |
| University Forest Ca | State Department of Conservation | Protective Management Area | Missouri |
| Lon Sanders Canyon Ca | State Department of Conservation | Protective Management Area | Missouri |
| Sun (Stephen J.) Ca | State Department of Conservation | Protective Management Area | Missouri |
| Clearwater Ca | State Department of Conservation | Protective Management Area | Missouri |
| Lower Taum Sauk Lake | Private Institution-Managed for Biodiversity | Protective Management Area | Missouri |
| Sam A. Baker State Park | Other State Land | State Park | Missouri |
| Mark Twain National Forest - Fredericktown Unit | Forest Service (USFS) | National Forest-National Grassland | Missouri |
| Seven Island Ca | State Department of Conservation | Protective Management Area | Missouri |
| Big Cane Ca | State Department of Conservation | Protective Management Area | Missouri |
| Castor River Ca | State Department of Conservation | Protective Management Area | Missouri |
| Cape Lacroix Bluffs Ca | State Department of Conservation | Protective Management Area | Missouri |
| Carter Creek Ca | State Department of Conservation | Protective Management Area | Missouri |
| Coon Island Ca | State Department of Conservation | Protective Management Area | Missouri |
| Oak Ridge Ca | State Department of Conservation | Protective Management Area | Missouri |
| General Watkins Ca | State Department of Conservation | Protective Management Area | Missouri |
| Girvin (J. L.& G.) Ca | State Department of Conservation | Protective Management Area | Missouri |
| Ten Mile Pond Ca | State Department of Conservation | Protective Management Area | Missouri |
| Mingo National Wildlife Refuge | Fish and Wildlife Service (USFWS) | National Wildlife Refuge | Missouri |
| Mingo Wilderness | Fish and Wildlife Service (USFWS) | Wilderness Area | Missouri |
| Mark Twain National Forest - Eleven Point Unit | Forest Service (USFS) | National Forest-National Grassland | Missouri |
| Little Black Ca | State Department of Conservation | Protective Management Area | Missouri |
| Apple Creek Ca | State Department of Conservation | Protective Management Area | Missouri |
| Chalk Bluff Trail Access | State Department of Conservation | Protective Management Area | Missouri |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Rocky Creek Ca | State Department of Conservation | Protective Management Area | Missouri |
| Sweetgum Access | State Department of Conservation | Protective Management Area | Missouri |
| Swift Ditch Access | State Department of Conservation | Protective Management Area | Missouri |
| Bell Mountain National Wilderness Area - Mark Twain National Forest | Forest Service (USFS) | Wilderness Area | Missouri |
| Bald Hill Glade Na | Forest Service (USFS) | Protective Management Area | Missouri |
| Big Barren Creek Na | Forest Service (USFS) | Protective Management Area | Missouri |
| Perry County Cl | State Department of Conservation | Protective Management Area | Missouri |
| Peck Ranch Ca | State Department of Conservation | Protective Management Area | Missouri |
| Cupola Pond Na | Forest Service (USFS) | Protective Management Area | Missouri |
| Grasshopper Hollow Na | Forest Service (USFS) | Protective Management Area | Missouri |
| Corkwood Ca | State Department of Conservation | Protective Management Area | Missouri |
| Allred Lake Na | State Department of Conservation | Protective Management Area | Missouri |
| Sand Pond Ca - Altvater (N. B.) Addition | State Department of Conservation | Protective Management Area | Missouri |
| Sand Prairie Ca | State Department of Conservation | Protective Management Area | Missouri |
| Current River Ca | State Department of Conservation | Protective Management Area | Missouri |
| Flatwoods Ca | State Department of Conservation | Protective Management Area | Missouri |
| Frisbee Cutoff Access | State Department of Conservation | Protective Management Area | Missouri |
| Hammer (Bradley A) Mem Ca | State Department of Conservation | Protective Management Area | Missouri |
| Irish National Wilderness Area - Mark Twain National Forest | Forest Service (USFS) | Wilderness Area | Missouri |
| Logan Creek Ca | State Department of Conservation | Protective Management Area | Missouri |
| Magnolia Hollow Ca | State Department of Conservation | Protective Management Area | Missouri |
| Maintz Wildlife Preserve | State Department of Conservation | Protective Management Area | Missouri |
| Bradyville Na | State Department of Conservation | Protective Management Area | Missouri |
| Sand Pond Ca | State Department of Conservation | Protective Management Area | Missouri |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Hemenway Ca | State Department of Conservation | Protective Management Area | Missouri |
| Fourche Creek Ca | State Department of Conservation | Protective Management Area | Missouri |
| Poplar Bluff Forest Na | State Department of Conservation | Protective Management Area | Missouri |
| Coldwater Ca | State Department of Conservation | Protective Management Area | Missouri |
| Taum Sauk Mountain State Park | Other State Land | State Park | Missouri |
| Delaney (Robert G.) Lake Ca | State Department of Conservation | Protective Management Area | Missouri |
| Duck Creek Ca | State Department of Conservation | Protective Management Area | Missouri |
| Holly Ridge Ca | State Department of Conservation | Protective Management Area | Missouri |
| Vancill Hollow Na | Other State Land | Protective Management Area | Missouri |
| Mud Creek Na | Forest Service (USFS) | Protective Management Area | Missouri |
| Tunnel Bluff Woods Na | Forest Service (USFS) | Protective Management Area | Missouri |
| Crowley'S Ridge Ca | State Department of Conservation | Protective Management Area | Missouri |
| Graves Mountain Ca | State Department of Conservation | Protective Management Area | Missouri |
| Towosahgy State Historic Site | Other State Land | Historic / Cultural Area | Missouri |
| Big Oak Tree Na | Other State Land | Protective Management Area | Missouri |
| Johnson'S Shut-Ins Na | Other State Land | Protective Management Area | Missouri |
| Amidon Memorial Ca | State Department of Conservation | Protective Management Area | Missouri |
| Dark Cypress Swamp Ca | State Department of Conservation | Protective Management Area | Missouri |
| Wilhelmina Ca | State Department of Conservation | Protective Management Area | Missouri |
| Clubb Creek Ca | State Department of Conservation | Protective Management Area | Missouri |
| Coldwater Access | State Department of Conservation | Protective Management Area | Missouri |
| Donaldson Point Ca | State Department of Conservation | Protective Management Area | Missouri |
| Lake Girardeau Ca | State Department of Conservation | Protective Management Area | Missouri |
| Mule Hollow Glade Na | State Department of Conservation | Protective Management Area | Missouri |
| Morris State Park | Other State Land | State Park | Missouri |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Grandin Towersite | State Department of Conservation | Protective Management Area | Missouri |
| Castor River Shut-Ins Na | State Department of Conservation | Protective Management Area | Missouri |
| Iron Bridge Access | State Department of Conservation | Protective Management Area | Missouri |
| Riverside Ca | State Department of Conservation | Protective Management Area | Missouri |
| Mudpuppy Ca | State Department of Conservation | Protective Management Area | Missouri |
| Otter Slough Ca | State Department of Conservation | Protective Management Area | Missouri |
| Poplar Bluff Ca | State Department of Conservation | Protective Management Area | Missouri |
| Red Rock Landing Ca | State Department of Conservation | Protective Management Area | Missouri |
| Yokum School Ca | State Department of Conservation | Protective Management Area | Missouri |
| Tywappity Cl | State Department of Conservation | Protective Management Area | Missouri |
| Tywappity Towersite | State Department of Conservation | Protective Management Area | Missouri |
| Holly Ridge Na | State Department of Conservation | Protective Management Area | Missouri |
| Overcup Fen Na | State Department of Conservation | Protective Management Area | Missouri |
| Pickle Springs Na | State Department of Conservation | Protective Management Area | Missouri |
| Spiderlily Na | State Department of Conservation | Protective Management Area | Missouri |
| Stegall Mountain Na | State Department of Conservation | Protective Management Area | Missouri |
| Hawn State Park | Other State Land | State Park | Missouri |
| Johnson'S Shut-Ins State Park | Other State Land | State Park | Missouri |
| Lake Wappappello State Park | Other State Land | State Park | Missouri |
| Mudlick Mountain Na | Other State Land | Protective Management Area | Missouri |
| Orchid Valley Na | Other State Land | Protective Management Area | Missouri |
| St. Francois Mountains Na | Other State Land | Protective Management Area | Missouri |
| Hickory Canyons Na | Local Land Trust | Protective Management Area | Missouri |
| Wappapello Reservoir | Private Institution-Managed for Biodiversity | Protective Management Area | Missouri |
| St Mary Access | Private Institution-Managed for Biodiversity | Access Area | Missouri |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| St. John'S Bayou Access | Private Institution-Managed for Biodiversity | Access Area | Missouri |
| Beech Springs Na | State Department of Conservation | Protective Management Area | Missouri |
| Clearwater Dist Hq | State Department of Conservation | Protective Management Area | Missouri |
| Old Plantation Access | State Department of Conservation | Protective Management Area | Missouri |
| Cape Woods Ca | State Department of Conservation | Protective Management Area | Missouri |
| Carmichael (Mac & Zelma) Sf | State Department of Conservation | Protective Management Area | Missouri |
| Perry Towersite | State Department of Conservation | Protective Management Area | Missouri |
| Perryville Dist Hq | State Department of Conservation | Protective Management Area | Missouri |
| Gipsy Towersite | State Department of Conservation | Protective Management Area | Missouri |
| Harviell Access | State Department of Conservation | Protective Management Area | Missouri |
| Hawn Access | State Department of Conservation | Protective Management Area | Missouri |
| Felix Valle State Historic Site | Other State Land | Historic / Cultural Area | Missouri |
| Champion Springs Ca | State Department of Conservation | Protective Management Area | Missouri |
| Crane Roost Access | State Department of Conservation | Protective Management Area | Missouri |
| Johnson'S Shut-Ins Dolomite Glade Na | Other State Land | Protective Management Area | Missouri |
| Johnson'S Shut-Ins Fen Na | Other State Land | Protective Management Area | Missouri |
| Hunter Towersite | State Department of Conservation | Protective Management Area | Missouri |
| Centerville Access | State Department of Conservation | Protective Management Area | Missouri |
| Cowards Hollow Na | Forest Service (USFS) | Protective Management Area | Missouri |
| Juden Creek Ca | State Department of Conservation | Protective Management Area | Missouri |
| Blue Pond Na | State Department of Conservation | Protective Management Area | Missouri |
| Lesterville Access | State Department of Conservation | Protective Management Area | Missouri |
| Ringo Ford Access | Private Institution-Managed for Biodiversity | Access Area | Missouri |
| Seven Island Access | Private Institution-Managed for Biodiversity | Access Area | Missouri |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Sand Ponds Na | State Department of Conservation | Protective Management Area | Missouri |
| Commerce Access | State Department of Conservation | Protective Management Area | Missouri |
| Mudlick Towersite | Private Institution-Managed for Biodiversity | Protective Management Area | Missouri |
| Bollinger Mill State Historic Site | Other State Land | Historic / Cultural Area | Missouri |
| Red Star Access | State Department of Conservation | Protective Management Area | Missouri |
| Miller Cl | State Department of Conservation | Protective Management Area | Missouri |
| Southeast Regional Office | County Land | State Other | Missouri |
| Headwaters Access | County Land | Access Area | Missouri |
| Ball Mill Resurgence Na | Local Land Trust | Protective Management Area | Missouri |
| Haney Pond Na | Forest Service (USFS) | Protective Management Area | Missouri |
| Red Maple Pond Na | Forest Service (USFS) | Protective Management Area | Missouri |
| Wells Branch Fen Na | Forest Service (USFS) | Protective Management Area | Missouri |
| Greenville Ford Access | State Department of Conservation | Protective Management Area | Missouri |
| Botkins Pine Woods Na | Other State Land | Protective Management Area | Missouri |
| Lamotte Sandstone Barrens Na | Other State Land | Protective Management Area | Missouri |
| Bird'S Blue Hole | Private Institution-Managed for Biodiversity | Protective Management Area | Missouri |
| Big Oak Tree State Park | Other State Land | State Park | Missouri |
| Tower Rock Ca | State Department of Conservation | Protective Management Area | Missouri |
| Dan River Access | State Department of Conservation | Protective Management Area | Missouri |
| Doniphan Towersite | State Department of Conservation | Protective Management Area | Missouri |
| Dorena Access | State Department of Conservation | Protective Management Area | Missouri |
| Otter Slough Na | State Department of Conservation | Protective Management Area | Missouri |
| Twin Borrow Pits Ca | Private Institution-Managed for Biodiversity | Protective Management Area | Missouri |
| Grassy Towersite | State Department of Conservation | Protective Management Area | Missouri |
| James Clark Access | State Department of Conservation | Protective Management Area | Missouri |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Little Whitewater Ca | State Department of Conservation | Protective Management Area | Missouri |
| Maple Flats Access | State Department of Conservation | Protective Management Area | Missouri |
| Mussel Boat Landing Access | State Department of Conservation | Protective Management Area | Missouri |
| New Madrid Bend Access | State Department of Conservation | Protective Management Area | Missouri |
| New Madrid Forestry Office | State Department of Conservation | Protective Management Area | Missouri |
| Fisk Access | Private Institution-Managed for Biodiversity | Access Area | Missouri |
| Hilliard Access | Private Institution-Managed for Biodiversity | Access Area | Missouri |
| Moore (Jos Hunter) Access | Private Institution-Managed for Biodiversity | Access Area | Missouri |
| Wolf Bayou Ca | State Department of Conservation | Protective Management Area | Missouri |
| Golden Seal Na | State Department of Conservation | Protective Management Area | Missouri |
| Grassy Pond Na | State Department of Conservation | Protective Management Area | Missouri |
| Tower Rock Na | State Department of Conservation | Protective Management Area | Missouri |
| Kelso Sanctuary Na | State Land Board | Protective Management Area | Missouri |
| Hunter-Dawson State Historic Site | Other State Land | Historic / Cultural Area | Missouri |
| Pickle Creek Na | Other State Land | Protective Management Area | Missouri |
| Cape Girardeau Fairgrounds Facility | County Land | State Other | Missouri |
| Mingo National Wildlife Refuge - Bradley Unit | Private Conservation Land | Private Conservation Land | Missouri |
| Thirty-Four Corner Blue Hole | Private Institution-Managed for Biodiversity | Protective Management Area | Missouri |
| Trail Of Tears Radio Facility | Private Institution-Managed for Biodiversity | Access Area | Missouri |
| Husman Fen Na | Private Institution-Managed for Biodiversity | Protective Management Area | Missouri |
| Lily Pond Na | Private Institution-Managed for Biodiversity | Protective Management Area | Missouri |
| Block Hole Access | Private Institution-Managed for Biodiversity | Access Area | Missouri |
| Ozark National Scenic Riverway | Unknown | Wild and Scenic River | Missouri |
| Wolf Bayou Na | State Department of Conservation | Protective Management Area | Missouri |
| Lower Hatchie National Wildlife Refuge | Fish and Wildlife Service (USFWS) | National Wildlife Refuge | Tennessee |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Meeman-Shelby Forest Sna | State Cultural Affairs | Protective Management Area | Tennessee |
| Tumbleweed Wma | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Chickasaw National Wildlife Refuge | Fish and Wildlife Service (USFWS) | National Wildlife Refuge | Tennessee |
| Tigrett Wma | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| White Lake Refuge | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Whites Lake Wma | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Moss Island Refuge Wma | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett Wma - Jaquess | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett Wma - Mitigation 426 | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Moss Island - Lecklitner | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| George L. Yarbro Wma | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Mav - Fullen | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett Wma - Mitigation 457 | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Cold Creek | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Cold Creek Wma | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Sullivan - Chisholm Wetland | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett Wma - Mitigation 350 | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett Wma - Mitigation 508 | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett Wma - Mitigation 448 | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Ernest Rice Wma | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Chickasaw-Carson | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Fort Pillow Shp | State Park & Recreation | Historic / Cultural Area | Tennessee |
| John Tully Wma | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Lake Lauderdale Refuge | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |

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| Sensitive Habitats | | | |
|---|---|---|---|
| **Location Name** | **Owning Agency/Organization** | **Habitat Type** | **State** |
| Lwcf07 - Blue | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett Wma - Mitigation 451 | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Moss Island | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Sunk Lake Sna | State Cultural Affairs | Protective Management Area | Tennessee |
| Tigrett Wma - Mitigation | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Chickasaw | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Upper Mav | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett Wma - Mitigation 449 | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Bogota Wma | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett - Mitigation 500 | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett Wma - Mitigation 436 | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Tigrett Wma - Mitigation 532 | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Dot Transfer | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Reelfoot - West | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Reelfoot Spillway | State Fish and Wildlife | Recreation Management Area | Tennessee |
| Reelfoot - Phillipy Unit | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Ingram Tract | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Reelfoot - Black Bayou Refuge | State Fish and Wildlife | Habitat or Species Management Area | Tennessee |
| Reelfoot Nwr | State Fish and Wildlife | National Wildlife Refuge | Tennessee |
| Reelfoot Lake Sna & Wma | State Cultural Affairs | Protective Management Area | Tennessee |
| Lake Isom National Wildlife Refuge | Fish and Wildlife Service (USFWS) | National Wildlife Refuge | Tennessee |

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# APPENDIX G. NATURAL RESOURCE DAMAGE ASSESSMENT

## A. Introduction

This information is provided for EPA Regional staff and the general public as a reference tool to facilitate their understanding of the Natural Resource Damage Assessment (NRDA) process. Natural Resource Trustees conduct NRDAs to calculate the monetary cost of restoring injuries to natural resources that result from releases of hazardous substances or discharges of oil. Damages to natural resources are evaluated by identifying the functions or 'services' provided by the resources, determining the baseline level of the services provided by the injured resource(s), and quantifying the reduction in service levels as a result of the contamination. Regulations for assessing NRD have been promulgated under both CERCLA and OPA.

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

## B. DOI Regulations

Section 301(c) of CERCLA requires promulgation of regulations for the assessment of damages for injury to, destruction of, or loss of natural resources resulting from a discharge of oil or release of a hazardous substance. The responsibility for this rulemaking was delegated to the Department of the Interior (DOI) by the President in Executive Order 12580 (January 23, 1987).

DOI's regulations provide a framework and standards for the NRDA process in coastal and marine environments (Type A) and other environments (Type B). The Type A process involves use of a computer model to assess damages, in a standard and simplified manner, that result from chemical or oil discharges in coastal and marine environments. The Type B process is used in situations that require an individual approach. Both Type A and Type B regulations call for the following four sequential phases in the assessment of damages [43 CFR 11]:

**Phase 1: Pre-assessment Screen.** A pre-assessment screen is conducted to determine if additional action is warranted. Trustees must determine whether an injury has occurred and a pathway of exposure exists. The pre-assessment screen is a prerequisite to conducting a formal NRDA.

**Phase 2: Assessment Plan.** Trustees must confirm the exposure of Trust Resources and develop an Assessment Plan to identify how the potential damages will be evaluated. Type A Assessment Plans document that the conditions for use of the Type A procedures are met, provide the site-specific data inputs the Trustee will use to run the computer model, and provide the results of a preliminary application of the model. Type B Assessment Plans identify the site-specific studies the Trustees will conduct and quality control/assurance procedures. Draft Assessment Plans under both Type A and Type B procedures must be available for public review and comment.

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**Phase 3: Assessment Implementation.** The purpose of the Assessment Implementation phase is to gather the data necessary to quantify the injuries and determine damages. The work consists of three steps: (1) injury determination, (2) quantification, and (3) damage determination. Under Type A, these steps are performed through a computer model. Under Type B, the steps are performed through laboratory and field studies. Trustees quantify injuries by identifying the functions or "services" provided by the resource, determining the baseline level of such services, and quantifying the reduction in service levels that result from the impacts.

**Phase 4: Post-Assessment.** Trustees prepare a Report of Assessment detailing the results of the Assessment Implementation phase. When Trustees use a Type A procedure, the Report will include the printed output of the final model application. A reasonable number of restoration alternatives including natural attenuation are usually proposed. A preferred alternative is selected based on several factors, including technical feasibility, relationship of costs to benefits, and consistency with response actions.

The regulations also require Trustees to coordinate the assessment efforts, including the pre-assessment screen, with the lead response agency in any situation where response activity is planned or underway at a particular site [40 CFR 11.23(f)]. The Trustee Information and Query Report provides information regarding activities underway at CERCLA sites.

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# APPENDIX H. NOAA NRDA REGULATIONS

Section 1006(e)(1) of OPA requires that the National Oceanic and Atmospheric Administration (NOAA) develop regulations for the assessment of NRD which may result from a discharge of oil (except for any part of oil defined as a "hazardous substance" by CERCLA).

NOAA's regulations provide a framework for conducting NRDAs that achieve restoration under OPA. NOAA's natural resource damage assessment regulations include the following three phases [15 CFR 990]:

**Phase 1: Pre-assessment.** Trustees first determine whether they have jurisdiction under OPA. Then Trustees must determine whether to conduct restoration planning. Trustees determine if it is likely that the discharge has caused an injury, if response actions will adequately address the injuries, and if feasible restoration alternatives exist. If so, Trustees are to proceed with the NRDA.

**Phase 2: Restoration Planning.** This phase has two basic components: (1) injury assessment and (2) restoration selection. Injury assessment evaluates whether the discharge has resulted in an adverse change in natural resources and/or services. During the restoration selection stage, the Trustee determines the need for, and scale of, restoration actions. For injury assessments, Trustees quantify the degree and the spatial and temporal extent of the injuries in comparison to baseline conditions. Trustees must develop a Draft Restoration Plan that identifies a primary restoration action to return injured resources to baseline conditions and a compensatory restoration action to compensate for the interim loss of services pending return to baseline conditions. This involves evaluating the range of primary and compensatory restoration alternatives, selecting and justifying a preferred alternative, and preparing the plans. The regulation identifies six specific criteria that must be used to evaluate restoration alternatives. The public must be given the opportunity to comment on the Draft Restoration Plan.

**Phase 3: Restoration Implementation.** The Final Restoration Plan is presented to responsible parties for implementation, or to fund the Trustees' costs for implementation.

Trustees must coordinate their activities with other Trustees, response agencies, and responsible parties when operations are conducted concurrently [15 CFR 990.14]. Trustees may develop pre-incident memorandums of understanding (MOUs) to more efficiently coordinate their activities with response agencies [15 CFR 990.14(b)].

http://www.epa.gov/superfund/programs/nrd/nrda2.htm

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# APPENDIX I. CORRECTIONS AND UPDATES FORM

Corrections, updates or suggested additions to the Great Rivers Sub-Area Contingency Plan (GRSACP) should be provided to the EPA Region 7 Emergency Response and Removals (ER&R) program. Because the OSC responsible for this specific plan will change with the passage of time, written changes should be addressed to the address indicated below. If there are questions, the name of the current OSC for the Great Rivers Sub-Area can be obtained from the Chief of the ER&R program: 800-223-0425.
Please complete the following information to effect a change in the Sub-Area 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: _____

_____

_____

_____

_____

_____

Send to:
On-Scene Coordinator for the Great Rivers Sub-Area Contingency Plan
Emergency Response & Removals Program
U.S. Environmental Protection Agency
11201 Renner Blvd
Lenexa, KS 66219

Changes can also be emailed to EPA On-scene Coordinator (OSC) Heath Smith at smith.heath@epa.gov; however, it is recommended that a particular OSC's involvement with the Sub-Area be verified before submitting corrections or additions to them, because responsibilities are subject to change.

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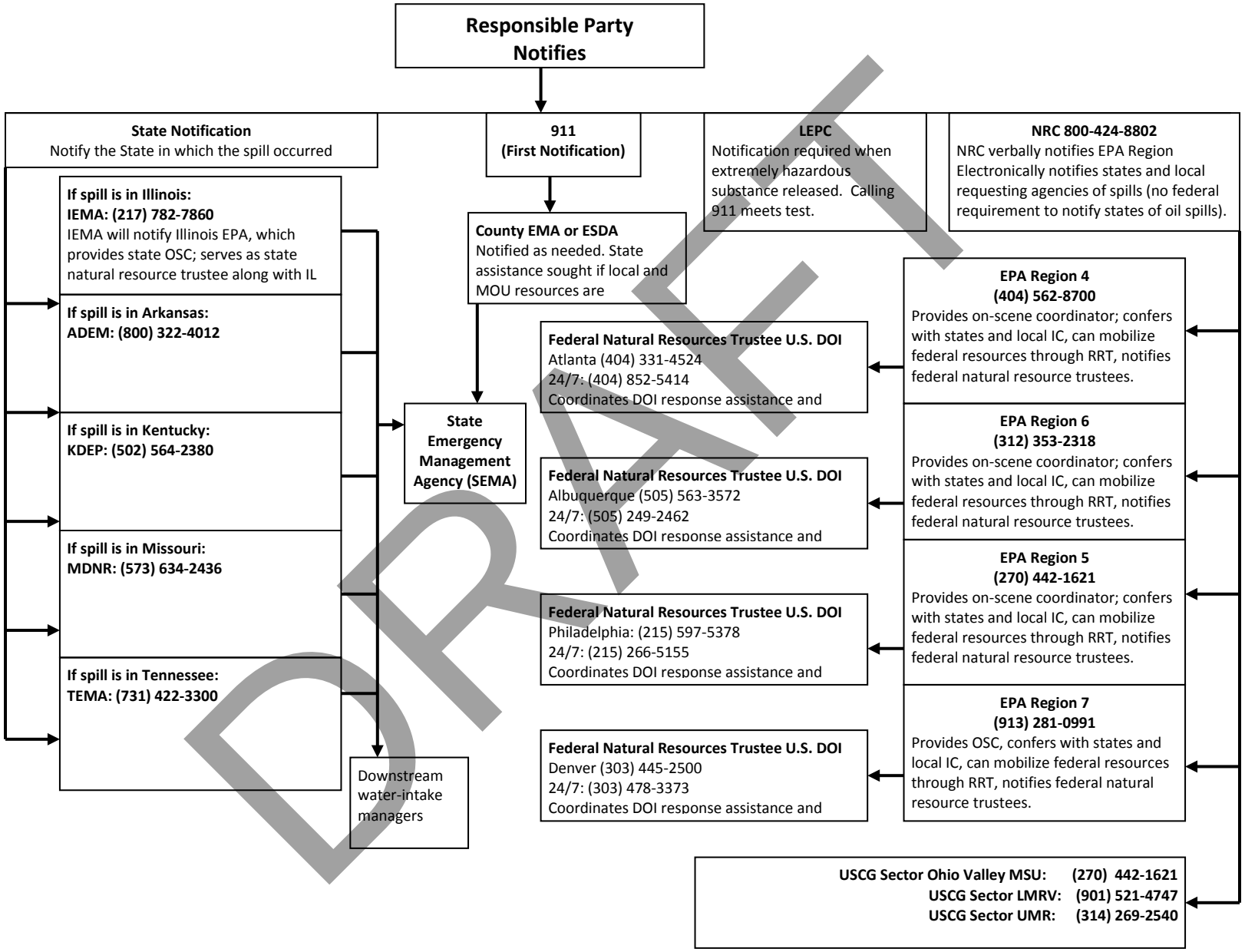
# APPENDIX J GREAT RIVERS SUB-AREA SPILL NOTIFICATION

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