Springfield Plateau Regional Restoration Plan and Environmental Assessment

U.S Department of the Interior

U.S. Fish and Wildlife Service

Missouri Department of Natural Resources

Notice of Amendment

The Springfield Regional Restoration Plan was amended in January, 2018, following a public comment period. The amended sections of this plan include: Section 6.1 and Section 7. The full text of the amendment is available at https://dnr.mo.gov/env/hwp/sfund/nrda-sw.htm and https://www.fws.gov/midwest/es/ec/nrda/MoTriState/index.html. In addition, the contact information on page iii was updated to reflect changes in staff.

On the cover. Diamond Grove Prairie Conservation Area, Diamond, MO. The Springfield Plateau of southwest Missouri was once mostly prairie with oak-hickory hardwood forests in areas of greater relief such as along streams. Hardwood forests are more frequent on the eastern side of the plateau with a shift to prairie to the west. Photo courtesy of Wayne Rhodus, Rhodus Photography, Bonner Springs, KS.

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LIST OF ACRONYMS

AER	ACQUISITION OF EQUIVALENT RESOURCES
AO	AUTHORIZED OFFICIAL
CERCLA	COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, & LIABILITY ACT
CFR	CODE OF FEDERAL REGULATIONS
COA	CONSERVATION OPPORTUNITY AREA
CRP	CONSERVATION RESERVE PROGRAM
CWA	CLEAN WATER ACT
DOI	UNITED STATES DEPARTMENT OF THE INTERIOR
EA	ENVIRONMENTAL ASSESSMENT
EIS	ENVIRONMENTAL IMPACT STATEMENT
EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ESA	ENDANGERED SPECIES ACT
FONSI	FINDING OF NO SIGNIFICANT IMPACT
GCPO	GULF COASTAL PLAINS AND OZARKS
HPO	HISTORIC PRESERVATION OFFICER
LCC	LANDSCAPE CONSERVATION COOPERATIVE
MDC	MISSOURI DEPARTMENT OF CONSERVATION
MDNR	MISSOURI DEPARTMENT OF NATURAL RESOURCES
MPF	MISSOURI PRAIRIE FOUNDATION
NEPA	NATIONAL ENVIRONMENTAL POLICY ACT
NHPA	NATIONAL HISTORIC PRESERVATION ACT
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NRCS	NATURAL RESOURCE CONSERVATION SERVICE
NRDAR	NATURAL RESOURCE DAMAGE ASSESSMENT AND RESTORATION
NWR	NATIONAL WILDLIFE REFUGE
OPA	OIL POLLUTION ACT
RFP	REQUEST FOR PROPOSALS
SPRRP	SPRINGFIELD PLATEAU REGIONAL RESTORATION PLAN
SHC	STRATEGIC HABITAT CONSERVATION
SERVICE	UNITED STATES FISH & WILDLIFE SERVICE

SECTION 1 - INTRODUCTION

1.1 General Information

This document is both the Springfield Plateau Regional Restoration Plan (SPRRP) and Environmental Assessment (EA) (40 C.F.R. § 1506.41). The proposed action is to establish and implement the Springfield Plateau Regional Restoration Plan. The EA is being developed pursuant to the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321-4370, and its implementing regulations, 40 C.F.R. Part 1500 and 43 C.F.R. Part 46. The Federal Water Pollution Control Act (CWA, commonly known as the Clean Water Act) [33 U.S.C. §§ 1251-1387] and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, more commonly known as the Federal "Superfund" law) [42 U.S.C. §§ 9601-9675], and its implementing regulations (40 C.F.R. Part 300 and 43 C.F.R. Part 11) authorize states, federally recognized Tribes, and certain federal agencies with authority to manage or control natural resources, to act as "Trustees" on behalf of the public, and to restore, rehabilitate, replace, and/or acquire natural resources equivalent to those injured by hazardous substances releases. Similar to the CWA and CERCLA, the Oil Pollution Act of 1990 (OPA) [33 U.S.C. §§ 2701-2762] and its implementing regulations, 15 C.F.R. Part 990, also authorize Trustees to pursue natural resource damages on behalf of the public for injury to, destruction of, loss of, or loss of use of natural resources, including the costs of assessing the damage. Additionally, Section 644.096 RSMo authorizes the State of Missouri to bring a cause of action and seek actual damages against any person violating the provisions of the state's Clean Water Law (CWL), for actual damages to restore any waters of the State to their condition prior to the violation.

The SPRRP will be jointly administered and used by the Missouri Trustee Council (Trustees) to assist in carrying out their natural resource trust authorities under CERCLA, OPA, and CWA. The Trustees for the SPRRP include the State of Missouri (represented by the Missouri Department of Natural Resources (MDNR)) and the United States Department of the Interior (DOI) (represented by the United States Fish and Wildlife Service (Service)). The Trustees have developed an ecoregion comprehensive SPRRP to restore the natural resources injured by the release of hazardous substances. Natural resource damages received, either through negotiated or adjudicated settlements, must be used to restore, replace, rehabilitate, and/or acquire the equivalent of those natural resources injured and natural resource services lost.

The goals of this ecoregional plan are to:

1) Identify the natural resources and services potentially injured by the release of hazardous substances in the SPRPP;

2) Develop a request for proposal (RFP) process to evaluate and select restoration projects to achieve restoration strategies (specific restoration goals identified as part of the RFP process);

3) Expedite and gain efficiencies in the natural resource damage assessment and restoration (NRDAR) process; provide for consistency and predictability by detailing the NRDAR process, thereby minimizing uncertainty to the public; and,

4) Expedite restoration of potentially injured natural resources and lost services.

1.1.1 Natural Resources and Services Defined

Natural resources means land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States, any state or local government or Indian tribe, as defined in 40 C.F.R. § 300.5.

Natural resource services may be classified as follows:

- Ecological services - the physical, chemical, or biological functions that one natural resource provides for another. Examples include provision of food, protection from predation, and nesting habitat, among others; and

- Human services - the human uses of natural resources or functions of natural resources that provide value to the public. Examples include fishing, hunting, nature photography, and education, among others. In considering both natural resources and services, Trustees are addressing the physical and biological environment, and the relationship of people with that environment.

By law, the Trustees are responsible to the public for the natural resource damages—typically monetary compensation—being disbursed to restore resources injured by the release of hazardous substances, and/or pollutants. The Trustees must restore, replace, rehabilitate and/or acquire the equivalent of injured natural resources. Therefore, the Trustees must maintain the linkage between injury and restoration and are accountable to the public for the funds, and compliance with NEPA and restoration planning requirements under CERCLA, and other applicable laws. There is no intent by the Trustees to delegate these responsibilities to other parties or organizations.

1.2 Scope and Scale of the Springfield Plateau Regional Restoration Plan

The SPRRP is designed to be flexible, allowing existing and future recovered natural resource damages to be used to implement restoration projects consistent with the Preferred Alternative. The SPRRP and EA are not intended to quantify the extent of restoration needed. Scaling restoration alternatives to ensure that the public is adequately compensated for injured natural resources and lost services will be done on a case by case basis.

As restoration proceeds and the Trustees gain knowledge through monitoring of what projects provide the greatest benefits and ecological value, modifications to the SPRRP may be made. The Trustees reserve the right to modify the SPRRP as necessary, including the use of an adaptive management approach. 43 C.F.R. §46.145. Any supplemental document or analysis to the SPRRP will be provided for public review and comment and finalized before any modifications are implemented.

The SPRRP is intended to address all releases, discharges, spills or other incidents, occurrences, or events (hereinafter referred to as "events") in the Springfield Plateau subsection and boundary waters, which: 1) affect coexisting or contiguous natural resources under the legally authorized trusteeship and jurisdiction of, the Trustees; and 2) give rise to a claim for natural resource damages under the authorities listed below. Sites outside of the defined boundary of the Springfield Plateau subsection may be considered for restoration activities under this plan if the events giving rise to a NRDAR claim are connected by political, jurisdictional, or previously delineated hazardous substances release boundaries (*e.g*. the Waco mining designated area in northwest Jasper County lies outside of the Springfield Plateau but within the Oronogo/Duenweg Superfund Site; thus it would be included within the SPRRP).

The Springfield Plateau subsection of the Ozark Highlands Section, as described in Nigh and Schroeder's (2002) *Atlas of Missouri Ecoregions,* is a large flat plain in the southwestern Missouri Ozarks. Topographical relief is usually less than 150 feet, caused by slight dissection along streams. The Springfield Plateau is underlain by cherty limestone strata that are responsible for numerous areas of well-developed karst and springs. Prior to settlement by Europeans, vegetation was mostly prairie, with forests along streams and in the more dissected border regions. The majority of the Springfield Plateau is rural; however, the metropolitan areas of Springfield and Joplin are two of the most rapidly developing areas of the State.

According to the *Atlas of Missouri Ecoregions* (Nigh and Schroeder 2002), the Springfield Plateau:

> "…lies in the western Ozark Highlands of southwestern Missouri. It comprises the major portions of Cedar, Dade, Jasper, Newton, Lawrence, and Green Counties, almost half of Polk, Webster, Christian, and Barry Counties and minor portions of St. Clair, Hickory, Barton, McDonald, Stone, and Douglas Counties."

Figure 1 shows the boundaries of the Springfield Plateau in southwestern Missouri.

Division from surrounding subsections in the Ozark Highlands Section of Missouri described by Nigh and Schroeder are primarily geological in nature and reflect both subtle and distinct shifts in the terrain and composition of the underlying strata of the ecological subsections. Section (4) of this document provides further discussion of the physical, biological, and socioeconomic characteristics of the subsection.

Figure 2 shows the ecological subsections of Missouri.

FIGURE 1. SPRINGFIELD PLATEAU BOUNDARIES

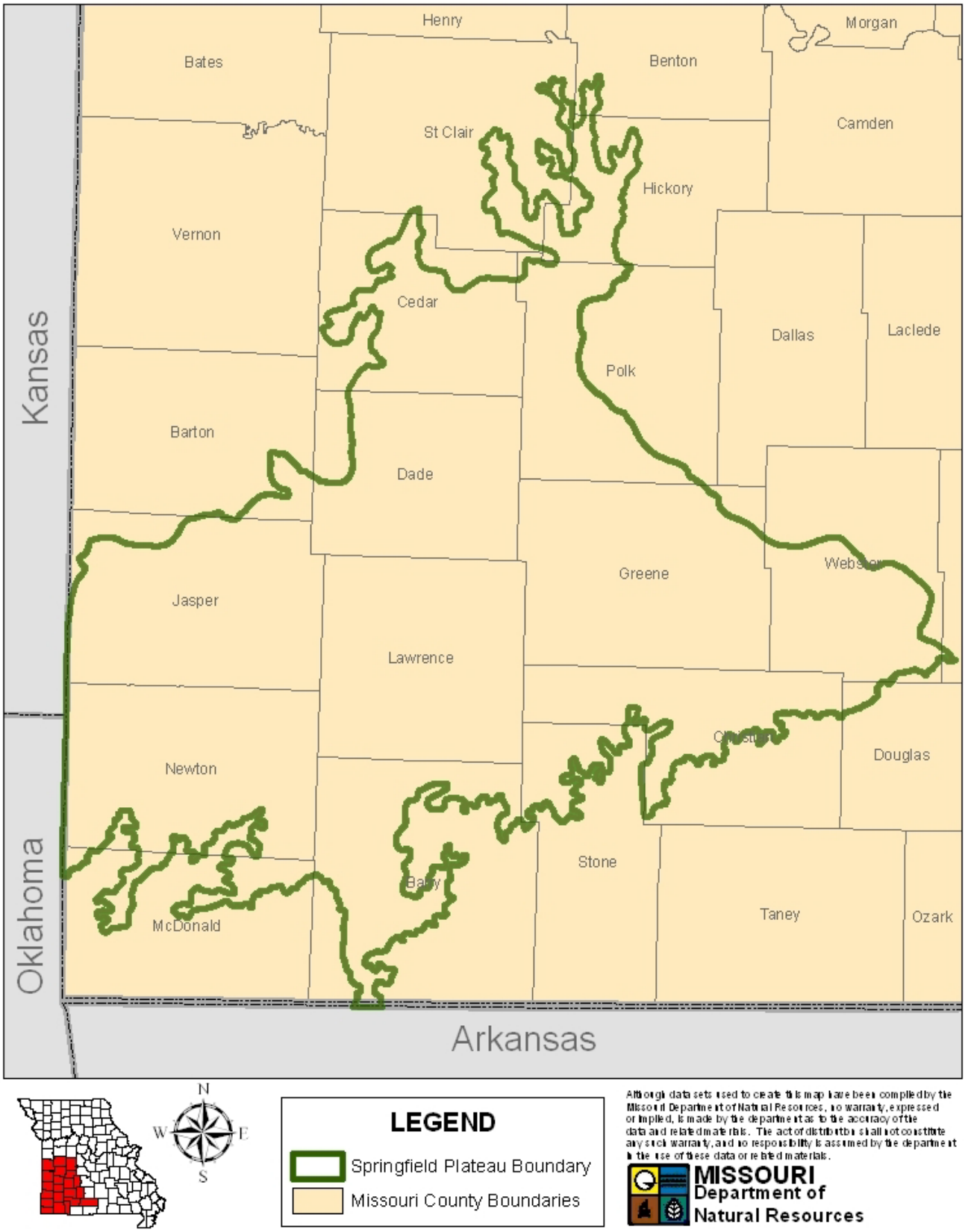
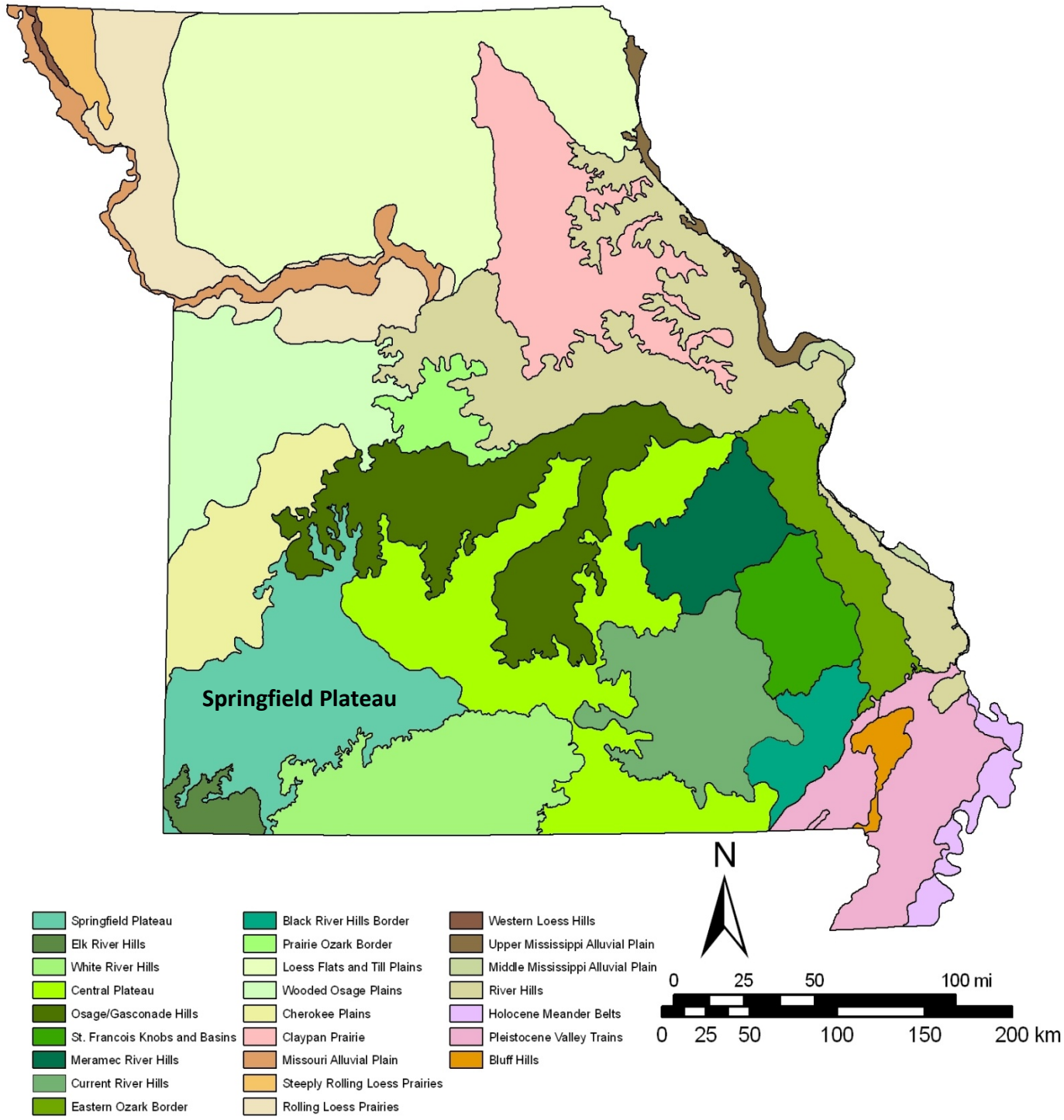


FIGURE 2. ECOLOGICAL SUBSECTIONS OF MISSOURI



Source: Department of Interior, U.S. Geological Survey. 2002. "Ecoregions of Iowa and Missouri."

1.3 The Springfield Plateau Regional Restoration Plan and the Request for Proposal Process

The Trustees have designed a restoration process that allows them to use the overarching SPRRP as an umbrella to cover multiple NRDAR settlements. The envisioned process will follow this pathway:

1. Natural resource damages are monies recovered from a responsible party (sometimes referred to herein as "restoration funds").

2. The Trustees develop a Request For Proposal (RFP) which identifies: potentially injured resources, location of the release and where the injury to natural resources occurred or continues to occur, natural resources for which the Trustees have trusteeship, damages amount(s), restoration goals, and potential metrics to measure restoration success. Appendix G provides an example of an RFP for restoration projects;

3. The Trustees will cause the RFPs to be made publicly available. The general public, non-governmental organizations, and/or local, state and federal governments and entities (including the Trustees) may submit restoration proposals meeting the criteria described in the RFP and the SPRRP. The RFPs will identify the time period in which proposals may be received for consideration by the Trustee Council;

4. The Trustee Council members and their technical expert(s) will evaluate project proposals received from the RFP using the Decision Matrix described in Section (6) of this document and attached as Appendix A. The Trustee Council will follow the project selection process outlined in Appendix B;

5. The Trustees will continue to issue RFPs for desired restoration goals until injury to natural resources and services lost have been compensated, restoration is completed and the restoration funds are expended.

Further information regarding the process the Trustees will use to evaluate and select restoration projects is found in Section (6) "Restoration Project Proposal Process" of this document.

1.4 Authority and Legal Requirements

This SPRRP was prepared jointly by the Service and MDNR. The Service is acting for DOI as the designated natural resource trustee under Section 107(f) of CERCLA, 42 U.S.C. § 9607(f), Section 311 of the CWA, 33 U.S.C. § 1321, and other applicable laws, including Subpart G of the National Contingency Plan, 40 C.F.R. § 300.600-300.615.

Pursuant to CERCLA, the Governor of the State of Missouri has designated the Director of the Missouri Department of Natural Resources as the Trustee for the State's natural resources. Further, the authorities under which the State of Missouri may act include, but are not limited to, the Missouri Constitution, 1945, Art. IV, Sections 40(a)-47; Chapter 252, RSMo, Department of Conservation – Fish & Game; Chapter 254, RSMo, State Forestry Law; Chapter 644, RSMo,

Missouri Clean Water Law; Sections 260.350-260-434, RSMo, Missouri Hazardous Waste Management Law; Sections 260-500 et seq., RSMo, Missouri Hazardous Waste Clean Up Law; and the regulations duly promulgated under the statues set out above.

The Missouri Trustee Council, comprised of the MDNR and the Service, will make recommendations to their respective Trustee and Authorized Official (AO), on behalf of the public to assess natural resource injuries and recover damages for injured natural resources and losses of services attributed to releases of hazardous substances. The federal AO is the DOI official delegated the authority to act on behalf of the Secretary of the DOI to conduct a natural resource damage assessment, restoration planning and implementation. The federal AOs for this plan are the Region 2 and 3 Regional Directors for the Service. The state designated Trustee is the Director of the MDNR and is responsible for conducting natural resource damage assessments, restoration planning, and implementation. The federal AOs represent the interests of the DOI, including all affected Bureaus, and the state Trustee represent the interests of the State of Missouri.

Future NRDAR claims may involve other Trustees, e.g., if the claim is for injury on Department of Defense (DOD) lands, the DOD would become an additional federal Trustee. If other Trustees are involved in a NRDAR case, then the SPRRP will be reviewed by the additional Trustee(s) to determine if is adequate for future restoration using recoveries of natural resource damages. If the SPRRP is determined to be insufficient for future needs by the other Trustee(s), then a restoration plan specific to that case will be developed.

Actions undertaken by the Service to restore natural resources or services under CERCLA and other federal laws are subject to the NEPA; and the regulations guiding its implementation at 40 C.F.R. Parts 1500 and 43 C.F.R. Part 46. NEPA and its implementing regulations outline the responsibilities of federal agencies under NEPA. Federal agencies contemplating implementation of a major federal action must produce an environmental impact statement (EIS) if the action is expected to have significant impacts on the quality of the human environment. When it is uncertain whether a contemplated action is likely to have significant impacts, federal agencies prepare an EA to evaluate the need for an EIS. If the EA demonstrates that the proposed action will not significantly impact the quality of the human environment, the Service will issue a Finding of No Significant Impact (FONSI), which satisfies the requirements of NEPA, and no EIS is required. However, if there is a finding of significant impact to the human environment, then an EIS will be developed. For a proposed restoration plan, if a FONSI determination is made, the Trustees may then issue a final restoration plan describing the potential restoration alternatives. The Regional Director for the U.S. Fish and Wildlife Service Region 3 is the Responsible Official for the NEPA.

In accordance with NEPA and its implementing regulations, the SPRRP summarizes the current environmental setting, describes the purpose and need for restoration actions, identifies potential alternative actions, assesses their applicability and potential impact on the quality of the physical, biological and cultural environment, and outlines public participation in the decision-making process. This information will be used to make a threshold determination as to whether preparation of an EIS is required prior to selection of the final restoration alternatives.

Other regulations that may guide the Trustees in the implementation of the SPRRP are found in Appendix C.

1.4.1 Applicability to the Oil Pollution Act

This document was developed to establish and implement restoration to compensate for injuries to natural resources and their services arising from the release of hazardous substances within the Springfield Plateau. As previously identified, the CERCLA authorizes states, federally recognized Tribes, and certain federal agencies that have authority to manage or control natural resources, to act as "Trustees" on behalf of the public, and to restore, rehabilitate, replace, and/or acquire natural resources equivalent to those injured by hazardous substance releases. Likewise, OPA authorizes federal and state governments and federally recognized Tribes to make the public whole for injuries to natural resources and their services resulting from an incident involving a discharge or substantial threat of a discharge of oil incident.

The development of the SPRRP is a coordinated effort among state and federal natural resource agencies, local governments and entities, and the public. Further, the SPRRP broadly describes the Trustees' priorities and objectives for restoring all injured natural resources and/or lost services in the Springfield Plateau and would be relevant to injured natural resources and/or lost services arising from events. Finally, the SPRRP allows for compensating the environment and the public for injuries resulting from an event as well as scaling relative to the event. As such, the SPRRP will meet OPA's use of a regional restoration plan as identified in Subchapter E of the OPA implementing regulations, 15 C.F.R. §990.56 (b) and will expedite restoration implementation when an incident involving a discharge or threat of a discharge of oil occurs. The Trustees intend to refer to this SPRRP to inform restoration in the event of natural resource injury resulting from the discharge of oil and subsequent recovery of associated damages. In addition, pursuant to the DOI's NEPA regulations, the Responsible Official may use the NEPA analysis contained in this SPRRP/EA for future oil spill restoration projects, where and when appropriate 43 C.F.R. § 46.120.

1.4.2 The Natural Resource Damages Assessment and Restoration Process

Pursuant to Executive Order 12580, the responsibility for promulgating NRDAR regulations was delegated to the Department of Commerce (via the National Oceanic and Atmospheric Administration (NOAA)) for coastal and marine environments, and the DOI for other environments. Type A regulations, promulgated by NOAA use a computer-based model to assess injuries resulting from chemical and/or oil discharges in coastal and marine environments. Type B assessments are more individualized and take into account more site specific conditions and impacts on the natural resources and services. Both Type A and Type B regulations contain four sequential phases for assessing injuries and determining damages. Generally Type A regulations are not applicable to Missouri. For the purposes of this SPRRP, the four Type B phases are discussed below.

*Phase 1: Pre-assessment Screen***.** A pre-assessment screen, a prerequisite to conducting a formal natural resource damage assessment, is prepared based on readily available information to determine if additional assessment is warranted and that there is a reasonable probability of

making a successful claim. Five criteria (43 C.F.R. §11.23(e)) must be met and notification provided to the potentially responsible parties prior to moving forward to the next phase.

Phase 2: Assessment Plan. The assessment plan outlines potential studies planned to determine injuries to natural resources and/or services; provides an overview of environmental impacts; and describes the NRDAR process. The assessment plan ensures that any natural resource assessment of potential injuries is conducted in a planned and systematic manner and that the methodologies chosen demonstrate reasonable costs. There is a 30-day public review and comment period.

Phase 3: Assessment. The purpose of the assessment phase is to collect, compile and analyze data necessary to determine injury - exposure of trust resources to release or discharges; quantify injuries - nature and extent; and determine damages - monetary value of injured resources plus compensable value of the services lost.

*Phase 4: Post-Assessment***.** During this phase, the Trustees prepare a Report of Assessment documenting all determinations, data, test results and related findings. A reasonable number of restoration alternatives including natural recovery are usually developed. A preferred alternative is selected based on several factors, including, but not limited to, technical feasibility, relationship of costs to benefits, and integration with response actions.

1.5 Summary of NRDAR Settlement History in the Springfield Plateau

At the publication of this document the Trustees have achieved several NRDAR settlements. The settlements (Table 1) provide the impetus for the creation of the SPRRP. It is the Trustees' goal that, once restoration funds are received by the Trustee(s), restoration will begin in as timely a fashion as is possible. However, some circumstances may preclude the initiation of restoration. For example, even if restoration funds are available, starting restoration may be premature if remediation at the site is not complete. Additionally, the Trustees may defer use of some restoration funds until an evaluation of the success and extent of previous restoration can be completed. Further details regarding individual settlements will be provided in each of the RFPs developed for those settlements and/or other recovered natural resource damages. An example RFP is included as Appendix G.

Table 1. Existing NRDAR Settlements within the Springfield Plateau

Settlement	Settlement Date	Available Restoration Funds*
Eagle Picher	February, 1995	$235,197.33
Carver Salvage	February, 1995	$2,802.91
Newton County Wells	May, 2007	$137,362.00
ASARCO--Newton County	December, 2009	$6,990,529.23
ASARCO--Jasper County	December, 2009	$13,099,124.26

* RESTORATION FUNDS AT THE TIME OF PUBLICATION

SECTION 2 - PURPOSE AND NEED FOR RESTORATION

The purpose of this document is twofold: (1) serve as an Environmental Assessment (EA) and (2) as a Regional Restoration Plan. The EA is designed to consider alternatives which will restore, rehabilitate, replace, and/or acquire the equivalent of any natural resources and services potentially injured by the release of hazardous substances into the Springfield Plateau, pursuant to applicable state, and federal laws and regulations. Additionally, this plan serves to facilitate public involvement in the restoration plan and to comply with environmental decision-making requirements.

The SPRRP is developed to identify a preferred alternative or alternatives to restore injured natural resources and to establish criteria for selecting projects to implement such restoration alternatives. The SPRRP broadly describes the Trustees' priorities and objectives for restoring injured natural resources and lost services in the Springfield Plateau. Restoration projects will be selected and funded by the Trustees via a RFP approach. Each RFP will include, but is not limited to, such information as the type of natural resources injured and/or services lost; location of the potentially injured natural resources and/or lost services; whether primary restoration is a viable action; and the amount of restoration funds available.

Any selected restoration project will be consistent with this SPRRP, statutory mandates and regulatory procedures, and applicable laws and policies for restoring, replacing, rehabilitating and/or acquiring the equivalent of potentially injured natural resources and lost services.

2.1 Residual Injury After Response Actions

Restoration under the NRDAR process is designed to complement removal and remedial responses performed by the Environmental Protection Agency (EPA) or other agencies that are underway or planned. The extent to which response actions return natural resources and the services they provide to their baseline condition (i.e., the level of services that would have existed but for the release) are considered in the restoration planning process. Generally the response action focuses on risks to human health and the environment posed by hazardous substances contamination. Simultaneous or subsequent restoration activities initiated by the natural resource Trustees address injuries to natural resources and their services resulting from releases of hazardous substances which may be unaddressed by response actions ("residual injury"). Additionally, natural resource Trustees are responsible for assessing and restoring natural resources to compensate the environment and the public for injuries that may have occurred during the remedial process and may persist into the future.

In addition to primary restoration costs, or the costs associated with directly restoring the injured resource to its baseline level of services ("***baseline condition***"), damages can also include compensation for the loss of natural resource services pending restoration. The period of injury from the time the injury occurred until baseline recovery is achieved is referred to as "compensatory loss". The SPRRP is applicable to restoration for all types of natural resource injuries.

SECTION 3 - RESTORATION ALTERNATIVES

3.1 Introduction of Alternatives under the National Environmental Policy Act

The following alternatives were developed to evaluate and recommend a preferred alternative to meet restoration goals in the Springfield Plateau. Evaluation of alternatives to the proposed action, in this case for restoration of injured natural resources, is a requirement under the NEPA process. Alternatives A, B, C, and D, as presented below, offer a variety of restoration options from which a preferred alternative will be selected at the conclusion of the restoration planning process. For Alternatives B, C, and D, restoration projects will be evaluated and selected using the same criteria as outlined in Section (6) of this document. Public review and coordination for Alternatives B, C, and D will be the same as described in Section (7) of this document. Table 2 provides a summary comparison of the Alternatives discussed in this section.

3.1.1 Important Considerations in Developing Restoration Alternatives

The selected alternative will be consistent with statutory mandates and regulatory requirements that specify that recovered damages are used to undertake feasible, safe, and cost-effective projects that address injured natural resources, consider actual and anticipated conditions, have a reasonable likelihood of success, and are consistent with applicable laws, regulations and policies.

The SPRRP evaluates the alternatives, taking into account a variety of factors including:

1. Technical feasibility (*i.e.*, whether it is possible to implement the alternative);

2. The relationship of the expected costs of the proposed actions to the expected benefits from the restoration, rehabilitation, replacement, and/or acquisition of equivalent resources;

3. The relative cost-effectiveness of different alternatives (*i.e.*, if two alternatives are expected to produce similar benefits, the least costly one is preferred);

4. The results of actual or currently planned response actions;

5. The potential for collateral injury to the environment if the alternative is implemented;

6. The ability of the natural resources to recover with or without each alternative, and the time required for such recovery;

7. The natural recovery period determined in § 11.73(a)(1);

8. Potential effects on human health and safety;

9. Consistency with relevant federal and state policies;

10. Compliance with applicable federal and state laws.

43 C.F.R. § 11.82(d)

The selected alternative must restore, rehabilitate, replace and/or acquire the equivalent of those natural resources and their services potentially injured by the releases of hazardous substances within the Springfield Plateau subsection boundary. Because the Springfield Plateau is a complex community of invertebrates, fish, wildlife, plants and humans, the Trustees intend to consider as much of the Springfield Plateau as possible and address areas of potential improvement for the ecosystem as a whole**.**

The Responsible Official will select one of the EA alternatives and will determine, based on the facts and recommendations contained within the EA, and public comment, whether this EA is adequate to support a FONSI, or whether an Environmental Impact Statement needs to be prepared. NEPA compliance is a federal requirement and not applicable to NRDARs that only involve the state Trustee.

3.2 Alternative A: No Action

The No Action Alternative, required by NEPA and the NRDAR regulations, 43 C.F.R. § 11.82(c)(2), consists of expected conditions under current programs pursued outside the NRDAR. It is the basis against which other alternatives can be compared. It is the alternative by which restoration is obtained by natural recovery. If this Alternative is implemented, the Trustees would not initiate specific actions to restore injured natural resources and their services to baseline conditions or compensate the environment and the public for natural resource injuries caused by the releases of hazardous substances into the environment.

Under this alternative, the state and federal agencies and landowners would continue to manage, conserve and protect the sites within the Springfield Plateau as outlined in current programs and regulations and within applicable budget constraints. However, no additional action would be taken to compensate for injuries to natural resources or their services. In addition, the terms of existing Consent Decrees require recovered natural resource damages be spent to restore, replace, rehabilitate and/or acquire the equivalent of potentially injured natural resources and their service and, under this Alternative, the restoration funds would not be expended..

3.3 Alternative B: Primary Restoration of Injured Natural Resources

Primary restoration is any action taken to return an injured natural resource and its services to its baseline condition. Alternative B describes restoration projects that directly restore natural resource injuries caused by the release of hazardous substances through means of primary restoration. This alternative would compensate for injury to natural resources by directly restoring the same resources that have been adversely impacted to a condition where they can provide the level of services available prior to the release of hazardous substances. Under this alternative, sites that cannot feasibly be returned to baseline condition would not be considered for further funding opportunities.

Natural resource-based restoration projects include activities such as upland restoration, wetland restoration, aquatic resource restoration, groundwater or cave/karst restoration, and other projects designed to reduce the exposure of natural resources under the Trustees' jurisdictions to residual hazardous substances. Alternative B would limit the Trustees to engaging solely in primary

restoration of injured natural resources at the site of the release of hazardous substances or where those substances come to be located in the environment. No off-site, compensatory, or acquisition of equivalent resource restoration projects would occur under this alternative.

Under this alternative, a mix of primary restoration projects would be selected to restore a broad array of natural resource services throughout the geographical area. Selecting a mix of restoration projects allows for the recovery of a wider range of injured resources as well as more flexibility for cost-effectiveness and feasibility due to different constraints related to the ecology of the area, residual hazardous substance following clean-up or remediation, or ability to find willing participants. Potential benefits of this approach to restoration include creating tracts of continuous high quality habitat or connecting existing habitats. This approach keeps the important linkages between physical, chemical and biological properties of the overall ecosystem.

All restoration under this Alternative would only be considered in areas where the landowner is willing and the surrounding land uses indicate that the restoration will remain viable wildlife habitat. The Trustees strongly prefer conservation easements in perpetuity for restored natural resources. The length of the conservation easement may be less than in perpetuity, but the length of time will be determined on a site by site basis. The Preservation of restored properties would be obtained through fee title purchase or environmental covenants. Land acquired is usually conveyed to individual state, tribal, or local government agencies, land trusts, or non-government conservation organizations following specific procedures and standards for each entity. In some instances, the federal government may acquire property if it meets the restoration criteria and is contained within existing comprehensive conservation plan and/or other property acquisition boundaries. While the primary purpose of the preservation of land is to protect and preserve high quality natural resources, portions of the acquired properties may be made available to the public for natural resource-based recreational activities such as wildlife viewing, hiking, fishing, hunting or educational opportunities.

The main benefit of this Alternative is that it provides the clearest linkage to injury, since the affected resources themselves will be restored. This Alternative also reduces ongoing injury from residual contamination. The next five subsections, 3.3.1 through 3.3.5, present a suite of primary restoration choices that could be selected under this Alternative, though the list is by no means exhaustive and could include numerous others as approved by the Trustees. The identified resource categories (i.e., upland resources, wetlands) are under the jurisdiction of the Trustees--both as natural resources and as supporting habitat for natural resources under the Trustees' jurisdiction (i.e., migratory birds).

3.3.1 Upland Resource Restoration Projects

The upland settings in the Springfield Plateau provide important habitat for migratory birds and other natural resources and may be injured by the release of hazardous substances. Releases of hazardous substances that occur in upland settings may erode, flow, or percolate into other landscapes or geological domains continually being released into the environment and causing additional, ongoing injury. As a consequence, restoration of injured upland resources becomes a

significant component of the SPRRP. Specific upland restoration projects could include but are not limited to:

- Ecological enhancement of remedial activities performed by the EPA
- Re-establishment of native upland vegetation
- Propagation and re-stocking of federally and state-listed Threatened and Endangered (T&E) species
- Utilization of accepted methods for land restoration not addressed fully by the remedial action
- Removal of invasive species
- Other projects that serve to reestablish natural characteristics that have been eliminated would be utilized, as appropriate.

3.3.2 Wetland Restoration Projects

Wetlands serve as natural water filters and sequestration sites for many different types of environmental contaminants. As a consequence, hazardous substances may accumulate in wetland environments above thresholds of toxicological concern. Wetland restoration and reestablishment would help restore resources that may be impaired or destroyed in the Springfield Plateau by the release of hazardous substances. Restoration of injured wetlands would provide increased nesting opportunities and increased food for a wide variety of fish, birds and other wildlife, as well as increased sediment storage capacity within the watershed. The Trustees envision that wetland resources reestablishment and enhancement may include active restoration projects such as but not limited to:

- Ecological enhancement of remedial activities performed by the EPA
- Removal of contaminants from wetlands where not fully addressed by EPA
- Re-establishment of interconnections between surface water and injured wetlands
- Propagation and re-stocking of T&E, game, and non-game wetland species
- Removal of invasive plant species
- Disruption of (or not repairing) drain systems
- Re-establishment of wetland plants and other native vegetation
- Other projects that serve to reestablish natural characteristics that have been eliminated would be utilized, as appropriate.

Wetland reestablishment and enhancement projects that will improve water quality and provide habitat for biological resources are preferred. Wetland restoration would only be considered in areas where the landowner is willing and the surrounding land uses indicate that the restoration will remain viable. The Trustees strongly prefer conservation easements in perpetuity for restored natural resources. The length of the conservation easement may be less than in perpetuity, but the length of time will be determined on a site by site basis.

3.3.3 Surface Water Quality and Aquatic Resource Restoration Projects

The release of hazardous substances, for example from industrial sources or un-reclaimed mine lands, may impair water quality and aquatic resources within the Springfield Plateau. To address

past and potential future injury, water quality and aquatic resource improvement projects may include many of the types of project categories, but are not limited to those listed below:

- Ecological enhancement of remedial activities performed by the EPA
- Stabilization of contaminated or eroding stream banks
- Natural stream channel design/restoration of channelized streams
- Restoration of mine drainage seeps or mine waste adjacent to waterways
- Establishment or protection of injured riparian corridors with native species
- Propagation and re-stocking of T&E, game, and non-game aquatic species
- Other projects that serve to reestablish natural characteristics that have been eliminated would be utilized, as appropriate.

Surface water quality and aquatic resource restoration projects such as these would provide ecological services similar to those lost due to the release of hazardous substances. Surface water protection and enhancement projects that will improve water quality and provide habitat for biological resources are preferred.

3.3.4 Groundwater Quality and Resource Restoration Projects

The release of hazardous substances can impair groundwater quality as well as karst and cave resources within the Springfield Plateau. For example, these resources may be affected by seepage and percolation of contaminants from un-reclaimed and abandoned surface and underground mining, industrial releases of hazardous chemicals from storage pits, releases of hazardous substances due to dumping or accidental spills, as well as other sources. To address past and potential future injury, groundwater quality and karst/cave resource improvement projects may include many of the types of project categories, but are not limited to those listed below:

- Treatment of contaminated groundwater for beneficial use
- Ecological enhancement of remedial activities performed by the EPA
- Removal and disposal of contaminated soils and overburden that contribute to injured groundwater
- Closure of voids that allow contamination to enter groundwater directly
- Propagation and re-stocking of T&E species, and other karst dwelling species
- Protection of recharge areas/establishment of groundwater protection zones
- Implementation of source control and water conservation projects
- Riparian restoration along losing streams
- Implementation of water treatment structure projects to intercept and treat groundwater discharge to surface water
- Implementation of permeable pavement and other projects designed to minimize storm water runoff to surface water
- Other projects that serve to reestablish natural characteristics that have been eliminated would be utilized, as appropriate.

Groundwater quality and karst/cave habitat restoration projects such as these would provide ecological services potentially similar to those lost due to the release of hazardous substances. Groundwater protection and enhancement projects that will improve groundwater quality for drinking water and provide habitat for biological resources are preferred. Groundwater is a major source of domestic and municipal drinking water in the Springfield Plateau and is also utilized for agricultural and industrial purposes. The karstic nature of the Springfield Plateau Aquifer results in an increased susceptibility to contamination from point and non-point sources. As a result, many opportunities exist to protect or enhance recharge to the aquifer.

3.3.5 Public Enjoyment Projects

This category of projects is intended to promote the improvement in the quality of life for surrounding communities whose use and enjoyment of natural resources in the Springfield Plateau may have been reduced as a result of the release of hazardous substances. Projects could include programs that promote hiking and bird watching opportunities, trash clean-ups (stream teams) and education about the importance of water quality to life in the project area. These projects would facilitate protection and conservation of trust resources resulting in enhanced public access to, and thus appreciation of, natural resources.

3.4 Alternative C: Offsite, Compensatory Restoration and/or Acquisition of Equivalent Resources or Replacement

Alternative C allows for consideration of other restoration such as:

> *Acquisition of Equivalent Resources (AER) or Replacement*: the substitution of an injured resource with one that provides the same or substantially similar services; and
>
> *Compensatory Restoration*: any action taken to offset the interim losses of natural resources from the date of the event until recovery;

CERCLA authorizes Trustees to replace or acquire natural resources and their services equivalent to those injured by hazardous substance releases, in lieu of or in addition to, direct restoration of the injured resources themselves. Under this Alternative, primary restoration *will not* occur. Natural resource-based restoration projects could occur in the same resource categories described in Alternative B; however, *all* of the restoration activities would take place away from the natural resources injured by the release of hazardous substances. Instead of primary restoration projects, compensatory restoration activities and AER will be used to compensate the environment and the public for the natural resources potentially injured.

Restoration under this Alternative would only be considered in areas where the landowner is willing and the surrounding land uses indicate that the restoration will remain viable wildlife habitat for at least 15 years. Preservation of restored properties would be obtained through fee title purchase or environmental covenants. Land acquired is usually conveyed to individual state, tribal, or local government agencies, land trusts, or non-government conservation organizations following specific procedures and standards for each entity. In some instances, the federal government may acquire property if it meets the restoration

criteria and is contained within existing comprehensive conservation plan and/or other property acquisition boundaries. While the primary purpose of the preservation of land is to protect and preserve high quality natural resources, portions of the acquired properties may be made available to the public for natural resource based recreational activities such as wildlife viewing, hiking, fishing, hunting or educational opportunities.

Similarly to Alternative B, a mix of natural resource restoration, enhancement, and acquisition projects can be selected to provide a broad array of natural resource services throughout the Springfield Plateau area. Selecting a mix of off-site restoration projects allows for the recovery of a wider range of resources as well as more flexibility for cost-effectiveness and feasibility due to different constraints related to the ecology of the area or ability to find willing participants. Potential benefits of this approach to restoration include creating tracts of continuous high quality habitat or connecting existing habitats. This approach keeps the important linkages between physical, chemical and biological properties of the overall ecosystem.

The next five subsections, 3.4.1 through 3.4.5, present a suite of compensatory and AER restoration choices that could be selected under this Alternative, though the list is by no means exhaustive and could include numerous others as approved by the Trustees.

3.4.1 Upland Resource Restoration, Enhancement and Creation

The difference between Alternative B and this category of projects is the potential location of the compensatory restoration/AER projects away from areas directly impacted by the release in question. Under this alternative, upland restoration projects could include:

- Acquisition or protection through conservation easements of native prairie remnants in the Springfield Plateau
- Restoration/rehabilitation of degraded prairies
- Conversion of non-native grassland into native prairie species composition
- Acquisition or protection through conservation easements of high quality glade and forest environments
- Propagation and re-stocking of T&E, game, and non-game species
- Restoration/rehabilitation of degraded glades and forests
- Other projects that serve to reestablish natural characteristics that have been eliminated would be utilized, as appropriate.

3.4.2 Wetland Restoration, Reestablishment or Enhancement Projects

The difference between Alternative B and this category of projects is the potential location of the compensatory restoration/AER projects away from areas directly impacted by the release in question. Under this alternative, wetland restoration projects could include:

- Acquisition or protection through conservation easements of native wetland remnants in the Springfield Plateau
- Restoration/rehabilitation of degraded wetlands
- Conversion of non-native wetlands into native wetland species composition

- Acquisition or protection through conservation easements of high quality seeps and springs and swamp environments
- Propagation and re-stocking of T&E, game, and non-game species
- Other projects that serve to reestablish natural characteristics that have been eliminated would be utilized, as appropriate.

3.4.3 Surface Water Quality and Aquatic Resource Improvement Projects

The difference between Alternative B and Alternative C for this category of projects is the potential location of the compensatory restoration/AER projects away from areas directly impacted by the release in question. Under this alternative, surface water and aquatic resource restoration projects could include:

- Establishment of drinking water protection zones
- Acquisition or protection through conservation easements of native riparian corridor/forested floodplain remnants in the Springfield Plateau
- Restoration/rehabilitation of degraded riparian corridors
- Stabilization of eroding stream banks
- Natural stream channel design/restoration of channelized streams
- Propagation and re-stocking of T&E, game, and non-game aquatic species
- Acquisition or protection through conservation easements of high quality seeps, springs, and swamp environments
- Other projects that serve to reestablish natural characteristics that have been eliminated would be utilized, as appropriate.

3.4.4 Groundwater Quality and Resource Improvement Projects

The only difference between Alternatives B and C for this category of projects is the potential location of the compensatory restoration/AER projects away from the site of the release of hazardous substances or where they come to reside in the landscape. Under this alternative, groundwater restoration projects could include:

- Acquisition or protection through conservation easements of high quality caves, karst areas, seeps and springs
- Acquisition or protection through conservation easements of cave/karst recharge zones in the Springfield Plateau
- Closure of voids that allow contamination to enter groundwater directly
- Restoration/rehabilitation of degraded cave/karst recharge zones
- Installation of cave closure devices
- Propagation and re-stocking of T&E, game, and non-game aquatic species
- Riparian restoration along losing streams
- Implementation of water treatment structure projects to intercept and treat groundwater discharge to surface water
- Implementation of permeable pavement and other projects designed to minimize storm water runoff and increase recharge

- Other projects that serve to reestablish natural characteristics that have been eliminated would be utilized, as appropriate.

3.4.5 Public Education and Enjoyment Projects

This category of projects is intended to promote the improvement in the quality of life for surrounding communities whose use and enjoyment of natural resources in the Springfield Plateau were may have been as a result of the release of hazardous substances. Projects could include educational programs that promote hiking and bird watching opportunities, trash clean-ups (stream teams) and education about the importance of water quality to life in the project area. These projects would facilitate protection and conservation of trust resources resulting in enhanced public access to, and thus appreciation of, natural resources.

3.5 Alternative D: Tiered Project Selection Process Evaluating the Feasibility of Primary Restoration, Compensatory Restoration, and Acquisition of Equivalent Resources (Preferred Alternative)

Alternative D examines the feasibility of primary restoration at each site and also allows for consideration of other restoration alternatives if a return to baseline level of services is not feasible. CERCLA authorizes Trustees to replace or acquire natural resources capable of providing the baseline level of services equivalent to those injured by hazardous substance releases, in lieu of or in addition to, primary restoration of the injured resources themselves. Natural resources may also be rehabilitated with actions that increase the ecological integrity or viability of resources and their services. Possible actions and types of restoration to be considered under Alternative D may include:

> *Primary Restoration*: action taken to return an injured resource to its baseline condition;
>
> *Compensatory Restoration*: any action taken to offset the interim losses of natural resource services from the date of the event until recovery;
>
> *Acquisition of Equivalent Resources or Replacement*: the substitution of an injured resource that provides the same or substantially similar services.

This alternative includes all the categories of potential projects outlined in Alternative B and Alternative C. Alternative D is different from Alternatives B and C in that it allows the Trustees to use a combination of restoration activities and projects to accomplish restoration goals at or near the site. Consequently, Alternative D allows for the restoration, rehabilitation, replacement, and/or acquisition of equivalent resources within the Springfield Plateau. Like Alternative B, primary restoration is preferred but a combination of any or all categories of restoration may be considered and determinations of the appropriate type will be site-dependent. In cases where primary (on-site) restoration is not feasible, compensatory restoration or acquisition of equivalent resources off-site will allow flexibility for adequate compensation of the public for the resources.

Projects will be evaluated and selected using a matrix of factors (“Decision Matrix”) to be considered including criteria to give appropriate weight to the factors used to rank the projects.

An example of the Decision Matrix is included in Appendix A. The Trustees will solicit restoration project proposals from non-profit organizations, local, state and federal agencies, and the general public using a RFP approach. Please see the Appendix G for an exemplar RFP. The exemplar RFP serves as a model for future RFPs.

3.5.1 Upland Resource Restoration, Enhancement and Creation

Under this resource category of restoration projects, Alternative D allows the Trustees to select potential restoration projects discussed in both Alternatives B and C that serve to most efficiently return the site to pre-release conditions and/or compensate the public for the loss of upland natural resource services if primary restoration is not indicated. Alternative D restoration projects will be evaluated and selected using the guidelines established in Section (6) and the Decision Matrix.

3.5.2 Wetland Restoration, Reestablishment or Enhancement Projects

Under this category of restoration projects, Alternative D allows the Trustees to select potential restoration projects discussed in both Alternatives B and C that serve to most efficiently return the site to pre-release conditions and/or compensate the public for the loss of wetland natural resource services if primary restoration is not indicated. Alternative D restoration projects will be evaluated and selected using the guidelines established in Section (6) and the Decision Matrix.

3.5.3 Surface Water Quality and Aquatic Resource Improvement Projects

Under this category of restoration projects, Alternative D allows the Trustees to select potential restoration projects discussed in both Alternatives B and C that serve to most efficiently return the site to pre-release conditions and/or compensate the public for the loss of surface water and aquatic resource services if primary restoration is not indicated. Alternative D restoration projects will be evaluated and selected using the guidelines established in Section (6) and the Decision Matrix.

3.5.4 Groundwater Quality and Resource Improvement Projects

Under this category of restoration projects, Alternative D allows the Trustees to select potential restoration projects discussed in both Alternatives B and C that serve to most efficiently return the site to pre-release conditions and/or compensate the public for the loss of groundwater resources if primary restoration is not indicated. Alternative D restoration projects will be evaluated and selected using the guidelines established in Section (6) and the Decision Matrix.

3.5.5 Public Education and Enjoyment Projects

Under this category of restoration projects, Alternative D allows the Trustees to select potential restoration projects discussed in Alternatives B and C that serve to educate and/or compensate the public for the loss of any natural resources or natural resource services if primary restoration is not indicated. Alternative D restoration projects will be evaluated and selected using the guidelines established in Section (6) and the Decision Matrix.

Table 2. Comparison of Alternatives A, B, C, and D

Actions	**Alternative A** (No Action)	**Alternative B** Primary Restoration Projects	**Alternative C** Compensatory Restoration and Acquisition of Equivalent Resources Projects	**Alternative D** Primary Restoration, Compensatory Restoration, and Acquisition of Equivalent Resources Projects (Preferred)
Restore injured upland resources	No	Yes	No, compensatory restoration allowed at off-site locations, acquisition of equivalent resources possible.	Yes
Preserve existing high-quality upland resources	No	No	Yes	Yes
Restore injured wetlands and associated resources	No	Yes	No, compensatory restoration allowed at off-site locations, acquisition of equivalent resources possible.	Yes
Preserve existing high-quality wetlands resources	No	No	Yes	Yes
Restore injured surface water systems and aquatic resources	No	Yes	No, compensatory restoration allowed at off-site locations, acquisition of equivalent resources possible.	Yes

Table 2 Continued				
Actions	**Alternative A** (No Action)	**Alternative B** Primary Restoration Projects	**Alternative C** Compensatory Restoration and Acquisition of Equivalent Resources Projects	**Alternative D** Primary Restoration, Compensatory Restoration, and Acquisition of Equivalent Resources Projects (Preferred)
Preserve existing high-quality surface water systems and aquatic resources	No	No	Yes	Yes
Restore injured groundwater, cave, and karst systems	No	Yes	No, compensatory restoration allowed at off-site locations, acquisition of equivalent resources possible.	Yes
Preserve existing high-quality groundwater, cave, and karst systems	No	No	Yes	Yes
Improve outdoor recreational opportunities/enhance public awareness	No	Yes	Yes	Yes

SECTION 4 - AFFECTED RESOURCES

The purpose of this section is to describe the physical, biological, and socioeconomic resources that are potentially affected by the implementation of the SPRRP and the selected Alternative discussed in Sections (3) and (5). Detailed descriptions of the affected resources are provided in Appendix D.

4.1 Physical Resources

4.1.1 Geology

The Springfield Plateau is defined by smooth plains, lying higher in elevation than adjacent regions (Nigh and Schroeder, 2002). The bedrock in the Springfield Plateau has characteristic Mississippian-age cherty limestones and limestones, with well-developed karst (Nigh and Schroeder, 2002). Soils in the Springfield Plateau are composed of material weathered from cherty limestones and partially enveloped with loess (Nigh and Schroeder, 2002).

4.1.2 Surface Water

Due to the comparatively high elevation of the Springfield Plateau in Missouri, streams drain radially from the plateau into adjacent areas (Nigh and Schroeder, 2002). Drainage basins in the Springfield Plateau include major portions of the [west flowing] Spring River, [north flowing] Sac River, and [south flowing] James River; and other minor portions of the Upper Osage River, Pomme de Terre River, Elk River, and Cherokees Lake Basins (Figure 3) (Nigh and Schroeder, 2002). Streams in the Springfield Plateau are typically clear with chert gravel and cobble, and limestone or dolomite boulders and bedrock.

4.1.3 Groundwater

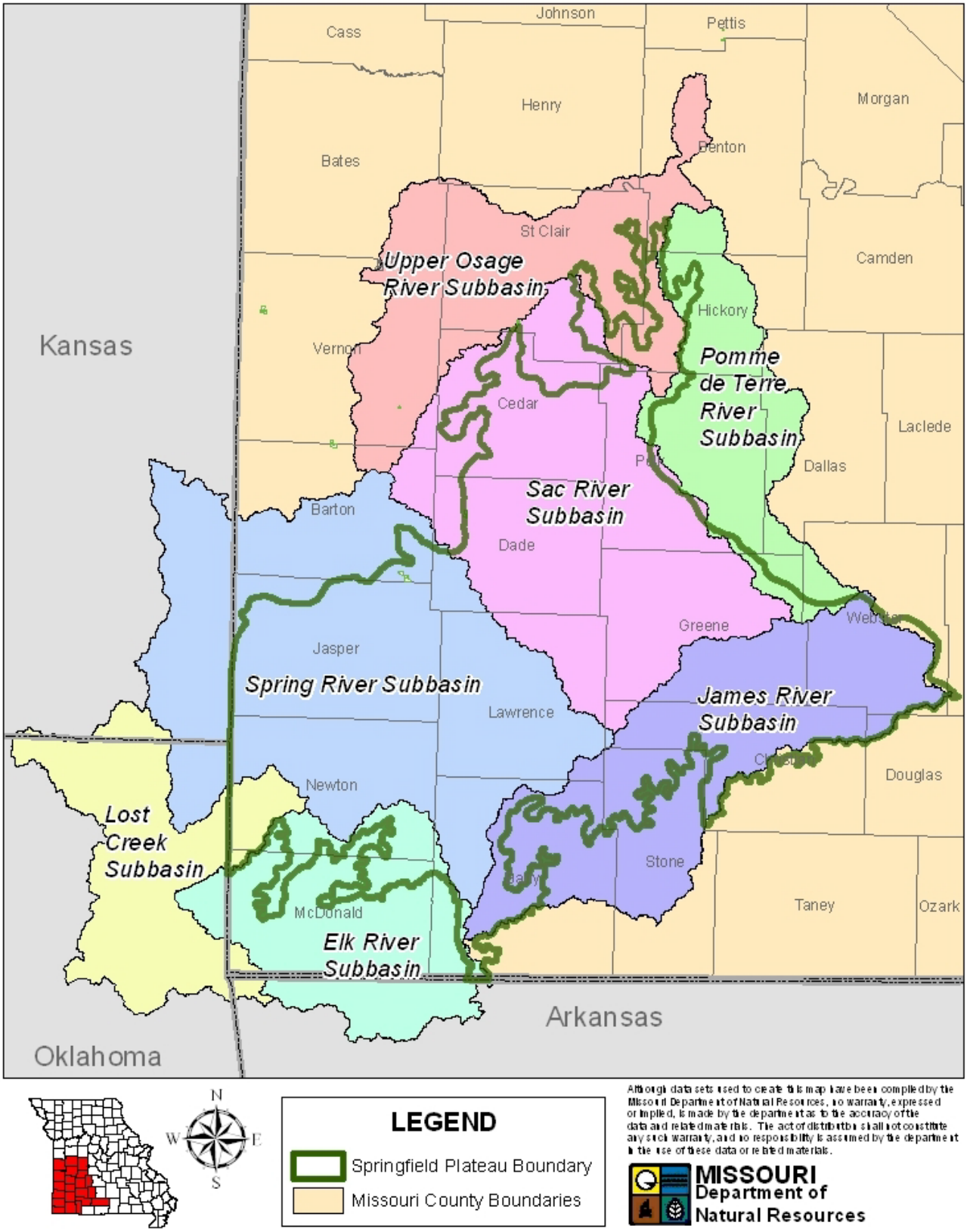
The Springfield Plateau lies within the Ozark Plateau's aquifer system and is comprised of three aquifers, named from shallowest to deepest, the Springfield Plateau aquifer, Ozark aquifer, and St. Francois aquifer. The Ozark aquifer is the primary water source for the Springfield Plateau region (Miller and Appel, 1997).

4.2 Biological Resources

4.2.1 Terrestrial and Aquatic Habitats

As a consequence of its unique karstic geology, the Springfield Plateau is a host to many rare natural communities. Uncommonly found terrestrial habitats in the Springfield Plateau include chert, limestone, and hardpan prairies; globally unique chert glades; high-quality limestone and sandstone glades; and, pristine high-quality caves (Nigh and Schroeder, 2002). Unique aquatic habitats include numerous springs, losing streams, sinkhole ponds, and caves (Nigh and Schroeder, 2002); steep-sided streams with limestone bluffs (MDC, 2009a); and cool/coldwater fisheries fed by multiple streams (MDC, 2009a). These habitats are strongly associated with listed species in the

FIGURE 3. WATERSHEDS IN THE SPRINGFIELD PLATEAU



Springfield Plateau. State- and federally-listed species, such as cave dwelling species and near-endemic glade species, depend upon the persistence of these natural communities for their survival (Nigh and Schroeder, 2002).

4.2.2 Conservation Opportunity Areas

Conservation Opportunity Areas (COAs) represent areas with unique species and habitats that are prioritized for conservation. The Missouri Department of Conservation (MDC) has identified three COAs in the Springfield Plateau, including the Shoal Creek, Spring River, and Golden Grasslands areas (Conservation Commission of Missouri, 2009) (Figure 4).

4.2.3 Federally- and State-listed Species

The Springfield Plateau houses more rare and endangered species than any other region in Missouri (Nigh and Schroeder, 2002). Twenty-one species in the Springfield Plateau are state or federally-listed, or are candidates for listing, including 14 species with federal status and 18 species with state status (Table 3). The list of species provided in Table 3 was compiled from county-specific information available online from the MDC Heritage Program (MDC, 2011a) and the Service (USFWS, 2011a); this list is current for the year 2011.

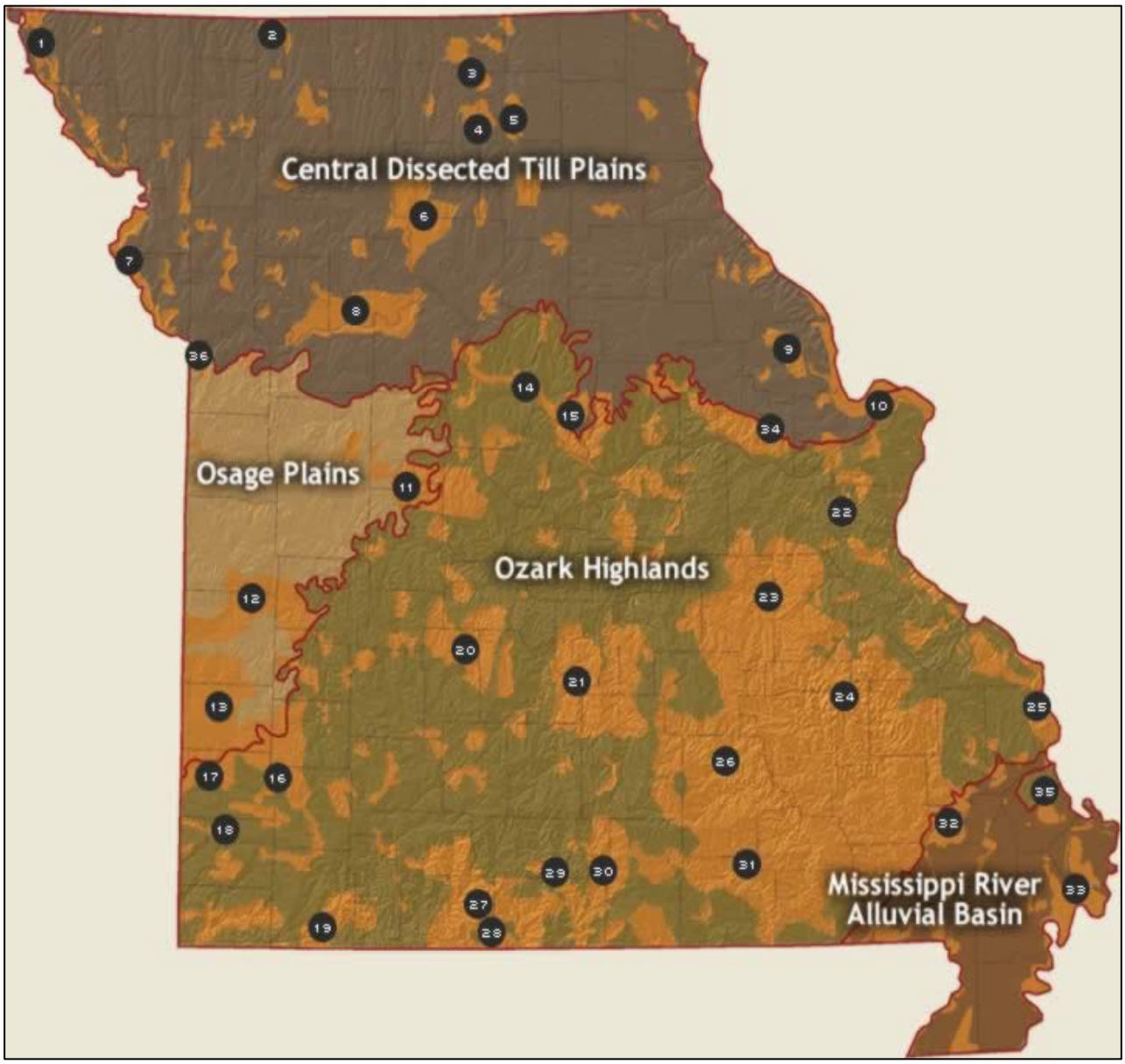
4.2.4 Missouri Species of Concern

In addition to the "listed" species, the Missouri Department of Conservation maintains a database of rare plants and animals – the "Missouri Species of Concern" (MDC, 2011b). Plants and animals are given a numeric rank (S1 through S5) based upon number of occurrences within Missouri. The number of species of concern that occupy the Springfield Plateau totals 76 species (Appendix E) (MDC 2011b).

4.2.5 Extirpated Species

Extirpated species are species that previously existed in Missouri, but are no longer found in Missouri (MDC, 2011c). The extirpation of a species is of concern because all species have a unique role (or "niche") that they fulfill in an ecosystem. Some extirpated species are being reintroduced into Missouri. The desired endpoint of species reintroductions is to both reestablish populations of the extirpated species and also to benefit the ecosystem by replacing the lost functionality. Examples of reintroduction plans currently underway in Missouri include plans for the American burying beetle, bison, and elk. When appropriate, the restoration of injured resources may include the reintroduction of previously extirpated species.

FIGURE 4. CONSERVATION OPPORTUNITY AREAS OF MISSOURI



COAs within the Springfield Plateau include the Golden Grasslands (16), Spring River (17), and Shoal Creek (18).

Source: Conservation Commission of Missouri. "Comprehensive Wildlife Strategy: Conservation Opportunity Areas." 2009 Missouri Department of Conservation. 12 Dec, 2009 http://mdc.mo.gov/nathis/cws/coa/

Table 3. Threatened, Endangered, and Candidate Species in the Springfield Plateau

Common Name	Scientific Name	State Status	Federal Status
Birds			
Bachman's sparrow	*Aimophila aestivalis*	Endangered	
American bittern	*Botaurus lentignosus*	Endangered	
Northern harrier	*Circus cyaneus*	Endangered	
Greater prairie-chicken	*Tympanuchus cupido*	Endangered	
Mammals			
Black-tailed jackrabbit	*Lepus californicus*	Endangered	
Gray bat	*Myotis grisescens*	Endangered	Endangered
Plains spotted skunk	*Spilogale putorius interrupta*	Endangered	
Fish			
Ozark cavefish	*Amblyopsis rosae*	Endangered	Threatened
Arkansas darter	*Etheostoma cragini*		Candidate
Niangua darter	*Etheostoma nianguae*	Endangered	Threatened
Redfin darter	*Etheostoma whipplei*	Endangered	
Neosho madtom	*Notorus placidus*	Endangered	Threatened
Mollusks			
Pink mucket	*Lampsilis abrupta*	Endangered	Endangered
Neosho mucket	*Lampsilis rafinesqueana*		Candidate
Rabbitsfoot	*Quadrula cylindrica cylindrica*		Candidate
Insects			
American burying beetle[1]	*Nicrophorus americanus*	Endangered	Endangered
Plants			
Geocarpon	*Geocarpon minimum*	Endangered	Threatened
Mead's milkweed	*Asclepias meadii*	Endangered	Threatened
Missouri bladder-pod	*Physaria filiformis*	Endangered	Threatened
Virginia sneezeweed	*Helenium virginicum*	Endangered	Threatened
Western prairie fringed orchid	*Platanthera praeclara*	Endangered	Threatened

1. The MDC identifies this species as a Missouri extirpated species. The Service and the St. Louis Zoo are working [independent of this restoration plan] to develop a plan for reintroduction in the SPRRP.

4.2.6 Migratory Bird Species

The Springfield Plateau is located within the Mississippi Flyway, one of the major migration routes in the United States. More than 250 species of migratory birds utilize the Springfield Plateau as a migratory pathway, according to the MDC's Fish and Wildlife Information System (MDC, 2009b).

4.3 Socioeconomic Resources

4.3.1 Recreational Resources

Game animals in the Springfield Plateau provide hunting and fishing opportunities for people living in or near the region, and result in significant annual revenue for the area. Fishing and hunting expenditures in Missouri totaled nearly $2.2 billion in 2006, according to the most recent *National Survey of Fishing, Hunting, and Wildlife-Associated Recreation* (USFWS et al., 2006).

The Springfield Plateau contains 80,000 acres of public lands (Figure 5) (Nigh and Schroeder, 2002). The public lands in the Springfield Plateau provide recreational opportunities such as hunting, fishing, swimming, boating, bird watching, camping, and hiking (Nigh and Schroeder, 2002). A listing of the public lands (to date) in the Springfield Plateau is provided in Appendix F.

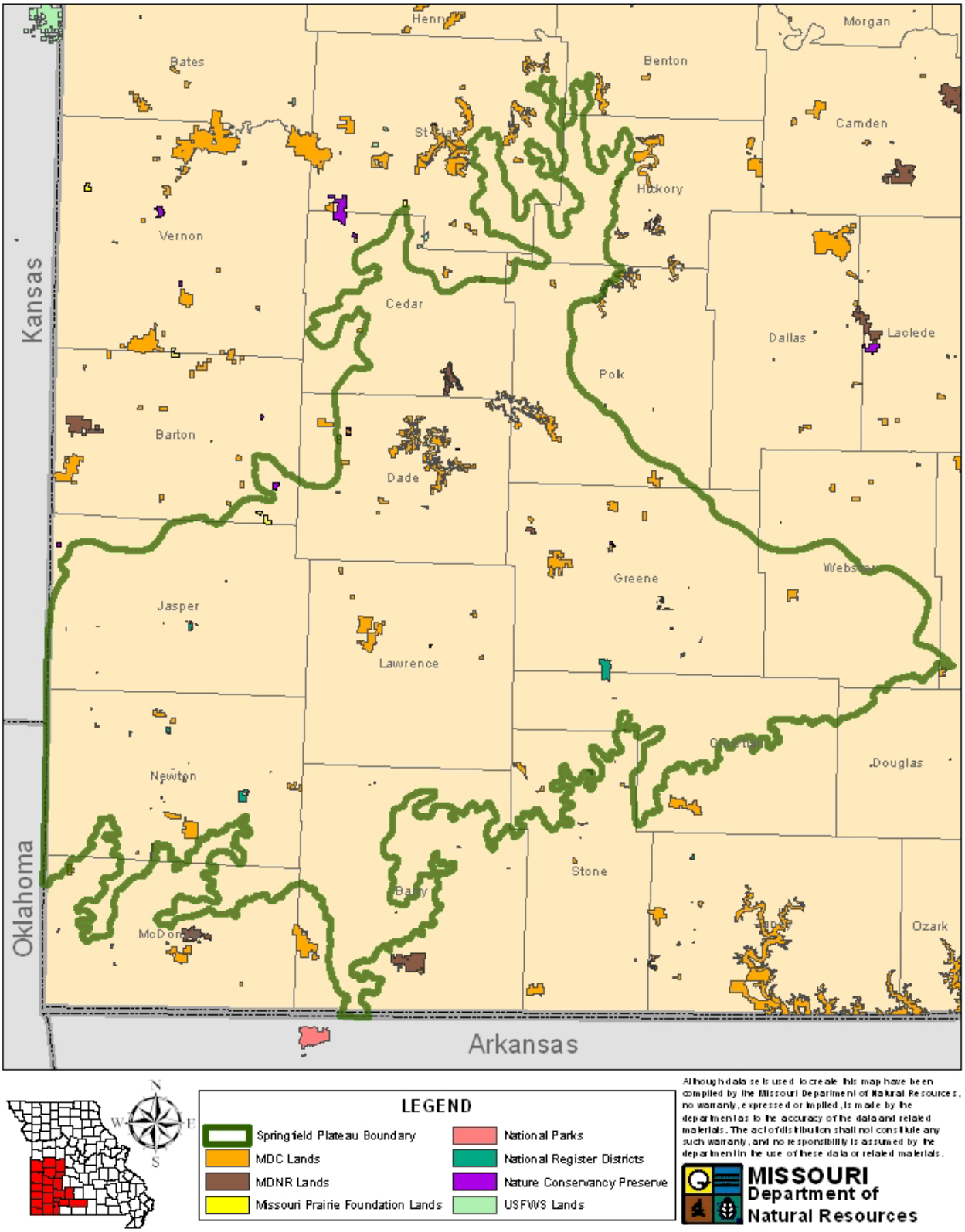
4.3.2 Economics and Land Use

Historically, agriculture and mining were the primary components of the Springfield Plateau's economy. The economy of the early 1800s was dominated by the farming of livestock, corn, and wheat (Nigh and Schroeder, 2002). By the 1850s and 60s the region became known worldwide for its production of lead and zinc. Mining of these ores became concentrated in Jasper and Newton counties, and continued until ore reserves were nearly depleted around 1966 (Nigh and Schroeder, 2002).

At present, the economy of the Springfield Plateau is driven by wholesale trade, retail trade, and manufacturing (U. S. Census Bureau, 2006). The agriculture sector remains an important component in the region's economy. Agriculture in the region is dominated by the livestock industry, notably beef and dairy cattle production in Greene county, and poultry farming in Barry and Newton counties (Nigh and Schroeder, 2002). The Springfield Plateau is Missouri's leading dairy cattle region (Nigh and Schroeder, 2002). Hay, sorghum, and wheat crops are also important to the area (Nigh and Schroeder, 2002). Today, high-calcium limestone and gravel mining occur in the Springfield and Joplin areas.

The economies within the Springfield Plateau dictate land use. Land use in Springfield, Joplin, and Neosho is dominated by urbanization (Nigh and Schroeder, 2002). Throughout the region, crops occupy the best soils and smoothest lands, grasslands are used for beef and dairy cattle, and mined lands remain as derelict tracts (Nigh and Schroeder, 2002).

FIGURE 5. SELECT PROTECTED LANDS IN THE SPRINGFIELD PLATEAU



SECTION 5 - ENVIRONMENTAL CONSEQUENCES

The purpose of this section is to evaluate and explain the potential environmental impacts of the selection of a particular Alternative. The four alternatives reviewed in this document are discussed here to reveal their differences and to provide insight into the selection of the Trustees' Preferred Alternative.

5.1 Alternative A: No Action

5.1.1 Habitat Impacts

Under this alternative, no natural resources would be restored, enhanced, or acquired beyond what is currently being done within mandates, policies and restricted budgets. The public would not be compensated for injuries to natural resources from the release of hazardous substances into the environment because no restoration linked to the injuries would occur.

5.1.2 Biological Impacts

Natural resources harmed by the release of hazardous substances into the environment would not be restored, rehabilitated, replaced or the equivalent acquired. Populations of fish and wildlife species throughout the Springfield Plateau that rely on streams and associated upland, wetland, surface water, and ground water habitats would not increase sufficiently to compensate for past losses.

5.1.3 Listed, Proposed, and Candidate Species

Negative impacts to listed species would not be reduced under this alternative.

5.1.4 Cultural Resources

No cultural resources have been identified.

5.1.5 Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 Federal Register 7629 (1994)), directs federal agencies to incorporate environmental justice in their decision making process. Federal agencies are directed to identify and address as appropriate, any disproportionately high and adverse environmental effects of their programs, policies and activities on minority or low-income populations.

Under the No Action Alternative (A), wildlife viewing and environmental education opportunities would not improve through enhancement projects. Thus, the local environment would remain impacted while natural recovery occurs. While affluent individuals can afford to travel and pay for non-impacted outdoor experiences located elsewhere, low-income individuals are less capable of doing so.

5.1.6 Socioeconomic Impacts

This alternative would not result in any positive direct or indirect impacts on the local economy. This alternative would not result in additional lands that could provide increased recreational opportunities and related economic development in the area.

5.1.7 Cumulative Impacts

If this alternative were implemented, the cumulative impacts would be adverse to the environment. Injuries to the environment likely would persist for some time into the future and would not be compensated for. The exclusive reliance on existing programs, regulations and policies do not necessarily provide for long-term restoration and preservation of high quality upland, wetland, aquatic, and groundwater resources or additional services to compensate for injuries suffered.

5.2 Elements Common to Alternatives B, C, and D

5.2.1 Habitat Impacts

Restoring, enhancing, or protecting upland, wetland, aquatic, and groundwater resources negatively impacted by hazardous substances improves the ecological functions of the Springfield Plateau that are essential for many fish and wildlife species. In addition, stream and associated resource restoration and preservation may also improve public use and enjoyment of these resources. Benefits of upland, wetland, aquatic, and groundwater resource improvements or enhancement would include improved water quality, restored habitat for fish and wildlife species, and increased ecological productivity. Improving the quality of aquatic vegetation and habitat for fish and birds would provide similar ecological functions as those potentially injured by hazardous substances.

Under Alternatives B, C, and D there would be minimal short-term impacts to habitat due to the needed manipulation of soil to complete upland, wetland, and aquatic habitat restoration or enhancement projects.

5.2.2 Biological Impacts

Alternatives B, C, and D would benefit a wide suite of species of fish and wildlife found in the Springfield Plateau. Improvements to the habitats of species are expected to result in commensurate increases in the populations of species that utilize the newly restored, created, or protected habitats. There would be minimal negative impacts to biological resources from human disturbance in relation to use of preserved areas and natural resource-based public use projects. The public use projects would also protect and potentially minimize human disturbance to fish and wildlife by controlling human impacts on those resources.

5.2.3 Listed, Proposed, and Candidate Species

State- and federally-listed or endangered species would receive further protection and aid in the recovery of the species if Alternative B, C, or D were implemented. Protective measures would be taken during implementation of any projects. Adherence to the restrictions proscribed in the protective measures will provide for no adverse effects on the listed species. For federally-listed species, consultation under the Endangered Species Act will be conducted as described in Section 7.3 of this report.

5.2.3.1 Birds

The Greater prairie chicken and Bachman's sparrow may use uplands restored or acquired under Alternative B, C, or D. The Northern harrier and American bittern may benefit from wetlands and aquatic habitat restored or acquired under Alternatives B, C, or D.

5.2.3.2 Mammals

The Spotted skunk and the Black-tailed jackrabbit may use uplands restored or acquired under Alternative B, C, or D. The Gray bat may benefit from caves and karst systems restored or acquired under alternatives B, C, or D.

5.2.3.3 Aquatic organisms

State and federally-listed mussel species like the Pink mucket and other mussel species require clean waterways and specific fish host species for their young. Mussel populations may return or increase in surrounding waterways as aquatic stream habitat is restored, water quality is improved, and (as needed) mussels and their host species are propagated and reintroduced in the Springfield Plateau waterways. Mussel species may benefit from restoration or acquisition projects under Alternative B, C, or D.

State- and federally-listed fish species like the Arkansas darter, Niangua darter, Redfin darter, Neosho madtom, and Ozark cavefish may benefit from aquatic habitat restoration or acquisition projects in Alternative B, C, or D.

5.2.3.4 Insects

The state- and federally-listed American burying beetle may benefit from upland restoration and acquisition projects under Alternative B, C, or D.

5.2.3.5 Plants

State- and federally-listed plant species like the Missouri bladder pod, Mead's milkweed, Virginia sneezeweed, Prairie fringed orchid, and Geocarpon may benefit from upland restoration and acquisition projects under Alternative B, C, or D.

5.2.4 Cultural Resources

Projects covered under this EA such as planting riparian buffers, stabilizing stream banks, acquiring tracts of native prairie, restoring abandoned mine lands, and development for public uses or other eventual development on acquired lands have the potential to affect properties meeting the criteria for the Natural Register of Historic Places and other cultural resources. Specific areas for upland and wetland restoration and land acquisition have not been determined. When project areas are determined during preparation of a RFP, and prior to making final decisions about these projects, the Field Supervisor at the Columbia, Missouri Ecological Field Office of the Fish and Wildlife Service, will initiate consultation with the Missouri State Historic Preservation Officer (HPO) and, with the assistance of the Service Regional HPO, will complete the Section 106 process. 36 C.F.R. Part 800.

5.2.5 Environmental Justice

Upland, wetland, aquatic, and cave/karst preservation would involve transactions with willing landowners. No minority or low-income populations would be displaced or negatively affected in any way. While the primary purpose of the restoration of this land is for fish and wildlife, portions of the acquired properties may be used by the public for natural resource based recreational/educational activities such as wildlife viewing. Aquatic habitat improvement would also enhance recreational opportunities in and around the Springfield Plateau.

5.2.6 Socioeconomic Impacts

The overall quality of life for the surrounding communities would improve with the restoration of the potentially injured areas. Protection of prairies, wetlands, riparian buffers, and caves would provide wildlife viewing, fishing and hunting, and help create positive economic impacts on the local economy. Aquatic habitat improvements or enhancements would provide more opportunities for public enjoyment of natural resources. Acquisition procedures of land would involve transactions with willing land owners who would be paid fair market value.

5.2.7 Elements Common to All Impacts

Other impairments to the ecosystem such as pollution associated with development would continue to affect the Springfield Plateau where restoration projects would be implemented under alternatives B, C, and D. These additional sources of impact may also inhibit the ability of the natural resources to fully recover or may negatively impact other restoration projects undertaken by the Trustees.

5.3 Alternative B: Primary Restoration of Injured Natural Resources

5.3.1 Cumulative Impacts

Alternative B would limit the Trustees solely to primary restoration of natural resources at the site of the release of hazardous substances or where those substances come to be located in the environment. No off-site, compensatory, or acquisition of equivalent resource restoration projects would occur under this alternative. Selection of Alternative B would compel the Trustees to spend restoration funds only at the site of release, without regard to other mitigating factors such as the local environment, prospects for restoration success, and long-term project viability due to external pressures. As a result, the Trustees may be compelled to spend large sums of money to directly restore resources that have limited value due to the surrounding environment (*e.g.* a restored prairie surrounded by urban development).

Cumulative impacts from the primary restoration implemented under Alternative B would still positively affect the region as a whole. Primary restoration is the Trustees stated preference for all potentially injured natural resources. However, the cumulative effect of primary restoration projects from Alternative B is expected to be less than cumulative benefits of the comprehensive restoration alternatives offered by Alternative D. Due to the limitation of the ability of the Trustees to only consider primary restoration, Alternative B is less desirable than Alternative D. To begin restoring the resources of the Springfield Plateau that have been injured by the release of hazardous substances and achieving maximum benefit from restoration projects implemented, the Trustees need to have the flexibility to request and implement projects that best suit the needs, local conditions, and local communities affected by the injured natural resources while still meeting our legal requirements.

5.4 Alternative C: Offsite, Compensatory Restoration and/or Acquisition of Equivalent Resources or Replacement

5.4.1 Cumulative Impacts

Alternative C would limit the Trustees solely to off-site compensatory restoration, or AER projects. No primary restoration of injured natural resources to their baseline condition would occur under this alternative. Selection of Alternative C would compel the Trustees to spend restoration funds off-site from the injured natural resources. Consequently, the Trustees would be without the ability to directly restore injured natural resources, even in situations where primary restoration is feasible, cost-effective, and desired by the local community. As a result, large portions of injured natural resources may remain injured in perpetuity, since the Trustees could exhaust restoration funds at restoration locations far from the site of release.

Nonetheless, cumulative impacts from the compensatory restoration and AER projects implemented under Alternative C will still positively affect the Springfield Plateau. Alternative C will provide for opportunities to add to and connect the currently protected resources over a larger geographic area than Alternative B. Consequently, Alternative C may also establish larger tracts of contiguous high quality habitat that would benefit many fish and wildlife species in the area.

However, the overall effect of restoration projects under Alternative C is expected to be less than the cumulative benefits of the comprehensive restoration alternatives offered by Alternative D. Due to these limiting factors, Alternative C is less desirable than Alternative D. To achieve maximum benefit from those restoration projects implemented, the Trustees need to have the flexibility to request and implement projects that best suit the environmental needs, local conditions, and local communities affected by the injured natural resources while still meeting our legal requirements.

5.5 Alternative D: Tiered Project Selection Process Evaluating the Feasibility of Primary Restoration, Compensatory Restoration, and Acquisition of Equivalent Resources (Preferred Alternative)

5.5.1 Cumulative Impacts

As the synthesis of restoration projects presented in both Alternatives B and C, Alternative D would contribute most to the efforts of the Trustees towards the restoration of natural resources in the Springfield Plateau. With the ability to selectively decide between primary restoration, off-site restoration/resource enhancement, or acquisition of equivalent resources, the Trustees can plan for and seek RFPs for projects that will best restore natural resources to their baseline level of services or acquire the equivalent of such resource services. As a result, large tracts of injured natural resources can be considered for restoration, and where on-site restoration is impracticable, or less appropriate, suitable off-site restoration projects can be sought and considered. The Trustees would use the project selection criteria as outlined in section (6) of this document to judiciously select the most appropriate restoration projects.

The inclusion of a greater diversity of projects under Alternative D allows for greater input and impact by local communities, organizations, and agencies. It also allows for greater input and impact over the restoration projects selected to restore injured resources and resource services and to compensate the public for the loss of injured natural resources. Accordingly, Alternative D provides for increased cooperation between the Trustees and the abovementioned entities towards the completion of conservation, natural resource enhancement, and restoration goals. Because of the ability to consider a greater diversity of projects, Alternative D may result in the establishment of larger tracts of continuous high quality habitat that would benefit fish and wildlife species in the Springfield Plateau area than possible under either Alternatives B or C.

Cumulative impacts from the primary restoration, compensatory restoration and AER projects implemented under Alternative D would result in the greatest positive impact for the Springfield Plateau as a whole. The overall effect of restoration projects under Alternative D is expected to be significantly greater than cumulative benefits offered by Alternative B or Alternative C.

5.6 Summary of Environmental Consequences for Each Alternative (Table 4)

Table 4. Comparison of Alternative A, B, C, & D, Environmental Consequences

Attributes	Alternative A (No Action)	Alternative B Primary Restoration Only	Alternative C Off-Site Compensatory Restoration and/or Acquisition of Equivalent Resources	Alternative D Primary Restoration, Off-Site Compensatory Restoration and/or Acquisition of Equivalent Resources
Uplands	Continued net loss of resources	Increase of upland resources associated with the restoration of injured sites	Uplands away from the site are restored and/or protected, additional protection from degradation or development. On-site injured resources remain unaddressed	Injured uplands are directly restored where appropriate; uplands are preserved, enhanced, or protected off-site when primary restoration is not indicated
Wetlands	Expected continued net loss of resources	Increase of wetland resources associated with the restoration of injured sites	Wetlands away from the site are restored and/or protected, additional protection from degradation or development. On-site injured resources remain unaddressed	Injured wetlands are directly restored where appropriate; wetlands are preserved, enhanced, or protected off-site when primary restoration is not indicated
Aquatic resources	Continued degradation and loss of resources	Increase of aquatic resources associated with the restoration of injured sites	Aquatic resources away from the site are restored and/or protected, additional protection from degradation or development. On-site injured resources remain unaddressed	Injured aquatic resources are directly restored where appropriate; aquatic resources are preserved, enhanced, or protected off-site when primary restoration is not indicated
Surface water	Remain degraded due to land use issues and historic pollution in sediments	Increase of surface water quality associated with the restoration of injured sites	Surface water quality away from the site is restored and/or protected, additional protection from degradation or development. On-site injured resources remain unaddressed	Injured surface waters are directly restored where appropriate; surface waters are preserved, enhanced, or protected off-site when primary restoration is not indicated
Ground water, cave and karst resources	Continued degradation and loss of resources	Increase of ground water quality associated with the restoration of injured sites	Groundwater resources away from the site are restored and/or protected, additional protection from degradation or development. On-site injured resources remain unaddressed	Injured ground water/cave/karst resources are directly restored where appropriate; ground water/cave/karst resources are preserved, enhanced, or protected off-site when primary restoration is not indicated
Wildlife resources	Continued injury and decrease of numbers	Increase in populations with restoration of injured sites	Increase in populations in locations other than the site of injury.	Wildlife populations increase at the site of injury and at off-site locations when compensatory restoration or acquisition of equivalent resources is indicated
Listed threatened or endangered species	Negative impacts would continue	Potential recovery of species in the area of primary restoration	On-site injured resources remain unaddressed.	Potential recovery of listed species at the site of primary and compensatory restoration. Protection of populations through acquisition of existing resources

Table 4 Continued				
Attributes	**Alternative A (No Action)**	**Alternative B Primary Restoration Only**	**Alternative C Off-Site Compensatory Restoration and/or Acquisition of Equivalent Resources**	**Alternative D Primary Restoration, Off-Site Compensatory Restoration and/or Acquisition of Equivalent Resources**
Cultural resources	N/A	Adverse impacts are possible	Adverse impacts are possible	Adverse impacts are possible
Environmental justice issues	No opportunities for increased quality of life	Degraded resources impacting communities are directly restored	Degraded resources impacting communities are not restored. Populations distant from the site more directly benefit from restoration	Degraded resources impacting communities are restored or the public is compensated for their loss with appropriate off-site restoration projects
Socioeconomic issues	Local economy would remain the same or decrease due to continued injury without restoration	Local economy could potentially increase due to funds spent on primary restoration	Increase likelihood of restoration benefiting local economy due to greater geographic region	Local economy likely to benefit from the restoration of injured sites, funds expended on restoration, and enhanced wildlife, fishing, hiking, viewing, etc. opportunities.
Recreational use, environmental education and resource enjoyment	No enhancement or increase in recreational opportunities or environmental education	Potential enhancement of wildlife viewing and fishing opportunities at the site only.	Allows for enhancement of wildlife/bird viewing and fishing opportunities as well as enhancement of understanding of the ecosystem	Allows for enhancement of wildlife/bird viewing and fishing opportunities as well as enhancement of understanding of the ecosystem both at the site and at off-site areas designed to compensate the public.
Cumulative impacts	Potential decrease in populations of wildlife continued loss of upland and wetland resources, continued degradation of groundwater	Increase populations of wildlife and greater diversity in the aquatic community; some ecosystem functions restored, funds may be spent inappropriately for local conditions	Increase populations of wildlife and aquatic communities only at locations other than the site of release. Natural resources at the site of injury remain injured.	Increase populations of wildlife and greater diversity of fish communities; ecosystem functions are able to be restored. Local communities experience satisfaction of increased natural resources and enjoyment.

SECTION 6 - RESTORATION PROJECT PROPOSAL PROCESS

6.1 Introduction

Sections 6.1.1 through 6.4 explain the processes through which the Trustees will evaluate and select restoration projects under this plan. By law, the Trustees are responsible to the public to use recovered restoration funds solely for the restoration of natural resources injured by the release of hazardous substances, and/or pollutants. The Trustees must restore, rehabilitate, replace, and/or acquire the equivalent of injured natural resources. The Trustees must ensure that there is a legal nexus between the injury and the restoration project implemented. The Trustees are accountable to the public for how the funds are expended and must comply with requirements under NEPA and CERCLA. There is no intent by the Trustees to delegate these responsibilities to other parties or organizations.

The Trustees intend to conduct both primary and compensatory restoration under this SPRRP. As previously defined, primary restoration is any action taken to return an injured natural resource and its services to its baseline condition. Compensatory restoration is any action taken to offset the interim losses of natural resources from the date of the event until recovery. This SPRRP provides two mechanisms by which restoration projects in the Springfield Plateau may be proposed, evaluated and selected by the Trustees, in conjunction with a robust public review and comment process.

6.1.1 The Request for Proposal Process

The Trustees intend to utilize an RFP process to assist in the identification of some restoration projects for implementation. This RFP process will be the sole mechanism through which the Trustees will evaluate and select compensatory restoration projects, and one of the two mechanisms used for primary restoration projects.

Issuance of an RFP by the Trustees will be triggered by a number of factors, including but not limited to, the achievement of settlements; staff time and availability; input from stakeholders; the schedule of remedial action at a particular site; and the nature of the resource injury. The Trustees will work with stakeholders and amongst themselves to identify projects which meet the restoration criteria and goals contained within this SPRRP. The Trustee Council will evaluate and make the final recommendations on the selection of projects. The exemplar RFP contained in Appendix G serves as a model for future RFPs. It contains the restoration project RFP format and guidance for a hypothetical restoration fund.

Potential stakeholders include, but are not limited to: municipalities; county and local governments; state and federal governments; private and public entities; and private and public nonprofit organizations interested in implementing restoration projects to restore injured natural resources and their services. Overall effectiveness of the SPRRP will increase through leveraging public and private contributions (dollars and services) and coordination with other area enhancement projects. Note that the Trustees can submit projects through the RFP process. These projects will be evaluated objectively using the same criteria as non-trustee submittals and

comply with Sections 105.450 to 105.458, Revised Statutes of Missouri (RSM0) regarding conflict of interest.

Restoration projects should not duplicate or substitute for traditional funding sources or program responsibilities; they should be in addition to existing responsibilities. Basic principles such as fish and wildlife biology, landscape ecology, botany, wetland/riverine ecology and hydrology are important concepts to utilize in the development of quality restoration projects that restore both habitat structure and function and comply with the goals of the SPRRP. Maximizing resources and leveraging monies for restoration projects is strongly encouraged.

The Trustees reserve the right to initiate or return communications in any form to project proposal submitters to request clarifications in their proposal documents. The Trustees will notify each submitter separately regarding their selection or failure to be selected for funding under a specific RFP. The public will be notified of selected restoration project proposals via the Trustees respective NRDAR websites and via local repositories.

6.1.2 The Trustee-Initiated Primary Restoration Project Proposal Process

In addition to the RFP process detailed in Section 6.1.1, the Trustees have also decided to include the ability to directly control the implementation of primary restoration at the sites where injury to natural resources has been determined by Trustee-led assessment studies. This direct-drive process is not applicable to compensatory restoration.

Trustee-initiated primary restoration project proposals can be submitted by a Trustee to the Trustee Council at any time. Trustee-initiated proposals for primary restoration will be crafted to reflect the known suite of information regarding the NRDAR site where the Trustees have made a successful claim. The Trustees will work with stakeholders and amongst themselves to identify projects which meet the restoration criteria and goals contained within this SPRRP. The Trustee Council will evaluate and make the final recommendations on the selection of projects. Trustee-initiated proposals will need to include the same information as proposals submitted under an RFP, and they will be evaluated under the same criteria, including use of the Decision Matrix found in Appendix A of this document.

6.2 Restoration Project Proposal Evaluation Criteria

Sections 6.2.1. through 6.4 below provide detailed information regarding the criteria for restoration project proposals. The scoring criteria or Decision Matrix which the Trustees will use to score individual restoration project proposals received from the RFP process is included as Appendix A. Appendix B details the full process which the Trustee Council will use to screen and select successful restoration project proposals.

6.2.1. Benefit Scope

Wherever possible, natural resource functions that are self-sustaining and essential to maintain the resource, will be restored or enhanced and protected. Projects that provide long-term benefits that begin immediately after project implementation are preferred, assuming that any operation

and maintenance activities required for long-term success will be conducted. Projects that provide a broad scope of measurable benefits to a wide area or wildlife population will be given priority. Those that are focused on a limited set of benefits to a limited area or wildlife population are less preferred. Restoration projects should not have disproportionate high costs or low benefits to a small population. Projects that benefit more than one injured natural resource will also be given priority. Projects that use reliable, proven methods are preferred to those that rely on experimental, untested methods. Natural resource-based restoration projects with a high ratio of expected benefits to expected cost will be preferred. This aspect may be assessed relative to other proposed projects that benefit the same resource. Projects utilizing species native to the Springfield Plateau will be preferred.

6.2.2 Quantifiable Benefit

Restoration projects with quantifiable benefits and easily discernible success endpoints are a higher priority than projects that do not include these measures. Restoration project proposals shall include performance measures to determine whether the restoration actions are effective in providing the public with similar services and values to those lost due to the release of hazardous substances into the environment. A timeline outlining the implementation and establishment of the restoration project will be used by the Trustees to determine completion and success of the project. The overall success of the Trustees' restoration plan will depend upon the success of each restoration project.

6.2.3 Potential Impact

Priority will be given to restoration projects that avoid or minimize additional impacts to natural resources or environmental degradation. Temporary degradation which is necessary for project success will not preclude the selection of a restoration project. Mitigation measures, if necessary, should be identified in the proposal. The Trustees will require that all appropriate permits are obtained and regulations followed. All projects selected for implementation will comply with applicable and relevant laws, policies and regulations.

6.2.4 Voluntary Land Acquisition/Easements

Protection of resources through acquisition of land or conservation easements will only be from willing sellers or participants. Landowners will be under no obligation to sell or provide a conservation easement for the purposes of implementing a restoration project. Neighbors adjacent to land purchased for preservation under this restoration plan will retain all of their current rights to their lands. The Trustees are required to pay fair market value for land purchased. Fair market value will be determined through established appraisal procedures.

6.2.5 Geographic Area

All potential restoration projects will be evaluated for their proximity to the injury. Priority will be given to projects that seek to restore or compensate the public for injury in the geographic area identified by the Trustees. If primary on-site restoration as identified by the Trustees is not feasible or cost-effective, then this criterion will be diminished in importance. All restoration

projects that are authorized under this plan will seek to restore or replace natural resources within a defined geographic area as indicated in the RFP, unless the Trustees determine that all other options are exhausted.

Geographical priorities will be influenced by the following factors:

1) feasibility of primary on-site restoration as identified by the Trustees;
2) proximity to the impacted natural resources and/or lost services; and
3) quality of restoration opportunities (areas with substantial ecological opportunities are preferred);

6.2.6 Climate Change

The climate of the Earth is changing with the potential to cause changes in ecosystems and mass species extinctions. The Service is committed to examining every activity it performs for its implications for climate change, (USFWS, 2009). Consequently, the restoration project proposals will also be evaluated in the context of climate change—both its implications for and its adaptability to climate change. In particular, restoration project proposals should address how the proposed project incorporates one or more of the four basic climate change adaptation approaches or strategies identified by the Service: Resistance, Resilience, Response, and Realignment. (www.wildlifeadaptationstrategy.gov/). Further information about the Service's perspective and plan for Climate Change can be found at: http://www.fws.gov/home/climatechange/index.html.

Generally, restoration projects that serve to restore degraded environments, re-establish native vegetation, and improve the habitat of native species also serve to increase the sequestration of carbon in the biosphere and the pedosphere. Projects that specifically seek to address natural resources injured as a result of the release of hazardous substances while mitigating the effects of climate change are preferred. Projects that solely focus on climate change *are not* the focus of the SPRRP and will not be funded under this process.

6.2.7 Landscape Conservation Cooperatives

By leveraging resources and strategically targeting science to inform conservation decisions and actions, Landscape Conservation Cooperatives (LCCs) are a network of partnerships working in unison to ensure the sustainability of America's land, water, wildlife and cultural resources. LCCs are applied conservation science partnerships focused on a defined geographic area that informs on-the-ground strategic conservation efforts at landscape scales. LCC partners include DOI agencies, other federal agencies, states, tribes, non-governmental organizations, universities and others. LCCs enable resource management agencies and organizations to collaborate in an integrated fashion within and across landscapes. General information regarding LCCs is available at: http://www.fws.gov/science/shc/lcc.html.

The Springfield Plateau falls within the Interior Highlands section of the Gulf Coastal Plains and Ozarks LCC. The Trustees plan to utilize the expertise of the Gulf Coastal Plains and Ozarks

LCC and coordinate their activities to the greatest and most environmentally beneficial degree possible.

6.2.8 Strategic Habitat Conservation

Strategic Habitat Conservation is a structured, science-driven approach for making efficient, transparent decisions about where and how to expend Service resources for species, or groups of species, that are limited by the amount or quality of habitat. It is an adaptive management framework integrating planning, design, delivery and evaluation. The purpose of the Strategic Habitat Conservation framework is to ensure that the Service uses the best process to make decisions about local conservation actions to achieve broad-scale objectives as efficiently as possible. Further information regarding Strategic Habitat Conservation is available at: http://training.fws.gov/EC/resources/shc/shc.htm.

Because the Service is charged with the conservation of species (migratory birds, T&E species, inter-jurisdictional fish, marine mammals and populations that reside on Refuges), the Service's objectives are normally expressed in terms of a population size or response. A fundamental principle of Strategic Habitat Conservation is that every site has a unique management potential for every trust species. Consequently, this SPRRP will evaluate projects for both selection and eventual success under the context of Strategic Habitat Conservation.

6.2.9 Missouri Conservation Opportunity Areas, Parks, and Other Public Lands

The Missouri Department of Conservation's framework of COAs identifies the best places where partners can combine technology, expertise and resources for all wildlife conservation. Focused efforts in these COAs will ensure that Missourians continue to enjoy a rich and diverse natural heritage. Further information regarding COAs is available at: http://mdc.mo.gov/landwater-care/priority-focus-areas/conservation-opportunity-areas. The MDC has identified three COAs in the Springfield Plateau, including the Shoal Creek, Spring River, and Golden Grasslands areas (Conservation Commission of Missouri, 2009).

Restoration projects that serve to enlarge, buffer, connect, or restore existing protected natural resources in the Springfield Plateau will be given preference under the SPRRP. Restoration projects funded under this plan do not have to specifically occur within or adjacent to a designated COA, park, or other Public property; however, restoration projects that meet other criteria and also occur within above described areas will potentially receive a higher score according to the Trustees' Decision Matrix, as outlined in Appendix A.

6.2.10 Tribal Cultural Resources

The restoration of specific areas or resources with appreciable cultural value to Native American tribes is important to the Trustees. A search of the Native American Consultant Database maintained by the National Park Service identified no federally or state recognized Native American tribes in Missouri.

6.3 Restoration Project Proposal Acceptability Criteria

Proposed projects must meet the Acceptability criteria (Table 5) to be considered further in the project selection process. These criteria were developed by the Trustee Council to aid in eliminating those projects that are inconsistent with the requirements of the NRDAR regulations. In essence, the acceptability criteria stipulate that a restoration project must comply with all applicable laws and regulations, address resources or services connected to those injured only by the release of hazardous substances and be technically feasible to implement. Proposed projects will be evaluated on a pass/fail system in relation to each criterion. If a proposed project passes each criterion, it will be evaluated further under the Restoration Ranking Criteria. If a proposed project fails any of the Acceptability Criteria, it will no longer be considered.

Table 5. Acceptability Criteria for Restoration Planning

Criteria	Interpretation
Is compliant and consistent with federal and state laws, policies and regulations.	Project must be legal and protect public health and safety.
Has demonstrated technical feasibility, and is within the funding limits identified in the RFP.	Projects must be feasible within the proposed budget.
Addresses impacted natural resources or services targeted for restoration within the RFP.	Projects must restore, rehabilitate, replace or acquire the equivalent of natural resources impacted by the release of hazardous substances in the Springfield Plateau.
Project will not be used for response actions, and is not being proposed by an identified potentially responsible party.	Project addresses the specific concerns and criteria laid out by the Trustees.

6.4 Restoration Project Proposal Ranking Criteria

The Trustees developed criteria to evaluate and rank potential restoration projects. These criteria (Table 6) reflect the Trustee requirements and priorities for NRDAR restoration as outlined in Section (6) and the Preferred Alternative. The purpose of the project ranking criteria is to provide a means of ranking potential restoration projects against each other by considering the objectives and requirements of the NRDAR restoration planning process. Proposed projects will then be rated by priority within each criterion. Projects with the highest ranking will undergo final review and selection for implementation by the Trustees. Only proposals meeting Acceptability Criteria (Section 6.3, Table 5) will be considered.

These evaluation criteria relate to whether the project meets the goals and objectives of the Trustees for restoration of the Springfield Plateau relating to project location, injury caused by release of the hazardous substance, restoration goals, project implementability, feasibility, cost-effectiveness, project types, timing, and duration of benefits provided by the project.

Table 6. Restoration Project Ranking Criteria

Criteria	Interpretation
Location of Project	On-site projects (within or adjacent to the injured natural resources) are preferred to projects further from the site of release of hazardous substances. Projects that occur within a COA are also given preference, provided that the COA falls within the geographic scope identified by the RFP.
Addresses restoration of injured resources and services as prescribed in federal and state mandates; and addresses priorities for injured resources, endangered or threatened species or species habitats.	Priorities include prairies, glades, savannahs, wetlands, aquatic resources, groundwater, state and federal rare, threatened or endangered species, and native species.
Provides additional benefits not being provided by other restoration projects	Preference is given to projects, or aspects of existing projects, that are not already being implemented, have no planned funding, or that are insufficiently funded under other programs. Although the Trustees will use restoration planning efforts by other programs, preference is given to projects that would not otherwise be implemented without NRDAR restoration funds.
Provides benefits that are complementary to planned response actions	Where applicable, projects should be integrated with the planned response actions of either the USEPA or the MDNR for the control of the release of hazardous substances. See http://www.epa.gov/superfund/cleanup/index.htm
Provides the greatest scope of ecological, cultural, and economic benefits to the largest area or population.	To the degree that a bigger project results in greater good, bigger projects are better. Projects that benefit more than one injured resource or service will be given priority. Projects that avoid or minimize additional impacts to natural resources or environmental degradation will be given priority.
Is cost effective, including planning, implementation, and long-term operation, maintenance, and monitoring.	A project with a high ratio of expected benefits to expected costs is preferred. This may be assessed relative to other projects that benefit the same resource.
Time required to return resources to baseline level of services is minimized. Maximizes the time over which benefits accrue.	Projects that provide benefits sooner are preferred. Projects that provide longer term benefits are preferred. Project identifies timeline for restoration success.

Benefits can be measured for success.	Projects will be evaluated in terms of whether the benefits can be quantified and the success of the project determined. A restoration monitoring plan is included. Projects can be scaled to provide restoration of appropriate magnitude. Small projects that provide only minimal benefit relative to injured resources or larger projects that cannot be appropriately reduced in scope are less favored.
Uses established, reliable methods/technologies known to have a high probability of success.	Projects will be evaluated for their likelihood of success given the proposed methods. Factors that will be considered include whether the proposed technique is appropriate to the project, whether it has been used before, and whether it has been successful. Projects incorporating wholly experimental methods, research, or unproven technologies will be given lower priority.

SECTION 7 - CONSULTATION AND COORDINATION WITH THE PUBLIC AND OTHERS

7.1 Public Participation

Public review is an integral component of the restoration planning and NEPA processes. Throughout the public comment period, the Trustees accepted comments on the SPRRP's Environmental Assessment (EA). To insure that the public had ample opportunity to provide comments on the SPRRP's EA, the Trustees accepted comments on the draft plan for 45 days and held public meetings during this time to facilitate understanding of the draft plan. Next, the Trustees responded to comments and incorporated changes to the draft document (Appendix H). Notification of comment period and public meetings was made available on the Trustees' respective websites, local newspapers, and the Federal Register, among other sources.

The Trustees will use their websites for a multitude of purposes, including, but not limited to the announcement of public meetings; acceptance of comments on the SPRRP; announcement of scheduled releases of RFPs; publication of dates for project proposal submission; publication of RFPs; announcement of selected restoration projects; and general communication of restoration efforts in the Springfield Plateau. Project submission details and requirements will be included in each individual RFP that the Trustees release. FWS' NRDAR website is located at fws.gov/midwest/es/ec/NRDA/MoTriState/index.html. The MoDNR's NRDAR website is located at dnr.mo.gov/env/hwp/sfund/nrda.htm. Hard copies of all materials on the websites will also be available in FWS' office in Columbia, Mo., the MoDNR's office in Jefferson City, Mo.

Public stakeholder meetings will be conducted to fully explain each RFP that is released by the Trustees, as well as to explain each project that a member of the Trustee Council proposes to implement. When the designated time frame for evaluation of proposals submitted in response to an RFP has expired, the Trustees will announce the selection and funding of projects that rank the highest. Project ranking will be based on the Decision Matrix found in Appendix A. Selected restoration projects will undergo further NEPA (among other statutory and regulatory) analysis, including an opportunity for public comment, prior to implementation. The Trustees will continue to select projects until all designated restoration funds are expended.

Prior to the implementation of any selected restoration project the Trustees will advertise and conduct a public meeting to discuss, answer questions, and solicit public comment on the selected restoration project alternatives. The Trustees will accept comments in writing and via e-mail for a period of at least 30 days. The Trustees will respond in writing to all received comments prior to the implementation of any restoration projects.

7.2 Public Meetings, Presentations, and Scoping for Restoration

A public meeting was held on December 11, 2017 in Joplin, Missouri to present a draft amendment to this restoration plan and accept comments. No comments were received during the 30-day period beginning December 4, 2017 and running until January 3, 2018.

7.3 National Historic Preservation Act Compliance

FWS' Region 3 Regional Director will provide the state historic preservation offices (HPOs) and Tribal HPOs with this restoration plan and environmental assessment as part of the public review and comment process, drawing their attention to the recommended procedure for implementing Section 106 of the National Historic Preservation Act (NHPA) as described in 36 Code of Federal Regulations (CFR) Part 800.

Cultural resources are those parts of the physical environment, natural and built, that have cultural value to some socio-cultural groups and human social institutions. Cultural resources include historic sites; archeological sites and associated artifacts; sacred sites, traditional cultural properties; cultural items (human remains, funerary objects, sacred objects and objects of cultural patrimony); and buildings and structures. Most cultural resource concerns can be identified through the Section 106 process of the NHPA. To reduce paperwork, avoid duplication, and expedite decision making, the Section 106 process as defined in 36 CFR Part 800 will be followed for purposes of the environmental assessment.

Absent objections from HPOs or from other interested persons the NHPA is recognized as having legal standing (39 CFR § 800.2(c)(3), (4), and (5)) in land acquisition projects, projects involving ground disturbance, and projects impacting buildings and structures 50 years and older, FWS' Restoration Coordinator will:

1) Consult with the appropriate HPO for each specific project (undertaking) for the purpose of identifying cultural resources in the area of potential effect and obtain from the HPOs a determination of no historic properties or no effect on historic properties as outlined in Section 106 of the NHPA, and

2) Provide the Regional HPO with sufficient documentation to determine if the Section 106 process has been completed prior to project implementation.

7.4 Endangered Species Act Compliance

After projects have been evaluated and deemed successful through the SPRRP's process, FWS' case manager for projects in the Springfield Plateau will provide FWS' Ecological Services Field Office with completed Intra-Service Section 7 consultation forms pursuant to Section 7 of the Endangered Species Act of 1973, as amended, 16 U.S. Code §§ 1531-1599, and its implementing regulations, 50 CFR Part 402. Each project funded under this restoration plan will be evaluated for its potential effects to federally threatened, endangered and candidate species prior to the award of any restoration funds. Projects deemed to have an adverse effect on listed or candidate species or their critical habitats will not be funded under this plan.

7.5 Administrative Record

An administrative record will be maintained at the FWS, Columbia, Mo. Ecological Services Field Office and at MoDNR in Jefferson City, Mo. All pertinent documents relating to the

restoration will be cataloged and an index will be available at fws.gov/midwest/nrda/index.html. The documents will be available to the public during normal office hours.

7.6 Additional Compliance Considerations

In the course of the development of restoration proposals for specific sites that fall within the TSMD, the Trustees recognize that additional restoration planning or environmental compliance analyses (i.e., NEPA) may be required for certain restoration projects (i.e., in-stream restoration of contaminated sediments, or project types not analyzed in this SPRRP). Each individual restoration project that is selected under this regional restoration plan will undergo further NEPA (among other statutory and regulatory) analysis, prior to its implementation.

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SECTION 10 – REFERENCES CITED

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