

July 2019

**Joplin Parks Project
Joplin, Missouri**

FINAL RESTORATION PLAN

Prepared by:

**U.S. Fish and Wildlife
Service**



**Missouri Department of
Natural Resources**



1.0 INTRODUCTION

The Missouri Trustee Council (Trustees) is comprised of the State of Missouri, represented by the Missouri Department of Natural Resources (MDNR), and the U.S. Department of the Interior, represented by the U.S. Fish and Wildlife Service (USFWS). In May 2012, the Trustees finalized the Springfield Plateau Regional Restoration Plan and Environmental Assessment (SPRRP), a comprehensive plan that describes the process by which the Trustees will use recovered funds to restore natural resources injured by the release of hazardous substances within the Springfield Plateau.

This Final Restoration Plan (Final RP) tiers to and incorporates portions of the analysis contained in the SPRRP. This Final RP is a site-specific plan that identifies and evaluates restoration alternatives considered for achieving the restoration objectives in Joplin, Missouri. Specifically, this RP identifies the restoration alternatives that the Trustees to compensate the public for natural resource injuries that have resulted from releases of hazardous substances from mining activities in Jasper County, Missouri.

1.1 Background

Lead and zinc mining began in Jasper County in the mid-19th century and reached peak production around 1916. However, diminishing production led to the closure of the mining industry in Jasper County by 1957. After nearly 150 years of mining and smelting, the prominent features of the landscape were chat piles, tailings sites, waste rock piles, and subsidence ponds.

The Environmental Protection Agency (EPA) listed the Jasper County Site on the National Priority List (NPL) in 1990. Un-vegetated and partially vegetated mine wastes covered over 3,600 acres, and contaminated soil covers an additional 4,000 acres at the Site. Cleanup was initiated in 2007, since which time approximately 7 million cubic yards of mine waste have been addressed. Remedial activities remain ongoing with a scheduled completion around 2020. Such response actions, however, are not intended, nor are they sufficient, to restore the local floral and faunal communities impacted by the releases to baseline conditions or to compensate the public for the ecological services lost in the interim.

This project takes place within the Turkey and Shoal Creek watersheds, tributaries to the Spring River, within Jasper County (and the Jasper County NPL site, Missouri). This area is within the Jasper County Site referenced above. Past mineral processing operations from Eagle Picher and others resulted in the release of hazardous substances and high concentrations of heavy metals in soils around Joplin, triggering clean up actions. As a result of the release of heavy metals, migratory bird habitat has declined. The funds for this project are derived from the “Settlement Agreement Regarding EaglePicher Holdings, Inc. et al” approved on August 13, 2012. The Trustees are directed to use these funds for the restoration of injured resources.

1.2 Purpose and Need for Restoration

As described in §2 of the SPRRP, the Trustees developed the SPRRP to identify a preferred alternative to restore injured natural resources and to establish criteria for

selecting projects to implement such restoration alternatives. The Trustee-selected alternative in the SPRRP included a combination of restoration activities and projects to accomplish restoration goals at or near the site of injury.

The purpose and need of this Final RP, in accordance with the analysis contained in the SPRRP, is to develop restoration projects to restore natural resources injured as a result of releases of hazardous substances from mining activities in Jasper County. This Final RP presents a range of alternatives to meet the Trustees' goal of restoring and/or enhancing natural resources affected by historical mining activities and to compensate the public for ecological services lost in the interim.

1.3 Relationship to the SPRRP

This Final RP complements the information and analysis contained within the SPRRP. The SPRRP can be accessed at:

<https://www.fws.gov/midwest/es/ec/nrda/motristate/index.html>

The Selected Action in the SPRRP, as described in §3.3.1 and §3.5.1 of the SPRRP, is an Upland Resource Restoration Project. The activities associated with this Final RP are in alignment with the goals of the SPRRP, and compliant with the Selected Action.

1.4 Authorities and Legal Requirements

This Final RP was prepared by the Trustees pursuant to their respective authority and responsibilities as natural resource trustees under CERCLA (42 U.S.C. § 9601, *et seq.*) and its implementing regulations.

In addition, federal trustees must comply with NEPA, 42 U.S.C. § 4321 *et seq.*, and its implementing regulations, when planning restoration projects. NEPA requires federal agencies to consider the potential environmental impacts of planned actions. NEPA provides a mandate and framework for federal agencies to consider whether proposed actions have significant environmental effects and to inform and involve the public in the environmental analysis and decision-making process.

1.5 Public Participation

Public participation and input are important parts of the restoration planning process, and are required under NEPA. To comply with the statutory and regulatory processes, the Trustees held a public meeting on July 1, 2019 at the City of Joplin Council meeting, and opened a comment period for 30 days. We received three comments:

Comment No. 1: *I am delighted with the plan to return 50+ acres of Joplin public land to native prairie planting. At one time, I am told, it would have been possible to walk from Diamond Grove Prairie all the way to Joplin and always be on prairie. I think we forget sometimes that prairie is our heritage...way before mining... and that we share this ground with a myriad of other species that often get kicked to the curb with land management practices.*

There is way too much mowed fescue in our parks that is never touched, except for periodic mowing. It might be visually appealing to some, but useful to few. Mowing around these areas will give them definition, and a trail, at least through Joplin Prairie, will provide access for hiking and learning about nature in the place where we live. Strategic interpretive signage would be very helpful to educate about the benefits of this land use as well as its interesting components. I appreciated coverage in the Joplin Globe to date. Residents need to know what is happening!

A prairie planting will be useful to many species including pollinators, birds, and other wildlife in addition to the human species. As a cost-saving measure for Parks Dept, it will reduce time and dollars spent for mowing, and allow stormwater to actually flow INTO the ground. I look forward to an ever-changing pallet of wildflowers and waving grasses as seasons progress.

The public has been very receptive to pollinator plantings at a number of park entrances. Of course these are somewhat (but not entirely) formal, but do serve to begin the process of educating and raising interest about pollinators, native plants, et al. Native plant sales at Wildcat Glade/aka Shoal Creek Conservation Education Center have soared over the past several years as people become more aware of their benefits and have them available for purchase. How great it will be to see some of these same plants growing in the proposed native prairie plantings!

Response: We look forward to providing prairie habitat for both wildlife and the public to enjoy.

Comment No. 2:

I am interested while hearing of a proposal that involves converting some city-owned landscaped areas from grasses that require mowing into informal plantings of native grasses and flowering species. In my humble opinion, this plan may well encourage the recovery of the beneficial bird, insect and small animal habitat that was lost or damaged as a result of the May 22, 2011, tornado. The introduction of native plants and trees in these areas might well be enjoyed by wildlife and humans alike and could also be viewed or even designated as a continuing and expanding memorial to help mark that calamitous event, ie, funding?

Consider that such a plan might help reduce the ongoing costs associated with mowing; upkeep of the machinery, the labor and the fuel required for that purpose. Consider the efficient, natural filtering of the storm water run-off that is currently being directed into some of these areas. These natural plantings could provide that filtering function while being a more attractive alternative over existing areas currently being mowed that contribute the grass leavings and other debris and contaminants that eventually wash into and compromise our recently cleared and restored storm water infrastructure. Consider finally, the destination of this run-off, into the largest local source of Joplin's drinking and recreational waters at Shoal Creek.

Understanding all of this, it is clear that these proposed native plantings should not be indiscriminately broadcast and then left to grow rank. It would necessarily require some direction from resources knowledgeable and dedicated to choosing and maintaining the variety and density of these plantings. Already, there are good examples of these native plantings in place within our public, green corridors.

Should we consider expanding this plan in the proposed areas? Like any other plan involving changes that would encompass such large and diverse locations, careful considerations should be made.

Thanks for providing a forum for public input.

Response: Maintenance of the prairie areas is important, and we plan to fund their upkeep. We hope that the success of our initial plantings will open the way for conversion of additional areas. As appropriate, the public will be afforded the opportunity to comment in the event additional restoration activities are planned.

Comment No. 3: Thank you for the opportunity to comment. The proposed action appears sound. It looks like there will be no opportunity to provide a competitive bid for the restoration activities. Is there any chance this could be modified to allow for qualified companies to bid on this project through an RFP process?

Response: This project will not be open for competitive bid, but future restoration projects may be open for bids. We will hold public meetings and have open comment periods whenever we announce requests for proposals.

2.0 ALTERNATIVES CONSIDERED

2.1 Project Objectives

This chapter presents the alternatives considered, including the Trustees selected alternative for the Joplin Parks Restoration Project. The preferred alternative will focus on restoring native prairie vegetation. The Trustees are proposing the preferred alternative because it meets the objectives of the SPRRP. The objective of this Final RP is propose activities that will restore native prairie vegetation in currently mowed areas to create migratory bird habitat. The areas proposed for restoration include habitat within the Turkey and Shoal Creek watersheds, in areas that have been impacted by releases of hazardous substances at the Eagle Picher smelter facility. These areas will be managed for wildlife habitat and a diversity of plant species, and will be protected through an agreement with the City of Joplin for a minimum of 10 years.

2.2 Restoration Criteria

To guide the restoration process, the Trustees developed preliminary restoration objectives for the Springfield Plateau, described in detail in the SPRRP. The Trustees

used multiple factors to identify and evaluate the proposed restoration alternatives. Below are the criteria used to evaluate the potential restoration projects described in this Final RP as part of the NRDAR process. The criteria reflect the “factors to consider when selecting the alternative to pursue” (NRDAR factors) as described in 43 C.F.R. § 11.82(d)(1-10).

Technical Feasibility (43 CFR 11.82(d)(1):

The preferred restoration alternative must be technically sound. The Trustees considered the level of risk or uncertainty involved in implementing a project. A proven record of accomplishment demonstrating the success of projects utilizing similar or identical restoration techniques can be used to satisfy this evaluation criterion.

Compliance with Laws, Regulations, and Policies (43 CFR 11.82(d)(9-10):

Development of this Final RP requires consideration of a variety of legal authorities and their potential applicability to the Preferred Alternative(s). As part of restoration planning process, the Trustees have initiated steps to ensure compliance with applicable laws, regulations, and policies. Implementation of the Preferred Alternative(s) would remain subject to meeting all permitting and other environmental compliance requirements to ensure the project is implemented in accordance with all applicable laws and regulations.

Consistency with the Trustees Restoration Goals:

The Preferred Alternative(s) should meet the Trustee's intent to restore the injured resources or the services those resources provide. Included in this criterion is the potential for success (meeting restoration goals) and the level of expected return of resources and resource services.

Public Health and Safety (43 CFR 11.82(d)(8):

The Preferred Alternative(s) ideally should not pose a threat to the health and safety of the public.

Avoidance of Further Injury (43 CFR 11.82(d)(5):

The Preferred Alternative(s) should avoid or minimize adverse impacts to the environment and the associated natural resources. The Trustees considered the future short- and long-term injuries, as well as mitigation of past injuries, when evaluating projects.

Time to Provide Benefits:

The Trustees considered the time expected for the project to begin providing benefits to the target ecosystem and/or public. A more rapid time to delivery of benefits is favorable.

Duration of Benefits:

The Trustees considered the expected duration of benefits from the restoration alternatives. Projects expected to provide longer-term benefits were regarded more favorably.

2.3 Restoration Alternatives

The Trustees considered the following restoration alternatives in developing this plan:

- Alternative 1 – No Action: As indicated, this alternative would not involve any active restoration projects.
- Alternative 2 (Selected) – Restoration of Park Land: This alternative would involve establishing and managing native vegetation at existing city parks described in more detail in section 3.2 below.
- Alternative 3- Restoration of Riparian Park Land: This alternative would involve establishing and managing native vegetation at the city parks in Alternative 2 except for Mercy Park

2.3.1 Alternative 1 – No Action

The No Action alternative is included in this RP/EA as a basis for comparison of the other alternatives to the status quo. Under the No Action alternative, no restoration or rehabilitation would occur on the project lands. If the No Action alternative is selected, there would be no restoration of the injured resources and their services, and the public would not be compensated for injuries caused by releases from the Jasper County NPL Site. The No Action Alternative would not meet the Restoration Criteria.

The Trustees concluded that the No Action Alternative would not meet the purpose and need for restoration under this Final RP, or the responsibilities of the Trustees under CERCLA and its associated regulations.

2.3.2 Alternative 2 (Selected Alternative) – Parkland Restoration

This alternative includes the conversion of non-native vegetation to a native tallgrass prairie landscape on 53.77 acres. These areas will be managed as a tallgrass prairie for the benefit of wildlife.

The overall project will involve baseline vegetation monitoring, site preparation, seeding, and maintenance mowing and spraying. The area will be scouted for invasive weeds and those weeds will be treated through herbicide spraying or cultural practices. After weeds have been satisfactorily controlled, seed will be drilled or broadcast. The seed mix for an area will be specified by the Trustees, but will generally consist of five pounds total of grasses and sedges and forbs per acre. All seed should be of local ecotype, no greater than 200 miles from Joplin. The Missouri Prairie Foundation shall assist the City of Joplin in the restoration of wildflower/prairie habitat by spraying herbicide on exotic weeds, seeding native plant species, and conducting prescribed burns.

The Trustees concluded that Alternative 2 would best meet the purpose and need for restoration by maximizing acres to be restored.

2.3.2 Alternative 3 – Riparian Parkland Restoration

This alternative includes the conversion of 50 acres of non-native vegetation to a native tallgrass prairie landscape on the same areas as Alternative 2, without Mercy Park, since the baseline conditions are slightly different than the other parks, and will not directly benefit a stream. These areas will be managed as a tallgrass prairie for the benefit of wildlife, and the project will involve the same activities as above.

The Trustees concluded that Alternative 3 would meet the purpose and need for restoration, but would not maximize the acres to be restored.

4.0 ENVIRONMENTAL COMPLIANCE

Actions undertaken by a federal trustee to restore natural resources or services under CERCLA are subject to NEPA) and other federal laws. This Final RP meets the criteria for a categorical exclusion under 516 DM 8, §8.5(B)(3)(c). Please see attached Form 3-2185, NEPA compliance checklist.

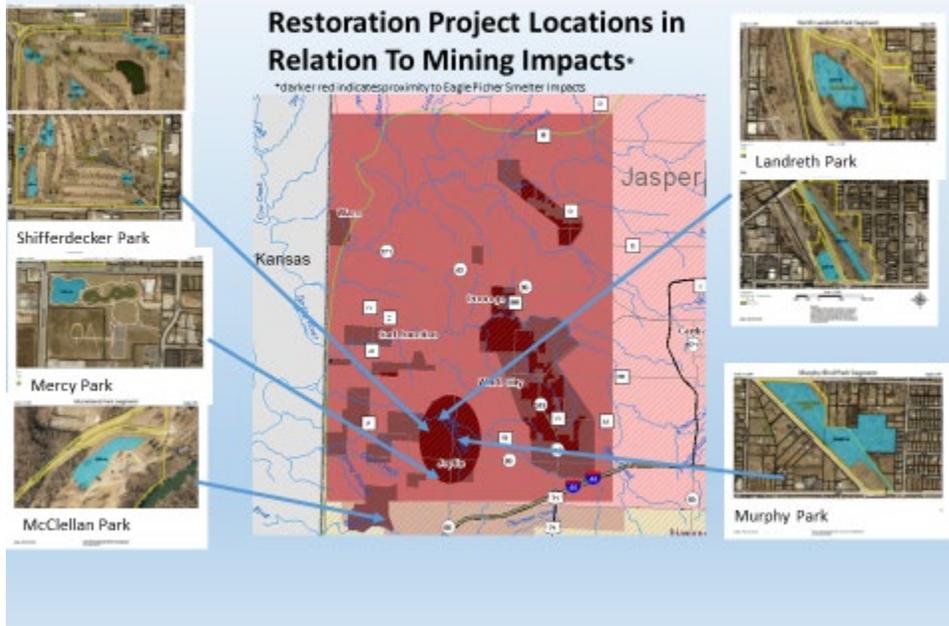
4.1 Affected Environment

General information such as the physical resources, biological setting, and socioeconomic resources, is provided in the SPRRP.

The specific sites to be restored are within the city limits of Joplin, MO, and are within areas affected by historical mining operations. Soil samples from the park sites showed elevated levels of metals (residential clean-up level for Pb is 400ppm) typically associated with mining (see table below).

Park	Pb	Cd	Zn
Campbell Parkway	372	31	2085
Joplin Prairie	83	ND	456
McClelland Park	157	<10	590
Mercy Park	40	<10	98
Landreth Park (lower field)	565	18	1907
Landreth Park (upper field)	721	18	1399

All park sites are currently mowed (exotic) fescue fields with interspersed trees, with the exception of Mercy Park, which is a failed prairie restoration that has been invaded by weeds. All of the park sites have some stream/riparian area along waterbodies that have been affected by historical mining practices (Joplin Creek, Shoal Creek) except for Mercy Park and Shifferdecker Park (see image below).



5.0 AGENCIES, ORGANIZATIONS, AND PARTIES CONSULTED FOR INFORMATION

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