DRAFT

Programmatic Damage Assessment and Restoration Plan
and
Environmental Assessment
for the
Bridger Pipeline 2015 Yellowstone River Oil Spill

Prepared by State and Federal Trustees
State of Montana and U.S. Department of the Interior

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1.0 INTRODUCTION

1.1 Purpose and Scope of this Document

This Draft Programmatic Damage Assessment and Restoration Plan and Draft Environmental Assessment for the Bridger Pipeline 2015 Yellowstone River Oil Spill (restoration plan) is intended to inform the public about the natural resource injuries caused by the January 17, 2015, Bridger Yellowstone River oil spill and potential restoration projects that could address and compensate for those injuries. This document is part of a Natural Resource Damage Assessment (NRDA) being performed pursuant to the Oil Pollution Act of 1990 (OPA) (33 USC §§ 2701, *et seq.*), by the U.S. Department of the Interior (DOI), represented by the U.S. Fish and Wildlife Service (USFWS), and the Governor of the State of Montana, through the Montana Natural Resource Damage Program (NRDP), collectively known as the Trustees. The State of Montana (State) also has natural resource damage authority pursuant to the Comprehensive Environmental Cleanup and Responsibility Act (CECRA), 75-10-701, MCA, *et seq*.

If an incident affects the interests of multiple trustees, the Trustees should ensure that full restoration is achieved without double recovery of damages. For joint assessments, Trustees must designate one or more lead administrative trustee(s) to act as coordinators. The DOI and the State are co-lead administrative trustees. Two federally recognized tribes may have treaty and other rights for natural and cultural resources in the geographical vicinity of the spill and downstream along the river. These tribes are the Assiniboine and Sioux Tribes of Fort Peck, Montana, and the Three Affiliated Tribes of Fort Berthold, New Town, North Dakota. Letters were sent to the Tribal Chairman of both tribes on July 22, 2015, requesting the potentially affected tribes contact the Trustee Council by August 14, 2015. Subsequent follow-up occurred in October 2022. At this time, the Tribes have not responded.

The restoration plan includes several restoration project types to be undertaken on the Yellowstone River and related areas. This restoration plan presents categories of restoration project types that could be implemented to restore and compensate for injuries to natural resources due to the oil spill. Four restoration alternatives are presented, based on how settlement funds could be allocated to each restoration category. This restoration plan evaluates the four restoration alternatives, identifies a preferred alternative, and outlines an implementation plan for the preferred alternative. This draft restoration plan also serves as an environmental assessment under the National Environmental Policy Act (NEPA) (42 USC §§ 4321, *et seq.*) and the Montana Environmental Policy Act (MEPA) (75-1-102, MCA, *et seq.*). This document addresses the potential impact of the Trustees' proposed restoration actions on the quality of the physical, biological, and cultural environment.

The purpose of this restoration plan is to make the public whole for injuries to natural resources and natural resource services resulting from the oil spill by returning the injured natural resources and natural resource services to their "baseline" condition (*i.e.,* the condition that would have occurred but for the spill) and compensating for associated interim losses.

The regulations for conducting a NRDA to achieve restoration are found at 15 Code of Federal Regulations (CFR) Part 990. These regulations were promulgated pursuant to the OPA to determine the nature and extent of natural resource injuries, select appropriate restoration projects, and implement or oversee restoration. This draft restoration plan presents information about the affected environment, injury and service losses to natural resources caused by the oil

spill (Section 1.4), and the Trustees' proposed restoration alternatives (Section 2.0). Analysis of the restoration alternatives under OPA selection criteria, NEPA/MEPA, and other applicable laws is provided in Section 3.0. A restoration implementation plan is included in Section 4.0. Preparers and entities consulted are listed in Section 5.0 and references are included in Section 6.0.

1.2 Summary of Bridger Pipeline LLC Poplar Pipeline Oil Discharge

On January 17, 2015, a break in the weld line of the 12-inch diameter Poplar Pipeline, owned by Bridger Pipeline, LLC (Bridger), released approximately 30,000 gallons (700 barrels) of Bakken crude oil into the Yellowstone River approximately 6.5 miles upstream of the City of Glendive, Montana (Figure 1). Extreme winter conditions existed at the time of the discharge of oil into the Yellowstone River, including extensive ice cover (with documented open water areas) and below freezing ambient air temperatures. Bridger was alerted to the spill by a low-pressure alarm at the time of the rupture. In response to the alarm, Bridger shut down the pipeline and sent a crew to investigate (Environmental Protection Agency [EPA], 2015a). However, the Yellowstone River was frozen over and ice (up to five feet thick) covered the river surface at the time of the spill, preventing the investigative crew from identifying any evidence of a release. The spill was discovered the following day (January 18, 2015) and odor and taste complaints about water from the City of Glendive's Water Treatment Plan (WTP), which receives water from the Yellowstone River, were linked to the release (Abt Associates, 2016 and EPA, 2015a).

The Bakken crude oil that was spilled had low sulfur content but contained benzene, polycyclic aromatic hydrocarbons (PAHs), and a high proportion of volatile organic compounds (VOCs; Aueres et al., 2014). Typically, VOCs volatilize from the water and only remain within the river for a short amount of time. However, the ice coverage at the time of the spill may have trapped VOCs in the water for an extended period of time and allowed contaminants to travel farther downstream. The U.S. Geological Survey (USGS) gage closest to the spill site was frozen at the time of the spill, but the flow was estimated to be approximately 8,000 cubic feet per second (cfs) (USGS, 2016).

1.3 Summary of Response Actions

Initial response actions were focused on the Glendive WTP, including characterizing contamination throughout the supply system, and installing aeration and filtration systems at the WTP to treat VOCs. Cleanup operations began at the spill site on January 21, 2015, but progress was hindered by winter weather conditions and ice covering the river. The Poplar pipeline was capped to prevent further release and approximately 21,000 gallons (500 barrels) of oil were recovered from the pipe. An estimated 2,520 gallons (60 barrels) of oil were recovered from the river using various techniques. Oil recovery activities ended in mid-February.

EPA issued a consumption advisory for Glendive tap water following the release, which remained in place until January 22, 2015 (EPA, 2015b). Warm weather in March of 2015 prompted the City of Glendive to switch their water supply to stored water in anticipation of ice break-up and an additional release of oil that had been stored within the ice (EPA, 2015a). An increase in VOC concentrations was observed at this time, during which the City of Glendive issued a request for residents to conserve water (March 14 through 16, 2015). VOC levels returned to normal by March 17, 2015. There was no oil recovered from the river during this event.

Montana Fish, Wildlife, and Parks (FWP) issued a fish consumption advisory (FCA) on January 21, 2015. The FCA remained in place until April 13, 2015.

EPA ended response efforts on March 22, 2015 (EPA, 2015a) and State cleanup operations were officially ended on April 10, 2015.

1.4 Summary of Injury

1.4.1 Impact Surveys and Studies

Environmental samples were collected by Bridger (and their contractors), state agencies, federal agencies, and the Trustees during the response to the spill. The following samples were collected after the spill by Bridger (and their contractors), state agencies, or federal agencies:

- Surface water samples collected on at least three different dates over the course of the response; and
- Eight sediment samples collected from five locations; the first three locations downstream were sampled twice, and the upstream and furthest downstream locations were sampled once (given the winter ice and snow-covered conditions, there were limited opportunities to collect sediment samples).

The Trustees collected additional samples, including:

- 12 surface water samples during three different sampling events: January 28-29, March 19, and March 22-24, 2015;
- Split sample of pooled oil and water collected March 28th by Bridger contractors approximately 8.5 miles downstream of the spill site;
- Eight sediment samples analyzed for PAHs (including random grab samples and targeted samples of visibly contaminated substrate);
- One oiled vegetation sample approximately 27 miles downstream from the spill site on March 23, 2015;
- Six sets of semipermeable membrane devices (SPMDs) were deployed twice at one location upstream and five locations downstream of the spill site. Dates of the SPMD events were:
    - Deployed January 29 and retrieved March 5, 2015;
    - Deployed March 19 and recovered on April 21, 2015;
- Fish samples collected on January 22, 2015, for FCA tissue analysis; and
- Fish health survey conducted March 21-24; fish were collected from one reference reach and three reaches downriver of the spill site (Stratus Consulting, 2015).

1.4.2 Affected Environment in the Impacted Area

The main geographic focus of the NRDA was the Yellowstone River where the release occurred, approximately 6.5 miles upstream of the City of Glendive, to approximately 30 miles downstream of the release site because this is the area that was most heavily impacted by the spill (impacted area). The impacted area is in the lower reach of the Yellowstone River approximately 90 miles from its confluence with the Missouri River. The reach is located in the Northwest Great Plain ecoregion, characterized by grassland habitat (Abt Associated, 2016). Climate in this region is semi-arid with large fluctuations in temperature across seasons. This lower reach is characterized by a wide channel migration zone and an active floodplain that support riparian habitat. The mean

daily discharge in this reach of the river ranges from 5,000 cubic feet per second (cfs) in the winter to 45,000 cfs in early to mid-summer. The reach contains braided channels, sandbars, islands, mid-channel pools, runs, riffles, and backwaters that provide and support essential habitats for many aquatic species.

The lower reach of the Yellowstone River is warm-water fish habitat (Abt Associated, 2016). Native species in this reach include suckers, sauger, catfish, walleye, and the federally endangered pallid sturgeon. These are migratory fish that move upriver and/or into side channels to spawn. Resident non-migratory species in this reach include emerald shiner, burbot, western silvery minnow, flathead chub, sand shiner, and longnose dace.

The floodplain riparian zone in this reach of the Yellowstone River includes cottonwood gallery forests that support bald eagles and blue heron as well as diverse wetlands including sedge meadows, willow bottoms, cottonwood, and aspen (Abt Associated, 2016). The impacted area provides habitat for resident and migratory bird species such as bald eagles, Canada geese, and mallards. The northern flicker, common goldeneye, and common merganser occasionally inhabit the floodplain and riparian areas during winter months, as well.

The predominant land use in the Glendive region is agricultural, especially irrigated agriculture with some grazing on open rangeland, except within the town of Glendive, which is primarily urban land use (Abt Associated, 2016). Oil and gas development has been expanding in the Glendive region in recent years, mainly through fracking operations. The city of Glendive relies on the Yellowstone River for drinking water and irrigation.

1.4.3 Injury to Surface Water

Following the discharge on January 17, 2015, oil constituents were detected in water samples at levels that exceeded screening levels as far as 30 miles downstream or, in several instances, exceeded water quality standards as far as 8.5 miles downstream from the incident location. These constituents include:

- Benzene,
- Total PAHs,
- Naphthalene,
- Chrysene,
- Benzo(a)anthracene,
- 1-methylnaphthalene,
- 2-methylnaphthalene,
- 1,3,5-trimethylbenzene, and
- Various aliphatic hydrocarbons.

In addition to the detection of these oil constituents in water samples from the Yellowstone River, benzene concentrations measured at the Glendive WTP exceeded the maximum contaminant level and Circular DEQ-7 human health standard of 5 µg/L. Bridger measured 14 µg/L in a water sample collected at the City of Glendive's WTP faucet on January 19, 2015 (Weston Solutions, 2015). In response to the contamination, a "do not consume" water advisory was issued on January 18, 2015, and 6000 residents were supplied with bottled water. The advisory was held in place until January 22, 2015.

Contamination of surface water was detected on multiple occasions over a span of two months after the oil spill, including an instance when high VOCs were detected at the WTP on March 14, 2015, during seasonal spring ice break up. Oil trapped in layers and cracks in the ice caused a surge of off gassing at the plant when the ice breakup occurred, resulting in VOC measurements of greater than 200 ppb. The detection of high VOCs resulted in the water supply being switched from the river to water storage tanks. During this time, residents were requested to conserve water and bottled water was again made available.

1.4.4 Injury to Fish

The surface water contaminants discussed above were measured at concentrations predicted to cause adverse effects to fish that were known to be present during the spill, including pallid sturgeon and walleye (Abt Associates, 2016). In addition, FWP collected fish on January 22, 2015, for tissue analysis. The results of those analyses, as well as observations made during the sampling event, showed fish in reaches downriver from the spill had higher incidences of effects related to exposure to crude oil. Elevated concentrations of PAHs, benzene, toluene, ethylbenzene, and xylene were measured in fish tissue. These findings are significant because PAHs are typically metabolized quickly by fish, and not typically measured in tissue of fish exposed to PAHs (Eisler, 1987 and Johnson et. al., 2008). However, relatively little is known about PAH metabolic processes in cold climate conditions (Word, 2014). Slower metabolic rates in cold conditions might be one explanation for these observations. Regardless, the measured oil constituents in fish tissue confirm that this aquatic natural resource was exposed to oil and oil constituents at levels known to cause injury as a result of the spill. In addition, fish collected downriver from the spill site showed gill changes, degeneration of kidney tubule epithelium, and evidence of damage to blood cells, all of which have been linked to oil exposure (Abt Associates, 2016).

1.4.5 Injury to Birds

On January 7, 2015, 10 days prior to the oil spill, a fixed-wing, aerial bird survey was conducted by Montana FWP along the Lower Yellowstone River to the confluence of the Missouri River, as part of an annual mid-winter waterfowl survey project. For the section of this survey that covered the spill site to Sidney (127 miles), approximately 4,200 Canada geese (*Branta canadensis*) and 150 mallards (*Anas platyrhynchos*) were identified. Post spill, subsequent observations in oil-impacted regions of the river identified numerous birds using open water areas.

Birds are highly susceptible to negative effects of oil spills as a result of their reliance and use of the water surface, which is also where oil tends to concentrate due to its buoyancy properties. Oil exposure can cause feathers to lose their waterproofing abilities, resulting in impairment to floating and/or swimming, as well as thermal insulation (Helm et al. 2005). The endpoints for these oil-induced effects are an increase in energy requirements resulting in reduced survivorship and increased mortality. The physical properties of oil are also influenced by similar parameters as those for bird foraging hot spots (*e.g.,* river current and wind conditions), which can result in spatial overlap between areas with heavy oiling and optimal bird habitat. Birds in oiled environments consume contaminated food, water, and sediments; ingest oil during preening; and inhale VOC fumes. Immunological, reproductive, and growth effects are associated with oil toxicity in avian species (reviewed in King et al. 2021). The extreme winter conditions when the oil spill occurred were likely an additional, cumulative stressor that resulted in higher bird mortality, and also limited systematic searches for quantification of NRDA injury.

1.4.6 Lost Recreational Use

As a part of the response to the oil spill, FWP issued a fish consumption advisory (FCA) on January 21, 2015. Elevated contaminant concentrations measured during the January 22, 2015, sampling event prompted FWP to extend the FCA on February 20, 2015. The advisory was in place until April 13, 2015.

1.5 Oil Pollution Act (OPA)

The primary goal of OPA is to make the environment and public whole for injuries to natural resources and services resulting from an incident involving an oil discharge. OPA makes the owners or operators of a vessel or facility from which oil is discharged liable (among other things) for removal costs and for damages for injury to, destruction of, loss, or loss of use of, natural resources, including reasonable costs of assessing the damage. 33 USC 2702. Under OPA NRDA regulations (15 CFR Part 990), the natural resource injuries for which responsible parties are liable include injuries resulting from the oil discharge and those resulting from response actions or substantial threat of a discharge.

Under OPA NRDA regulations (15 CFR 990.10), Trustees with jurisdiction over resources affected by an oil release may conduct a NRDA to determine whether natural resources have been injured and then plan restoration to address those injuries. The NRDA consists of three phases:

1) preassessment;

2) restoration planning; and

3) restoration implementation.

The NRDA includes assessment of natural resources that may have been injured and assessment of natural resource services impaired as a result of the discharge of oil.

Trustees are authorized to:

- Assess natural resource injuries resulting from a discharge of oil or the substantial threat of a discharge and response activities, and
- Develop and implement a plan for restoration of such injured resources pursuant to Section 1006 of the OPA, 33 USC § 2706.State law provides similar authority through CECRA, 75-10-701, MCA, *et seq.* Federal Trustees are designated pursuant to the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR § 300.600 and Executive Orders 12580 and 12777. For this incident, the federal Trustee is the DOI, as represented by the USFWS. The State Trustee is the Governor of the State of Montana.

OPA and the NRDA implementing regulations (15 CFR 990.30) provide specific definitions for the following terms:

- “Injury” is “an observable or measurable adverse change in a natural resource or impairment of a natural resource service;”
- “Natural resources” are “land, fish, wildlife, biota, air, 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"; and

- "Natural resource services" are "functions performed by a natural resource for the benefit of another resource and/or the public."

During the preassessment phase, the Trustees determined that the provisions and determinations of OPA applied to this discharge including:

1) one or more incidents had occurred;

2) the discharge was not from a public vessel;

3) the discharge was not from an onshore facility subject to the Trans-Alaska Authority Act;

4) the discharge was not permitted under federal, state, or local law; and

5) public trust natural resources and/or services may have been injured as a result of the discharge.

On the basis of those determinations, on October 26, 2016, the Trustees issued a Notice of Intent to Conduct Restoration Planning for the natural resource damage assessment associated with the oil spill (State of Montana and DOI, 2016).

The Trustees used information collected during the response to conceptualize injury categories and qualitatively describe the scope and extent of those injuries, as noted in Section 1.4. With limited funds, the Trustees have determined that it is in the public interest to focus on restoration selection rather than a more robust assessment.

The Trustees have evaluated the available information and determined that there is sufficient information available to develop restoration alternatives, evaluate alternatives, and develop the restoration plan pursuant to 15 CFR 990.53-990.55.

The injuries from the oil spill are divided into the following categories:

1) surface water injury,

2) fish injury,

3) bird injury; and

4) lost recreational use.

A summary of injuries to each category of natural resources based on the available data and information is presented in Section 1.4, and references are noted in Section 6. Although additional assessment work may have assisted in determining the extent of injuries to natural resources and natural resource services with more precision, the Trustees decided to move expeditiously toward the goal of restoration.

Considering the nature and extent of exposure and injuries to natural resources caused by the spill, the Trustees developed this draft restoration plan for restoring the injured resources and

services. In this plan, the Trustees identify a reasonable range of restoration alternatives, evaluate those alternatives, and select a preferred alternative using the criteria at 15 CFR § 990.54.

Section 2.0 of this restoration plan describes the restoration alternatives the Trustees analyzed for returning the resources injured by the oil spill to their baseline condition and to compensate the public for the interim losses. Section 2.0 also describes how these alternatives were developed under OPA and NEPA/MEPA. A summary of the restoration alternatives, project goals, project types, project examples, and allocated costs is included in Appendix C.

In proposing their preferred restoration alternative, the Trustees considered all the criteria outlined in the OPA NRDA regulations (Section 3.1). As a part of this process, the Trustees considered the extent to which the restoration alternatives would provide benefits to more than one natural resource and/or service. As described in more detail in Section 3.0 of this draft restoration plan, many of the preferred restoration alternatives proposed by the Trustees benefit multiple resources and/or resource services. Overall, the Trustees are proposing selection of the least expensive, most practicable alternatives that are expected to provide the restoration benefits required by these criteria.

1.5.1 National Environmental Policy Act and Montana Environmental Policy Act Compliance

Any restoration of natural resources under OPA must comply with NEPA, as amended (42 USC 4321, et seq.), and its implementing regulations (40 CFR § 1500-1508) with respect to federal actions that may significantly impact the human environment. In addition, restoration actions undertaken in the State of Montana must comply with MEPA (75-1-102, MCA, et seq.). NEPA and MEPA require:

- A statement of the purpose and need for the proposed action;
- A description of the environment that could be affected;
- A description of the proposed action and a set of alternatives, including the no action alternative; and
- An analysis of the direct, indirect, and cumulative environmental impacts of each alternative and appropriate mitigations.

MEPA requires that State agencies conduct thorough analysis and disclosure of State actions that impact Montana's human environment. NEPA requires that the environmental impacts of a proposed federal action be considered before implementation. Generally, under both NEPA and MEPA, if it is uncertain whether an action would have a significant impact, agencies begin the planning process by preparing an environmental assessment (EA). State and federal agencies may then review public comments prior to making a final determination. Depending on whether an impact is considered significant, an environmental impact statement (EIS) or a Finding of No Significant Impact (FONSI) is issued.

In undertaking their analysis, the Trustees evaluated the potential significance of proposed actions, considering both context and intensity. For the actions considered in this draft restoration plan, the appropriate context for considering potential significance of the action is at the local or regional level, as opposed to national, or worldwide. This draft restoration plan is designed to allow the Trustees to comply with OPA, NEPA and MEPA concurrently, including the public involvement requirements.

After considering NEPA and MEPA requirements, the Trustees believe that the selected project types described in this draft restoration plan will not cause significant negative impacts to the environment, nor to natural resources or the services they provide. None of the proposed project types to be implemented are controversial, have highly uncertain impacts or risks, or are likely to violate any environmental protection laws. Environmental analyses for similar projects in the Yellowstone drainage (channel migration easements, boat ramp or fishing access development, fish passage, or control of woody invasive species, for example) have all been addressed in similar contexts with an EA.

Further, the Trustees do not believe the preferred types of projects would adversely affect the quality of the human environment or pose any significant adverse environmental impacts. Instead, habitat restoration would benefit species by restoring natural habitat functions. Likewise, the preferred restoration actions would provide positive benefits for human recreational use. If no new information that affects the evaluations in this restoration plan is made available during the restoration plan public review process, the Trustees anticipate a Finding of No Significant Impact for the suite of selected projects types described in Section 2.0. More information on the Trustees' analysis of the proposed actions relative to NEPA and MEPA is provided in Section 3.0.

This document provides a programmatic environmental assessment that evaluates broad (as opposed to project-specific) restoration alternatives for prioritized projects that are still in development. This programmatic document describes the process for subsequent restoration planning to select specific projects for implementation. Additional specific restoration actions will be consistent with the final restoration plan and integrated with additional NEPA or MEPA analysis, as needed. When appropriate, a tiered EA will be completed for a project. A tiered environmental analysis is a project-specific analysis that focuses on project-specific issues, and summarizes or references (rather than repeats) the broader issues discussed in this EA.

In this document, the Trustees are also providing a specific environmental assessment for some projects that are already defined. Additionally, because they are part of existing plans, some projects have already completed NEPA or MEPA compliance.

In compliance with NEPA and MEPA, this draft restoration plan describes the purpose and need for action, summarizes the current environmental setting in the areas of the proposed restoration, identifies alternative actions, assesses their applicability and environmental consequences, and summarizes opportunities for public participation in the decision-making process. The restoration plan will be finalized after public comment is received and considered.

In addition to the NEPA impact analysis in this document, an environmental assessment checklist of the implementation of the restoration plan is provided in Appendix A. This checklist is a standard checklist used by State of Montana agencies to evaluate impacts of proposed State action on the physical and human environment pursuant to the requirements of MEPA. This checklist covers impacts to the environment and human health and safety, two of the required DOI NRDA criteria (43 CFR §11.82), plus it covers additional impacts to the human environment required to be analyzed under MEPA (see "A Guide to the Montana Environmental Policy Act," prepared by the Montana Environmental Quality Council, 2021). As part of its analysis of impacts to human health and safety, the State will determine if protective measures should be added to the restoration plan alternatives to ensure safety.

1.5.2 Coordination with Responsible Party

The identified responsible party for this oil spill, as defined by OPA, is Bridger Pipeline LLC. The OPA NRDA regulations require the Trustees to invite the responsible party to participate in the damage assessment process. Accordingly, the Trustees worked with the responsible party to participate in the damage assessment process. On October 26, 2016, the Trustees formally invited the company's participation in the natural resource damage assessment, in a letter to Bridger enclosing the Trustees' "Notice of Intent to Conduct Restoration Planning." The Trustees and Bridger negotiated a Consent Decree (CD) for $2,000,000, which was entered January 13, 2022, by the U.S. District Court for the District of Montana. The settlement agreement and CD are discussed further in Section 1.6.

1.5.3 Watershed Plans

In developing this draft restoration plan, the Trustees utilized resources from local organizations that were identified during public participation for development of a restoration plan for a previous oil spill on the Yellowstone River in 2011 (State of Montana and DOI, 2017). The Trustees had the benefit of reviewing existing local watershed and recovery plans in the development of this restoration plan, including:

- Yellowstone River Cumulative Effects Analysis (YRCEA; U.S. Army Corps of Engineers [COE] and Yellowstone River Conservation District Council [YRCDC], 2015);
- Yellowstone River Recommended Practices and Position Statements (YRRP; YRCDC, 2016);
- Recommendations for Improving Public Access, Habitat Conservation, and Management of the Lower Yellowstone River Corridor (Lower Yellowstone River Corridor Advisory Committee [LYRCAC], 2021); and
- Revised Recovery Plan for the Pallid Sturgeon (*Scaphirhynchus albus*) (USFWS, 2014).

The Trustees have adapted several of the project types specified in the plans and included them as part of the restoration alternatives analysis. The Trustees limited inclusion in the restoration plan alternatives to those project types that would contribute to returning the injured resources and services to baseline condition and compensate for interim losses, as well as comply with other requirements of OPA, NEPA, and MEPA, and provide for actions for which a non-federal governmental agency would normally not be responsible or that would receive funding in the normal course of events. The Trustees also paid attention to scaling the project types to the expected natural resources or services that will be provided.

The YRCEA and YRRP both went through an extensive public review process. Throughout the development of the YRCEA, the COE and YRCDC held council meetings and technical advisory meetings to discuss all aspects of the development of the analysis. During the development of the YRRP, meetings were held in each of the counties along the river. The COE and YRCDC held three public meetings in October 2015 to accept comments on the draft cumulative effects analysis and recommended practices. In March 2016, the COE and YRCDC held an end-of-study symposium to hear an overview of the cumulative effects analysis and recommended practices development process and invite discussion about the product.

The Recommendations for Improving Public Access, Habitat Conservation, and Management of the Lower Yellowstone River Corridor (LYRCAC Recommendations) was developed by a citizen-based advisory committee sponsored by the Governor of Montana and convened by FWP. Technical input was gathered from FWP, the Bureau of Land Management, Department of Natural

Resource Conservation, Eastern Plains Economic Development Corp, and Lower Yellowstone River Coalition. The committee was comprised of individuals representing "agricultural, recreational, conservation, and economic values so important to the region" (LYRCAC, 2021). Committee members engaged with landowners and community members while developing the recommendations.

The Recovery Plan for the Pallid Sturgeon was developed by USFWS in 1993 and revised in 2013. USFWS solicited public comments on the draft and incorporated them into the revised recovery plan (2014).

1.5.4 Public Participation

The Trustees have collaborated with State and federal agencies, including FWP Region 7, since starting this natural resource damage assessment. The Trustees established and periodically updated a website that describes the spill and natural resource damage assessment activities. This website can be accessed at https://dojmt.gov/lands/yellowstone-river-oil-spill-january-2015/.

Before entering into the CD, NRDP solicited public comments on the proposed settlement through notices in the Billings Gazette and Glendive Ranger Review (both on November 21, 2021), announcement on NRDP's website, and notification through an email list developed for the 2011 Yellowstone Oil Spill (State of Montana and DOI, 2017). Public comments were accepted from November 21, 2021, through December 22, 2021. After consideration of all comments received, the CD was entered by the court on January 13, 2022 (discussed further in Section 1.6).

On January 19, 2023, the Trustees held a public scoping meeting. The meeting was advertised in legal ads in the Billings Gazette (January 11 and 18, 2023) and the Glendive Ranger (January 12, 15, and 19, 2023). 14 people attended the public scoping meeting. The Trustees presented a summary of the settlement, explained Natural Resource Damage Assessment laws, the purpose and scope of the restoration plan, ideas already scoped, and criteria for restoration alternative selection. The Trustees also explained how the public can be involved in the restoration plan preparation by submitting a restoration action idea and by conveying issues with the implementation of the proposed actions.

Public comments were accepted between January 6 and February 10, 2023. During the public scoping process, five comments were received in two comment letters. One eligible restoration action was proposed: improvements to the access road and ramp at the Glendive Yellowstone River site. This proposal was incorporated into the recreation compensation restoration category (Section 2.5.3). Responses to comments are provided in Appendix B.

The public comment period for the draft restoration plan will run from May 4 through 11:59 PM on June 11, 2023. During this comment period, the document will be available electronically through the Montana Natural Resource Damage Program website: https://dojmt.gov/lands/yellowstone-river-oil-spill-january-2015/. The Trustees will issue a press release to announce the availability of the draft restoration plan. The press release and document release will be sent to local media outlets. The availability of the draft and comment opportunity will be noted in a Federal Register Notice of Availability and legal notices in the Billings Gazette and Glendive Ranger Review. On May 4, 2023, the Trustees sent notices of the draft restoration plan comment opportunity to over 70 individuals and entities on its mailing list. On June 1, 2023, the Trustees will present the draft restoration plan at a public meeting in Glendive and take verbal comments. The public meeting will be advertised in a display ad in the Billings Gazette and Glendive newspapers. For presentations of the draft restoration plan, the Trustees will notify and coordinate with local

organizations and agencies, including but not limited to the Dawson County Commission, Montana Watershed Coordination Council, Glendive City Council, YRCDC, and FWP Region 7.

The Trustees will respond to all public comments received during the public comment period and responses will be included in the final restoration plan. Public comments will be considered when finalizing the restoration plan and appropriate changes to the plan will be made accordingly.

Selected habitat projects and human use/recreation projects will undergo additional public review and NEPA/MEPA analysis (as applicable) tiered to this restoration plan on an as-needed basis. The public will have an opportunity to comment on these project(s) when they are further developed.

As needed during implementation of the final restoration plan, the Trustees will hold additional public meetings in the restoration area. The Trustees will also provide periodic notices and reports to the public on the progress of the restoration plan implementation.

1.5.5 Administrative Record

The Trustees have maintained records to document the information considered by the Trustees in developing this draft restoration plan. These records are compiled in an administrative record, which is available to the public at the address listed below. The administrative record facilitates public participation in the assessment and implementation process and will be available for use in any future administrative or judicial review of Trustee actions to the extent provided by federal or state law. Additional information and documents, including public comments received on the draft restoration plan, and other related restoration planning documents will become a part of the administrative record. The administrative record is available for inspection at the following locations:

- USFWS Helena office: 585 Shephard Way, Suite 1, Helena, Montana 59601
- NRDP Helena Office: 1720 9th Avenue, Helena, Montana 59601

1.6 Overview of the Settlement Agreement

Through settlement negotiations, the Trustees agreed to forgo a more extensive NRDA and focus on restoration instead. A CD was entered on January 13, 2022, that provided a total of $2,000,000 in natural resource damages to restore, rehabilitate, replace, or acquire the equivalent of the natural resources that were injured, destroyed, or lost as a result of the discharge and subsequent removal actions. The State was allocated $1,739,975 to be paid into the Yellowstone River 2015 Oil Spill Account. In addition, the USFWS was allocated $260,205 to be paid into a distinct account within the Natural Resource Damage Assessment and Restoration (NRDAR) Fund. The CD required that all interest and earnings accrued on these damages also be paid into the accounts. A portion of the settlement money was used to refund the Trustees for past costs incurred during site investigation and settlement negotiations. Table 1 summarizes the damages received and funds used to refund past costs. The requirements of the CD are consistent with the natural resource damage provisions of OPA (33 USC § 2706(f)) and associated regulations which specify that any damages recovered from natural resource damage lawsuits may only be used to restore, rehabilitate, replace, or acquire the equivalent of the injured natural resources that were the subject of the 2015 Bridger Yellowstone River oil spill. This includes planning, design, implementation, oversight, operations and maintenance, monitoring, permitting, NEPA/MEPA analysis, administrative and other requirements, and to reimburse the Trustees for Natural Resource Damage Assessment Costs.

Table 1. Summary of Settlement Agreement Funds

Item	State	USFWS	Total
Amount Allocated	$1,739,795	$260,205	$2,000,000
Amount Used to Refund Past Costs	$230,000	$70,250	$300,250
Amount Available for Restoration Planning and Implementation	$1,509,795	$189,955	$1,699,750

This draft restoration plan was prepared jointly by NRDP and USFWS for natural resources and their supporting ecosystems belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the State and DOI. The Governor, as trustee of the natural resources for the State, and DOI will approve a final restoration plan after considering public input and the recommendations from NRDP. The Regional Director of the USFWS' Mountain-Prairie Region (Region 6) is the DOI Authorized Official for approval of a final restoration plan.

1.7 Implementation

Since the settlement has been approved by the court and settlement funds were received, the Trustees will proceed with implementation of this restoration plan once it is finalized. OPA NRDA regulations provide that upon settlement, Trustees should consider certain actions to facilitate implementation of restoration, including establishing a memorandum of understanding to coordinate between the Trustees, developing more detailed work plans to implement restoration, monitoring and overseeing restoration, and evaluating restoration success and the need for corrective action. The Trustees will separately manage implementation of the project types and projects contained in this draft restoration plan, but will coordinate their activities on a programmatic level, and seek State, federal, local, and private partners to help develop, design, manage, provide additional funding, and/or implement identified projects. Applicable laws and regulations are discussed in Section 3.2, restoration plan implementation is discussed in Section 4.0. Preparers and entities consulted are listed in Section 5.0, and references are included in Section 6.0. Figures are located after the references.

Appendix A, attached, is the MEPA environmental assessment checklist for implementation of this Restoration Plan. Appendix B provides responses to comments received during the public scoping period. After receiving public comment on this draft restoration plan, an additional appendix will be added to document the public comments received and the Trustees' responses to comments.

2.0 RESTORATION ACTION ALTERNATIVES

This section describes the restoration alternatives the Trustees analyzed for restoring, replacing, and acquiring the equivalent natural resources injured by the oil spill to their baseline condition and to compensate the public for the interim losses. As discussed in Section 1.4, the three natural resources most impacted by the oil spill were: surface water, fish, and birds. This section includes a brief outline of the OPA requirements and restoration project selection criteria (discussed in detail in Section 3.1). NEPA and MEPA also apply to restoration actions taken or directed by the federal and state Trustees, respectively. To reduce transaction costs and avoid delays in restoration the OPA NRDA regulations encourage the Trustees to conduct the NEPA process concurrently with the development of the draft restoration plan. A brief introduction to the purpose and need for analysis under NEPA and MEPA is presented here and discussed in detail in Section 3.2. Section 4.0 describes the Trustees' proposed project implementation plan.

The Trustees have developed restoration categories that address injuries to each resource and potential restoration projects within each category to restore or compensate for these losses. These categories, the goals and objectives of each category, and potential restoration projects that could be implemented to achieve the goals and objectives are presented in Section 2.5. Restoration Alternatives were developed based on different funding allocations to each restoration category. These alternatives are presented in Section 2.6 and evaluated in Section 3.0.

2.1 Restoration Strategies for Primary and Compensatory Restoration

The goal of restoration under OPA is to compensate the public for injuries to natural resources and their associated services from an oil spill. OPA requires that this goal be achieved by returning injured resources to their baseline condition and compensating for any interim losses of natural resources and services during the period of recovery to baseline.

To develop restoration alternatives, the Trustees must consider both primary and compensatory restoration options (15 CFR 990.53). Active primary restoration actions work to directly restore injured natural resources and services to baseline on an accelerated time frame (15 CFR 990.53). Compensatory restoration actions are intended to compensate the public for the loss of natural resources and services during the "interim" time period between the start of injury and the eventual recovery of the resource or service (15 CFR 990.53).

Several of the restoration alternatives included in this section are projects that may require additional detailed engineering design work or operational plans. Therefore, details of specific projects may require additional refinements or adjustments to reflect site conditions or other factors. Restoration project designs also may change to reflect public comments and further Trustee analysis. If a proposed project becomes infeasible for some reason, the Trustees will consider substituting a similar project and evaluate whether this decision requires additional public review under OPA, NEPA, or MEPA.

2.2 OPA Requirements and Restoration Project Selection Criteria

NRDA regulations under OPA require consideration of six criteria when evaluating restoration options (15 CFR 990.54(a) and (b)).

1) Project cost and cost-effectiveness

The cost of a project, both implementation cost, long term maintenance, and monitoring will be considered against the relative benefits of a project to the injured natural resources and service losses. Projects that return the greatest and longest lasting benefits for the cost will be preferred. The Trustees will also consider the time necessary before the project benefits are achieved, and the sustainability of those benefits. Projects will be reviewed for their public acceptance and support, and additional consideration given to projects that leverage the financial resources of partner organizations.

2) Project goals and objectives

This criterion considers the extent to which each restoration project helps to return injured natural resources and services to at least baseline conditions that were present prior to the oil spill or compensate for interim service loss. Projects should demonstrate a clear relationship to the resources and services injured. Projects located within the impacted area are preferred, but projects that provide benefit to the resources injured by the spill will also be considered.

3) Likelihood of project success

The Trustees will consider the technical feasibility of each project in achieving the restoration project goals and the risk of failure or uncertainty that the goals can be met and sustained. The Trustees will generally not support projects or techniques that are unproven or projects that are designed primarily to test or demonstrate unproven technology.

4) Avoidance of adverse impact

Projects will be evaluated for the extent to which they prevent future injury as a result of the oil spill and avoid collateral injury as a result of implementing the alternative. All projects shall be lawful and likely to receive any necessary permits or other approvals prior to implementation.

5) Multiple resource and service benefits

Projects that provide benefits that address multiple resource injuries or service losses, or that provide ancillary benefits to other resources or resource uses are preferred.

6) Public health and safety

This criterion is used to ensure that the projects will not pose unacceptable risks to public health and safety.

Information supporting the Trustees' selections of restoration alternatives is provided throughout the remainder of this chapter.

2.3 NEPA/MEPA Statement of Purpose and Need

The purpose of the restoration is to make the public whole for injuries to natural resources and natural resource services resulting from the oil spill. To meet the purpose of restoring extensive and complex injuries to natural resources and services resulting from this spill, the Trustees identified the need for a comprehensive restoration plan consistent with OPA to restore these injured natural resources and services (see 15 CFR 990.10). The purpose and need for this document are outlined in more detail in Section 1.1.

2.4 Approach to Developing and Evaluating Alternatives Under OPA and NEPA/MEPA

The Trustees started meeting with State and federal agencies affected by the spill immediately after it occurred. Public involvement is described in detail in Section 1.5.3. The Trustees also reviewed plans and recommendations issued by agencies and local organizations that focus on restoration of the Yellowstone River watershed and recovery of the pallid sturgeon (see Section 1.5.4). The Trustees considered input from these entities, recommendations in watershed plans, and OPA, NEPA, and MEPA considerations outlined above, to develop goals for the restoration of each of the Yellowstone River resources that was injured by the oil spill. These goals will guide the future restoration actions and selection of the alternatives like those outlined below.

Certain projects within restoration categories have been identified as priority projects by local resource managers. If these projects cannot move forward at this time, the Trustees, in consultation with local resource managers, may select other projects that achieve the same goals.

2.5 Restoration Action Categories

The development of restoration alternatives is intended to identify restoration actions that restore, replace, and/or acquire the equivalent of natural resources injured by the oil spill and compensate the public for the interim losses. The natural resources most impacted by the spill were surface water, fish, and birds. Although surface water is a separate injured natural resource, the Trustees have decided not to pursue active primary restoration and allow for natural recovery. Settlement funds will instead be directed towards readily available projects focused on fish habitat that indirectly benefit surface water. Because the oil spill also impacted the public's ability to fish recreationally, the restoration plan also includes recreational use as a separate restoration category. Restoration project ideas were initially developed by the Trustees in coordination with FWP. Ideas were gathered from the watershed and recovery plans listed in Section 1.5.4 and discussions between the Trustees and FWP. Each restoration project idea was assigned to a restoration category: fish habitat restoration, bird habitat restoration, and recreation compensatory restoration. These categories of restoration actions are discussed in the following sections with examples of potential projects that achieve the goals and objectives for a particular category. Figure 2 shows the potential locations for restoration actions.

These restoration categories were used to develop restoration alternatives, discussed in Section 2.6, based on different allocations of settlement monies to each category and the types of projects within each category that could be implemented based on those allocations. A detailed criteria evaluation for restoration actions included in the restoration alternatives is included in Section 3.0.

2.5.1 Fish Habitat Restoration

Goal: Enhance aquatic habitat for fish production and other aquatic organisms.

Objectives:

- Increase aquatic channel complexity by reconnecting side channels, activating old oxbows, and providing additional backwater habitat.
- Enhance floodplain connectivity through channel migration zone easements (CMEs) and removal of levees, dikes, or berms.
- Increase fish production by improving fish passage on the Yellowstone River and tributaries.

2.5.1.1 Channel Complexity

Side channels and overall channel complexity have been reduced due to man-made blockages and flow alterations. Side channels and backwaters are important habitat for fish, reptiles, amphibians, birds, and other aquatic life. The YRRP (YRCDC, 2016) identified twelve locations with side channel blockages on the Yellowstone River between the mouth of the Powder River and the confluence with the Missouri River. Side channel reconnection is also identified as a restoration strategy for the recovery of pallid sturgeon (USFWS, 2014).

Increasing the number of connected side channels by the removal of blockages would increase the size of the active floodplain, allow for a more naturally functioning river system, and encourage cottonwood regeneration. Restoring side channels may also involve excavation to deepen the channel, grade control to prevent river capture, or fish habitat enhancement (*i.e.,* providing woody cover, pools, etc.). In addition, land planning activities such as flood hazard mitigation through vegetative buffers or floodplain easements could also be necessary to address landowner concerns while ensuring natural river function.

2.5.1.2 Enhancing Floodplain Connectivity

Floodplain connectivity is an important component of a naturally functioning river. Allowing a river to access the floodplain is important for maintaining riparian vegetation and recruitment of woody debris to the river. The inundation of the floodplain is also important for groundwater storage, energy dissipation, water quality, and agricultural production. In many areas of the Yellowstone River, floodplain connectivity has been reduced through bank armoring (riprap), levees, agricultural berms, and roadways (YRCDC, 2016). Removal of these types of structures would increase the size of the active floodplain and allow for a more naturally functioning river system.

A channel migration easement is an easement on land bordering a stream or river that precludes the owner from rip-rapping a bank or otherwise disrupting natural erosive processes. Channel migration zone easements are a common method used to conserve riparian areas and allow the river's natural function to continue (YRCDC, 2016; MARS, 2017). Channel migration zone easements have been employed elsewhere along the Yellowstone River for this purpose (MARS, 2017).

2.5.1.3 Fish Passage Improvement

Obstructions to fish passage are a common issue on the Yellowstone River and many of its tributaries. Seasonal migrations of various fish species can be impeded by water diversion structures, especially when these structures span the width of the river channel. Fish may also become lost or entrained in irrigation canals. Researchers have suggested that blockage of seasonal migrations for spawning and feeding may be a leading cause of the decline in fishes native to large river systems (Trenka, 2000; Helfrich et al., 1999; Elser et al., 1977). Across the U.S. and locally, fish passage and entrainment protection measures have been used effectively to prevent loss of fish, restore connectivity with habitat, and increase fish abundance without negatively affecting agricultural practices.

Many of the fish species in the Yellowstone Basin are highly migratory, some of which use both the mainstem Yellowstone River and tributaries to complete their life histories. Therefore, fish passage projects in the mainstem and tributaries can both serve to increase fish production in the impacted area. Examples of these types of projects in the Yellowstone Basin include the T & Y dam bypass project (Muggli Bypass), the SH dam removal on the Tongue River (FWP, 2020) and the recently completed bypass at the Intake Diversion Dam (Pesik and Rugg, 2021). Past projects have addressed many of the fish passage concerns on the lower Yellowstone River. However, there are opportunities to improve and maintain fish passage structures, ensuring sustained benefit for all of the fish species in the Lower Yellowstone River. For example, research has shown many fish species using the Muggli Bypass on the Tongue River (completed in 2007), which allows them to access upstream habitat that was previously unavailable. However, shovelnose sturgeon (and likely pallid sturgeon) have difficulty ascending the Muggli Bypass, and reductions in water velocities and the gradient of the bypass channel are needed to ensure passage for sturgeon species (FWP, 2020). Although this project is upstream of the area of the 2015 oil spill, improving fish passage at the T & Y dam could increase sturgeon recruitment throughout the Yellowstone River, including the area affected by the 2015 oil spill.

2.5.2 Bird Habitat Restoration

Goal: Conserve and restore upland (grassland/shrubland) and riparian habitat for avian species in the Yellowstone Basin, and/or the Prairie Pothole Region (PPR) of northern Montana, northern and eastern North Dakota, and eastern South Dakota.

Objectives:

- Restore injured upland and riparian habitat to compensate for bottomland impacted by oil and response activities in the Yellowstone Basin

- Procure conservation easements and develop/implement restoration strategies for enhancing upland and riparian habitat in the PPR. Although outside the area affected by the spill, habitat protection and enhancement in the PPR would benefit waterfowl and other migratory bird populations affected by the spill.

2.5.2.1 Upland and Riparian Habitat Restoration of Altered or Developed Habitat

Riparian forests cover less than 1% of the total landscape in western North American, yet these habitats support over 50% of breeding bird species, including 235 known species in Montana (R.L. Hutto, pers. Comm.; Knopf et al. 1988). These riparian habitats primarily consist of cottonwoods (*Populus* spp.) and willows (*Salix* spp.) that require approximately 90 years of structural diversity to develop into a mature canopy (Skagan et al. 2005). For bird habitat restoration, properties would be selected based upon the presence of injured upland/riparian habitat types (*e.g.,* bottomland cottonwood galleries, riparian grasslands and shrublands, sedge meadows, and willow bottoms). Potential restoration projects will be targeted in the Yellowstone Basin in and/or around the impacted site, including farther upstream and downstream of the impacted area (Figure 2). Projects outside the impacted area will be considered on a project-specific basis for their potential to meet the restoration plan goals. The preservation of these habitats will provide benefits for avian species that may have been injured as a result of the spill and response activities, including various waterfowl and cavity nesting populations.

Upland/riparian restoration is compatible with the YRCDC's recommended practices for the Yellowstone River (YRCDC 2016). The recommended practices document priority areas with more than 5% of the floodplain isolated by dikes, berms, or levees for restoration. These Yellowstone River recommended practices would be one component considered in the project selection (YRCDC 2016).

Possible project partners may include FWP, NRDP, USFWS, BLM, local government entities, and non-government organizations that are interested in or whose mission is land conservation and/or river restoration.

2.5.2.2 Prairie Pothole Habitat Protection and Improvement

Prairie potholes are depressional wetlands formed as subterranean masses of ice melted following glacial retreat during the last ice age that now receive water temporarily or seasonally via snowmelt and rain events (Johnson and Grier 1988). The PPR of North America includes five U.S. states (northern Montana, northern and eastern North Dakota, eastern South Dakota, western Minnesota, and north-central Iowa) and extends over 770,000 km^2 (Doherty et al. 2018). The uplands and wetlands of the PPR are some of the most altered habitats in the world as a result of private landownership, high productivity for agriculture, and ease of cultivation (Doherty et al. 2018). It is estimated that up to 89% of the wetlands in the PPR have been drained since

European settlement began in the U.S. during the 1800's (Dahl 2011). However, even with these significant anthropogenic alterations, the PPR is still the most productive waterfowl habitat in North America with an estimated 10 million ducks and 18 species relying on this region for breeding (Batt et al. 1989). Similarly, the adjacent upland PPR habitat is also essential for breeding waterfowl, and the availability/ amount of perennial cover (grassland) influences the suitability and productivity of PPR wetlands (reviewed in Reynolds et al. 2007).

Many of the waterfowl species that utilize the Yellowstone Basin are reliant on the PPR in northern Montana, eastern North Dakota, and eastern South Dakota for breeding (Figure 2). Protecting upland and riparian habitat in the PPR is a primary requirement for enhancing habitat quality and subsequently increasing waterfowl density. Potential conservation easements, fee title land acquisitions, and restoration projects will be targeted in the PPR with the ultimate goal of increasing the number of breeding pairs and promoting waterfowl recruitment for the impacted area on the Yellowstone River.

Possible project partners may include BLM, state and local government entities, and non-government organizations that are interested in or whose mission is land conservation and/or river restoration.

2.5.3 Recreation Compensatory Restoration

Goal: Enhance public access to the Yellowstone River within impacted area near Glendive to compensate for lost recreational use due to the oil spill.

Objectives:

- Develop and enhance public access on public and private lands
- Acquire, develop, and construct one Fishing Access Site to be managed by FWP

2.5.3.1 Develop and Enhance Public Access on Public or Private Lands

Improving public access to the Yellowstone River was identified as a high priority by the public, FWP, and LYRCAC (LYRCAC, 2021). During the public scoping process, a project to improve existing public river access within the town of Glendive was identified as a high priority and is within the impacted area (see responses to public comments received during the public scoping, Appendix B). Potential improvements to the Glendive Yellowstone River access site include stabilization and widening the boat ramp, improving the road and parking lot, and building an outhouse or other amenities. The Trustees recommend coordinating with Walleyes Unlimited, the City of Glendive, and other stakeholders to implement this project. If funding remains after improvement of the Glendive Yellowstone River access site, other public or private lands may be considered for improvements to boat ramps and other facilities.

2.5.3.2 Fishing Access Site Development

If funding remains after the Glendive Yellowstone River Access site is improved, a new Fishing Access Site (FAS) to be managed by FWP may be pursued. FWP and the LYRCAC recommendations (LYRCAC, 2021) identified several locations within the impacted area where a new FAS would improve public access to the Yellowstone River. Establishing at least one new access point would partially replace lost recreational opportunities due to the FCA issued following the oil spill. The FAS would preferably be between Glendive and Fallon Bridge, which is in the immediate vicinity of the oil spill and currently lacks public access to 36 miles of the Yellowstone

River. This would involve purchasing land along the Yellowstone River to be managed and developed by FWP as a FAS.

2.6 Restoration Alternatives

The restoration alternatives presented in this section are a combination of the eligible restoration actions discussed in Section 2.5. Each alternative represents a restoration plan based on technically feasible restoration actions, which restore, rehabilitate, replace, or acquire the equivalent of injured natural resources or services associated with those resources, but with a greater amount of funds or a lesser amount of funds allocated to different resources. The "no action" alternative, Alternative 1, is discussed to provide the benchmark against which restoration alternatives are evaluated if the Trustees did not implement restoration. Alternative 2 is weighted to fish habitat restoration, Alternative 3 is weighted to recreation replacement actions, and Alternative 4 divides funding between fish habitat and recreation. Bird habitat restoration is included in all alternatives except the no action alternative.

A total of $2,000,000 was received in the settlement by the State and Federal Trustees. As discussed in Section 1.6, a portion of these funds ($300,250) were used to refund past costs incurred by the Trustees during the site investigation and settlement negotiations, meaning approximately $1.7 million is left for restoration plan development and implementation. The Trustees reserved 7.5% of the total settlement for costs associated with developing the restoration plan (approximately $150,000), with the State and USFWS each designating approximately $75,000 of their respective settlement monies to plan development.

Of the $190,000 available for restoration plan development and implementation for USFWS (refer to Section 1.6), this leaves approximately $115,000 for restoration action implementation on bird habitat projects. Any funds leftover from USFWS's $75,000 for plan development will be added to the funds available for fish or bird habitat restoration, upon agreement between State and Federal Trustees.

The State has approximately $1.5 million available for fish habitat and recreation restoration projects (Section 1.6). Of this, the State reserves approximately 5% for administrative and staffing costs associated with project implementation ($70,000) and the $75,000 for plan development, as discussed above. This leaves approximately $1.36 million available for restoration actions. Any money gained in interest and money left over from individual restoration categories or the amount reserved for plan development/administrative costs will be added to the restoration category specified in Table 2.

Table 2. Funding Allocation for Restoration Alternatives

Alternative	Fish Habitat	Bird Habitat	Recreation	Plan Development / Administrative Costs	Total	Remaining/ Leftover Funds
Alternative 1	$0	$0	$0	$150,000	$150,000	N/A
Alternative 2	$1,365,000	$115,000	$0	$220,000	$1,700,000	Fish habitat
Alternative 3	$0	$115,000	$1,365,000	$220,000	$1,700,000	Bird habitat
Alternative 4	$890,000	$115,000	$475,000	$220,000	$1,700,000	Fish or bird habitat

Note: Dollar amounts are approximate

2.6.1 Alternative 1: No Action/Natural Recovery

MEPA and NEPA require the Trustees to evaluate an alternative in which no actions are taken by a State or Federal agency to restore the Yellowstone River affected by the oil spill. Under the no-action alternative, the Trustees would not implement restoration projects under NRDA. The Trustees would allow natural recovery processes to occur, which could result in one of four outcomes for injured resources: 1) gradual recovery, 2) partial recovery, 3) no recovery, or 4) further deterioration. Although injured resources could presumably recover to at or near baseline conditions, recovery would take much longer compared to a scenario in which restoration actions were undertaken. Additionally, the interim losses of natural resources would not be compensated under a no-action alternative. If Trustees selected this alternative, the public would not be compensated for the substantial losses in natural resources and services caused by the oil spill.

2.6.2 Alternative 2: Fish Habitat Restoration Prioritized

Alternative 2 would prioritize bird and fish habitat restoration, using the settlement money to implement projects that restore habitat that was affected by the oil spill or create or enhance similar habitat. Funding would be allocated to each restoration category as follows:

- Fish habitat restoration: $1,365,000, approximately 70% of settlement funds, would be allocated to restoring fish habitat by implementing actions to improve channel complexity, floodplain connection, and fish passage. With this amount of funding for fish habitat restoration, the Trustees estimate that a combination of these project types (described further in Section 2.5.1) could be implemented.

- Bird habitat restoration: $115,000, approximately 6% of settlement funds, would be allocated to restoring bird habitat by procuring conservation easements and developing/implementing restoration strategies in the PPR, and/or restoring injured upland and riparian habitat in the Yellowstone Basin. With the amount of funding for bird habitat restoration, the Trustees estimate that one or both project types could be implemented. For the larger scale/more expensive projects (*i.e.,* conservation easements), partnering with other organizations will likely be necessary to leverage additional funding sources.

- Recreation actions: No funding would be allocated to restoring or replacing recreational services.

- Plan Development and Administrative Costs: $220,000, approximately 10% of settlement funds, would be allocated to plan development and administrative costs associated with project implementation.

- Remaining funds: All unspent funds allocated to bird habitat, recreation, or plan development, or funds unallocated to a specific project after 5 years of approval of this restoration plan would be allocated to the fish habitat category for use.

2.6.3 Alternative 3: Recreation Compensation Prioritized

Alternative 3 would prioritize bird habitat restoration and projects that compensate the public for lost recreational services due to the oil spill. Funding would be allocated to each restoration category as follows:

- Fish habitat actions: No funding would be allocated to restoring fish habitat.

- Bird habitat actions: $115,000, approximately 6% of settlement funds, would be allocated to restoring bird habitat by procuring conservation easements and developing/implementing restoration strategies in the PPR, and/or restoring injured upland and riparian habitat in the Yellowstone Basin. With the amount of funding for bird habitat restoration, the Trustees estimate that one or both project types could be implemented. For the larger scale/more expensive projects (*i.e.,* conservation easements), partnering with other organizations will likely be necessary to leverage additional funding sources.

- Recreation actions: $1,365,000, approximately 70% of settlement funds, would be allocated to restoring or replacing recreational services through FAS acquisition and development or enhancing Yellowstone River access on existing public or private lands. With this amount of funding for recreation actions, the Trustees estimate that a combination of these project types (described further in Section 2.5.3) could be implemented.

- Plan Development: $220,000, approximately 10% of settlement funds, would be allocated to plan development and administrative costs associated with project implementation.

- Remaining funds: All unspent funds allocated to bird habitat, recreation, or plan development, or funds unallocated to a specific project after 5 years of approval of this restoration plan would be allocated to the bird habitat category for use.

2.6.4 Alternative 4: Fish Habitat and Recreation

Alternative 4 would allocate funding to all three restoration categories: fish habitat restoration, bird habitat restoration, and projects that compensate the public for lost recreational services due to the oil spill. Funding would be allocated to each restoration category as follows:

- Fish habitat actions: $890,000, approximately 45% of settlement funds, would be allocated to restoring fish habitat by implementing actions to improve channel complexity, floodplain connection, and fish passage. With this amount of funding for fish habitat restoration, the Trustees estimate that one or a combination of these project types (described further in Section 2.5.1) could be implemented. Pursuing a wider variety of fish habitat restoration projects or pursuing larger, more expensive projects would require contributions from funding sources outside of this restoration plan.

- Bird habitat actions: $115,000, approximately 6% of settlement funds, would be allocated to restoring bird habitat by procuring conservation easements and developing/implementing restoration strategies in the PPR, and/or restoring injured upland and riparian habitat in the Yellowstone Basin. With the amount of funding for bird habitat restoration, the Trustees estimate that one or both project types could be implemented. For the larger scale/more expensive projects (*i.e.,* conservation easements), partnering with other organizations will likely be necessary to leverage additional funding sources.

- Recreation actions: $475,000, approximately 25% of settlement funds, would be allocated to restoring or replacing recreational services through FAS acquisition and development or enhancing Yellowstone River access on existing public or private lands. With this amount of funding for recreation, the Trustees estimate that one or a combination of these project types (described further in Section 3) could be implemented. Pursuing a wider variety of recreation projects or larger, more expensive projects would require contributions from funding sources outside of this restoration plan.

- Plan Development: $220,000, approximately 7% of settlement funds, would be allocated to plan development and administrative costs associated with project implementation.

- Remaining funds: The State and Federal Trustees will reevaluate all unspent funds five years after the approval of this restoration plan. Remaining funds may be reallocated to the fish habitat and/or bird habitat category upon agreement between the State and Federal Trustees.

3.0 EVALUATION OF RESTORATION ALTERNATIVES

After developing the range of restoration alternatives, the Trustees evaluated the alternatives according to the six evaluation criteria set out in OPA NRDA regulations. This comparison is supported by the Trustees' consideration of the environmental consequences of the alternatives, presented in Section 3.2. Appendix C presents the Trustees' evaluation of the alternatives and project types, according to OPA NRDA regulations and project selection criteria.

3.1 Evaluation of Alternatives Under OPA

Natural resource damage assessment regulations under OPA include consideration of six criteria when evaluating restoration options (15 CFR 990.54). These OPA criteria and the restoration project selection criteria are discussed in more detail in Section 2.2. Appendix C presents an evaluation of each alternative with respect to the OPA criteria. Below is a brief comparison of how well each alternative meets the selection criteria.

1) Project cost and cost effectiveness

Alternative 1 would not cost anything above developing the restoration plan because no active restoration or compensation projects would be completed. Alternatives 2, 3, and 4 provide feasible and cost-effective restoration options that are sustainable and provide long-term benefits. These alternatives are approximately equivalent in terms of cost and cost effectiveness. There is potential for match funding and/or in-kind services from the land managers (e.g., FWP) or local organizations (e.g., Trout Unlimited or YRCDC).

2) Project is expected to meet Trustees' goals and objectives

Alternative 1 does not meet the Trustees' goals because restoration actions would not be implemented to speed up recovery of injured natural resources and there would be no compensation for lost services. Alternatives 2 and 3 are approximately equivalent in terms of meeting the Trustees' goals and objectives as alternative 2 focuses on fish habitat only and alternative 3 focuses on recreational services only. Alternative 4 best meets all the Trustees' goals and objectives by including projects restoring and replacing both fish habitat and recreational services, along with the bird habitat.

3) Likelihood of success

Alternatives 2, 3, and 4 are approximately equivalent in terms of likelihood of success. Each alternative will use readily available information, including the YRRP (YRCDC, 2016), Recovery Plan for the Pallid Sturgeon (USFWS, 2014), Recommendations for Improving Public Access, Habitat Conservation, and Management of the Lower Yellowstone River Corridor (LYRCAC, 2021), and USDA-Conservation Reserve Program for Waterfowl and Grassland Passerines in the Prairie Pothole Region of the U.S. for birds, to identify projects. Once projects are identified, proven technologies, construction methods and scientific principles will be used to implement projects. The Trustees will collaborate with other federal and state agencies and local organizations wherever possible to ensure public acceptance and maximize funds and benefits. All these project

planning, development, and implementation strategies will increase the likelihood of success.

4) Project will prevent future injury and not cause collateral damage

Alternative 1 would not prevent future injury. Alternative 3 would address bird habitat, which would speed up recovery and prevent future injury from the oil spill on bird populations. Alternatives 2 and 4 would prevent future injury from the spill on bird and fish populations, with more potential benefit under Alternative 2 because more funding would be allocated to habitat restoration. Short-term negative impacts during construction of any projects would require permits and would minimize adverse impacts. No alternatives would cause collateral damage.

5) Project will benefit more than one resource

Alternatives 2 and 3 are approximately equivalent, focusing on two resources each. Alternative 2 focuses on fish and bird habitat and alternative 3 focuses on bird habitat and recreational services. Alternative 4 benefits three of the injured or lost resources: fish habitat, bird habitat, and recreational services.

6) Effect of alternative on public health and safety

The human health and safety impacts resulting from the proposed actions include both short-term transient impacts associated with construction and long-term benefits resulting from completion of the actions. Potential short-term impacts, except Alternative 1, to human health and safety during construction would be effectively mitigated by compliance with permitting and proper best management practices to protect the public and workers against hazards. Alternative 1 would not adversely impact public health and safety but would not improve conditions. Depending on the exact projects selected, Alternative 2 has the potential to improve conditions for boaters on the Yellowstone River.

Alternatives 3 and 4 would benefit human health and safety by providing improved riparian and recreation areas where the public can safely participate in outdoor recreation.

3.2 Evaluation of Alternatives Under NEPA and MEPA

This section addresses the potential overall impacts and other factors to be considered under NEPA and MEPA, including the impacts and factors systematically by category under NEPA and MEPA. A summary of the analyses conducted on the restoration alternatives follows. Results of the evaluation are presented in Appendix D.

3.2.1 Direct and Indirect Impacts Considered by Trustees

This analysis addresses direct and indirect effects of conducting the restoration projects. Direct effects are those caused by the actions proposed and can occur at the same time and place of the action. Indirect effects are caused by the actions proposed and may include effects related to changes in patterns of land use, population density, or growth rate and related effects on air and water and other natural systems.

This draft restoration plan describes and evaluates both potential adverse and beneficial impacts on the natural and human environments. The analysis considers the magnitude of the potential impacts (minor, moderate, and major), the area of the impacts (context), and the likely intensity of the impacts. The analysis is based on a review of available data, reference material, and professional judgement.

Minor impacts are generally those that might be detectable but, in their context, may nonetheless not be measurable because any changes they cause are so slight as to be impossible to detect. Moderate impacts are those that are more detectable and, typically, more quantifiable or measurable than minor impacts.

Major impacts are those that, in their context and due to their severity, have the potential to rise to the level of significant effects, as set forth in the Council on Environmental Quality (CEQ) NEPA regulations (40 CFR 1501.3) and, thus, warrant heightened attention and examination for potential benefit of mitigation. If at the conclusion of the environmental assessment, the Trustees determine the preferred alternative will not have significant effects on the human environment, they will prepare a finding of no significant impact.

3.2.2 Beneficial Impacts from Restoration Alternatives

For all injured resource areas, Alternative 1, the no action alternative would not meet project goals of restoring natural resources and compensating for natural resource losses from the oil spill. Losses of natural resources and their services were, and continue to be, suffered during the period of recovery from the oil spill. These losses would continue for decades under a scenario where natural attenuation is relied upon to recover injured natural resources and the services they provide. Technically feasible project alternatives exist to compensate for the natural resource losses including injuries to surface water, fish, and birds and lost recreational use. Technically feasible project alternatives also exist to compensate for lost human recreational services due to the oil discharge. Therefore, the Trustees reject the “no-action” alternative and instead have selected the appropriately scaled restoration projects described in this draft restoration plan.

3.2.2.1 Fish

Alternatives 2 and 4 would benefit fish habitat through increased channel complexity, enhanced floodplain connectivity, and fish passage improvements. Alternative 2 would have the greatest benefit to fish habitat. Increasing fish habitat diversity by increasing channel complexity has been shown to increase fish production and is a recovery action for pallid sturgeon (USFWS, 2014). Across the U.S. and locally, fish passage measures have been shown to effectively restore connectivity with habitat and increase fish abundance, without negatively affecting agricultural practices (DOI and COE, 2016).

3.2.2.2 Birds

Alternatives 2, 3, and 4 would benefit birds through increased (conservation easements) and enhanced (habitat restoration) waterfowl breeding habitat in the PPR of northern Montana, northern and eastern North Dakota, eastern South Dakota, which in turn will promote higher waterfowl densities within the impacted area of the Yellowstone River. Each Alternative would provide the same benefits to birds. Similar restoration strategies have resulted in higher breeding pair waterfowl densities and subsequent waterfowl recruitment densities in other regions with prairie pothole habitat (Ballard et al. 2021). In addition, restoring upland and riparian habitat in the Yellowstone Basin would provide benefits for avian species that may have been injured as a result of the spill and response activities, including various waterfowl and cavity nesting populations.

3.2.2.3 Recreational Use

Alternatives 3 and 4 would provide compensation for lost recreational use of the impacted area due to the oil spill with Alternative 3 providing the greatest benefit to recreational river use. After recreation projects are completed, the public would expect to have greater recreational activity

and fishing opportunities. The public would also have more and safer access points to the Yellowstone River.

Alternatives 2, 3, and 4 are also expected to benefit recreational human use of the impacted area because enhancements to fish and bird habitat will create better opportunities for wildlife viewing and benefit fish populations.

3.2.3 Other Environmental Impacts Considered by Trustees

Overall, the proposed restoration alternatives would enhance functionality of the ecosystem by improving aquatic and bird habitat and providing safe and established access points to the Yellowstone River. There could be some short-term direct and localized negative impacts, though not significant, from implementation of the selected projects. Potential impacts from the proposed restoration actions are discussed below.

3.2.3.1 Construction, Sound, and Air Pollution

Machinery and equipment used during construction and other restoration activities could generate sound that could temporarily and directly disturb wildlife and humans near the construction activity. There could be additional short-term negative impacts on fish and wildlife species as a result of construction activities. The Trustees would address these types of short-term impacts through best management practices required of the construction contractor in the bid documents. Examples of the types of best management practices that would be used, as appropriate, are as follows:

1) **Erosion Control Measures** – Erosion control measures will be installed downstream of each site to prevent short-term delivery of fine sediment and turbidity during construction. Temporary erosion control measures, such as straw bales, straw wattles or silt fence will be installed between construction areas and any live water, wetlands, or drainages with potential for live water. Temporary erosion and sediment control measures include the installation and maintenance of temporary structural control measures to reduce or eliminate the erosion of soil and transport of sediment off-site as a result of construction activities. This may include, but not be limited to, silt fences, ditch checks, sediment basins, erosion control mats, stabilized construction entrance, temporary diversions, inlet protection, sediment traps, and slope drains. If erosion control measures are required, it will be the responsibility of the Contractor to install and maintain them throughout the construction.
2) **Equipment Condition** – All equipment will be pressure washed/cleaned of external oil, grease, dirt, and mud and free of any leaks prior to entering the Site. Where possible, equipment will operate from the existing embankments.
3) **Vegetation Protection** – Contractor must protect all trees and land located within the project construction, staging, or construction limits unless the vegetation is specified for removal and transplant. Care shall be taken in areas not so marked to avoid unnecessary damage to natural vegetation.
4) **Wetland Preservation** – If wetland areas supporting desirable vegetation are present near work extents, disturbance of these areas must be avoided during construction activities.
5) **Fuel Storage and Refueling** – Fuel storage and refueling will not occur within 300 feet of perennial drainages and wetlands, or within 150 feet of ephemeral drainages. Fuel spill containment and cleanup materials will be present and available on-site.

6) **Weeds** – Comply with all local and state noxious weed control requirements. Equipment and vehicles must be washed prior to entering the project site to remove vegetation to avoid the spread of weeds. Known weed infestations near work sites will be identified prior to construction. Heavy equipment must avoid unnecessarily entering these areas to reduce potential spread of weeds.

7) **Site Condition** – Contractor will keep the premises free from debris and accumulation of waste. Contractor will assure proper disposal of all excess materials off site. Contractor will smooth tracks upon completion of work at each site.

In accordance with State and Federal permit conditions, in-water work would be timed and conducted in a manner to minimize impacts to fish and other aquatic life. Impacts on mobile species (*e.g.,* birds, mammals) are expected to be minor, consisting of short-term displacement and timing of construction would be considered regarding breeding and nesting periods of migratory birds. Overall, the construction of the riverine aquatic habitat projects as part of the preferred alternatives would provide long-term benefits to fish and wildlife species that depend on these types of habitats. Construction impacts from fish habitat and recreation projects would be short-term and will be addressed through appropriate best management practices, similar to the ones outlined above.

3.2.3.2 Federally Threatened, Endangered, and Candidate Species and Montana Species of Concern

The lower reach of the Yellowstone River is year-round and seasonal habitat for a diverse assemblage of aquatic biological resources. Threatened and endangered species and Montana species of concern that reside in the lower Yellowstone River or may be found there during migration stopovers are listed in Table 3 (Abt Associates, 2016).

Table 3. Threatened, Endangered, and Candidate Species and Montana Species of Concern in the lower Yellowstone River

Category	Species
Montana State Species of Concern	Blue sucker (*Cycleptus elongates*) Sauger (*Sander canadensis*) Shortnose gar (*Lepisosteus platostomus*) Sicklefin chub (*Macrhybopsis meeki)* Sturgeon chub *(Macrhybopsis gelida)* Paddlefish *(Polyodon spathula)* Great blue heron (*Ardea herodias*) Interior least tern (*Sterna antillarum*) Piping plover (*Charadrius melodus*)[1]
Montana State Potential Species of Concern	Burbot (*Lota lota*)
Federally Endangered Species	Pallid sturgeon (*Scaphirhynchus albus*) Whooping crane (*Grus americana*)

Notes: [1] – Federally threatened species; data from Abt Associated, 2016.

The proposed projects would be unlikely to negatively affect candidate, threatened, and endangered species. However, coordination with USFWS would be completed pursuant to Section 7 of the Endangered Species Act if it is determined that affects may occur. Montana species of concern may be present at the restoration areas and projects, once selected, will be coordinated with FWP to mitigate negative impacts on these species. Alternatives 2 and 4 may have long-term, positive effects on endangered species and species of concern.

3.2.3.3 Water Quality and Sediment

Temporary and localized direct adverse impacts may occur as a result of increases in erosion, turbidity and sedimentation related to construction activities for certain restoration projects. However, the use of best management practices, as discussed above, along with other avoidance and mitigation measures required by the regulatory agencies would be employed to minimize any adverse water quality and sedimentation impacts.

3.2.3.4 Visual Resources

There may be temporary and localized adverse direct minor visual impacts during construction of some of the restoration projects. Completion of restoration projects would generally be expected to result in improved viewscapes.

3.2.3.5 Archeological and Cultural Resources

As appropriate, the Trustees would work with project managers during the permitting process to ensure that they consult with the State Historical Preservation Office (SHPO) and Tribal Historical Preservation Offices (THPOs) to confirm that there are no known archeological and cultural sites within the project areas. If sites are discovered, the Trustees would work with the project manager to redesign projects so as to minimize or not adversely affect any known archaeological sites or sites of cultural significance, or a similar project in a different location in the watershed would be substituted. Additionally, USFWS will comply with the National Historic Preservation Act before commencing any restoration projects.

3.2.3.6 Additional Environmental Impacts Considered (soil, geology, energy use, land use, transportation, pipeline crossings)

The intent of an environmental justice evaluation under Executive Order (EO) 12898, “Federal Actions to Address Environmental Justice in Minority and Low-Income Populations” (1994) is to identify communities and groups that meet environmental justice criteria and suggest strategies to reduce potential adverse impacts of projects on affected groups. The purpose of EO 12898 is to identify and address the disproportionate placement of adverse environmental, economic, social, or health impacts from federal actions and policies on minority and/or low-income communities. This order requires lead agencies to evaluate impacts on minority or low-income populations during preparation of environmental and socioeconomic analyses of projects or programs that are proposed, funded, or licensed by federal agencies. The projects in this Restoration Plan are anticipated to benefit natural resources over the long-term. Project implementation, particularly those including construction activities, is anticipated to result in short-term increases in the demand for employment. While some short-term closures to localized areas could occur during project construction, none of these are anticipated in minority or low-income communities. None of the alternatives evaluated in this Restoration Plan would create a disproportionately high and adverse impact on minority or low-income populations.

No significant adverse effects are anticipated to soil, geologic conditions, energy consumption, wetlands, or floodplains. The Trustees expect that all of these projects would provide ecological benefits and some would also improve recreational use for hiking, biking, boating, fishing, and wildlife observation. The proposed restoration project types would not likely affect existing transportation corridors. During construction of some projects, traffic may temporarily be increased in the immediate area.

3.2.3.7 Regulatory Restrictions Analysis

Although conservation or channel migration easements may restrict private land use, projects would only be undertaken with willing landowners and would not impose any additional regulatory restrictions.

3.2.3.8 Climate Change

CEQ released Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews (August 1, 2016). The guidance recommends that federal agencies should consider 1) the potential effects of a proposed action on climate change as indicated by assessing greenhouse gas emissions, including, where applicable, carbon sequestration; and 2) the effects of climate change on a proposed action and its environmental impacts. The Trustees believe it is possible that the net effect of ecosystem restoration actions resulting in short-term biogenic emissions may lead to long-term reductions of atmospheric greenhouse gas emissions concentrations through increases in carbon stocks or reduced risks of future emissions. For ecosystem restoration projects, agencies should include a comparison of estimated net greenhouse emissions, including biogenic emissions, and carbon stock changes that are projected to occur with and without implementation of proposed actions. When agencies do not quantify an action's projected greenhouse gas emissions because tools, methodologies, or data inputs are not reasonably available to support calculations for a quantitative analysis, CEQ recommends that agencies include a qualitative analysis in the NEPA document and explain the basis for determining that quantification is not warranted. Reasonableness and proportionality would be used to determine the extent of the analysis. Due to the programmatic nature of this restoration plan, as additional planning proceeds, and subsequent NEPA review is necessary, quantitative estimates may be generated and made available in tiered restoration plans and NEPA analyses led by federal trustees. As part of planning ecological restoration projects, the federal trustees will use existing climate change planning tools during design, maintenance, and monitoring phases.

In addition, USFWS will follow the framework set forth in the USFWS document entitled "Rising to the Urgent Challenge: Strategic Plan for Responding to Accelerating Climate Change," to help ensure the sustainability of fish, wildlife, plants, and habitats in the face of accelerating climate change (See: https://digitalmedia.fws.gov/digital/collection/document/id/1783/). As required, USFWS will use Stein et al. (2014) to determine what constitutes "good" climate adaptation, how to recognize those characteristics in existing work, as well as how to design new interventions when necessary. USFWS policy requires offices to evaluate and address the impacts of climate change; by incorporating climate change adaptation measures in planning and decision-making so that the agency can more effectively manage fish, wildlife, plants, and associated ecological processes to achieve its mission.

3.2.4 Cumulative Impacts

Cumulative environmental impacts are those combined effects on the quality of the human environment that result from the incremental impact of the alternative when added to other past, present, and reasonably foreseeable future actions (40 CFR 1508.1(g)(3)). In March 2016, the YRCDC completed a comprehensive cumulative effects analysis of the entire Yellowstone River corridor, including the restoration area (COE and YRCDC, 2015), and similar analyses have been conducted for the Prairie Pothole Region (Ballard et al., 2021). The study looked at past and ongoing human impacts to the Yellowstone River from agricultural development, transportation development, urban and exurban development. The cumulative effects analysis also included trends in impacts, if development continues similarly, and resulted in a number of recommended

practices for activities on the river to address the major impacts identified (YRCDC, 2016) and to promote an ecologically sustainable river for preserving the long-term economic viability of the communities who rely on the Yellowstone River. The 2016 cumulative effects analysis conducted by YRCDC remains current and valid today and is incorporated into the Trustees cumulative impacts analysis here. This restoration plan incorporates some of the recommended practices as project types.

The cumulative effects analysis (COE and YRCDC, 2015) observes that agriculture has had the largest overall effect on the physical and biological condition of the river with riparian clearing, irrigation infrastructure and development, flow diversions and bank armoring. The proposed project types would not be expected to have major effects on agricultural land uses or operations in the restoration area.

Overall, Alternatives 2, 3, and 4 would result in a long-term net improvement in river ecosystem function in the Yellowstone River through some combination of protecting terrestrial/riparian areas at risk of future development, by improving bird habitat with restoration projects, by providing fish passage and habitat, and by removing hindrances to natural fluvial processes in the impacted area. Alternatives 2, 3, and 4 would also compensate for human recreational injuries that occurred because of the oil spill either directly or indirectly.

As Alternatives 2, 3, and 4 are intended to achieve recovery of injured natural resources, the cumulative environmental consequences would be largely beneficial for birds, wildlife, habitat, aquatic resources, and the human environment. All the anticipated adverse impacts would be short-term and localized, would occur during project construction, and would be minimized at the time of project implementation as discussed above. The permit process required for work in streams, rivers, floodplains, and wetlands would ensure that these projects are reviewed in the context of any similar projects that might be implemented in the area, including those by the federal agencies, state, county, conservation districts, or others. Any unanticipated negative cumulative adverse effect identified before project implementation would result in reconsideration of the project by the Trustees.

Active habitat restoration or land transactions would be conducted with willing landowners. The overall quality of life for the surrounding communities would improve with these restoration alternatives, through increased economic and recreational opportunities, especially considering the improved opportunities for fishing and wildlife viewing. Thus, all of the proposed restoration alternatives will have positive cumulative impacts to the environment in the long-term.

3.2.5 NEPA/MEPA Comparison of All Restoration Alternatives Considered by Trustees

Appendix D outlines the impact of each restoration alternative on the injured resources and other natural and human resources considered by the Trustees.

3.3 Federal, State, Tribal, and Local Laws, Rules, and Policies

All alternatives are compliant with applicable laws, rules, and policies, although Alternative 1, No Action, would not comply with the requirements of the Consent Decree. The Trustees or project partners (e.g., FWP) would obtain all needed permits and authorizations before commencing a restoration project.

3.4 Preferred Alternative

Given that technically feasible restoration approaches are available to compensate for interim natural resource and service losses and the Trustees have recovered funds to implement restoration, the Trustees reject the no-action alternative. However, the no-actional alternative provides a basis to evaluate the benefits of the proposed alternatives for both OPA, NEPA, and MEPA purposes.

Of the four alternatives considered, the Trustees recommend Alternative 4 as the preferred alternative to meet restoration plan goals. Alternative 4 achieves the goals of the legal and policy criteria, meets the purpose and need of this Environmental Assessment, and produces benefits to all of the injured resources, replaces some of the recreational services lost because of the injury, and aligns with significant priorities of the community.

4.0 RESTORATION PLAN IMPLEMENTATION

This section explains the process that would be followed in the restoration plan project selection, development, design, and implementation. The Trustees anticipate implementing the project types described in the restoration plan within five years, though the timeframe for restoration plan completion will depend on the specific project requirements. Project funds may also be used to conduct monitoring and maintenance on completed projects after implementation.

4.1 General Implementation Process

OPA NRDA regulations provide that Trustees should consider certain actions to facilitate implementation of restoration, including establishing a memorandum of understanding to coordinate between the trustees; developing more detailed work plans to implement restoration; monitoring and overseeing restoration; and evaluating restoration success and the need for corrective action.

The Trustees will separately manage implementation of the project types and projects contained in the final restoration plan, but will coordinate their activities on a programmatic level, and will seek State, federal, local, and private partners to help develop, design, manage, provide additional funding, and/or implement identified projects.

As described below, certain projects and project types will be implemented by either the State Trustee or federal Trustee and will follow parallel implementation processes. The Trustees plan to work with project partners such as, but not limited to, local, state, and federal agencies, conservation districts, weed districts, nonprofit organizations, and landowners. The specifics of implementation will depend, in part, on particulars of each project type or project included in this restoration plan, and methods for project implementation will vary based on the type of project and identified project partners. Below are some general implementation categories, followed by some examples. Project-specific administration and oversight costs for project management will be included in project implementation budgets and will be included within any contracts or agreements with any partners.

Restoration plan projects generally will include those that involve planning/development, design, and construction. If a project includes property acquisitions and conservation easements, the Trustees will work with project partners and/or landowners to determine fair market value of the property. Acquisition can occur if the property interests are offered at or below fair market value and meet the goals and objectives of the restoration plan. Any acquisition must be approved by the Trustee, following public comment.

Project planning and development will use readily available information to select the project(s) that best meet the Restoration Plan goals, the OPA criteria, and the public needs. Planning and development will be completed by the implementing Trustee or its partner(s).

Project implementation that involves construction will generally be completed and reported in the following phases, where applicable: engineering and design, construction, monitoring, long-term maintenance, and project completion. Engineering and design generally will be completed by the implementing Trustee or other governmental agency through an agreement with NRDP. When that phase is complete, the project will move into the construction phase. During construction, the implementing Trustee and/or its partner will monitor construction activities to assure consistency with the restoration plan and any scope of work, as well as monitor for compliance with any required regulatory permits and consultations in order to avoid environmental impacts. When the construction phase is complete, the project will move into the monitoring phase. Reports on the outcomes of construction and as-built documentation will be produced as applicable.

4.2 Monitoring Plans

Specific monitoring and adaptive management plans will be developed for each project concurrent with its development and implementation. The project management and monitoring plans will include measurable restoration objectives that are specific to the injury and the Trustees' restoration goals, and performance criteria that will be used to determine project success or the need for corrective actions. Restoration project monitoring plans will address duration and frequency of monitoring needed to gauge progress and success, sampling level, reference sites (as needed), and its reasonable costs. Adaptive management will include corrective actions, as needed, in order to adhere to the restoration plan.

The implementing Trustee will ensure that appropriate long-term maintenance activities likely to be required for each project are identified, and that appropriate budgets and agreements are established to maintain each project over its intended lifespan. The implementing Trustee may identify a partner as a long-term steward of a completed project, and project funds may be allocated for that involvement.

A project is complete after all activities and expenditures have been accomplished for that project per the restoration plan, including monitoring, long-term maintenance, and final reports. Any excess project funds will be returned to the account and will remain dedicated to the same restoration category as that associated with the completed project until five (5) years after approval of Restoration Plan. After five years, the funds may be reallocated to another restoration category, consistent with this restoration plan. If the implementing Trustee determines that a project should be terminated, the remaining funds that would have been spent on that project will remain dedicated to the same restoration category.

4.3 Federal Lead Projects

For conservation easements or acquisitions, the USFWS will focus on protecting or restoring wetland and upland habitats in the Yellowstone Basin and/or PPR of northern Montana, northern and eastern North Dakota, eastern South Dakota.

Injury estimates from the 2015 Bridger Yellowstone River Oil Spill for waterfowl and waterfowl habitat were incorporated into pair prediction models to estimate the mean size for conservation easements and/or associated habitat restoration:

- Grassland Conservation Easements: 720 acres

- Grassland Restoration: 45 acres
- Wetland Restoration: 9 acres

When identifying land for conservation easements and restoration projects, the estimates generated by the pair prediction models above will serve as target acreage metrics.

The specifics of implementation will depend, in part, on particulars of each project type included in this restoration plan, and the methods for project implementation will vary on the type of project.

4.4 State Lead Projects

For State lead projects, the projects will be implemented through the NRDP using standard procurement and contracting requirements in compliance with Title 18 and other state law. As provided for in the 2022 CD, NRDP administrative costs incurred by the State related to the implementation of this plan will be funded from the allocated category. These costs will include design, implementation, oversight, operation and maintenance, monitoring, permitting, MEPA analysis and other related activities, as needed, in order to restore, replace, rehabilitate or acquire the equivalent of the natural resources injured by the spill.

- As part of the project development efforts, projects with matching funds or in-kind services for the full project increase the project's cost-effectiveness and will be prioritized over other similar projects without matching funds.
- Any acquisition of property interests must be approved by the Trustee, following public comment.
- If a project is completed under budget, the remainder funds will be used for the same restoration project type. Some projects may not reach the implementation phase, depending on the results of the project development phase. Funds may be reallocated in the Restoration Plan five years after approval of the final restoration plan.
- All restoration work on private land will require written landowner agreement to protect projects for a specific length of time.
- Specific projects may require additional MEPA review and public participation during project development and implementation.
- Projects selected will be required to initiate implementation within two years of the plan finalization. The implementation would take place over a period not to exceed 5 years.

The specifics of implementation will depend, in part, on particulars of each project type included in this restoration plan, and the methods for project implementation will vary on the type of project.

4.4.1 Selection Process

The allocation of funds to projects should address the highest priority projects in the impacted area.

The core principle for selection of fishery habitat and recreational service projects will be to base decisions in sound scientific information that will lead to achievement of the goals for each injury category. Information sources for all project types include local resource managers such as FWP, DNRC, DOI, USFWS, the conservation district or other local government or non-government entities; the injury assessment; the YRCEA (COE and YRCDC, 2015); the YRRP (YRCDC, 2016); LYRCAC Recommendations (LYRCAC, 2021); the Revised Recovery Plan for the Pallid Sturgeon (USFWS, 2014); and other information deemed necessary.

Projects will be located in areas best suited to meet the restoration plan goals (Figure 2). The main geographic focus of the natural resource damage assessment was the Yellowstone River where the release occurred, approximately 6.5 miles upstream of the City of Glendive, to approximately 30 miles downstream of the release site because this is the area that was most heavily impacted by the spill (impacted area; Figure 1). As documented in Sections 1.4.2 through 1.4.4, natural resources were injured throughout this area. Restoration projects may take place in an area greater than the impacted area (Figure 2), such as the Yellowstone River upstream, within and downstream of the impacted area, or off-River areas important to the migratory bird species affected by the spill. Projects that take place outside the most heavily impacted areas will be considered on a project-specific basis and selected according to their potential to meet the restoration plan goals.

In general, the NRDP will consult with local resource managers and other resource specialists to help identify, evaluate, and prioritize potential restoration projects that will have the greatest ability to achieve the goals of the restoration plan. Each identified project will be evaluated using the six criteria required by OPA, as well as other legal and Montana policy criteria where pertinent. For land acquisitions, additional criteria will be considered. To achieve restoration plan goals for each injury category, the NRDP proposes to address the factor(s) that most limit the injured resources first, then implement projects that reduce or eliminate the next most limiting factor(s).

For conservation easements or acquisitions, NRDP will work with project partners such as FWP and nonprofit organizations and with area landowners to help identify properties suitable to meet the project goals of recreational service replacement. NRDP may work with nonprofit land conservation organizations to secure the properties or easements. Acquisition may only be approved when the price to be paid for the property is equal to or less than the fair market value. An independent appraisal by a qualified appraiser which complies with the Uniform Standards of Professional Appraisal Practice will be required to verify the property's value. All acquisitions require approval by the Trustee, following public comment.

5.0 PREPARERS, AGENCIES, AND PERSONS CONSULTED

5.1 Preparers

Montana Natural Resource Damage Program
Doug Martin
Katherine Hausrath
Nathan Cook
Sydney Stewart

U.S. Department of the Interior
Brian Balmer
Clare Cragan
Jacob Martin

5.2 Agencies and Persons Consulted

State Agencies
Montana Department of Fish, Wildlife and Parks

Tribes (notified)
Assiniboine and Sioux Tribes of Fort Peck, Montana
Three Affiliated Tribes of Fort Berthold, New Town, North Dakota

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FIGURES

Figure 1. Spill Location and Impacted Area

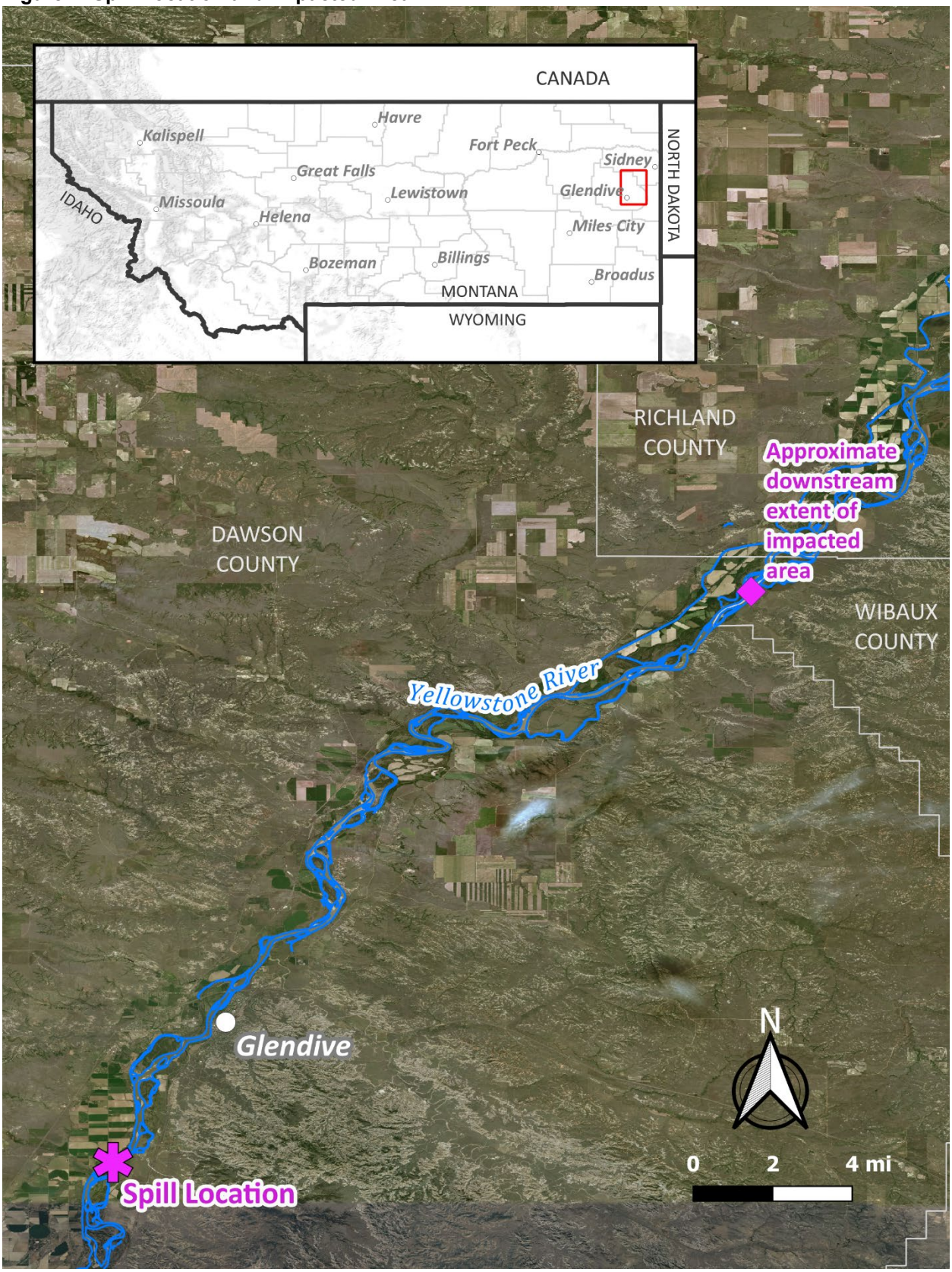
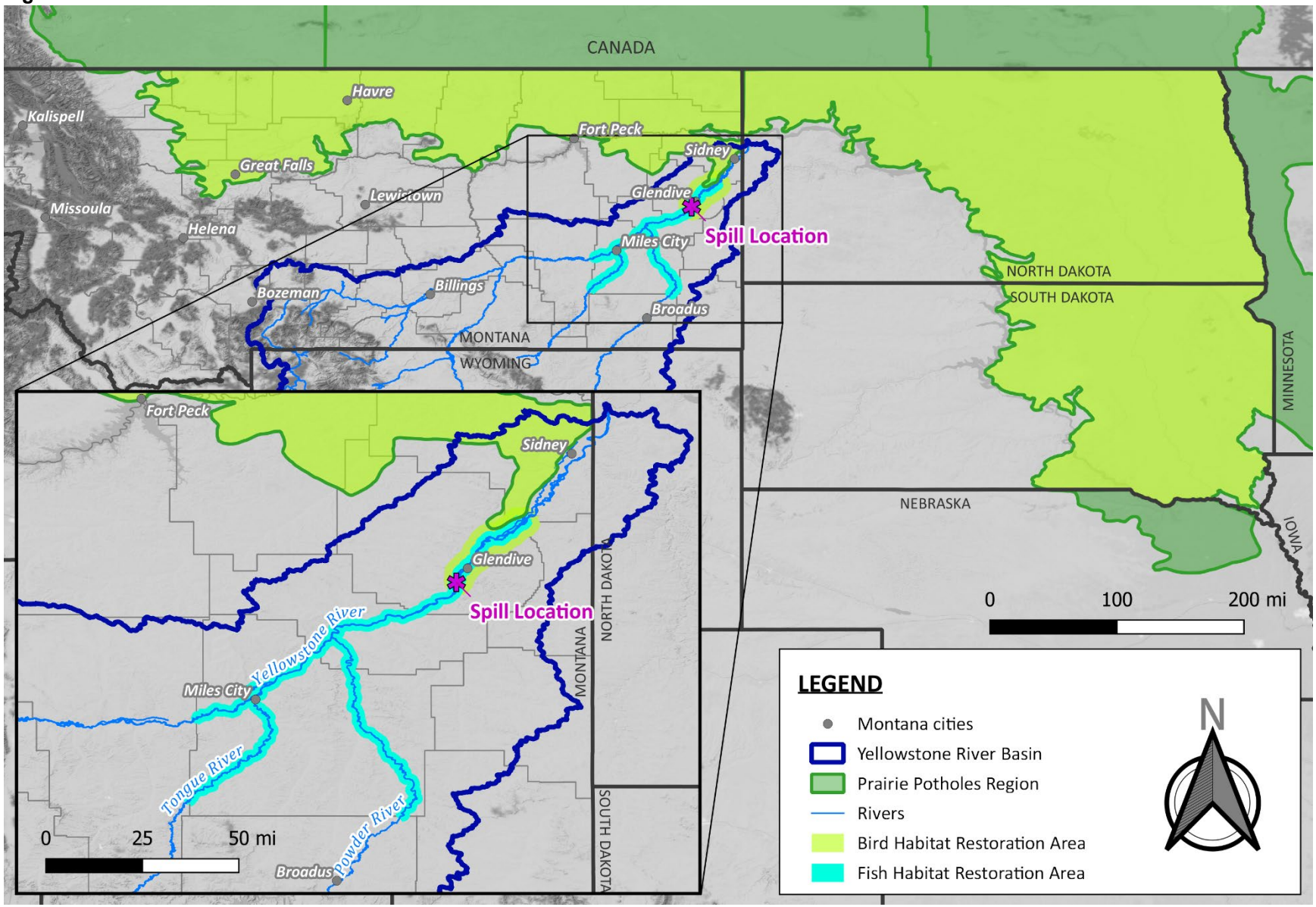


Figure 2. Potential Areas for Restoration Actions



APPENDIX A

Environmental Assessment Checklist Template

DRAFT

ENVIRONMENTAL ASSESSMENT

CHECKLIST

Bridger Pipeline 2015 Yellowstone River Oil Spill Restoration Plan

May 3, 2023

I. List of Mitigations, Stipulations

Mitigations, stipulations, and other *enforceable* controls required by NRDP, or another agency, may be relied upon to limit potential impacts associated with a proposed Project. The table below lists and evaluates enforceable conditions NRDP may rely on to limit potential impacts associated with the proposed Project.

Table 1: Listing and Evaluation of Enforceable Mitigations Limiting Impacts

Are enforceable controls limiting potential impacts of the proposed action? If not, no further evaluation is needed.			**Yes ☐**	**No ☒**
If yes, are these controls being relied upon to limit impacts below the level of significance? If yes, list the enforceable control(s) below			**Yes ☐**	**No ☒**
Enforceable Control	**Responsible Agency**	**Authority (Rule, Permit, Stipulation, Other)**	**Effect of Enforceable Control on Proposed Project**	

II. Summary of Potential Impacts of the Proposed Project on the Physical Environment and Human Population

The impacts analysis identifies and evaluates **direct**, **secondary**, and **cumulative impacts**.

- **Direct impacts** are those that occur at the same time and place as the action that triggers the effect.
- **Secondary impacts** are further impacts to the human environment that may be stimulated or induced by or otherwise result from a direct impact of the action. ARM 12.2.429(18).[1]
- **Cumulative impacts** "means the collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures." ARM 12.2.429(7).

Where impacts are expected to occur, the impact analysis estimates the **extent, duration, frequency,** and **severity** of the impact. The duration of an impact is quantified as follows:

- **Short-Term**: impacts that would not last longer than the proposed project.
- **Long-Term**: impacts that would remain or occur following the proposed project.

[1] NRDP has based this checklist EA on one developed by Montana Fish, Wildlife, and Parks (FWP). The regulatory citations are for reference only; these Administrative Rules of Montana are for FWP's rules. NRDP has not developed separate ARM.

The severity of an impact is measured using the following:

- **No Impact**: there would be no change from current conditions.
- **Negligible**: an adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor**: the effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- **Moderate**: the effect would be easily identifiable and would change the function or integrity of the resource.
- **Major**: the effect would irretrievably alter the resource.

Some impacts may require mitigation. As defined in ARM 12.2.429, mitigation means:

- Avoiding an impact by not taking a certain action or parts of a project;
- Minimizing impacts by limiting the degree or magnitude of a project and its implementation;
- Rectifying an impact by repairing, rehabilitating, or restoring the affected environment; or
- Reducing or eliminating an impact over time by preservation and maintenance operations during the life of a project or the time period thereafter that an impact continues.

A list of any mitigation strategies including, but not limited to, design, enforceable controls or stipulations, or both, as applicable to the proposed project is included in **Section VI** above.

NRDP must analyze impacts to the physical and human environment for each alternative considered. The proposed project considered the following alternatives:

- **Alternative 1: No Action. Evaluation and Summary of Potential Impacts on the Physical Environment and Human Population**

  Under the "No Action" alternative, the proposed project would not occur. Therefore, no additional impacts to the physical environment or human population in the analysis area would occur. The "No Action" alternative forms the baseline from which the potential impacts of the proposed Project can be measured.

- **Alternative 4 Proposed Project. Evaluation and Summary of Potential Impacts on the Physical Environment and Human Population**

  See **Table 2** (Impacts on Physical Environment) and **Table 3** (Impacts on Human Population) below.

Table 2 - Potential Impacts of Alternative 4: Proposed Project on the Physical Environment

PHYSICAL ENVIRONMENT	Duration of Impact			Severity of Impact					
Resource	None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
Terrestrial, avian, and aquatic life and habitats	☐	☒	☒	☐	☐	☒	☒	☐	No significant adverse impacts to terrestrial, avian, and aquatic life and habitats would be expected because of the proposed project. The proposed projects constitutes fish habitat improvement, migratory bird habitat improvement, and improvements to recreational access on the Yellowstone River. Project construction may have minor localized short-term adverse impacts on habitat due to turbidity generated by the work conducted in-stream or along streambanks. However, impacts would be consistent with, but likely would not exceed, the level of turbidity generated by high water events experienced during spring runoff. Operation of equipment in the stream channel would be minimized to the extent practicable. Necessary permits would be obtained prior to implementation and adhered to during construction to meet short-term water quality standards and protect against adverse impacts to aquatic resources during operations. Best management practices would be employed to minimize construction impacts. Noise from operation of heavy equipment necessary to implement the projects may adversely impact terrestrial and avian resources. However, impacts would only occur during operation of heavy equipment. When completed, the habitat restoration projects are expected to have long-term beneficial impacts to terrestrial, avian, and aquatic life, with specific focus on avian and aquatic life and habitat. Enhanced recreation opportunities and increased river access are unlikely to affect fish populations as these populations are protected and managed with fishing regulations. Any impacts to terrestrial, avian, and aquatic life and habitats in the affected area would be both long-

									term, beneficial, and moderate as well as short-term, adverse, and minor.
Water quality, quantity, and distribution	☐	☒	☒	☐	☐	☒	☒	☐	No significant adverse impacts to water quality, quantity, and distribution would be expected because of the proposed projects. The proposed projects would not require the use of any additional new water resources, nor would they affect the distribution of any existing water resources. Implementation of projects may result in short-term and minor increases in water turbidity generated by work conducted in-stream and along streambanks. However, any impacts would be consistent with, but likely would not exceed, the level of turbidity generated by high water events experienced during spring runoff. Operation of equipment in the stream channel would be minimized to the extent practicable. Necessary permits would be obtained prior to implementation and adhered to during construction to meet short-term water quality standards and protect against adverse impacts to aquatic resources during operations. Best management practices would be employed to minimize construction impacts. Habitat restoration projects are expected to result in long-term floodplain expansion, which is a beneficial project objective. Any adverse impacts to water quality, quantity, and distribution would be short-term, consistent with existing natural impacts, and minor. Beneficial impacts of the proposed project are expected to be long-term and moderate.
Geology	☒	☐	☐	☒	☐	☐	☐	☐	No impacts to geology would be expected because of the proposed projects. The proposed projects would not affect any geologic features in the project area; therefore no impacts to geology are expected because of the proposed project.
Soil quality, stability, and moisture	☐	☐	☒	☐	☐	☐	☒	☐	No significant adverse impacts to soil quality, stability, and moisture would be expected because of the proposed projects. An objective of the proposed habitat restoration projects is to enhance floodplain connectivity and facilitate natural channel migration. Although soil

									disturbance would occur, it would represent a desired and beneficial outcome of the proposed project and part of the natural ecology of properly functioning channels in this landscape setting. Any impacts to soil quality, stability, and moisture from the proposed project would be long-term, moderate, and beneficial.
Vegetation cover, quantity, and quality	☐	☒	☒	☐	☐	☒	☒	☐	No significant adverse impacts to vegetation cover, quantity, and quality would be expected because of the proposed projects. A primary objective of the habitat restoration projects is to enhance native plant diversity and wildlife habitat in the affected area. Vegetation may be disturbed during construction activities, but disturbed areas would be reseeded. Weed-free seed would be required for any reseeding and weed control would be implemented as needed. Projects such as increasing floodplain connectivity, easements, and upland and riparian habitat enhancement are expected to have long-term, moderate, and beneficial impacts on vegetation quantity, quality, and diversity.
Aesthetics	☐	☒	☒	☐	☐	☒	☒	☐	No significant adverse impacts to the aesthetic nature of the affected area would be expected because of the proposed projects. Some individuals may realize adverse aesthetic impacts during project implementation, as the movement of materials and presence of staff and equipment to conduct the work may result in unnatural and increased noise levels in the affected area. However, any adverse impacts would be short-term and minor, lasting only as long as the proposed project. When completed, projects are expected to increase wildlife habitat diversity and quality, thereby beneficially contributing to the aesthetic nature of the affected area. Beneficial impacts to the aesthetic area nature of the affected area are expected to be long-term and moderate.
Air quality	☐	☒	☐	☐	☒	☐	☐	☐	No significant adverse impacts to air quality would be expected because of the proposed project. Minor and temporary fugitive dust and vehicle emissions would be created by equipment during construction but would end

									after completion. There would be no additional new air quality disturbance in the affected area and no significant point-sources of air pollution exist in the area affected by the proposed project. Any impacts to air quality would be short-term, consistent with existing impacts, and negligible.
Unique, endangered, fragile, or limited environmental resources	☐	☐	☒	☐	☐	☐	☒	☐	No significant adverse impacts to any unique, endangered, fragile, or limited environmental resources would be expected because of the proposed projects. The presence of any animal and/or plant species of concern and any threatened or endangered species were assessed in the Restoration Plan and include pallid sturgeon. A completed list of Species of Concern and any Threated or Endangered species is in the Restoration Plan for the proposed project. When completed, the proposed habitat restoration projects are expected to increase wildlife habitat diversity and quality for many species. Therefore, impacts to unique, endangered, fragile, or limited environmental resources that may be located in the affected area would be long-term, beneficial, and moderate.
Historical and archaeological sites	☒	☐	☐	☒	☐	☐	☐	☐	No significant adverse impacts to historic and archaeological sites would be expected because of the proposed project. As appropriate, the Trustees will work with project managers during the permitting process to ensure that they consult with the State Historical Preservation Office and Tribal Historic Preservation offices to confirm that there are no known archeological and cultural sites that would be disturbed. If cultural resources within or near the project areas are recorded and eligible for the National Register of Historic Places, the Trustees would work with the project manager to redesign projects so as to minimize or not adversely affect any known archaeological sites or sites of cultural significance, or a similar project in a different location in the watershed would be substituted. If cultural resources are unexpectedly discovered during project implementation,

									NRDP will cease implementation and contact FWP's Heritage Program for further evaluation.
Demands on environmental resources of land, water, air, and energy	☐	☒	☐	☐	☒	☐	☐	☐	No significant adverse impacts to demands on the environmental resources of land, water, air, and energy would be expected because of the proposed projects. Fuel would be required to operate equipment and vehicles used for the proposed project. No other demands on the environmental resources of land, water, air, and energy would be expected because of the proposed projects. Therefore, any impacts to such resources would be short-term, negligible, and limited to energy resources in the form of fuel.

Table 3 - Potential Impacts of Alternative 4: Proposed Project on the Human Population

HUMAN POPULATION	Duration of Impact			Severity of Impact					
Resource	None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
Social structures and mores	☒	☐	☐	☒	☐	☐	☐	☐	No significant impacts to social structures and mores in the affected area would be expected because of the proposed projects. The proposed projects would not impact any pre-project social structures, customs, values, and conventions in the affected area.
Cultural uniqueness and diversity	☒	☐	☐	☒	☐	☐	☐	☐	No significant impacts to cultural uniqueness and diversity in the affected area would be expected because of the proposed projects. Projects are not expected to result in any relocation of people into or out of the affected area.
Access to and quality of recreational and wilderness activities	☐	☐	☒	☐	☐	☐	☒	☐	No significant adverse impacts to access or the quality of recreational and wilderness activities would be expected because of the proposed projects. No Wilderness areas currently exist in the affected area; therefore, no impacts to Wilderness recreation activities would occur because of the proposed projects. No closures of public lands would occur because of the proposed projects. Goals of the habitat restoration projects are to improved fish and bird populations and habitat, which would likely lead to enhanced recreation opportunities for the public, including fishing and birdwatching. After recreation projects are completed, greater and safer access to recreational opportunities are expected along the Yellowstone River. Therefore, any impact to access and the quality of recreational and wilderness activities in the affected area would be long-term, moderate, and beneficial.
Local and state tax base and tax revenues	☐	☒	☐	☐	☒	☐	☐	☐	No significant adverse impacts to the local and state tax base and tax revenue would be expected because of the proposed project. The proposed project would be expected to increase state and local tax revenues from the sale of fuel, supplies and/or equipment to complete the

									project. Any impacts to the local and state tax base and tax revenue would be short -term and negligible, lasting only as long as the proposed project.
Agricultural or Industrial production	☒	☐	☐	☒	☐	☐	☐	☐	No significant impacts to agricultural or industrial production in the affected area would be expected because of the proposed projects. The proposed habitat restoration projects constitute stream and vegetation restoration activities intended to restore the natural stream ecosystem and processes. Because the affected area is not currently used for agricultural and/or industrial production the proposed project would not impact such practices. Therefore, no impacts to agricultural or industrial production would be expected because of the proposed project.
Human health and safety	☐	☒	☒	☐	☒	☒	☐	☐	No significant adverse impacts to human health and safety would be expected because of the proposed project. Affected government staff and/or contractors hired to conduct the project may realize increased risk to human health and safety; however, FWP would require affected staff and/or contractors to operate in a safe manner and utilize best management practices, including the use of available and appropriate safety precautions. When complete, recreation projects are expected to lead to safer recreational access along the Yellowstone River. Therefore, any potential direct impacts to human health and safety would be both short-term and negligible, lasting only as long as the proposed project, and long-term, minor, and beneficial.
Quantity and distribution of employment	☐	☒	☐	☐	☒	☐	☐	☐	No significant adverse impacts to the quantity and distribution of employment in the affected area would be expected because of the proposed projects. Short-term and minor impacts to the local quantity and distribution of employment may be realized because existing government staff or contracted services would be required to complete restoration activities. Any impacts the quantity and distribution of employment in the

									affected area would be short-term and negligible, lasting only as long as the proposed projects.
Distribution and density of population and housing	☒	☐	☐	☒	☐	☐	☐	☐	No significant adverse impacts to the distribution and density of population and housing would be expected because of the proposed projects. The proposed project would use existing government staff or contractors to accomplish the proposed project and would not otherwise require or result in the movement of existing or new population into or out of the affected area. Therefore, no impacts to the distribution and density of population and housing in the affected area would be expected because of the proposed project.
Demands for government services	☐	☒	☐	☐	☒	☐	☐	☐	No significant adverse impacts to the demands for government services in the affected area would be expected because of the proposed projects. The proposed projects would use existing government staff or hired contractors to complete the work. No additional demands for government services would be expected because of the proposed projects. Any impacts would be short-term and negligible.
Industrial, agricultural, and commercial activity	☒	☐	☐	☒	☐	☐	☐	☐	No significant adverse impacts to industrial, agricultural, and commercial activity would be expected because of the proposed projects. The proposed projects would not disturb or otherwise impact any industrial, agricultural, or commercial properties or operations; therefore, no impacts to industrial, agricultural, or commercial activity would be expected because of the proposed projects.
Locally adopted environmental plans and goals	☒	☐	☐	☒	☐	☐	☐	☐	No significant adverse impacts to locally adopted environmental plans and goals would be expected because of the proposed projects. NRDP is unaware of any locally adopted environmental plans or goals that may be adversely impacted by the proposed project. Therefore, no significant adverse impacts to locally adopted environmental plans and goals would be expected because of the proposed projects.

Other appropriate social and economic circumstances	☒	☐	☐	☒	☐	☐	☐	☐	No significant adverse impacts to any other appropriate social and economic circumstances would be expected because of the proposed projects. NRDP is unaware of any other appropriate social and economic circumstances that may be impacted by the proposed projects. Therefore, no significant adverse impacts to other appropriate social and economic circumstances would be expected because of the proposed projects.

Table 4: Determining the Significance of Impacts on the Quality of the Human Environment

If the EA identifies impacts associated with the proposed project, NRDP must determine the significance of the impacts. This determination forms the basis for NRDP's decision as to whether it is necessary to prepare an environmental impact statement. According to the applicable requirements, NRDP considers the criteria identified in this table to determine the significance of each impact on the quality of the human environment. The significance determination is made by giving weight to these criteria in their totality. For example, impacts identified as moderate or major in severity may not be significant if the duration is short-term. However, moderate or major impacts of short-term duration may be significant if the quantity and quality of the resource is limited and/or the resource is unique or fragile. Further, moderate or major impacts to a resource may not be significant if the quantity of that resource is high or the quality of the resource is not unique or fragile.	
Criteria Used to Determine Significance	
1	The **severity, duration, geographic extent,** and **frequency** of the occurrence of the impact **"Severity"** describes the density of the potential impact, while **"extent"** describes the area where the impact will likely occur, e.g., a project may propagate ten noxious weeds on a surface area of 1 square foot. Here, the impact may be high in severity, but over a low extent. In contrast, if ten noxious weeds were distributed over ten acres, there may be low severity over a larger extent. **"Duration"** describes the time period during which an impact may occur, while **"frequency"** describes how often the impact may occur, e.g., an operation that uses lights to mine at night may have frequent lighting impacts during one season (duration).
2	The probability that the impact will occur if the proposed project occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur
3	Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts
4	The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values
5	The importance to the state and to society of each environmental resource or value that would be affected
6	Any precedent that would be set as a result of an impact of the proposed project that would commit FWP to future actions with significant impacts or a decision in principle about such future actions
7	Potential conflict with local, state, or federal laws, requirements, or formal plans

III. Private Property Impact Analysis (Takings)

The 54th Montana Legislature enacted the Private Property Assessment Act, now found at § 2-10-101. The intent was to establish an orderly and consistent process by which state agencies evaluate their proposed projects under the "Takings Clauses" of the United States and Montana Constitutions. The Takings Clause of the Fifth Amendment of the United States Constitution provides: "nor shall private property be taken for public use, without just compensation." Similarly, Article II, Section 29 of the Montana Constitution provides: "Private property shall not be taken or damaged for public use without just compensation..."

The Private Property Assessment Act applies to proposed agency projects pertaining to land or water management or to some other environmental matter that, if adopted and enforced without due process of law and just compensation, would constitute a deprivation of private property in violation of the United States or Montana Constitutions.

The Montana State Attorney General's Office has developed guidelines for use by state agencies to assess the impact of a proposed agency project on private property. The assessment process includes a careful review of all issues identified in the Attorney General's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency project has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act.

Table 5: Private Property Assessment (Takings)

	Yes	No
Is NRDP regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required	☐	☒
Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required.	☐	☐
Does NRDP have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required	☐	☐
If so, NRDP must determine if there are alternatives that would reduce, minimize, or eliminate the restriction on the use of private property, and analyze such alternatives. Have alternatives been considered and/or analyzed? If so, describe below:	☐	☐

PRIVATE PROPERTY ASSESMENT ACT (PPAA)			
Does the Proposed Action Have Takings Implications under the PPAA?	**Question #**	**Yes**	**No**
Does the project pertain to land or water management or environmental regulations affecting private property or water rights?	1	☐	☐
Does the action result in either a permanent or an indefinite physical occupation of private property?	2	☐	☐
Does the action deprive the owner of all economically viable uses of the property?	3	☐	☐
Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 4a and 4b and continue with question 5)	4	☐	☐
Is there a reasonable, specific connection between the government requirement and legitimate state interest?	4a	☐	☐
Is the government requirement roughly proportional to the impact of the proposed use of the property?	4b	☐	☐

Does the action deny a fundamental attribute of ownership?	5	☐	☐
Does the action have a severe impact of the value of the property?	6	☐	☐
Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public general? (If the answer is NO, skip questions 7a-7c.)	7	☐	☐
Is the impact of government action direct, peculiar, and significant?	7a	☐	☐
Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?	7b	☐	☐
Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?	7c	☐	☐
Does the proposed action result in taking or damaging implications?		☐	☐
Taking or damaging implications exist if **YES** is checked in response to Question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if **NO** is checked in response to question 4a or 4b.			
If taking or damaging implications exist, the agency must comply with MCA § 2-10-105 of the PPAA, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.			
Alternatives: The analysis under the Private Property Assessment Act, §§ 2-10-101 through -112, MCA, indicates no impact. NRDP does not plan to impose conditions that would restrict the regulated person's use of private property to constitute a taking.			

IV. Recommendation for Further Environmental Analysis

NO further analysis is needed for the proposed action	☒
NRDP must conduct **EIS** level review for the proposed action	☐

V. EA Preparation and Review

EA prepared by: Natural Resource Damage Program

APPENDIX B

Response to Comments – Public Scoping

Trustees' Response to Public Comments on the

2015 Bridger Yellowstone River Oil Spill Scoping

Prepared by the Montana Natural Resource Damage Program and United States Fish and Wildlife Service

March 2023

Table of Contents

Introduction

On January 6, 2023, the State of Montana Natural Resource Damage Program (NRDP) and U.S. Department of the Interior (DOI), as represented by the U.S. Fish and Wildlife Service (USFWS), solicited public input on preparation of a draft Restoration Plan for the 2015 Bridger Yellowstone River Oil Spill. NRDP, on behalf of the Governor of Montana, and DOI (the Trustees) sought public input by soliciting proposals for restoration projects and scoping issues that may be associated with implementation of any proposed restoration projects. Public comments were accepted from January 6, 2023, until 11:59 PM on February 10, 2023. NRDP posted a public comment announcement on the NRDP website, sent notices of this opportunity for public comment to approximately 63 individuals or entities on the NRDP mailing list via email, and placed legal notices in two newspapers: the Glendive Ranger Review (January 12, 15, and 19, 2023) and the Billings Gazette (January 11 and 18, 2023). NRDP and USFWS also held a public meeting at 6:00 PM on January 19, 2023, at the Glendive Public Library.

The Trustees received a total of 5 comments in 2 comment letters during the public comment period. See Attachment A for a list of commenters and copies of the 2 comment letters.

This draft response to comments document summarizes the public comments received and provides the Trustees' draft responses to these comments. Where appropriate, these comments were incorporated into the draft 2015 Bridger Yellowstone River Oil Spill Restoration Plan (draft Restoration Plan).

Comment Summary and Response

1. Comments About Recreation Projects – Two comments

Comments: Two comments from two individuals or entities addressed potential projects for fishing access sites. One comment discouraged use of settlement funds to purchase fishing access sites because there is a high potential for damage to the sites by flooding and ice jams and many private landowners already allow the public to access the river on their land.

The second comment proposed redesigning and reconstructing the access road and ramp at the Glendive Yellowstone River site. The proposed project would include improving stability and functionality of the ramp at varying water levels, widening the ramp, and upgrading site parking and the turnaround area. The comment suggests including the Glendive Chapter of Walleyes Unlimited in the design process.

Response: Improvements to the Glendive Yellowstone River site meet DOI natural resource damage criteria to be considered for funding from the draft Restoration Plan. This project will be included in the draft Restoration Plan. The Trustees will coordinate with the Glendive Chapter of Walleyes Unlimited, the City of Glendive, and other stakeholders on implementation of this project.

The Trustees will prioritize the project suggested above, which is an existing Yellowstone River access site, over purchase of a new fishing access site. The Trustees will also coordinate with Montana Fish, Wildlife and Parks, the Glendive Chapter of Walleyes Unlimited, and other

stakeholders to improve or establish other areas for Yellowstone River access if funding is available after completion the Glendive Yellowstone River site.

2. Comments Proposing Community Projects – Two comments

Comments: Two comments were received from one individual proposing projects that support the Glendive community and schools. The comments proposed the following use of recovered funds:

- Compensation for damage to the Eastern Plains Events Center that occurred during the response actions for the 2015 Bridger Yellowstone River Oil Spill, and
- A million dollars for the Glendive schools.

Response: Although the Trustees recognize the value to the community of the suggested projects, these projects are not eligible for project funding from the 2015 Bridger Yellowstone River Oil Spill Restoration Fund. Natural resource damages recovered in the settlement with Bridger Pipeline LLC must be used in accordance with the Oil Pollution Act. Projects funded by settlement monies must restore, rehabilitate, replace, or acquire the equivalent of the natural resources injured by the spill. While these proposed projects may be important to the City of Glendive, they are not eligible for funding under the restoration plan because they are not related to restoration of the injured resources (surface water, fish, and birds) or the services they provide.

3. Comments Proposing Irrigation Improvements – One comment

Comment: One comment was received suggesting improvements to irrigation pumping sites along the Yellowstone River, including self-cleaning screens and retrofitting pumping stations.

Response: Improvements to irrigation pumping stations are not eligible for funding from the 2015 Bridger Yellowstone River Oil Spill Restoration Fund. Improvements to irrigation infrastructure are not related to the natural resources injured by the spill (surface water, fish, and birds) for which natural resources damages were recovered in the settlement with Bridger Pipeline LLC, and thus these projects would not be in accordance with Oil Pollution Act regulations. Opportunities to address irrigation projects that could improve fish passage or reduce fish loss into irrigation canals will be considered on a case-by-case basis and are incorporated in the draft Restoration Plan.

Attachment A

Table of Contents

List of Comments

No.	Individual/Association	City/Area
1	Mike Carlson, EPEC Board	Glendive, MT
2	David Linn, Glendive Chapter of Walleyes Unlimited	Glendive, MT

Public Comment Letters

112 Ist Street
Glendive, Mt. 59330
2/6/23

State of Montana
Natural Resource Damage Program
1720 9th Avenue
Helena, Montana 59620-1425

Dear Sirs,

This letter is in response to your notice in the Glendive paper seeking public input on damages and potential projects from the 2015 Yellowstone River/Bridger Pipeline spill. I was unable to attend the meeting here. I have 3 areas of interest:

1. Our non-profit community center is still seeking funds for damages incurred as a direct result of this oil spill. This spill in January 2015 pipeline resulted in the loss of potable water for the City of Glendive for a week. To make up for the loss of water the Dawson County and State of Montana used the Eastern Plains Events Center (EPEC) as a distribution center for drinking water. This facility is designated by the local DES and Dawson County as a place that be used in case of local emergencies. After the oil spill, large heavy pallets of drinking water were brought into this facility with a MDOT forklift. The EPEC is a large building which used to be a Safeway grocery store and is 20,000 sq feet in size. The EPEC is a non-profit run community building owned and operated by the Yellowstone Plains Foundation, Inc. It is owned, maintained and managed by volunteers in the community. The problem occurred when the large heavy pallets of water were brought with a heavy forklift. The result was the concrete floor was severely damaged and cracked and settled. Cost estimates to repair the damage were between $28,000 and $32,000. We couldn't afford this and working with a contractor and using our labor were able to tear out the damaged floor and pour new concrete. The cost to us for materials was $12,300. I tried to get Bridger Pipeline Company to help but they turned us down. Both Dawson County and local DES refused to accept any responsibility. Our insurance company turned us down and then cancelled our policy. Twice I asked for assistance from the Montana Insurance Commissioner but they would not help and denied our claim against the state. Now that your program is funded we are hoping it can help us defray these actual expenses.

2. A million dollars of this fund should be provided to Glendive schools. We have 2 very old elementary schools badly needing replacement. Mill levies for this or even improvements fail every time with a public vote. This is due to our declining economy based on natural resources and we have lost 100's of jobs in the oil, gas and coal transportation industries here. I can't think of a better place to use this fund for that would provide the greatest long term benefit.

3. Another idea for the Damage Fund use would be for irrigated pumping site improvements along the Yellowstone River. I was the former manager for the Buffalo Rapids Irrigation Project which covers part of Custer, all of Prairie and part of Dawson County. We had 5 major pumping stations. Debris and moss and silt are big issues for maintenance and repairs are costly for all irrigation pumping sites. Self screening screens and other new ideas can help producers. These damage funds could be used to help with the costs of retro-fits for many farmers and irrigation districts.

Lastly I would not like to see these Damage Funds used to purchase any more expensive fishing access sites. Many of our farmers allow fishing access as did the Buffalo Rapids Irrigation Project on their 5 pump sites. None of these 5 sites are shown on any maps but they are there for use. Some farmers are also involved in Block Management along the river and allow fishing access by sign-in. There is a high level of damage potential due to ice jambs and flooding and any new fishing/boat access site and infrastructure can be destroyed. Plus the huge cost to purchase the land. We actually have a lot of places to fish here.

Thanks

Mike Carlson, EPEC Board
mcarlson@midrivers.com
406-989-0019

To: Doug Martin and Trustees of NRDP and USFWS

Natural Resources Damage Program
1720 9th Ave
PO Box 201425
Helena MT 59620-1425
nrdp@mt.gov

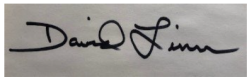
From: Glendive Chapter of Walleyes Unlimited

Date: February 10, 2023

Subject: Bridger 2015 Yellowstone River Restoration Plan Project Idea

This letter is to formally request consideration a lost recreational services project as part of the Bridger 2015 Yellowstone River Restoration Plan. The Glendive Chapter of Walleyes Unlimited has identified the need for a project to redesign and reconstruct the access road and ramp at the Glendive Yellowstone River site. Locally we have seen significantly increased recreational use of the lower Yellowstone River. As discussed at the January 19th meeting, this site is the only public boat ramp in the impacted area between Fallon and Stipek. The ramp is actively used by the public for all types of recreation including fishing, floating, hunting, rock picking etc. In addition, this boat ramp provides access to the river for essential needs such as the Dawson County Search and Rescue, infrastructure monitoring of bridges, pipelines and railroads, and river accessibility for Montana Fish Wildlife and Parks. This ramp and access is and has been the primary location for pipeline emergency response and cleanup; and river enhancement projects, including weed control. It is not a State FWP site, but an access located within the City of Glendive off Borden Street with shared ownership between the State and City. A strip of the current access road is privately owned. See attached Screen shot from Montana Cadastral (http://svc.mt.gov/msl/mtcadastral/)at end of this request. Glendive Walleyes Unlimited is a local non-profit organization that has existed in the community for over 30 years. We have used local funds to install additional concrete to the boat ramp and rock along the riverbank to keep this boat ramp functional as erosion, ice and flooding annually damage the ramp. The importance of this historical ramp and access are the reason that we feel it could greatly benefit from a fully engineered and properly designed ramp. Goals should include a design that reduces the annual high water erosion and ice damage and provide improved functionality for the extensive variation of river levels throughout the year. In addition, the ramp should be made of sufficient width to allow for easier loading and unloading during times of the year when swift current makes this more challenging. Ideally the project would be designed in 2023 and installed during the low water period of late summer 2024. If the project is considered, our Walleyes group would like to actively participate in the process to provide local comment on design options. In addition to ramp improvements, site parking and turn around area upgrades would also be beneficial in providing more room for the increased utilization seen at this ramp. Besides our Walleyes Group, City, County, and local FWP personnel have expressed their support of this project. Our Walleyes Unlimited Organization is committed to continue to work with City, County and State staff to help maintain this site after any new improvements are completed. Please Contact me if you have any questions or would like to set up a scoping site walk.

Sincerely,

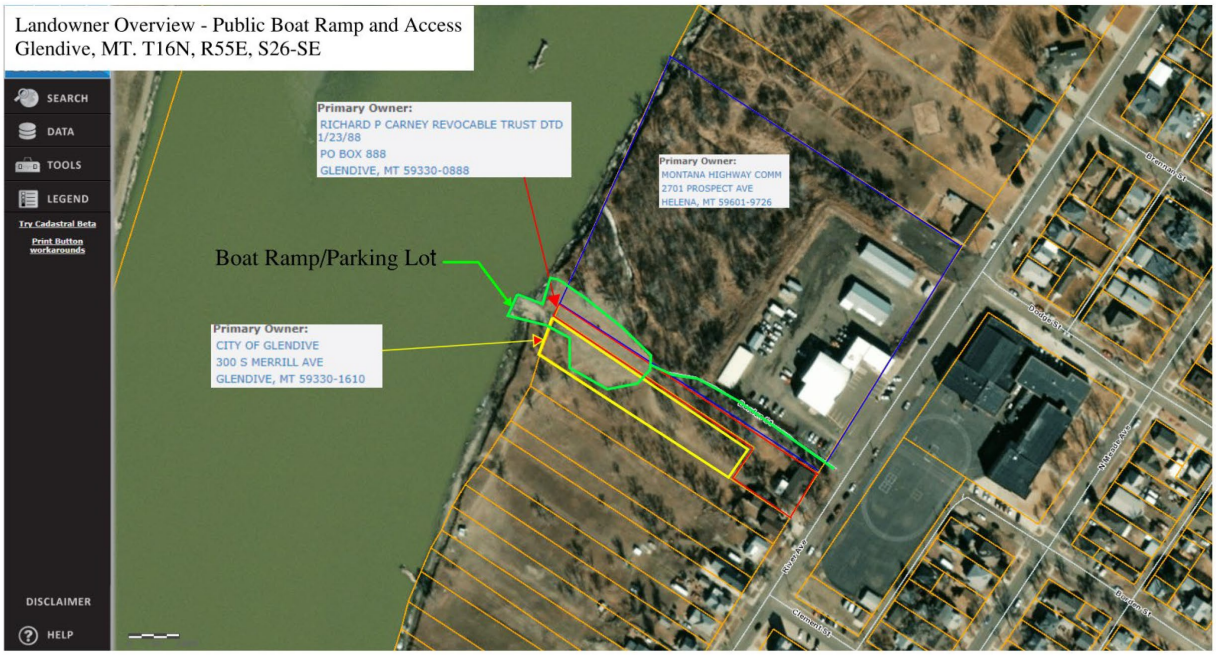


David Linn – Director

Glendive Chapter Walleyes Unlimited.

Montana Cadastral Screen Shot

Boat Ramp, access from Borden St., and parking area outlined in green in photo.



APPENDIX C

Evaluation of Alternatives According to OPA Criteria

Evaluation of Alternatives According to OPA Criteria

OPA Criteria						
Requirement	**Project cost and cost effectiveness**	**Project goals and objectives**	**Likelihood of project success**	**Avoidance of adverse impact**	**Multiple resource and service benefits**	**Public health and safety**
Description	The cost to carry out the alternative.	The extent to which each alternative is expected to meet the Trustees' goals and objectives in returning the injured natural resources and services to baseline and/or compensating for interim losses.	The likelihood of success of each alternative.	The extent to which each alternative will prevent future injury as a result of the incident, and avoid collateral injury as a result of implementing the alternative.	The extent to which each alternative benefits more than one natural resource and/or service.	The effect of each alternative on public health and safety.
Evaluation						
Alternative 1: No Action/Natural Recovery	Would not cost anything beyond developing the restoration plan but would not result in any natural resource benefits for injured resources or services lost. Other alternatives are more cost-effective for restoring injured resources and compensating for lost recreational use.	Would not meet the Trustees' goals because recovery would take much longer than other alternatives evaluated and interim losses would not be compensated. OPA establishes the Trustees' responsibility to seek compensation for interim losses pending recovery of natural resources.	Natural recovery would occur over a long period of time but would not successfully compensate for interim losses.	No projects would be implemented to speed up recovery, so future injury during natural recovery would not be prevented. Would not cause collateral injury during implementation. Would not require permits or approvals.	No resources would be improved to provide sources for injured fish or bird populations.	Would not affect public health and safety but would not improve conditions for human use.
Alternative 2: Fish Habitat Restoration Prioritized *Potential Fish Habitat Projects (~$1.4 million)* -Increase aquatic channel complexity -Enhance floodplain connectivity -Improve fish passage on the river and tributaries *Potential Bird Habitat Projects ($115,000)* -Restore injured upland and riparian habitat in the Yellowstone Basin -Procure conservation easements and develop/implement restoration strategies in the PPR.	*Fish Habitat Projects* would be cost-effective in the long term since after completion the restoration would be permanent. *Bird Habitat Projects* would be cost-effective as targeting upland and wetland habitat for easements and restoration in the PPR and Yellowstone Basin requires reasonable cost for implementation and minimal cost for maintenance. Possible match funds or in-kind services. Follow-up analysis of cost effectiveness would be included in specific project selection.	*Fish Habitat Projects* would meet the Trustees' goal of restoring habitat for warm water fish to help the Yellowstone River fish populations recover. This is directly related to resource injury to warm water fish. *Bird Habitat Projects* would meet the Trustees' goal of restoring habitat for birds to increase waterfowl breeding and recruitment in prairie pothole habitats and in the Yellowstone Basin. This is directly related to resource injury to birds. This alternative would not address the interim losses of recreational services.	*Fish and Bird Habitat Projects* would use accepted engineering and construction techniques and standard practices. Projects would be developed based on established plans and recommendations from state and federal agencies as well as local organizations (see Section 1.5.4).	*Fish and Bird Habitat Projects* would speed up recovery, helping to prevent future injury as a result of the oil spill. Short-term negative impacts during construction would be addressed through best management practices included within contracts and other permit requirements. Projects would not cause collateral injury during implementation.	*Fish and Bird Habitat Projects* under this alternative would benefit fish and bird habitat and wildlife populations. Riparian and riverine aquatic resources would benefit from actions implemented to restore these habitats. Improvements to these resources would likely benefit recreational human use.	*Fish Habitat Projects* may improve safety for boaters using the river.
Alternative 3: Recreation Compensation Prioritized *Potential Bird Habitat Projects ($115,000)* -Restore injured upland and riparian habitat in the Yellowstone Basin -Procure conservation easements and develop/implement restoration strategies in the PPR. *Potential Recreation Projects (~$1.4 million)*	*Bird Habitat Projects* would be cost-effective as targeting upland and wetland habitat for easements and restoration in the PPR and Yellowstone Basin require reasonable cost for implementation and minimal cost for maintenance. *Recreation Projects* would be cost-effective with potential for match funds or in-kind services from the City of Glendive, state,	*Bird Habitat Projects* would meet the Trustees' goal of restoring habitat for birds to increase waterfowl breeding and recruitment in prairie pothole habitats and in the Yellowstone Basin. This is directly related to resource injury to birds. *Recreation Projects* would meet the Trustees' goal of compensating for lost recreational services that occurred during the incident. Improving or developing fishing	*Bird and Recreation Projects* would use accepted engineering and construction techniques and standard practices. Projects would be developed based on established plans and recommendations from state and federal agencies as well as local organizations (see Section 1.5.4).	*Bird Habitat Projects* would speed up recovery, helping to prevent future injury as a result of the oil spill. *Recreation Projects* would compensate for losses during the spill and response period but would not address injury to fish habitat. Short-term negative impacts during construction of *Bird and*	*Bird Habitat Projects* would benefit bird habitat and the recreational projects would directly compensate for lost recreational use.	*Recreation Projects* may improve public health and safety by building safe access points, improving sanitation, or other facilities.

-Develop FAS -Improve access on public or private lands	federal or local agencies, or local nonprofits. Conservation easements or fee title acquisitions would only be approved where the price to be paid for the property is equal to or less than the fair market value. Follow-up analysis of cost-effectiveness would be included in project selection. Some funds would be required for long-term management and monitoring.	access would be directly related to compensating for the FCA issued because of the oil spill. This alternative would not address the injury to fish and fish habitat and would not meet the Federal trustee's goal to compensate for injury to the endangered pallid sturgeon.		*Recreation Projects* would require permits and would minimize adverse impacts. Projects would not cause collateral injury during implementation.		
Alternative 4: Fish Habitat and Recreation *Potential Fish Habitat Projects ($890,000)* -Increase aquatic channel complexity -Enhance floodplain connectivity -Improve fish passage on the river and tributaries *Potential Bird Habitat Projects ($115,000)* -Restore injured upland and riparian habitat in the Yellowstone Basin -Procure conservation easements and develop/implement restoration strategies in the PPR. *Potential Recreation Projects ($475,000)* -Develop FAS -Improve access on public or private lands	*Fish Habitat Projects* would be cost-effective in the long term since after the riprap or blockages are removed the restoration would be permanent. Possible match funds or in-kind services. Follow-up analysis of cost effectiveness would be included in specific project selection. *Bird Habitat Projects* would be cost-effective as targeting upland and wetland habitat for easements and restoration in the PPR and Yellowstone Basin require reasonable cost for implementation and minimal cost for maintenance. *Recreation Projects* would be cost-effective with potential for match funds or in-kind services from the City of Glendive, state, federal or local agencies, or local nonprofits. Conservation easements or fee title acquisitions would only be approved where the price to be paid for the property is equal to or less than the fair market value. Follow-up analysis of cost-effectiveness would be included in project selection.	*Fish Habitat Projects* would meet the Trustees' goal of restoring habitat for warm water fish to help the Yellowstone River fish populations recover. This is directly related to resource injury to warm water fish. *Bird Habitat Projects* would meet the Trustees' goal of restoring habitat for birds to increase waterfowl breeding and recruitment in prairie pothole habitats and in the Yellowstone Basin. This is directly related to resource injury to birds. *Recreation Projects* would meet the Trustees' goal of compensating for lost recreational services that occurred during the incident. Improving or developing fishing access would be directly related to compensating for the FCA issued because of the oil spill.	*Fish, Bird, and Recreation Projects* would use accepted engineering and construction techniques and standard practices. Projects would be developed based on established plans and recommendations from state and federal agencies as well as local organizations (see Section 1.5.4).	*Fish and Bird Habitat Projects* would speed up recovery, helping to prevent future injury as a result of the oil spill. Short-term negative impacts during construction of any projects would be addressed through best management practices included within contracts and other permitting requirements, which would minimize adverse impacts. Would not cause collateral injury during implementation.	*Fish and Bird Habitat Projects* under this alternative would benefit fish and bird habitat and wildlife populations. Riparian and riverine aquatic resources would benefit from actions implemented to restore these habitats. Improvements to these resources would likely benefit recreational human use. Recreation projects would directly compensate for lost recreational use.	*Fish Habitat Projects* may improve safety for boaters using the river. *Recreation Projects* may improve public health and safety by building safe access points, improving sanitation, or other facilities.

APPENDIX D

Environmental Impact Analysis Summary

Environmental Impact Analysis Summary

Resource	Alternative 1 - No Action/Natural Recovery	Alternative 2 - Fish Habitat Restoration Prioritized	Alternative 3 - Recreation Compensation Prioritized	Alternative 4 - Fish Habitat and Recreation
Fish	No impacts	Restoration actions would benefit fish populations in the Yellowstone River watershed.	Enhanced recreation opportunities and increased river access are unlikely to affect fish populations as these populations are protected and managed with fishing regulations.	Restoration actions would benefit fish populations in the Yellowstone River watershed.
Birds	No impacts	Restoration actions would benefit bird populations in the Yellowstone Basin and PPR of northern Montana, northern and eastern North Dakota, eastern South Dakota	Enhanced recreation opportunities and increased river access may result in minor disturbance effects to nesting birds and other wildlife. Such effects will be considered and mitigated, as needed, in project-specific analyses. Substantial effects to bird populations are not expected as these populations are protected and managed with federal/state regulations.	Restoration actions would benefit bird populations in the Yellowstone River watershed.
Recreation	No impacts	Improved fish and bird habitat would likely lead to enhanced recreation opportunities for the public, including fishing and birdwatching.	After recreation projects are completed, greater and safer access and recreational opportunities are expected along the Yellowstone River. Improved bird habitat would likely lead to enhanced recreation opportunities for the public, such as birdwatching.	Improved fish and bird habitat would likely lead to enhanced recreation opportunities for the public, including fishing and birdwatching. After recreation projects are completed, greater and safer access and recreational opportunities are expected along the Yellowstone River.
Construction, Sound, and Air Pollution	No impacts	Short term noise from construction projects could negatively impact wildlife and humans near the activity. There could be short-term, minor, negative impacts on fish and wildlife species.	Short term noise from construction projects could negatively impact wildlife and humans near the activity. There could be short-term, minor, negative impacts on fish and wildlife species.	Short term noise from construction projects could negatively impact wildlife and humans near the activity. There could be short-term, minor, negative impacts on fish and wildlife species.
Threatened and Endangered Species and Montana Species of Concern	No impacts	Restoration actions would improve habitat for threatened and endangered species and species of concern, including the endangered pallid sturgeon, resulting in a benefit to the species.	The proposed projects would be unlikely to affect candidate, threatened, and endangered species. However, coordination with USFWS would be completed pursuant to Section 7 of the Endangered Species Act if it is determined that affects may occur. Montana species of concern may be present at the restoration areas and projects, once selected, will be coordinated with FWP to mitigate negative impacts on these species.	Restoration actions would improve habitat for threatened and endangered species and species of concern, including the endangered pallid sturgeon, resulting in a benefit to the species.
Water Quality and Sediment	No impacts	Local effects of construction projects would be minimized by use of best management practices.	Local effects of construction projects would be minimized by use of best management practices.	Local effects of construction projects would be minimized by use of best management practices.
Visual	No impacts	There may be short-term impacts to visual resources during project construction, but long-term benefits to viewsheds are expected due to proposed habitat restoration.	There may be short-term impacts to visual resources during project construction, but long-term benefits to viewsheds are expected due to proposed habitat restoration.	There may be short-term impacts to visual resources during project construction, but long-term benefits to viewsheds are expected due to proposed habitat restoration.
Archeological and Cultural Resources	No impacts	As appropriate, the Trustees will work with project managers during the permitting process to ensure that they consult with the SHPO to confirm that there are no known archeological and cultural sites that would be disturbed. If sites are discovered, the Trustees would work with the project manager to redesign projects so as to minimize or not adversely affect any known archaeological sites or sites of cultural significance, or a	As appropriate, the Trustees will work with project managers during the permitting process to ensure that they consult with the SHPO to confirm that there are no known archeological and cultural sites that would be disturbed. If sites are discovered, the Trustees would work with the project manager to redesign projects so as to minimize or not adversely affect any known archaeological sites or sites of cultural significance, or a	As appropriate, the Trustees will work with project managers during the permitting process to ensure that they consult with the SHPO to confirm that there are no known archeological and cultural sites that would be disturbed. If sites are discovered, the Trustees would work with the project manager to redesign projects so as to minimize or not adversely affect any known archaeological sites or sites of cultural significance, or a

Resource	Alternative 1 - No Action/Natural Recovery	Alternative 2 - Fish Habitat Restoration Prioritized	Alternative 3 - Recreation Compensation Prioritized	Alternative 4 - Fish Habitat and Recreation
		similar project in a different location in the watershed would be substituted.	similar project in a different location in the watershed would be substituted.	similar project in a different location in the watershed would be substituted.
Economic, Historic, Land Use, and Transportation Resources	No impacts	Overall quality of life would improve through enhanced wildlife habitat, especially through better opportunities for fishing and wildlife viewing.	Overall quality of life would improve through increased economic and recreational opportunities, especially through better opportunities for fishing, recreation, and wildlife viewing.	Overall quality of life would improve through increased economic and recreational opportunities, especially through better opportunities for fishing, recreation, and wildlife viewing.
Regulatory Restrictions	No impacts	Although easements may restrict land use, projects would only be undertaken with willing landowners and would not impose any additional regulatory restrictions.	Although easements may restrict land use, projects would only be undertaken with willing landowners and would not impose any additional regulatory restrictions.	Although easements may restrict land use, projects would only be undertaken with willing landowners and would not impose any additional regulatory restrictions.
Climate Change	No impacts	The net effect of ecosystem restoration actions would result in short-term biogenic emissions and lead to long-term reductions of atmospheric greenhouse gas emissions concentrations through increases in carbon stocks or reduced risks of future emissions.	The net effect of ecosystem restoration actions would result in short-term biogenic emissions and lead to long-term reductions of atmospheric greenhouse gas emissions concentrations through increases in carbon stocks or reduced risks of future emissions.	The net effect of ecosystem restoration actions would result in short-term biogenic emissions and lead to long-term reductions of atmospheric greenhouse gas emissions concentrations through increases in carbon stocks or reduced risks of future emissions.
Cumulative Impacts	No impacts	As the proposed projects are intended to achieve recovery of injured natural resources, the cumulative environmental consequences would be largely beneficial for birds, wildlife, habitat, aquatic resources, and the human environment. All the anticipated adverse impacts would be short-term and localized, would occur during project construction, and would be minimized at the time of project implementation through best management requirements within the contract(s). Implementation of proposed projects would result in long-term improvements to fish and wildlife habitat in the impacted area. Overall quality of life should improve with increased aesthetics.	As the proposed projects are intended to achieve recovery of injured natural resources, the cumulative environmental consequences would be largely beneficial for birds, wildlife, habitat, aquatic resources, and the human environment. All the anticipated adverse impacts would be short-term and localized, would occur during project construction, and would be minimized at the time of project implementation through best management requirements within the contract(s). Implementation of proposed projects would result in long-term improvements to fish and wildlife habitat in the impacted area. Overall quality of life should improve with increased aesthetics and recreational opportunities.	As the proposed projects are intended to achieve recovery of injured natural resources, the cumulative environmental consequences would be largely beneficial for birds, wildlife, habitat, aquatic resources, and the human environment. All the anticipated adverse impacts would be short-term and localized, would occur during project construction, and would be minimized at the time of project implementation through best management requirements within the contract(s). Implementation of proposed projects would result in long-term improvements to fish and wildlife habitat in the impacted area. Overall quality of life should improve with increased aesthetics and recreational opportunities.