

Natural Resource Restoration in the Viburnum Trend: Stream, Riparian, and Floodplain Habitat Restoration within Crooked and Huzzah Creeks

Restoration Plan
February 2020



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Missouri Trustee Council

Natural Resource Restoration in the Viburnum Trend: Stream, Riparian, and Floodplain Habitat Restoration within Crooked and Huzzah Creeks

The State of Missouri, the U.S. Department of the Interior, and the U.S. Department of Agriculture, are funding a restoration project in the Viburnum Trend Lead Mining District. This project, described more fully herein, is the Alternative selected for implementation. This restoration project relates to the natural resource damage assessment and restoration process undertaken by the State of Missouri, the U.S. Department of the Interior, and the U.S. Department of Agriculture (collectively “Trustees”) in the Viburnum Trend Lead Mining District pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. §§ 9601-9675) and implementing regulations (43 C.F.R. Part 11).

In accordance with the *Southeast Missouri Ozarks Regional Restoration Plan* (SEMORRP) and the *Stream, Riparian, and Floodplain Habitat Restoration within Crooked and Huzzah Creeks Final Restoration Plan*, the Trustees have selected Alternative (2) for implementation and will fund the restoration of stream, riparian, and floodplain habitat in targeted areas of Crooked and Huzzah Creeks using streambank stabilization and conservation agricultural best management practices.

More information on the natural resource damage assessment and restoration process is available on the following websites:

[U.S. Fish and Wildlife Service Natural Resource Damage Assessment Website](#)

or

[Missouri Department of Natural Resources - Natural Resource Damages Program Website](#)

Public Participation

The Trustees presented the restoration Alternatives in this Restoration Plan to the public and accepted comments between December 2, 2019 and December 31, 2019. Please see Appendix A to this document for a summary of comments received as well as the Trustees' responses.

| | | |
|----|--|----|
| 1. | <u>Introduction</u> | 1 |
| | A. <u>Relationship to the Southeast Missouri Regional Restoration Plan</u> | 1 |
| | B. <u>Natural Resource Trustee Authority</u> | 2 |
| | C. <u>Summary of NRDAR Settlement</u> | 2 |
| | D. <u>Public Participation</u> | 3 |
| 2. | <u>Summary of Injury to Natural Resources</u> | 3 |
| 3. | <u>Proposed Restoration Alternatives</u> | 4 |
| | A. <u>Restoration Evaluation Criteria</u> | 5 |
| | B. <u>Alternative 1 - No Action Alternative (Natural Recovery)</u> | 5 |
| | C. <u>Alternative 2 - Crooked and Huzzah Creek Stream and Riparian Restoration (Preferred)</u> | 6 |
| | i. <u>Project Description</u> | 6 |
| | ii. <u>Project Partners</u> | 6 |
| | iii. <u>Restoration Methods</u> | 6 |
| | iv. <u>Project Benefits</u> | 7 |
| | v. <u>Timeline</u> | 7 |
| | vi. <u>Proposed Budget</u> | 8 |
| | D. <u>Alternative 3 – Conservation Agricultural Practices</u> | 8 |
| 4. | <u>Environmental Compliance</u> | 9 |
| 5. | <u>Monitoring</u> | 9 |
| 6. | <u>Agencies, Organizations, and Parties Consulted for Information</u> | 9 |
| 7. | <u>Literature Cited</u> | 10 |

Part 1. Introduction

This Restoration Plan (RP) has been prepared by the Trustees to restore natural resources injured and ecological services lost due to releases of hazardous substances, including heavy metals from mines, mills, smelters, and tailings impoundments of the Viburnum Trend Mining District (Trend) of southeast Missouri. This document selects a restoration Alternative that will restore natural resources and the services those resources provide, injured from the release of hazardous substances from the Trend.

For decades, heavy metals, including but not limited to lead, zinc, copper, and silver, were mined, milled, and smelted in the Trend. Currently, five active mines and four associated milling and tailings disposal operations remain. Primary lead smelting no longer occurs in the Trend, however, the Buick Resource Recycling Facility continues to conduct secondary smelting operations. Releases of hazardous substances into nearby soils, sediments, and surrounding waters, including tributaries within the Black, Meramec, and St. Francis River watersheds, have led to natural resource injuries. A number of natural resources, including surface water, sediment, fish, and migratory birds, have been exposed to and adversely affected by hazardous substances released from the mining associated facilities in the Trend.

Currently, the response actions proposed and implemented by the U.S. Environmental Protection Agency (EPA) and the U. S. Forest Service (USFS) have focused on the reduction of threats to human health including the removal and disposal of contaminated yard soils by the EPA. These response actions are not intended to address ecological risks or to compensate the public for the ecological services lost in the interim under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). As a result, the Trustees undertook a natural resource damage assessment and restoration (NRDAR). The restoration Alternatives described in this RP, as well as the selected Alternative are part of the ongoing NRDAR for Viburnum Trend.

This RP has been developed in accordance with CERCLA and its implementing regulations at 43 C.F.R. § 11.93, in addition to the National Environmental Policy Act (NEPA, 42 U.S.C. § 4321 *et seq.*) to inform the public as to the types and scale of restoration to be undertaken towards compensating for injuries to natural resources. The Trustees solicited comments on this RP during a 30-day public comment period, and held a public meeting to inform the public of proposed restoration Alternatives. After consideration of public comments received, the Trustees have selected Alternative (2) for implementation. The Selected Alternative (2) will allow the Trustees and partnering agencies the flexibility to work with willing landowners to select and implement appropriate conservation agricultural best management practices, including streambank stabilization, to restore and compensate the public for the loss of natural resources and services in the Viburnum Trend.

Section A. Relationship to the Southeast Missouri Regional Restoration Plan

In 2014, the Trustees produced the [Southeast Missouri Ozarks Regional Restoration Plan](#) (SEMORRP), which provides a process framework governing the approach for restoration project identification, evaluation, selection and implementation. In the SEMORRP, the Trustees selected Alternative D as the Preferred Alternative (see Section 3.5, pages 23 and 24 of SEMORRP for a description), where the Trustees will consider a combination of restoration actions and projects to accomplish restoration goals at or near the site(s) of injury.

The purpose of this RP, in accordance with the analysis contained in the SEMORRP, is to address injured natural resources/services lost due to releases of hazardous substances including heavy metals. The need for this RP is to describe the restoration actions or projects that have been proposed by the Trustees to address the release of hazardous substances associated with mining activities in the Trend. Specifically, the goal of this RP is to improve or protect water quality, the quality of aquatic and riparian habitats, and the species and communities dependent on those natural resources in Crooked Creek and downstream of its confluence with Huzzah Creek. This Final RP identifies the Trustees' selected action to conduct restoration to restore aquatic resources, their habitats, and the services those resources provide, that have been injured from releases of hazardous substances. This RP includes references to and incorporates portions of the SEMORRP for expediency and efficiency, as appropriate. Specific sections of the SEMORRP are identified, including a brief summary of the incorporated material. The selected Alternative in this RP is in alignment with the goals of the SEMORRP, and compliant with the Preferred Alternative selected in the SEMORRP.

Section B. Natural Resource Trustee Authority

Under federal law, the Trustees are authorized to act on behalf of the public to assess injuries to natural resources and services resulting from the release of hazardous substances into the environment. The NRDAR process allows Trustees to pursue claims against responsible parties for monetary damages based on these injuries in order to compensate the public. Pursuant to CERCLA, the goal of this process is to plan and implement actions to restore, replace, or rehabilitate the natural resources that were injured or lost as a result of the release of a hazardous substance, or to acquire the equivalent resources or their services (42 U.S.C. § 9601 et seq.; 43 C.F.R. Part 11). The Trustees for the Viburnum Trend NRDAR are the State of Missouri, represented by the Missouri Department of Natural Resources (MoDNR), the U.S. Department of Agriculture, represented by the USFS, and the U.S. Department of Interior, represented by the U.S. Fish and Wildlife Service. See also the National Contingency Plan 40 C.F.R. §§ 300.600 *et seq.*

Section C. Summary of NRDAR Settlement

The natural resource Trustees recovered monetary damages from Cyprus Amax in 2014 to settle certain legal claims concerning injuries to natural resources and their services associated with releases of hazardous substances from the Buick Mine, Mill, and Smelter (Buick Facilities) in the Trend. Crooked Creek, among others, was directly injured by releases of hazardous substances from the Buick Facilities and was part of the settlement

with Cyprus Amax. Since that settlement, restoration funds have been expended to restore injured natural resources. Currently, there are approximately \$5.4 million available from the Cyprus Amax settlement. The Trustees propose to fund the selected Alternative described in this RP from these remaining settlement funds.

Section D. Public Participation

The Trustees held a public meeting on December 12, 2019 in Steelville, Missouri to inform the public of the proposed projects. The meeting occurred within a 30-day public comment period which began on December 2nd and closed on December 31, 2019. The Trustees response to the comment received is attached as Appendix A to this document.

Part 2. Summary of Injury to Natural Resources

Mining in the Trend is ongoing, and the district remains a major producer of metals. Missouri's mines have yielded much of the United States' national production of lead (e.g., USGS 2018), and since 1997, all metals produced in Missouri originated in The Doe Run Company's Viburnum Trend mines (MoDNR 2004). In addition to lead, the mines produce substantial amounts of zinc and lesser quantities of copper and silver.

The Trustees completed a Damage Assessment Plan in 2009, summarizing existing information on natural resource injuries and describing proposed studies to evaluate past, current, and future impacts to natural resources and the services they provide. In addition, the Damage Assessment Plan outlined how information gathered from the studies would be used to determine the types and scale of restoration needed to address these injuries. Since 2009, the Trustees have conducted a series of site-specific studies assessing the exposure of natural resources, such as songbirds, sediments, plant communities, and mammals, to hazardous substances and potential effects resulting from that exposure. These studies indicate that releases of heavy metals may have caused injuries to geologic resources (sediment and soil), aquatic resources (crayfish, macroinvertebrates, and benthic fish), and terrestrial resources and services (songbirds and floristic quality).

Please see Section 2.2 of the SEMORRP for further information related to the history of lead mining and natural resource injury in the SEMOLMD. For more information on Trustee initiated Natural Resource Damage Assessments and other studies that have demonstrated injury to natural resources, please see our websites at:

<http://dnr.mo.gov/env/hwp/sfund/nrda-se.htm>

or

<http://www.fws.gov/midwest/es/ec/nrda/SEMONRDA/index.html>

This RP covers two streams, Crooked Creek and Huzzah Creek downstream of its confluence with Crooked Creek, portions of which have been contaminated by the releases of hazardous substances from the Trend. Evidence of injury includes exceedances of water

quality criteria due to elevated heavy metals in sediment, established for the protection of aquatic biota, and adverse impacts to benthic community structure.

The Trustees have prioritized restoration goals and have identified restoration opportunities within Crooked Creek and Huzzah Creek. The Selected Alternative conforms to the Trustees preferred Alternative D for restoration presented in the SEMORRP. Figure 1 represents the Trustees priority restoration area for this RP.

Summary information about Southeast Missouri Ozarks' physical, biological, and socioeconomic resources are contained in Section 4 of the SEMORRP. Summary information about Crooked Creek and Huzzah Creek, which make up part of the Meramec River Watershed of the Southeast Missouri Ozarks, including physical resources (geology, topography, soil, surface water, and groundwater), aquatic habitat, and biological resources, including sensitive species, is contained in Appendix D of the SEMORRP (see pages 14 – 17, 22, 25, 26, 27, and 32). These sections of the SEMORRP are incorporated by reference herein.

Part 3. Restoration Alternatives

To compensate the public for injuries to natural resources resulting from releases of heavy metals from facilities in the Trend, the Trustees are required to develop Alternatives for the “restoration, rehabilitation, replacement, and/or acquisition of the equivalent of the natural resources and the services those resources provide” (42 C.F.R. §11.82 (a)). The Trustees developed the SEMORRP and identified broad categories of restoration types. As described in Alternative D (Preferred Alternative) of the SEMORRP, the Trustees presented a suite of restoration project types that would be considered for implementation, including riparian corridor and stream bank restoration or enhancement. Except for Alternative A, the No action Alternative, all restoration Alternatives proposed by the Trustees in the draft RP and carried forward into the final RP are consistent with the Preferred Alternative in the SEMORRP and fall into categories of floodplain and riparian corridor enhancement or surface water quality and aquatic resource improvement.

Section A. Restoration Evaluation Criteria

To ensure the appropriateness and acceptability of restoration options addressing ecological losses, the Trustees evaluated each option against restoration evaluation criteria.

Below are the criteria used to evaluate the potential restoration projects described in this RP as part of the NRDAR process. The criteria reflect the “factors to consider when selecting the Alternative to pursue” (NRDAR factors) as described in 43 C.F.R. § 11.82(d)(1-10). The Trustees have considered the following factors as part of their evaluation of the Alternatives in this RP:

- i. Relationship of the proposed projects to the injured resource and services;

- ii. Technical feasibility;
- iii. Compliance with laws, regulations, and policies;
- iv. Consistency with the Trustees restoration goals;
- v. Public health and safety;
- vi. Avoidance of further injury; including impacts to the injured resources or other resources;
- vii. Time to provide benefits; and
- viii. Duration of benefits.

The Trustees evaluation of these criteria is consistent with the criteria identified in Sections 6.4 and 6.5 of the SEMORRP, incorporated by reference herein.

Section B. Alternative 1

No Action Alternative (Natural Recovery)

Under this Alternative, the Trustees would rely on natural recovery and would take no direct action to restore injured natural resources or compensate for interim lost natural resource services. This Alternative would include the continuance of ongoing monitoring programs, such as those initiated by the MoDNR for benthic macroinvertebrates, but would not include additional activities aimed at reducing contamination, reducing potential exposure to contaminants, or enhancing ecosystem biota or processes. Under this Alternative, no compensation would be provided for interim losses in resource services.

Under the No Action Alternative, no habitats would be preserved, restored, or enhanced beyond what agencies and organizations are already doing in the area with limited existing resources. Aquatic and riparian habitats would continue to be degraded along Crooked and Huzzah Creeks, and in adjacent habitats. Water and sediment quality would continue to be impaired. Migratory bird individuals and/or populations would continue to be adversely impacted by degradation of resting, foraging, and nesting habitat. Local citizens and visitors recreating in the affected areas would not benefit from improved ecological resources, such as fish populations and wildlife habitat providing wildlife viewing opportunities. Agricultural land would continue to be lost due to stream bank erosion.

Section C. Alternative 2

Crooked and Huzzah Creek Stream and Riparian Restoration Agricultural Conservation Practices (Selected)

i) Project Description

This Alternative focuses on the restoration and protection of stream banks, riparian forests and floodplains of Crooked Creek and Huzzah Creek to restore aquatic resources and services. The Trustees and Project Partners (see below) worked with local landowners to identify preliminary project locations where floodplain and

riparian enhancement and restoration would benefit the streams. The suite of selected conservation practices will be interdependent and overlapping; often occurring in similar or the same location, and will create contiguous blocks of restored habitat important for terrestrial and aquatic resources. Crooked Creek and Huzzah Creek are located within the Meramec River watershed which is known for its high biodiversity and quality including a number of federally protected species and Missouri Species of Conservation Concern. They are also in close proximity to a large existing network of managed public lands (USFS) and designated conservation areas.

ii) Project Partners

The project selected in this RP will complement NRDAR funded restoration projects currently being implemented by the Missouri Department of Conservation, Ozark Land Trust, and The Nature Conservancy within the Huzzah watershed (“the Partners”; TNC 2015 and FWS 2015). Over the past four years, the Partners have implemented similar conservation practices in Huzzah Creek and Courtois Creek. They have developed a close working relationship with many local landowners and leveraged NRDAR funds nearly one to one in an effort to maximize restoration benefits in the target watersheds (TNC Sept 2019 Report Addendum). The Trustees plan to continue this partnership for the selected project with restoration efforts focused within and adjacent to the priority restoration area defined in this RP (Figure 1). The Partners have identified willing landowners where the selected restoration described in this RP will be implemented.

iii) Restoration Methods

The methods used in the selected project will consist of conservation agricultural practices designed to restore and benefit floodplain, riparian corridor and instream habitats. Management priorities will be to establish, restore and protect riparian corridor vegetation and stabilize and protect eroding stream banks. Specific methods will include:

- a. Re-forestation of riparian corridor through the establishment of native grasses, shrubs and trees appropriate for the area;
- b. Stabilization of eroding stream banks;
- c. Installation of riparian corridor fencing to exclude cattle;
- d. Alternative water sources for cattle;
- e. Reinforced stream crossings;
- f. Control of invasive vegetation.

iv) Project Benefits

Based on the Restoration Evaluation Criteria, methods, and anticipated ecological benefits, the Trustees have selected Alternative 2 for implementation. This Alternative will restore aquatic habitat that had been contaminated by releases of hazardous substances at and from the Buick Mine and Mill. Specific benefits provided by this Alternative include:

- a. Restoration of native floodplain and riparian vegetation to increase wildlife habitat diversity and robustness, including important habitat for migratory birds;
- b. Improvement of water quality by reducing erosion of silt and soil into streams through bank stabilization and runoff filtration;
- c. Reduction of land lost due to erosional processes;
- d. Creation of large contiguous blocks of restored habitat which will benefit natural resources including migratory birds and bats through coordination of existing conservation agricultural and restoration practices;
- e. Improved stabilization of in-stream habitat necessary to support aquatic species and their habitats including non-game and sport fish.

v) Timeline

The selected Alternative will commence as soon as possible with completed implementation within five years. The budget allows for site monitoring to assess ecological benefits and re-vegetation, following completion. Individual project designs and landowner agreements will be initiated after the receipt of funding and monitoring will occur for the duration of each project’s specified contract (see Section 6 - Monitoring).

vi) Proposed Budget

The Trustees anticipate the cost of the Selected Alternative will not exceed **\$1,200,000** and will generally follow the budget categories below. In addition to funds provided by the Trustees, qualifying cost share programs, grants, staff time, and equipment will be provided by the Partners.

| Costs Description | Estimated Costs |
|--|------------------------|
| Streambank Stabilization | \$875,000 |
| Conservation Agricultural Practices – Riparian Buffer Livestock Fencing, Alternative Livestock Watering Systems, Reinforced Stream Crossings, Riparian Plantings | \$125,000 |
| Maintenance and Monitoring (3 years) | \$200,000 |
| Total | \$1,200,000 |

Section D. Alternative 3 Conservation Agricultural Practices

This Alternative involves all of the conservation agricultural practices identified in Alternative 2 but does not include streambank stabilization work. This Alternative consists of implementing common conservation agricultural practices, including riparian buffer livestock fencing, Alternative livestock watering systems, reinforced stream crossings, and riparian revegetation to restore these areas to their natural condition. These projects would help to address injuries related to the release of hazardous materials associated with the Buick Facilities, for which settlement funds were obtained (see Section 1C).

Under Alternative 3, no stream bank stabilization projects would be implemented, and stream bank erosion practice benefits, such as reducing the loss of soil from sloughing banks, would not occur beyond what agencies and organizations are already doing in the area with limited existing resources. Aquatic habitats would continue to degrade along Crooked Creek and Huzzah Creek, and in adjacent habitats. Water and sediment quality would continue to be impaired. Fish populations would not benefit from decreased siltation and habitat improvements. Local citizens and visitors recreating in the affected areas would not benefit from improved ecological resources, such as increased fish populations and wildlife habitat providing wildlife viewing opportunities.

Part 4. Environmental Compliance

In general, actions undertaken by a federal agency that may have a significant affect on the environment are subject to the NEPA (42 U.S.C. § 4321 *et seq.*) and other federal laws. The DOI is evaluating this RP pursuant to a categorical exclusion (516 DM 8 section 8.5 (B)(3)). To the extent additional analysis is warranted in the future, and as appropriate, the public will have the opportunity to comment. A completed NEPA Compliance Checklist is included as Appendix B to this RP.

Part 5. Monitoring

Ecological monitoring at the site of each implemented conservation agricultural practice will be conducted by a Trustee representative and/or cooperative partners. Inspections of plantings, streambank stabilizations, and installed structures (i.e. wells or riparian corridor fencing) will occur annually for a period of three years following the completion of the outlined restoration project in order to adapt the restoration if the need arises. Specifically, if survivorship of planted tree seedlings is determined to be less than 50% after year 2, additional trees will be established within the riparian forest buffer. Re-seeding of native vegetation and invasive species removal may also be incorporated if seeded vegetation fails to establish or invasive species become prevalent in the project area. After the initial 3 years of monitoring, follow up monitoring will be conducted following implementation and at appropriate points thereafter. All conservation

agricultural practices implemented as part of this restoration project will be documented and monitored using pre and post-photo points over the designated monitoring period. Pre-implementation vegetation and water quality surveys will be conducted to obtain current ecological conditions. At the end of the contract period, a final report will be produced, summarizing the status of each conservation agricultural practice and/or stream bank stabilization completed as part of this project, amount of growth of the trees/shrubs, any undesirable growth of invasive plant species and overall success of each practice. The report will also include a photographic history from the beginning stages of the project to the end of the monitoring period.

Part 6. Agencies, Organizations, and Parties Consulted for Information

U.S. Fish and Wildlife Service
Columbia Ecological Services Field Office
101 Park DeVille Drive, Suite A
Columbia, MO 65203

Missouri Department of Natural Resources
Environmental Remediation Program
P.O. Box 176
Jefferson City, MO 65102

U.S. Forest Service
Mark Twain National Forest
401 Fairgrounds Road
Rolla, MO 65401

Ozark Land Trust
Gray Summit Field Office
302 Morton Lane
Villa Ridge, MO 63089

Missouri Department of Conservation
St. Louis Regional Office
2360 Hwy D
St. Charles, MO 63304

The Nature Conservancy
Missouri Chapter
P.O. Box 440400
St. Louis, MO 63144

Part 7. Literature Cited

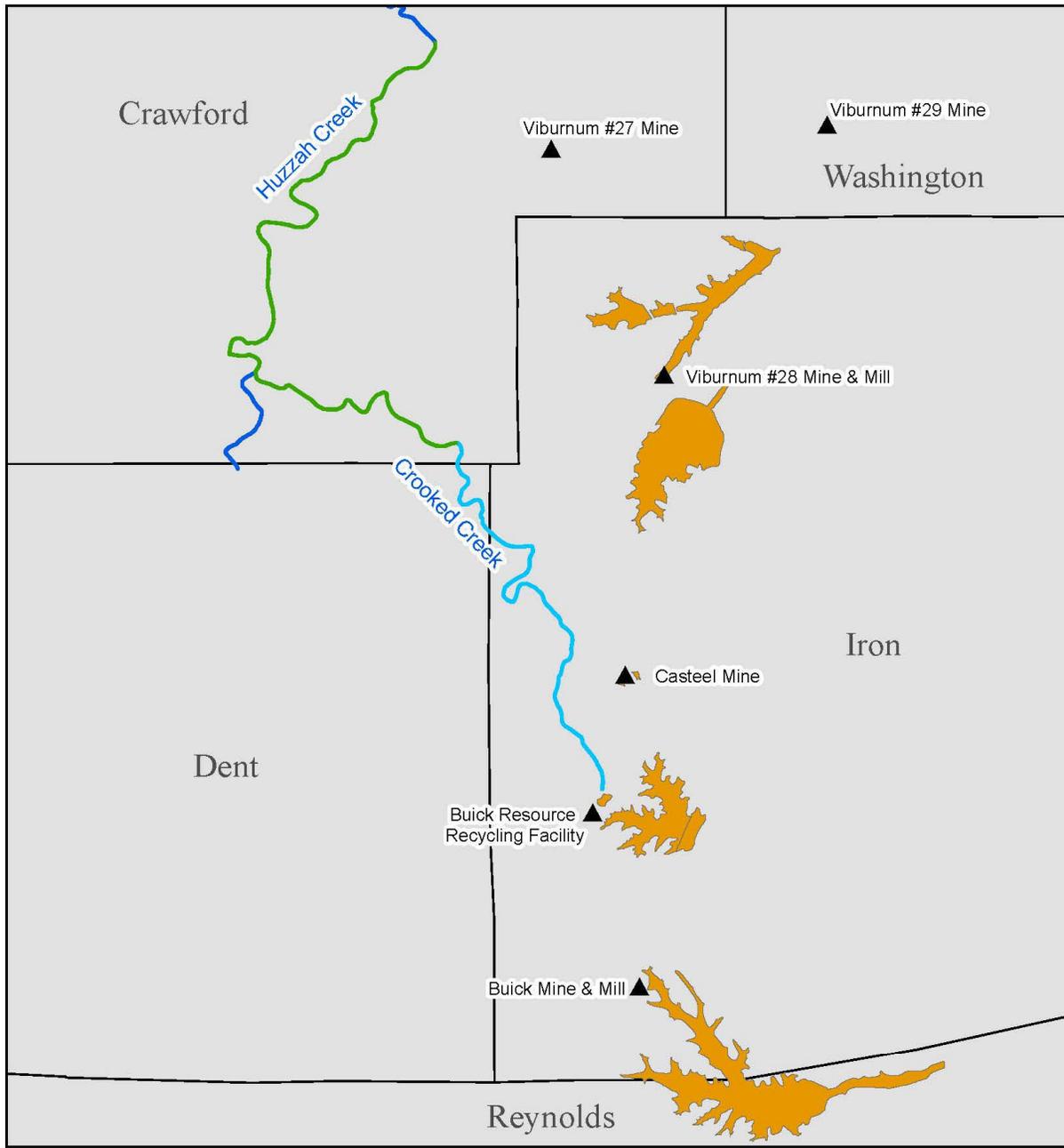
Missouri Department of Natural Resources (MoDNR), Land Reclamation Program. 2004. Biennial Report: Jefferson City, Missouri. 30 pages.

The Nature Conservancy (TNC), 90- Day Report for June 17, 2019-September 14, 2019 Addendum. 23 pages.

The Nature Conservancy (TNC). 2015. Implementing Agricultural Practices, Stream Restoration, and Land Protection in the Southeast Missouri Ozarks, Response to Request for Proposal. December, 2015, at URL [FWS – Natural Resource Damage Assessment Southeast Missouri Lead Mining District](#).

U.S. Fish and Wildlife Service (FWS). 2015. Decision Memo for Southeast Missouri Request for Proposal 1, at URL [Decision Memo SEMO RFP 1](#).

U.S. Geological Survey (USGS), 2018, Mineral commodity summary, accessed January 28, 2019, at URL [National Minerals Information Center](#)



- Crooked Creek
- Huzzah Creek
- Target Restoration Area
- ▲ Mine/Mill/Smelter Site
- Tailings Impoundment

Figure 1. Target restoration area and proximity to Buick Mine and Mill Facilities

Missouri Trustee Council – Appendix A

Natural Resource Restoration in the Viburnum Trend: Stream, Riparian, and Floodplain Habitat Restoration within Crooked and Huzzah Creeks: Response to Comments on Proposed Natural Resource Restoration Projects

This appendix summarizes the comment that was received on the draft Restoration Plan and restoration project Alternatives proposed by the Trustees and provides a response to the comment on behalf of both the federal and state Trustees. The Trustees appreciate the time and effort expended by the commenters on the proposed Alternatives.

Comment 1: Commenters wrote in support of the Preferred Alternative (2) based on its alignment with local landowner habitat restoration initiatives and overlap with their priority restoration geographies. The comment indicated the willingness of the commenter to share and encourage local landowner participation in the restoration opportunities described in Alternative (2) of this RP.

Response: The Trustees agree with the comment noting the area's existing watershed level restoration initiative and its alignment with the practices and focus area of the proposed restoration projects. This will ensure that the Trustees' project compliments ongoing restoration activities outside of the NRDAR which will collectively help to improve and protect water quality, aquatic and riparian habitats, and the species and communities dependent on those natural resources in Crooked Creek and Huzzah Creek.

Missouri Trustee Council – Appendix B

Natural Resource Restoration in the Viburnum Trend: Stream, Riparian, and Floodplain Habitat Restoration within Crooked and Huzzah Creeks: NEPA Compliance Checklist

NEPA COMPLIANCE CHECKLIST

State: Missouri Federal Financial Assistance Grant/Agreement/Amendment Number:
Grant/Project Name: Stream, Riparian, and Floodplain Habitat Restoration within Crooked and Huzzah Creeks

This proposal is; is not completely covered by categorical exclusion _____ in 516 DM 2, Appendix _____; and/or 516 DM 6, Appendix 1, 8.5 B(3,6,11), 8.5 E(1)
(check (✓) one) (Review proposed activities. An appropriate categorical exclusion must be identified before completing the remainder of the Checklist. If a categorical exclusion cannot be identified, or the proposal cannot meet the qualifying criteria in the categorical exclusion, or an extraordinary circumstance applies (see below), an EA must be prepared.)

Extraordinary Circumstances:

Will This Proposal (check (✓) yes or no for each item below):

- | Yes | No | |
|--------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1. Have significant adverse effects on public health or safety. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 2. Have significant adverse effects on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds (Executive Order 13186); and other ecologically significant or critical areas under Federal ownership or jurisdiction. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)]. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. Have a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 7. Have significant adverse effects on properties listed or eligible for listing on the National Register of Historic Places as determined by either the bureau or office, the State Historic Preservation Officer, the Tribal Historic Preservation Officer, the Advisory Council on Historic Preservation, or a consulting party under 36 CFR 800. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8. Have significant adverse effects on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant adverse effects on designated Critical Habitat for these species. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. Have the possibility of violating a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment. |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 10. Have the possibility for a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 11. Have the possibility to limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 12. Have the possibility to significantly contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112). |

(If any of the above extraordinary circumstances receive a "Yes" check (✓), an EA must be prepared.)

Yes No This grant/project includes additional information supporting the Checklist.

Concurrences/Approvals: JOHN WEBER
Project Leader: _____ Date: _____
Digitally signed by JOHN WEBER
Date: 2020.01.22 11:17:53
+10'00'

State Authority Concurrence: _____ Date: _____
(with financial assistance signature authority, if applicable)

Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined that the grant/agreement/amendment:

- is a categorical exclusion as provided by 516 DM 6, Appendix 1 and/or 516 DM 2, Appendix 1. No further NEPA documentation will therefore be made.
- is not completely covered by the categorical exclusion as provided by 516 DM 6, Appendix 1 and/or 516 DM 2, Appendix 1. An EA must be prepared.

Service signature approval:

RO or WO Environmental Coordinator: _____ Date: _____
Staff Specialist, Division of Federal Assistance: _____ Date: _____
(or authorized Service representative with financial assistance signature authority)

