# Brown's Creek Restoration Project

# Environmental Assessment Worksheet – Findings of Fact
# January 10, 2024

## Background

The Brown's Creek Watershed District Board of Managers is the Responsible Governmental Unit for environmental review of the Brown's Creek Restoration Project, an effort to be undertaken by BCWD to restore 2,000 feet of the creek from McKusick Road just upstream of Brown's Creek Park to just downstream of the Brown's Creek State Trail in Stillwater.

An Environmental Assessment Worksheet was completed for the project pursuant to Minnesota Rules 4410.4300, subpart 27A. The Project is expected to change the course or cross-section of more than 1 acre Brown's Creek, a public water of the state as defined in Minnesota Statutes section 103G.005, subdivision 15. Further details on the design of the project can be found in the attached final Environmental Assessment Worksheet.

The EAW was filed with the state Environmental Quality Board and circulated for review and comment in accordance with Minnesota Rules 4410.1500. Notice of the availability of the EAW was published in the *EQB Monitor* on November 21, 2023, announcing a 30-day comment period which ended on December 21, 2023. A news release was issued informing the public that the EAW was available on the BCWD website and at the BCWD office at the Washington Conservation District. The news release directed people wishing to make comments to file them with the president of the BCWD board. In addition, BCWD held a public hearing to receive comments on the EAW on December 13, 2023, as part of the board of managers' regular meeting.

## Brief Project Description

Brown's Creek Watershed District proposes to enhance 2,000 feet of the creek from McKusick Road just upstream of Brown's Creek Park to just downstream of the Brown's Creek State Trail in Stillwater. BCWD will reconnect several cutoff oxbow channels, and will include earthwork to reconnect the creek with the floodplain. Several new stream meanders will also be constructed to increase stream length and sinuosity to reestablish a natural meandering stream channel. The project will also include invasive tree and shrub harvest and installation of tree trunks, brush bundles, and rock riffles for fish and macroinvertebrate habitat. Grade-control riffles will emulate natural rock riffles and will be installed in the creek to increase the baseflow water elevation to restore riparian hydrology that has been impacted by channel incision. In general, earthwork and selective tree harvest will occur within 50 feet of the creek, but invasive shrub harvest is proposed up to 200 feet from the stream where dense stands of common and glossy buckthorn occur. Many of the trees and shrubs proposed to be harvested will be reincorporated into the project for bank stability and habitat features. The project will also include the creation of an American Disabilities Act-compliant connection to the Brown's Creek

State Trail to improve public access to the creek. Construction site access will occur off McKusick Road and Neal Avenue. No alterations to existing infrastructure are proposed.

Erosion control measures that will be implemented during construction include installation of temporary sediment best-management practices such as biologs and soil berms to capture surface soil erosion, and installation of both hydromulch and crimped straw mulch on all disturbed soils. All disturbed soils will be seeded with a cover crop (oats and winter wheat) and native state seed mixes based on land cover type. Erosion control measures will be installed prior to construction, and hydromulch and native seeding will occur immediately after final grading in accordance with the project stormwater pollution prevention plan.

Construction phasing:

1. Installation of erosion control BMPs;
2. Initiate selective tree harvest and temporary stockpile of harvested wood;
3. Bank grading and installation of grade control riffles and instream habitat;
4. Installation of hydromulch and native seed to establish permanent vegetation;
5. Removal of erosion control BMPs following establishment of native vegetation.

The project will have a net-positive impact on fish, wildlife, and the plant communities within the stream reach and will have a long-term positive benefit to the natural resources in the project area through the following:

- Creation of rock riffles will improve and increase macroinvertebrate habitat and fish spawning opportunities and will also help maintain deep-pool habitat.
- The project will increase the number and depth of pools for thermal refugia during the summer months and provide overwintering habitat for fish and other aquatic biota.
- The reconnected floodplain will improve riparian hydrology, benefit native hydrophytic vegetation, and support wetland habitat adjacent to the stream.
- Reducing sediment and nutrient loading within the project reach will improve downstream resources (Brown's Creek and St. Croix River).
- Native seeding will increase the diversity and extent of native vegetation, and the project will target populations of invasive species documented in the project reach including common buckthorn, glossy buckthorn, exotic bush honeysuckles, black locust, reed canary grass, creeping Charlie, and garlic mustard.
- Seeding native forbs will also improve habitat for pollinators including the federally listed rusty patched bumblebee and monarch butterfly.
- Establishment of brush piles will provide refugia for terrestrial fauna.

The project will have net positive effects on soils and vegetation in the riparian corridor as a result of restored hydrology in the reconnected floodplain and through removal of invasive species and reestablishment of native species. The project will also have a net positive effect on downstream water resources by improving water quality and expanding habitat for aquatic biota.

Temporary negative impacts the project construction will be mitigated as follows:

- No instream work will occur between September 1 to April 1 per Minnesota Department of Natural Resources work-exclusion dates to allow for fish spawning and migration.
- Tree harvest will occur in the winter months between January and early March to minimize impacts to migratory species and tree-nesting/roosting species such as the northern long-eared bat and tricolored bat. If tree harvest activities cannot be completed by early March, the BCWD will coordinate with the United States Fish & Wildlife Service to conduct a bat habitat assessment and/or other steps to determine tree harvest options after March 31.
- Work is only proposed on degraded stream banks and will bypass stream banks that are stable or that are currently providing quality near-stream/ instream habitat.
- Significant native trees and stable root masses adjacent to the creek will be preserved for bank stability and habitat diversity.
- Implementation of appropriate sediment BMPs, including rapid soil stabilization, to minimize soil erosion during project construction.
- Upon completion of the project, all disturbed soils will be seeded with native species and stabilized with hydromulch and crimped straw.

### Project Schedule

The Minnesota Department of Natural Resources has established work exclusion dates for work in public waters to protect fish spawning and migration. Brown's Creek is classified as a trout stream with work exclusion dates from September 1 to April 1. Construction of the project will occur outside the work exclusion dates, ideally between June 1 and August 1. Work during this construction window will allow for proper grading and materials installation and provide a sufficient growing season for establishment of perennial vegetative cover.

With this in mind, the Brown's Creek Restoration Project is anticipated to start in the spring/summer of 2024 and will be substantially complete by September 1, 2024.

## Summary of EAW Comments Received and Associated Responses

The 30-day EAW review and comment period began November 22, 2023, and terminated December 21, 2023. A public hearing was held as part of the regular meeting of the Brown's Creek Watershed District Board of Managers on December 13, 2023. Written comments were received from individuals representing several governmental organizations during the public comment period, listed below. BCWD board also received a comment from an individual representing the State Archaeologist's office well after the close of the comment period. Comments were received from:

- Minnesota Indian Affairs Council
- Minnesota Pollution Control Agency
- State Historic Preservation Office
- Metropolitan Council
- Minnesota Trout Unlimited

- Minnesota Department of Natural Resources
- Washington County

**Exhibit A** is a table of summaries of the comments and responses to them. The original comment communications are collected as **Exhibit B**.

## Issue Summary

The EAW and the comments on it support a determination that the Brown's Creek Restoration Project will not cause significant negative environmental impacts. Adverse impacts to the environment from the project will be temporary and BCWD will be able to substantially mitigate any adverse impacts in construction design and specification, as well as maintenance of the project. The project will provide significant environmental improvements and public-resource benefits to both the natural and human environments.

## Analysis of Potential Impacts Against Evaluation Criteria in Minnesota Rules

In deciding whether a project has the potential for significant environmental effects and whether an Environmental Impact Statement is needed, an RGU must consider the impacts that may be reasonably expected to occur from the project under four criteria by which potential impacts must be evaluated (Minnesota R. 4410.1700, subp. 7A-7D).

A. *Type, extent, and reversibility of environmental impacts*

Based upon information provided in the EAW and the responses to review comments, the RGU concludes that the potential environmental effects of the project will be short-term and effectively counteracted by specifying mitigation measures in the contract and post-project maintenance regime. Generally, long-term project effects are beneficial both to the resource (Brown's Creek and the creek-corridor habitats) and humans who interact with it.

The project will result in partial conversion of disturbed forest habitat to open prairie and wetlands with a net improvement in habitats for fish, macroinvertebrates, herptiles, mammals, and pollinators. In general, the project will mitigate the cumulative effects of climate change and future land development in the area. The project will have net positive effects on soils and vegetation in the riparian corridor as a result of restored hydrology in the reconnected floodplain and through removal of invasive species and reestablishment of native species. The project will also have a net positive effect on downstream water resources by improving water quality and expanding habitat for aquatic biota.

The temporary negative impacts the project will create during construction (e.g., land disturbance, disturbance in the creek) will be mitigated as described in Table 12 in the EAW.

B. *Cumulative potential effects.*

The Brown's Creek Restoration Project is not dependent on the initiation or development of any other project, and BCWD does not expect that further restoration work will be necessary in the near term in this reach of the creek. To the extent that cumulative effects will occur, they will be improvements to water quality and habitat in the creek corridor from the project and other natural-resources improvements BCWD has undertaken in the creek since the late 1990s. The

project will aid in building resiliency in the stream channel to buffer potential effects of further urbanization and specific effects of climate change such as increased rain events.

Cumulative effects resulting from the proposed project are largely environmentally protective and beneficial in nature. There are no related projects affecting the proposed project area at this time that would result in significant cumulative impacts when combined with the proposed project.

C. *The extent to which environmental effects are subject to mitigation by ongoing public regulatory authority.*

As noted above and in Table 12 in the EAW, mitigation of any impacts from the project will be achieved through design and inclusion of best management practices and compliance with all applicable regulations, including permit requirements and other programs, as detailed in Table 7 in the EAW.

D. *The extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.*

No other environmental effects are anticipated. Environmental effects related to project activities, including stormwater management and invasive species control, can be controlled in accordance with the results of the following studies:

Minnesota Pollution Control Agency. State of Minnesota Stormwater Manual. 2024 Minnesota Pollution Control Agency. *Available at* https://stormwater.pca.state.mn.us/index.php?title=Main_Page

Minnesota Invasive Species Advisory Council. 2009. A Minnesota State Management Plan for Invasive Species. State of Minnesota, St. Paul, MN.

Minnesota Department of Natural Resources. Best Practices for Meeting General Public Waters Work Permit GP 2004-0001 (reference for work exclusion dates) *Available at* https://files.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_chapter1.pdf

# Exhibit A

## Table of Summaries of Comments and Responses

# Exhibit B

EAW Comments