

Afton Alps Trout Brook Stream Restoration EAW, Great River Greening

Record of Decision

In the Matter of the Decision of the Need for an Environmental Impact Statement for the Proposed Afton Alps Trout Brook Stream Restoration project, Denmark Township, Washington County, Minnesota.

Findings of Fact, Conclusions of Law, and Resolution

Findings of Fact

1. Great River Greening (GRG), in cooperation with Minnesota Department of Natural Resources (MNDNR), South Washington Watershed District (SWWD), and Vail Properties is proposing stream restoration of approximately 1,130 linear feet of Trout Brook to a realigned route approximately 1,400 feet long as shown in Figures 1 and 2. Previous studies and management plans have identified this segment of Trout Brook as a top priority for improvement, citing it as the “most degraded reach” of the Trout Brook watershed.
2. The project seeks to improve the Trout Brook corridor for both biological and resort-related functions. Trout Brook will be re-meandered at the Afton Alps site privately owned by Vail using peer-reviewed natural stream restoration design standards, with construction to be completed by September 2018. The segment to be realigned is currently a linear ditch with limited habitat and a history of sediment accumulation that requires ongoing maintenance. The ditch segment bisects the Afton Alps parking lot. The proposed realignment of Trout Brook will incorporate a two-stage channel. The larger flood channel would be similar in dimension to the corridor of the current ditch. Within the larger channel, a smaller meandering channel will be constructed with habitat features such as riffles, pools, large wood, overhanging banks, and native riparian vegetation. Minor infrastructure improvements will also be completed nearby, including the improvement of a culvert which will allow sediment to move through the project area more effectively.
3. In 2012, SWWD conducted a geomorphic and feasibility reconnaissance examining channel stability, sediment sources and sinks and potential restoration solutions for the lower segment (Inter-Fluve page 4 2012). Since that time, the Minnesota DNR has conducted both geomorphic and fisheries investigations to support restoration at the site, including the survey of similar locations in both Trout Brook and Brown’s Creek that may serve as references for the design of this project. Concept designs for this remeander project were completed in 2014 and presented to stakeholders for input and comment. The landowner (Vail) is interested in potential reconfiguration of the existing parking layout (due to the new route of Trout Brook) to a more efficient arrangement, reducing its maintenance requirements within the channel

(currently caused by frequent sediment, and an overall improvement in the function of Trout Brook. Together with GRG, SWWD, and MNDNR, the project is intended to accomplish improvements to stream functions in Afton State Park and in Afton Alps in addition to the recreational functions through the Afton Alps property.

4. Proposed Project Elements Include:

- a. Channel Restoration – This design calls for construction of an approximately 1,375-foot long two-stage channel to replace an existing ditch that is approximately 1,130 feet long. The new flood channel would be similar in dimension to the corridor of the current ditch, but would be located south of the current alignment, on the opposite side of an existing gravel parking lot. Within the new channel, a smaller meandering channel will be constructed with habitat features such as riffles, pools, large wood, overhanging banks and native riparian vegetation.
- b. Infrastructure Improvements – Minor modifications to the routing of vehicles and skiers within the project area will occur as a result of the realigned channel. A new culvert will be constructed at the downstream end of the remeander to replace an existing culvert located nearby the Afton Alps visitor center, allowing the continued passage of vehicle traffic through the site. The existing upstream culvert will be made fish-passable through the construction of a downstream riffle, creating a backwater and wet crossing at the existing culvert. Additionally, two 10-foot-wide pedestrian bridges will be constructed over the remeandered channel to facilitate skier and pedestrian movements to existing visitor facilities.
- c. Culvert Design – The new east (downstream) culvert is sized to accommodate the bankfull channel geometry and eliminate backwater. A minimum width of at least 18 feet was required to fit the bankfull channel width and provide a small bench for terrestrial species connectivity. Nevertheless, a larger width was necessary to provide enough hydraulic capacity to eliminate backwater. The vertical height of the culvert is sized to incorporate natural channel bed material in the bottom to promote fish passage.
- d. Upstream Floodplain Improvements – Additional floodplain capacity and space for stream meandering will be created at two sites in Afton State Park.

5. The purpose of the project is to improve water quality and ecology within the lower reach of the Trout Brook. The landowner of the Afton Alps property, Vail Resorts Management Company, is interested in potential reconfiguration of the existing parking layout, reduce the frequent sediment deposition within the channel that requires maintenance, return of trout to the stream, and as an overall improvement in the function and aesthetics of Trout Brook. SWWD and MNDNR’s goal is to improve stream habitat to support a sustainable population of brown trout (*Salmo trutta*) and brook trout (*Salvelinus fontinalis*). GRG seeks to provide long-term educational opportunities and together with Vail, SWWD, and the MNDNR, they endeavor to accomplish the improvements to both stream and ski functions through the property.

6. The project will result in a net increase in aquatic habitat, including:

	Before	After		Before	After
Wetlands	2.439 acres	2.535 acres	Lawn/landscaping	0.30 acres	0.10 acres



Deep water/streams	0.344 acres	0.642 acres	Impervious surface	0.20 acres	0.20 acres
Wooded/forest	0.20 acres	0.20 acres	Stormwater Pond	0	0
Brush/Grassland	0	0	Other (describe)		
Cropland	0	0			
			TOTAL		

7. The proposed project is subject to several permitting jurisdictions, including:

Unit of Government	Type of Application	Status
U.S. Army Corps of Engineers	Section 404 of Clean Water Act	To be submitted
MN Department of Natural Resources	Public Waters Work Permit	To be submitted
MN Pollution Control Agency	NPDES/SDS Stormwater General Permit	To be submitted
Washington County	Conditional Use Permit	To be submitted
Washington County	Grading & Filling Shoreland Alteration Permit	To be submitted
South Washington Watershed District	Wetland Conservation Act Permit Boundary or Type	Approved on Nov. 7, 2017

8. The proposed project is consistent with existing plans and zoning including:

- a. Denmark Township 2030 Comprehensive Plan
- b. Washington County Codes Chapter 6, Shoreland Management
- c. SWWD Trout Brook Management Plan

9. As project proposer, Great River Greening prepared a mandatory EAW under Minnesota Rules 4410.4300, subpart 26, stream diversion to determine if the project had the potential for significant environmental effects.
10. The EAW was filed with the Environmental Quality Board (EQB) and a notice of its availability was published in the EQB *Monitor* on January 1, 2018. A copy of the EAW was sent to all persons on the EQB Distribution List. Press releases announcing the availability of the EAW were sent to newspapers in the area.
11. The EAW and supporting technical materials used in preparation of the EAW are incorporated by reference into the Record of Decision on the Determination of Need for an Environmental Impact Statement (EIS).
12. The 30-day EAW public review and comment period began January 1, 2018 and ended January 31, 2018 pursuant to Minnesota Rules part 4410.1600.
13. During the 30-day public review and comment period, SWWD received written response from 5 parties, including:
 - a. Minnesota Pollution Control Agency
 - b. Minnesota Department of Transportation

- c. Metropolitan Council
 - d. Minnesota Department of Natural Resources
 - e. Washington Conservation District
14. Written responses received and SWWD's responses are compiled in Appendix A and incorporated by reference into this Record of Decision on the Determination of Need for an EIS.
15. Multiple comments were received related to permitting requirements, including:
- a. MPCA 401 Water Quality Certification
 - b. NPDES Construction Stormwater
 - c. Protection of rare and endangered species
 - d. DNR dewatering
16. Multiple comments were received related to clarification of presented information.
17. Multiple comments were received related to potential future improvements at the site.
18. Multiple comments were received highlighting the potential for the project to improve habitat of Trout Brook.
19. Multiple comments were received related to there being no need for an EIS.
20. Clarifications, where needed are noted in the response to comments in Appendix A.
21. Minnesota Rules Part 4410.0200 Subpart 51, define mitigation as follows:
- a. Avoiding impacts altogether by not undertaking a project or parts of a project;
 - b. Minimizing impacts by limiting the degree of magnitude of a project;
 - c. Rectifying impacts by repairing, rehabilitation, or restoring the affected environment;
 - d. Reducing or eliminating impacts over time by preservation and maintenance operations during the life of the project;
 - e. Compensating for impacts by replacing or providing substitute resource or environments; or
 - f. Reducing or avoiding impacts by implementation of pollution prevention measures.
22. The Rules of the Minnesota Environmental Quality Board set forth the following standards and criteria (Minnesota Rules part 4410.1700, subpts. 6 and 7) to which the effects of a project are to be compared to determine whether it has the potential for significant environmental effects:
- a. Type, extent, and reversibility of the environmental effects;
 - b. Cumulative potential effects of related or anticipated future projects;
 - c. Extent to which the environmental effects are subject to mitigation by ongoing regulatory authority; and
 - d. The extent to which environmental effects can be anticipated and controlled as a result of other environmental studies undertaken by public agencies or the project proposer, including other EISs.
23. Based on the information contained within the EAW and provided in written comments received and in the responses to those comments, SWWD has identified no un-mitigated adverse environmental effects for the Afton Alps Trout Brook Stream Restoration project.

Conclusions of Law

1. SWWD has fulfilled all applicable procedural requirements of law and rule regarding the determination of need for an environmental impact statement for the Afton Alps Trout Brook Stream Restoration project in Denmark Township, Washington County, Minnesota.
2. *Type, extent, and reversibility of environmental effects*
Based on the Findings of Fact, SWWD has determined that all potential environmental effects resulting from the project will be minor in type, extent, or are reversible.
3. *Cumulative potential effects of related or anticipated future projects*
Cumulative effects are potential impacts placed within the context of the impacts caused by other projects. Those impacts may or may not result from the same or similar type of project. There is potential for beneficial cumulative effects resulting from future improvements within the Afton Alps parking lot which would be subject to SWWD permitting and required to incorporate water quality treatment.
4. *Extent to which environmental effects are subject to mitigation by on-going public regulatory authority*
The project will be subject to various on-going permitting and regulatory authorities, including:
 - Physical Impacts on Water Resources (MnDNR, Wetland Conservation Act, USACE, SWWD)
 - Effects on Surface Water Use (MnDNR)
 - Erosion and Sedimentation (MnPCA, SWWD)
 - Water Quality (MnPCA, SWWD)
 - Recreation and impacts to park resources (Washington County, Metropolitan Council)
5. *Extent to which environmental effects can be anticipated and controlled as a result of other environmental studies undertaken by public agencies or the project proposer, or other EISs.*
Environmental effects have been addressed in the current EAW. No subsequent environmental review is anticipated.
6. Based on consideration of the standards and criteria and factors specified in the Minnesota Environmental Review Program Rules (MN Rules Part 4410.1700, subpart 6 and 7) to determine whether a project has the potential for significant environmental effects, and on the Finding and Record in this matter, **the SWWD determines that the proposed Afton Alps Trout Brook Stream Restoration Project does not have the potential for significant adverse environmental effects.**

Appendix A: Response to Comments

COMMENT ID	REVIEWER	LOCATION IN EAW	ORIGINAL REVIEW COMMENT	RESPONSE
1	MPCA	Permits and Approvals, Item 8	Please note, this section must include the MPCA 401 water quality certification in addition to a possible Antidegradation Determination. The over-all Project will increase wetland area and improve Trout Brook Stream function. However, specific in-water best management practices (BMPs) such as silt curtain, construction during low/no flow conditions, winter conditions, coffer and check dams, etc. must be included in final plans.	Noted. Project proposer will secure all approvals and permits. Project proposer will identify all necessary BMPs as part of their SWPPP.
2	MPCA	Water Resources, Item 11	If the Project areas located above the Department of Natural Resources (DNR) Ordinary High Water Level (OHWL) will result in one or more acres of disturbance, the National Pollutant Discharge Elimination System/State Disposal System General Construction Stormwater permit (CSW Permit) is required for those areas. Work areas located below the OHWL will need to comply with the DNR's permit requirements for erosion and sediment control BMPs.	Noted. See answer to comment 1.
3	MPCA	Water Resources, Item 11	Based on MPCA estimates, the Project boundary is located within one aerial mile of Lake St. Croix which is listed as impaired for construction related impairments. Therefore, the construction activity will need to implement the requirements of Appendix A. Part C. 1. soil stabilization timeline in the CSW Permit.	Noted. See answer to comment 1.
4	MPCA	Water Resources, Item 11	The CSW Permit requires that redundant down gradient sediment controls are installed on portions of the Project where 50 feet of the natural buffer is disturbed adjacent to surface waters, including the stream and wetlands.	Noted. See answer to comment 1.
5	MPCA	Water Resources, Item 11	Please ensure that the Project's Stormwater Pollution Prevention Plan incorporates the above requirements and identifies the specific locations and the timing for installing the erosion and sediment controls required by the CSW Permit.	Noted. See answer to comment 1.
6	MnDOT	N/A	MnDOT has reviewed the above-referenced EAW and has no comments, as the proposed project should have little or no impact on MnDOT's highway system.	Noted.
7	Met Council	N/A	Council staff finds that the proposed project is consistent with regional policies and an EIS is not needed for regional purposes.	Noted.
8	Met Council	Land Use, Item 9	The EAW should be revised to acknowledge the planned St. Croix Valley Regional Trail, which is part of the regional parks system and governed by the Council's 2040 Regional Parks Policy Plan. The Council approved Washington County's master plan for the regional trail in December 2005, which includes a planned alignment along Trout Brook near the EAW project site...The regional trail has not been constructed in this area, so the project proposed in the EAW is not anticipated to impact the trail or the regional parks system.	Noted. Additionally, the proposed project may help facilitate development of the proposed trail given that Vail Corp/Afton Alps will grant an angler access easement adjacent to the stream through their property.
9	Met Council	Water Resources, Item 11	The EAW indicates that this channel restoration project could make it possible for stormwater runoff water quality improvements to be made following its construction. Incorporation of infiltration Best Management Practices (BMPs) and/or rain gardens into the Afton Alps parking area reconstruction would reduce future contributions of suspended solids and chemical pollutants to the Brook, further improving the benefits of this Project. Council staff encourages the owners of the Afton Alps site to work with Great River Greening, MDNR, and SWWD staff to design and incorporate an efficient suite of runoff BMPs into the revised parking lot configuration to further enhance the benefits of the restoration of Trout Brook through their facility.	Noted. Future potential improvements at Afton Alps will be subject to SWWD development/redevelopment rules which will require additional stormwater treatment, primarily through infiltration.
10	DNR	N/A	The DNR has been involved with the planning of the project at various stages and we support the effort to improve the overall ecological function and enhancement within Trout Brook and we recognize the need to remove energy from the water to avoid continued erosion.	Noted.
11	DNR	N/A	The EAW did not address the potential to impact kittentails within the portion of the project that lies within Afton State Park. As noted in the Natural Heritage Review letter dated December 15, 2017, Kittentails, a state listed threatened plant, has been documented in the vicinity of the proposed project. Minnesota's endangered species law and associated rules prohibit the taking of threatened or endangered species without a permit. Given the protected status of this species and the presence of suitable habitat, we recommend a qualified surveyor conduct a habitat assessment and, if needed, a botanical survey within the project footprint and access routes. Please contact Lisa Joyal to discuss potential surveyors, survey protocol, and other requirements.	Noted. Project proposer has been in contact with MnDNR regarding Kittentails habitat and survey of park project sites in spring 2018. Discussions are ongoing about the MnDNR completing the survey since the area of interest is within a State Park. Otherwise, the project proposer will contract with an approved surveyor to complete a survey.
12	DNR	Water Resources, Item 11	The EAW should describe the characteristics of the existing springs present along the section of proposed stream channel. How will these springs be protected/preserved during construction to maintain this existing groundwater/surface water connection?	Potential existing springs/groundwater will feed directly into the new channel. Overall, the proposed project increases the existing groundwater/surface water connection.

13	DNR	Water Resources, Item 11	The new stream section will be moved adjacent to the existing parking lot. How will potential impacts to water quality from moving the stream adjacent to a large impervious surface be addressed?	The channel is being relocated from the middle of the Afton Alps parking lot to the edge of the parking lot. This relocation will help to limit pollution of runoff into the stream. Additionally, the new channel is designed to include vegetated floodplain which will also help to protect water quality and habitat.
14	DNR	Water Resources, Item 11	The EAW notes that dewatering may be necessary for excavation of the proposed channel bed and that a water appropriation permit from the DNR may be required. As a reminder, a DNR water appropriation permit is required if dewatering in volumes that exceed 10,000 gallons per day, or one million gallons per year. In addition to potentially needing a dewatering permit for channel excavation, a permit may also be required for any dewatering work associated with the relocation of the gas and communication lines, and the installation of the bridge piers and stream crossings, if dewatering for these portions of the project exceed the volumes noted above.	Noted.
15	DNR	Water Resources, Item 11	Should the construction of the new channel result in the creation of new springs, the final design of the channel should ensure that the water from these springs reaches the trout stream quickly and does not pool.	Noted. See response to comment 12.
16	DNR	Water Resources, Item 11	A minimum of 3 months is a short time period for establishing vegetation in a new channel section. If vegetation is not stabilized properly there is an increased potential for erosion and permanent, undesired alterations to the new stream bed. Explain how the status of vegetation growth in the new channel will be evaluated, prior to redirecting flow through the new channel, to ensure that the vegetation growth is adequate to handle the new stream flow. What is the plan if the vegetation is not adequately established by the time the new channel is scheduled to come online?	Soils within the construction areas will be stabilized and compliant with the SWPPP/NPDES permit conditions. The channel will not come online until the project will be able to meet those conditions. The design includes several elements to mitigate for slow vegetation growth, including: installation of category 3 blanket on all disturbed areas, double layer of coir fabric for critical channel bank areas, and large wood stabilization measures. Additionally, the vegetation will be monitored during establishment and reseeded as necessary.
17	DNR	Contamination/Hazardous Materials/Wastes, Section 12	Afton Alps Ski Area uses wells to supply its customers with water. Preventing pollution spills will protect the water supply of Afton Alps Ski Area.	Noted.
18	WCD	Water Resources, Item 11	Trout Brook is not a designated trout stream but the MN DNR included it in their periodic review of trout stream and lake designations in 2016, where it was listed as a proposed designated trout stream (http://www.dnr.state.mn.us/troutstreams/designations.html). The stream is described under "trout stream additions" as follows: "Surveys have found low numbers of brown trout in this stream despite it having never been stocked. There has not been evidence of natural reproduction to this point, indicating that the trout present likely migrated from other St. Croix River tributaries." The proposed project would help to improve the number of microhabitats in Trout Brook that are suitable for trout and other aquatic wildlife.	Noted.
19	WCD	Water Resources, Item 11	The WCD supports the statement in the EAW that the project could enable stormwater improvements post-construction, such as the installation of BMPs included as part of parking lot improvements.	Noted.
20	WCD	N/A	There are no known impacts that have not already been addressed in this EAW that warrant an Environmental Impact Statement.	Noted.