

Central Draw Storage Facility Overflow South Washington Watershed District

Record of Decision

In the Matter of the Decision of the Need for
an Environmental Impact Statement for the
Proposed Construction and Operation of the
Central Draw Storage Facility Overflow
Project in Cottage Grove, MN.

Findings of Fact, Conclusions of Law, and Resolution

Findings of Fact

- A. The South Washington Watershed District (SWWD) as local sponsor is proposing to construct an overflow for its Central Draw Storage Facility (CDSF) to provide a controlled overflow to the Mississippi River during infrequent (1% chance or less frequent) yet reasonably foreseeable precipitation events.
- B. The need for the overflow project results from past and planned future development in the watershed and construction and operation of the City of Woodbury's Bailey Lake Lift Station. In the absence of the overflow, extreme precipitation events will ultimately result in flooding of residential neighborhoods within the SWWD.
- C. The South Washington Watershed District was formed, in part, to identify and construct a controlled overflow route.
- D. SWWD convened a Local Advisory Committee (LAC) in 1998-1999 consisting of representatives from all applicable State and Regional agencies, Municipalities, Washington County, and concerned citizens for the purpose of identifying a preferred comprehensive overflow solution and route.
- E. The SWWD Local Advisory Committee and SWWD Board identified the currently proposed overflow option as the preferred option among several alternatives for several reasons, including:
 - a. Preference of State Agencies in utilizing an overland route of stormwater ponds and detention basins and conveyance pipes rather than a direct piped outlet at the River.
 - b. Opportunity for a combined Watershed District and City stormwater system through the City of Cottage Grove's planned East Ravine development.
 - c. Need of the project and timing of construction with various partners.
- F. Construction of the identified solution and currently proposed project was coordinated to coincide with development activity and planned roadway improvements in the area.
- G. With development activity beginning in the project area, SWWD and Washington County developed a partnership to construct Phase I of the overflow in 2013 in conjunction with roadway improvements necessary to serve anticipated development.
- H. As local sponsor and project proposer, SWWD completed environmental review through the preparation of a voluntary Environmental Assessment Worksheet (EAW) in 2013 under

Minnesota Rules 4410.1000 subp. 3 (D) to determine if Phase I of the project had the potential for significant environmental effects.

- I. The SWWD Board determined that Phase I of the project did not have the potential for significant environmental effects and committed to completing additional environmental review for remaining project phases in Findings of Fact and Record of Decision dated February 12, 2013.
- J. Phase I construction of the Overflow project was completed in 2013 in partnership with Washington County.
- K. Subsequent environmental review for Phases II-V was initiated through preparation of a second EAW in 2014.
- L. During development of the EAW, SWWD held several meetings with interested agencies including Washington County, Department of Natural Resources, Metropolitan Council, City of Woodbury, and City of Cottage Grove to discuss potential environmental impacts resulting from the project. Agency comment was considered and incorporated into the EAW.
- M. A Draft EAW was presented to the SWWD Board of Managers at their regular meeting on April 8, 2014.
- N. The EAW was filed with the Environmental Quality Board (EQB) and a notice of its availability was published in the EQB *Monitor* on April 28, 2014. 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.
- O. 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).
- P. The 30-day EAW public review and comment period began April 28, 2014 and ended May 28, 2014 pursuant to Minnesota Rules part 4410.1600.
- Q. During the 30-day public review and comment period, SWWD received 7 letters containing written comments. Comments were received from the following parties:
 - a. Tod Sherman, Planning Supervisor, Minnesota Department of Transportation
 - b. Kevin Kain, Planner Principal, Environmental Review Unit, Minnesota Pollution Control Agency
 - c. Ryan Schroeder, City Administrator, City of Cottage Grove
 - d. Clint Gridley, City Administrator, City of Woodbury
 - e. Brooke Haworth, Environmental Assessment Ecologist, Central Region, Minnesota Department of Natural Resources
 - f. LisaBeth Barajas, Manager, Local Planning Assistance, Metropolitan Council
 - g. John Elholm, Parks Director, Washington County
- R. Written comments 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.
- S. Several comments received related to permitting and procedural processes. Permitting and procedural processes are not criteria for determining the need for an EIS. However, all relevant permits have been identified and will be secured prior to project construction.
- T. Several comments were received related to positive potential effects to the ravine drainage pathway, Ravine Lake, and the Cottage Grove Ravine Regional Park resulting from the project including addressing current flooding concerns, prevention of erosional degradation,

- improving existing conditions in the ravine, and providing for flood protection and management of stormwater from Cottage Grove and Woodbury.
- U. Commenters from Metropolitan Council and Washington County raised concerns about unexpected impact to trees and habitat within the park from operation of the CDSF overflow. Neither found an EIS to be necessary.
- V. As stated in the EAW, much of the necessary stabilization in the ravine can be achieved through vegetation management. That vegetation management will be consistent with the Park Master Plan, including control of woody invasives, canopy thinning, and restoration of natural forest and savanna habitats.
- W. Where engineered practices (e.g. check dams and channel linings) are necessary, they will stabilize an existing risk for severe erosion in the channel, preventing environmental degradation.
- X. Potential for unexpected impacts to trees can and will be addressed and planned for during project design, execution of an easement for construction and operation of the overflow through Ravine Regional Park, and completion of a Park Master Plan amendment. All plans for work within the Park will be developed in partnership with Washington County and Metropolitan Council.
- Y. 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.
- Z. 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.
- AA. 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 environmental effects for PHASES II-V of the Central Draw Storage Facility (CDSF) Overflow 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 Central Draw Storage Facility (CDSF) Overflow Project: Phase II – Phase V in Cottage Grove, 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. The determination of minor in type, extent, and reversibility incorporates environmental commitment and mitigation as described herein in item Z. above.
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 cumulative effects resulting from development pressures in Cottage Grove. Those potential effects were evaluated and addressed in the EAW. The project will be designed to accommodate increased rates of runoff from full development.
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 Phase II – Phase V of the proposed Central Draw Storage Facility Overflow project does not have the potential for significant adverse environmental effects.

SWWD Resolution #2014-002

Central Draw Storage Facility (CDSF) Overflow, Phase II- Phase V Environmental Assessment
Worksheet

Decision on the Need for an Environmental Impact Statement

WHEREAS, the South Washington Watershed District ("The District") has approved and locally adopted a comprehensive watershed management plan ("Plan") as defined by Minnesota Statutes Chapter 103B, 103D and 103E and Minnesota Rule Chapter 8410; and

WHEREAS, The District's Plan includes various projects to provide flood control, improve water quality, manage stormwater runoff and manage natural resources; and

WHEREAS, The District's Plan includes a capital improvement program; and

WHEREAS, The District's Plan includes the construction of the Central Draw Overflow in the capital improvement program; and

WHEREAS, The District voluntarily completed an Environmental Assessment Worksheet for the project; and

WHEREAS, The Environmental Assessment Worksheet was published in the EQB Monitoring April 28, 2014 for a 30 day comment period; and

WHEREAS, the South Washington Watershed has provided response to submitted comments;
and

WHEREAS, the South Washington Watershed District has compiled a Findings of Fact summarizing the District's review of the proposed project; and

WHEREAS, the South Washington Watershed District has determined that there is not a potential for significant adverse environmental effects resulting from the project, and

NOW THEREFORE BE IT RESOLVED, that the South Washington Watershed District Board of Managers, based on the above Findings of Fact, does not order an Environmental Impact Statement for Phase II – Phase V of the Central Draw Storage Facility Overflow project.

Manager Hanna moved the adoption of the foregoing Resolution #2014-002, and Manager Madigan seconded the adoption of the Resolution, and it was duly adopted by the Board on the 10th of June, 2014.



Jack A. Lavold, President



Donald L. Pereira, Secretary

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Appendix A: Response to Comments

COMMENT ID	REVIEWER	LOCATION IN EAW	ORIGINAL REVIEW COMMENT	RESPONSE
1	MnDOT	Permits	As development moves forward and plans are refined, proposed construction next to or within MnDOT right of way will need to be reviewed by MnDOT.	Noted.
2	MnDOT	Water Resources; Permits	The proposal must not increase existing discharge to the MnDOT drainage system. The applicant will need to submit plans as development that could potentially impact MnDOT drainage occurs. The applicant shall submit hydraulic computations for 10, and 100 year storms for the pre- and post-development stages. Drainage area maps are required and should have flow arrows to indicate direction of overland and conveyed flows. Please direct questions regarding this issue to Bruce Irish (651-234-7534), of MnDOT's Water Resources Section.	Noted. No impacts to the MnDOT drainage system are anticipated.
3	MnDOT	Permits	In addition to a potential drainage permits, any use of or work within or affecting MnDOT right of way requires a permit. Permit forms are available from MnDOT's utility website at http://www.dot.state.mn.us/utility/ . Please include one 11 x 17 plan set and one full size plan set with each permit application. Please direct any questions regarding permit requirements to Buck Craig (651-234-7911) of MnDOT's Metro Permits Section.	Noted.
4	Cottage Grove	Land Use	The planned project is consistent with the future growth plans within the associated sub-watershed districts within Cottage Grove. The EAW adequately acknowledges this consistency. The plan is part of a continuing cooperative effort between the City and the SWWD to maintain the surface water drainage generated by that growth. The EAW adequately acknowledges this effort.	Noted.
5	Cottage Grove	Water Resources	The Cottage Grove Ravine Regional Park is the largest public park within the community, and the plan's intention to solve current flooding issues at the park entrance will be beneficial to residents of the City and the region. Given the existing erosion problems identified in the report within the storm water utility corridor, the City encourages the project's plan to correct these problems and put measures in place to permanently prevent further erosional degradation.	Noted.
6	Cottage Grove	Land Use	One of the City's tasks is to regulate activity within the Mississippi River Critical Area Corridor, and the plan's recognition and conformance with the Critical Area Rules is supported. The project's plans to utilize the existing historical drainage way within Cottage Grove's geography is supported as being the most economical route to pursue. The City further finds that the information provided in the report, attached as Exhibits A and B, to be accurate and the recommendations valid.	Noted.
7	Woodbury	General	The City believes the EAW thoroughly investigates the environmental impacts associated with the project and offers no comments or corrections to any of the items within the EAW. Woodbury supports this project, and believes the mitigation measures proposed in the EAW will not only adequately address the impacts associated with the CDSF overflow project, but should also help improve the existing conditions in the ravine area and future conditions in the ravine as the surrounding area develops...	Noted.
8	MPCA	General	MPCA staff has reviewed the EAW and have no comments at this time...	Noted.
9	Metropolitan Council	General	The Council staff review finds that the EAW is complete with respect to regional concerns, and raises no major issues of consistency with Council policies. The Council finds that an EIS is not necessary for regional purposes.	Noted.
10	Metropolitan Council	General	While the Council respects the validity of the predicted 100-year flood precipitation event data provided as a basis for the South Washington Watershed District's multi-phase CDSF project (Project), we remain concerned with the extent of planned habitat impacts within the Cottage Grove Ravine Regional Park (Regional Park). The planned stabilization of the flow channel to withstand erosive forces of stormwater flow and prolonged periods of inundation will result in significant negative impacts to the Park's natural character.	Noted. However, it is important to emphasize that there is a substantial existing erosion risk in the ravine. That, that risk will be exacerbated by local development, and only nominally increased by connecting the SWWD's Central Draw overflow. The stabilization project as described in the EAW will mitigate that existing risk and prevent largescale destruction in the park under the present condition. The existing risk of erosion combined with County vegetation management/restoration plans for the Park justify a proactive approach in stabilizing the ravine.

11	Metropolitan Council	Project Description	<p>The EAW presents clear distinctions between the different future phases of the Project, but has not incorporated projected timing of construction of the phases, as was included in the earlier Phase I EAW. The response to comments document should clarify which of the phases will incorporate the construction of the additional box culvert under US Highway 61--Phase II or Phase III.</p> <p>2018/2019. However we will consider accelerating design for phases III and IV to allow increased time for collaboration with partner agencies. At this time, we do not plan to construct an additional culvert under TH61 as there is not a change in peak flow rates or flooding extents at the highway as a result of the proposed project. However, such a project will be discussed with MnDOT. Said project would be for the purpose of alleviating existing flood/conveyance concerns, not mitigating impacts associated with the proposed project.</p> <p>The commentor correctly describes the nature of the anticipated cover changes. The commentor also correctly states that the preferred stabilization methods incorporated into Phase IV will be those that result in the least acreage of wooded vegetation impacts. As the project description indicates the stabilization methods throughout the project will be selected, designed and implemented based on the predicted erosion potential and the methods described in Table 9: Stabilization Measure Shear Stress Threshold and Cost. The EAW also provides renderings of the various proposed techniques. The least intrusive methods necessary to stabilize identified sections will be prescribed, including existing vegetation where applicable. The project will be consistent and compatible with all applicable plans as noted in the EAW</p>
12	Metropolitan Council	Cover Types	<p>The EAW indicates that there will be no change in cover types following construction of the remaining phases of the project along its designated 400-foot wide corridor. We would expect that there would be some degree of loss or conversion to other cover as a component of the project, but acreage impacts of those changes will not be known until the ravine stabilization methods to be used are known. Council staff assumes that the preferred ravine stabilization methods to be incorporated into Phase IV...will be those that result in the least acreage of wooded vegetation impacts.</p>
13	Metropolitan Council	Cover Types	<p>Based on the need for a firm access footing on which to bring construction equipment and stabilization materials down to near the north edge of Ravine Lake from the northern reaches of the Park and protection of the 3M pipeline, we recommend stabilizing the western drainage channel with a combination of a constructed lined channel (most probably with riprap), and check dams. Utilization of these two stabilization measures would most likely result in the loss of the least number of healthy trees within the Regional Park, but still allow for the selective removal of dead, diseased, and understory invasive trees and vegetation as per Washington County Park staff's specific guidance.</p>
14	Metropolitan Council	Cover Types	<p>Council staff requests to be involved in the design selection process when Washington County Parks staff, Watershed staff, and their consultants determine the final design of the stabilization channel so that we may more fully understand its impacts and scope. We encourage the Watershed to begin this process at its earliest convenience to allow sufficient time to incorporate the results into the Regional Park Master Plan (Master Plan) amendment that will need to be prepared and submitted to the Council. The Master Plan must be approved by the Metropolitan Council in advance of any planned Phase IV construction.</p>
15	Metropolitan Council	Permits	<p>As noted in the text on page 11 of the EAW, the Cottage Grove Ravine Regional Park Master Plan will need to be amended to describe the alterations necessary to the Regional Park to stabilize drainage channels, document easements, and relocate trails... The amendment will be necessary before construction of Phase IV, but there could be components within Phase III which might also require revision of the Park Master Plan. Please revise the EAW language as needed to reflect the appropriate timing.</p>
16	Metropolitan Council	Permits	<p>The Regional Park Master Plan amendment will need at a minimum to detail the following: Planned extent of vegetation impacts, updated entrance road and lake outlet weir and flow infrastructure, revegetation plans, details regarding proposed construction equipment access points and construction staging area plans.</p>
17	Metropolitan Council	Permits	<p>In addition to the Master Plan, an easement defining the area of work for the watershed districts project within the park needs to be approved and recorded...</p>
18	Metropolitan Council	Permits	<p>The Minnesota Department of Natural Resources (DNR) will need to review and approve the portion of Phase II that lies within the Mississippi River Corridor Critical Area for consistency with Executive Order 79-19 and Minnesota Statutes 116G.15.</p>
			<p>The proposed schedule has not yet changed. Phase II design 2014, implement 2015; phase III design 2015, implement 2016/2017; phase IV design 2016, implement 2017/2018; phase V design 2017, implement 2018/2019. However we will consider accelerating design for phases III and IV to allow increased time for collaboration with partner agencies. At this time, we do not plan to construct an additional culvert under TH61 as there is not a change in peak flow rates or flooding extents at the highway as a result of the proposed project. However, such a project will be discussed with MnDOT. Said project would be for the purpose of alleviating existing flood/conveyance concerns, not mitigating impacts associated with the proposed project.</p> <p>The commentor correctly describes the nature of the anticipated cover changes. The commentor also correctly states that the preferred stabilization methods incorporated into Phase IV will be those that result in the least acreage of wooded vegetation impacts. As the project description indicates the stabilization methods throughout the project will be selected, designed and implemented based on the predicted erosion potential and the methods described in Table 9: Stabilization Measure Shear Stress Threshold and Cost. The EAW also provides renderings of the various proposed techniques. The least intrusive methods necessary to stabilize identified sections will be prescribed, including existing vegetation where applicable. The project will be consistent and compatible with all applicable plans as noted in the EAW</p> <p>The suggestion is noted and will be considered by the final design. The EAW describes the methods that have been anticipated for stabilization in question 11.b.iv, which include vegetation management, constructed lined channel, lined existing channel, check dams, stabilizing outside bends with rock vanes, woody debris, rootwads, and vegetated riprap. The EAW also describes the commitment that SWWD will work with Washington County Parks and Metropolitan Council when developing the final design for the specific practices and permanent features contemplated by the project, in section 9b.</p> <p>Noted. We look forward to further developing this important project with interested partners. This project provides an opportunity to not only address an already existing risk of erosion, but also for the County to leverage SWWD efforts to accelerate plans for managing and restoring natural forest communities in the Park.</p> <p>Noted. SWWD will work with the County to complete a Master Plan amendment prior to initiating construction within the Park.</p> <p>Noted. SWWD will work with the County to develop and record said easement as part of the Master Plan amendment process.</p> <p>Noted.</p>

19	Metropolitan Council	Land Use	The EAW states on pages 11 and 12 that the project is compatible with and complies with the Mississippi River Corridor Critical Area (MRCCA) guidance. It is not clear from the EAW what the extent of vegetation removal will be from within the drainage channel within the MRCCA to stabilize it adequately to accommodate design flow events. The DNR's MRCCA reviews typically call for the preservation of as much of the native plant community and tree canopy as possible to preserve the natural character and topography of the MRCCA. Council staff requests that the response to comments document provide additional information regarding the extent of vegetation planned for removal and discussion regarding the vegetation restoration plan.	Any vegetation removals within the MRCCA will be part of vegetation management activities which will be consistent with and completed as part of existing restoration efforts.
20	Metropolitan Council	Water Resources	The EAW states that specific erosion control and stabilization measures to be implemented within the north and south reaches of the ravine have not been identified at this time. As included in the comments under Item 7 [comment 14], the Council requests to be involved in the design selection process when Washington County Parks staff, Watershed staff, and their consultants determine the design of the stabilization channel to more fully understand its impacts and scope.	Noted. See Response to comment 14.
21	Metropolitan Council	Fish, Wildlife, Plant Comms, Rare Features	Tree clearing on both sides of the upper western drainage channel through the Regional Park, if it is 150 feet wide for a proposed necessary stabilization length of 5200 feet would result in an approximate 18 acre void through the forest system. As we have stated earlier in our review, the Council would prefer to see a method of stabilization chosen that minimizes the loss of health forest along the drainage channel.	Noted. See Response to comment 14.
22	Metropolitan Council	Fish, Wildlife, Plant Comms, Rare Features	The Regional Park is already host to two other utility corridors which leave unsightly and undesirable breaks in the Park's habitat. Should future Project flow inundation events result in the measurable loss of currently healthy trees (in spite of EAW supporting document projections to the contrary), Council staff recommends that the Watershed work with Washington County Parks staff to mitigate for the loss through reforestation in the stabilization corridor with compatible native trees more tolerant of crown inundation over long periods of time.	Modeled project flows will not result in crown inundation. However, we will work with Washington County to develop a management response plan should unexpected tree mortality occur as a result of altered hydrologic conditions. Said plan will be incorporated into the easement for the project.
23	Metropolitan Council	Native Plant Communities	To the extent possible, the Council recommends that the Project have as little impact to native vegetation and woodlands as possible within the identified native plant communities outcroppings and Sites of Biodiversity Significance as identified by the Minnesota County Biological Survey (MCBS). Specifically within the Regional Park, we recommend complete avoidance of structural stabilization impacts to the areas classified as rich fen habitat bounding the northern perimeter of Ravine Lake.	Noted, As currently planned, the project would avoid the rich fen habitat.
24	Metropolitan Council	Cumulative Potential Effects	The same low-probability precipitation events that watershed modeling for this Project predicted would result in flood damage and erosion risks within the western drainage channel that also flows into Ravine Lake within the Regional Park identified similar, but even greater magnitude peak flow events in the eastern drainage channel that flows into the Lake. The Council recommends that the Watershed revise the Project scope to incorporate stabilization of the eastern drainage channel into Ravine Lake, either as an additional component of Phase IV or an additional Phase of the overall Project. At a minimum, an erosion analysis would need to be performed for the east channel. The record of decision document should address the incorporation of this potential additional project construction component at the same time as Phase IV, or as an additional phase.	The current project scope includes stabilizing the western channel to protect against existing and future erosive flows. The then stable channel will provide a stable drainage channel for runoff resulting from low probability precipitation events in the District's northern watershed. No such use has been identified for the eastern channel. As such any work to stabilize the eastern channel are outside the scope of the current project. We would consider assisting the County with addressing existing active erosion in the eastern channel upon request from the County.
25	Metropolitan Council	Cumulative Potential Effects	The Council recommends that all proposed Regional Park drainage channel stabilization plans and proposed Park revisions be incorporated into a single Master Plan amendment process.	We will work with Washington County to complete necessary amendment of the Master Plan. The County will lead that process.
26	Metropolitan Council	Appendix B- Lower East Ravine Stabilization	Please clarify the Flow Hydrograph data presented for Figure 2 modeling points B, C, D, and E as shown on Graphs 4, 5, 6, and 7 presented on pages 7, 8, 10, and 11 respectively, in Appendix B. The peak flow values expressed in the text for each modeling point do not quite match the "With Project" curve peaks in their respective graphical presentations.	The commentor correctly notes that the graphs and text do not match. The text and the table in the memo are correct and form the basis for the conclusions of the memo. The graphs were meant for illustration purposes and were inadvertently generated from an adjacent link in the SWMM model, but were not used in formulating conclusions of the memo.
27	MnDNR	Water Resources	This section [11.b.ii] describes post-construction conditions and references a SWPPP and BMPs for Phase V. Given the intermittent and sudden flows through the channel resulting from rainfall, we recommend close observation of BMPs for erosion control during construction, including the construction of access trails and landings for equipment and materials storage.	Noted.
28	MnDNR	Water Resources	Page 21 states "The outlet reconfiguration will be conducted in accordance with the park plan and in consultation with DNR fisheries managers to assure that the design conforms to the management goals for the fishery." DNR Fisheries managers require an appropriate fish barrier that is adequate to keep fish from accessing Ravine Lake from the infested waters of the Mississippi River. Placement is not a concern, although these are typically placed at road crossings.	Noted. Fisheries managers will be consulted during design of the structure to ensure proper design and location.

29	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	"Natural Heritage & Nongame Research Program Rare Natural Features Data" should be changed to "Natural Heritage Information System Rare Features Data".	Noted.
30	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	It should be noted that the western foxsnake is a Species in Greatest Conservation Need as identified in Minnesota's State Wildlife Action Plan.	Noted.
31	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	It should be noted that Northern Bulrush-Spikerush Marsh has a state conservation status of S2 or S3, indicating that this type of native plant community is either imperiled or vulnerable to extirpation in Minnesota. As such, this community may qualify as a Rare Natural Community under the Wetland Conservation Act.	Noted.
32	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	It should be noted that Dry Sand--Gravel Oak Savanna (Southern) has a state conservation status of S1S2, indicating that it is imperiled to critically imperiled in Minnesota.	Noted.
33	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	Regional Significant Ecological Areas (http://www.dnr.state.mn.us/rsea/index.html) were identified by the DNR Central Region not the Minnesota County Biological Survey (now known as the Minnesota Biological Survey).	Noted.
34	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	The Ravine Lake Regionally Significant Ecological Area was rated High (2) not Moderate (1).	Noted.
35	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	Please be sure to use current data layers available from the DNR Data Deli.	Noted.
36	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	This section [13c] does not adequately discuss potential impacts to kitten tails or Blanding's turtles, both of which are state listed as threatened. Minnesota's endangered species law (Minnesota States, section 84.0895) and associated rules (Minnesota Rules, part 6212.1800 to 6212.2300 and 6134) prohibit the taking of threatened or endangered species without a permit.	The EAW describes all known listed species and includes the associated fact sheets in Appendix D. The Blandings turtle fact sheet described BMP's to utilize in avoiding and minimizing impacts, which will be incorporated into the final design. The additional information provided in the comment letter will be incorporated into the final design and specifications for the project as well. See comment 37 for discussion regarding kitten-tails
37	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	Kitten tails was last identified in the Regional Park in 2000. The plants were observed to be abundant along a slope and it was uncertain as to whether the full extent of the population was documented. Is there potential for this plant to be impacted by the project? Potential impacts include, but are not limited to, destruction/disturbance by heavy equipment travelling to work areas, staging areas for construction materials, and/or heavy foot traffic.	Based on our understanding of the location of observed kitten-tails, they are not near the proposed project area and therefore there are no potential impacts from the current project. That location will be verified prior to design of Phase IV to assure avoidance of kitten-tails.
38	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	Blanding's turtles are known to occur in the Regional Park. This section should discuss potential impacts to this rare turtle. Potential impacts to Blanding's turtles include but are not limited to, direct mortality during construction activities or habitat disturbance/destruction due to dewatering, excavation, fill, sedimentation, or changes in hydrology.	Work will be designed and conducted in a manner that incorporates the avoidance methods identified in the DNR Blandings turtle flyer, fact sheet, and the BMP's identified in the Wildlife Friendly Erosion Control Fact sheet, which will minimize or avoid disturbances. Since construction activities are phased and largely dispersed in the areas likely to encounter Blandings turtles, widespread disturbances will not occur. The project is intended to preserve and maintain much of the existing habitat without construction disturbance.
39	MNDNR	Fish, Wildlife, Plant Comms, Rare Features	There is no discussion of the spread of invasive plants during construction activities. Given the presence of invasive woody species within the wooded areas of the Park, it will be important to clean equipment and vehicle tires before leaving the area in order to avoid spreading invasives outside of the area. Please see attached factsheet on equipment cleaning.	There is no discussion of the spread of invasive plants during construction activities. Given the presence of invasive woody species within the wooded areas of the Park, it will be important to clean equipment and vehicle tires before leaving the area in order to avoid spreading invasives outside of the area. Please see attached factsheet on equipment cleaning.

40	MnDNR	Fish, Wildlife, Plant Comms, Rare Features	Given the level of detail provided, it is unclear what kind of disturbance will occur within the MBS Native Plant Communities, especially the Dry Sand-Gravel Oak Savanna that occurs in Phase II. Where work areas occur within the footprint of a native plant community, impacts should be described.	The detail provided in the Lower East Ravine Stabilization memo describes the types of channel stabilization that is required in the Phase II portion of the project. The work in the reach abutting the Dry Sand - Gravel Oak Savanna is largely anticipated to be consistent with a streambank stabilization and stream restoration project. Figure 8 in the same memo shows the variety of techniques that may be utilized in this lower portion of the reach. Potential stabilization techniques include stabilizing outside bends with rock vanes, woody debris, rootwads, and vegetated riprap. A riffle-pool design will be utilized; the riffles will be constructed from rock using multiple techniques. These techniques are similar to one another with just slight variations of height, length, width and density of rock placement. The stabilization measures ultimately selected will take into account effectiveness at stabilizing the reach. Additional work from Friends of the Mississippi in developing a vegetation restoration plan will be incorporated into the designs. The impacts of the project will be temporary construction and work within the floodplain.
41	MnDNR	Fish, Wildlife, Plant Comms, Rare Features	The document does not provide enough detail to determine whether or not a takings permit is needed for ketten-tails. What measures will be taken to ensure that the kitten-tails population is avoided? Given that the extent of the population is unknown (and it has been 14 years since last observed), a qualified surveyor (see attached list) should either a) determine that potential habitat for this species will be avoided or b) conduct a botanical survey. The purpose of the survey would be to delineate the current extent of the population (for the purpose of avoidance) and, if needed, to inform the takings permit process. Please contact Lisa Joyal, Endangered Species Review Coordinator before any survey work is initiated, as the DNR would like the opportunity to provide feedback on surveyor qualifications and survey protocol in order to prevent any potential project delays. Project planning should take into account that the botanical survey needs to be conducted during the appropriate time of the year, which may be limited (the best time to search for kitten tails is when it is in flower from late April to late May). Please visit the DNR Rare Species Guide at http://www.dnr.state.mn.us/rsg/index.html for more information on the biology, phenology, habitat use, and conservation measures of this rare plant.	Noted. See response to comment 37. We will coordinate survey with MnDNR.
42	MnDNR	Fish, Wildlife, Plant Comms, Rare Features	What measures will be taken to ensure that disturbance to Blanding's turtles are avoided or minimized? Please refer to a) the attached Blanding's flyer; b) the Turtle Fact Sheet that is presented on page 161 of the EAW; and c) the attached Wildlife Friendly Erosion Control Fact Sheet for recommendations on avoiding and minimizing disturbance to this rare turtle. The EAW should identify which recommendations will be implemented.	Noted. See response to comment 38.
43	MnDNR	Fish, Wildlife, Plant Comms, Rare Features	What measures will be taken to minimize disturbance to the MBS Sites of Biodiversity Significance/MBS Native Plant Communities, especially the rare native plant communities?	As the EAW noted all project activities are designed to protect areas that are susceptible to erosion and at risk under the current condition and build out. The projects targeted approach minimizes disturbance to only areas that require work. Additionally, all work is being conducted in accordance with the SWWD Watershed Management Plan, Greenway Corridor plan, and the Cottage Grove Ravine Regional Park Master Plan which identify natural resource stewardship activities. The regional park staff will be directly involved in developing the final designs to minimize disturbances, avoid special and rare features, and identify management activities that are compatible.
44	Washington County	Land Use	As you are aware, the County owns and operates Cottage Grove Ravine Regional Park, a 579 acre natural resource based park in southern Washington County. The park serves a large portion of southern Washington County residents and sees over 80,000 visitors a year. The County understands and appreciates that the Central Draw Project will not impact or have any adverse impacts to recreation use in the park. Washington County encourages the SWWD to work closely with the County's Park Division staff to minimize impacts to park use that would result from this project.	Noted. All project phases within the Park will be developed in partnership with the County. Further, we believe this project provides an opportunity to address longstanding issues at the park (i.e. flooding of the entrance road, extensive invasive plant community).

<p>Noted and the comments are considered in the final decision. The EAW also describes the commitment that SWWD will work with Washington County Parks and Metropolitan Council when developing the final design for the specific practices and permanent features contemplated by the project, in section 9b. of the EAW. Mitigation measures for unexpected tree impacts can be incorporated into an easement for the project.</p>	<p>Noted. See response to comment 44.</p>
<p>Washington County appreciates the research the SWWD has performed as it relates to the impact of inundation on the trees growing in the park. However, staff has concerns about the EAW's analysis on potential tree loss in the park resulting from extended inundation. Specifically, staff has reviewed the publications cited in the EAW (Sinclair, Lyon, and Johnson 1987) and conducted further independent study to understand this issue in more detail (Whitlow and Harris 1979). The Whitlow and Harris and Sinclair, Lyon and Johnson publications both conclude inundation of 5 days or more will result in significant mortality for these species found in the park: Red Oak (<i>Quercus rubra</i>) and White Oak (<i>Quercus alba</i>). Washington County encourages the SWWD to consider this impact to the park and plan for proactive management to minimize damage.</p>	<p>Washington County understands that the SWWD will need to manage this area of the park (the Central Draw) for its intended use in perpetuity. We understand an easement agreement will be developed for this work. In addition, since Washington County also has natural resource management activities on-going in the park it will be essential for the SWWD to coordinate the management of the water conveyance system with County staff. Washington County looks forward to working with the SWWD on the development of a cooperative management plan and update of the Park's Master Plan to incorporate the Central Draw project.</p>
<p>Fish, Wildlife, Plant Comms, Rare Features</p>	<p>Washington County</p>
<p>45</p>	<p>Washington County</p>
<p>Land Use</p>	<p>Washington County</p>
<p>46</p>	<p>Washington County</p>