

ENVIRONMENTAL ASSESSMENT WORKSHEET

Note to reviewers: The Environmental Assessment Worksheet (EAW) provides information about a project that may have the potential for significant environmental effects. This EAW was prepared by the City of St. Louis Park (City) acting as the Responsible Governmental Unit (RGU), to determine whether an Environmental Impact Statement (EIS) should be prepared. Comments on the EAW must be submitted to the City during the 30-day comment period which begins with notice of the availability of the EAW in the *Minnesota Environmental Quality Board (EQB) Monitor*. Comments on the EAW should address the accuracy and completeness of information, potential impacts that are reasonably expected to occur that warrant further investigation, and the need for an EIS. A copy of the EAW may be obtained from the City by calling (952) 924-2574. An electronic version of the completed EAW is available at the City Web site <http://www.stlouispark.org>.

1. Project Title: <u>Minnehaha Creek Reach 20 Restoration</u>	
2. Proposer: <u>Minnehaha Creek Watershed District (MCWD)</u>	3. RGU: <u>City of St. Louis Park</u>
Contact Person <u>James Wisker</u>	Contact Person <u>Adam Fulton, AICP</u>
and Title <u>Director of Planning</u>	and Title <u>Planner</u>
Address <u>18202 Minnetonka Blvd.</u>	Address <u>5005 Minnetonka Boulevard</u>
<u>Deephaven, MN 55391</u>	<u>St. Louis Park, MN 55416</u>
Phone <u>(952) 641-4509</u>	Phone <u>(952)-924-2574</u>
Fax <u>(952) 471-0682</u>	Fax <u>(952) 924-2663</u>
4. Reason for EAW Preparation:	
EIS Scoping <input type="checkbox"/>	Mandatory EAW <input checked="" type="checkbox"/>
Citizen Petition <input type="checkbox"/>	RGU Discretion <input type="checkbox"/>
Proposer Volunteered <input type="checkbox"/>	
If EAW or EIS is mandatory give EQB rule category subpart number and name:	<u>4410.4300, subp. 26 Streams and Ditches</u>
5. Project Location:	
County <u>Hennepin</u>	City/Twp <u>St. Louis Park</u>
E <u>1/2</u> NE <u>1/4</u> Section <u>20</u>	Township <u>117N</u> Range <u>21W</u>

Figures for the EAW:

Figure 1 – Project Location Map

Figure 2 – USGS 7.5 Minute Topographic Map

Figure 3 – Areas of Environmental Concern

Figure 4 – Preliminary Wetland Delineation/FEMA Floodplains

Figure 5 – Public Waters Inventory

Figure 6 – Project Area Soils

Figure 7 – Concept Design Plans

Appendices for the EAW:

Appendix A – Historical Topographic Maps

Appendix B – Historical Aerial Photographs

6. Description:

- a. Provide a project summary of 50 words or less to be published in the *EQB Monitor*.

The Minnehaha Creek Watershed District (MCWD) is proposing a restoration of 4,563 linear feet of straightened channel of Minnehaha Creek by restoring former channel sinuosity, improving stormwater filtration, updating canoe access, developing recreational trails and maximizing restored stream, wetland and riparian habitats along the creek within St. Louis Park (See Figures 1 & 2).

- b. Give a complete description of the proposed project and related new construction. Attach additional sheets as necessary. Emphasize construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes. Include modifications to existing equipment or industrial processes and significant demolition, removal or remodeling of existing structures. Indicate the timing and duration of construction activities.

This project involves adding natural sinuosity, re-shaping the cross-sectional geometry, and adding large wood to the channel (See Figure 7), thereby restoring some of the normal geomorphic functions of the stream. Currently, the channel is wide and featureless, with aggradation of fine sediment degrading potential fish and wildlife habitat. Restoring sinuosity will add habitat area and encourage natural channel scour and depositional areas at bends, which will increase the complexity of the stream channel and provide more niches for aquatic habitat.

The new channel will be roughly excavated. Soil excavated from the new channel will be stockpiled onsite and used to partially fill in the old channel and construct banks. Channel banks will be constructed on the outside of meanders using fabric encapsulation and soil bioengineering techniques. This is accomplished by confining soil with a combined layer of both woven and non-woven biodegradable coir fiber blankets. Large woody debris will be secured and incorporated into banks to provide unobtrusive fish and macroinvertebrate cover, to help define banks and also allow the natural maintenance of pool habitat. Protection against buoyant and tractive forces will be provided by soil ballast and possibly by anchored buried logs. The inside of meander bends will be stabilized by simple grading and shaping of banks and trenching in of biodegradable erosion control fabrics. Between meander bends, small gravel will be incorporated into riffles to provide suitable substrate for fish spawning. Previously completed sediment transport analysis will ensure proper sizing of riffle material.

Although during winter and dry summer, the channel has historically gone dry due to closing of the Gray's Bay dam outlet structure, it is likely that some dewatering or diversion of the creek flow will be needed. This can be accomplished through coffer dam construction and pumping, or through the

construction of diversion channels or water diverting barriers. Groundwater in the project area, if a significant issue during winter construction, will be pumped out of the constructed channel into temporary infiltration basins established onsite in accordance with guidelines set forth in the Minnesota DNR's water appropriation permit conditions for stream construction dewatering.

Soils in the project area are soft and will require special construction techniques for wetland stream channels. The channel will be constructed by building a temporary haul road over the proposed channel alignment. This temporary road will be composed of wood or plastic mats, or could be lined with geotextile fabric and a layer of gravel or wood chips. Construction equipment will travel up and down the temporary road, thus minimizing impacts to the surrounding wetland surface. Channel construction will begin at either end of the haul road which will be removed as construction proceeds. This basic plan may have some variation in methodology depending on the contractor used.

The project will be constructed in short segments between 500 and 1,000 feet in length. The lower end of the new constructed channel segments will be connected to the existing channel when the new constructed channel segments are established with all erosion control measures in place. Once this temporary connection is made, the Minnehaha Creek flow will be diverted on the upstream end into the new channel. The old channel segments will be partially filled with onsite soils, creating depressional wetlands.

Old channels are susceptible to being recaptured by the stream during flood flows in channel restoration projects such as this one. Thus, partial filling is required to raise the old channel bed. The need for partial filling of the old channel will allow for a balance of cut and fill material during construction and eliminates the need for off-site disposal of excavated soils. This fill area will also provide a base for roughness elements such as large woody debris to help prevent channel avulsion (stream recapture) during flood events and will also provide reptile and amphibian habitat. The channel ends will be secured and stabilized with the same bioengineering techniques used in the channel construction. Flow will be diverted from active construction areas using sediment booms and other pre-approved methods for in-stream construction if there is significant flow during the winter construction period.

An important aspect of the design of Reach 20 is integration of stormwater best management practices (BMPs), the location of which is determined in this case by the existing outfalls at Excelsior Boulevard, Powell Road, and Meadowbrook Lane (See Figure 1). Each of the listed BMPs will control stormwater drainage from significant acreages; 74.1 acres, 236.3 acres, and 5.1 acres, respectively. The National Resource Conservation Service (NRCS) TR-20/TR-55 methodology was adopted when determining hydrologic properties for each of the three BMP subwatersheds and examination of the existing topography, land uses, storm sewer network and soil types was used to identify drainage patterns within each subwatershed. Hydrologic properties of each subwatershed were then incorporated into a water quality and hydrology and hydraulic (H&H) model to both correctly size BMPs and assess their future performance.

Following stream and BMP construction, a trail system will be constructed to allow public access along the stream corridor (See Figure 1). The trail will outlet on the eastern edge of the project at the Louisiana Avenue bridge and connect at the western edge to the future SW LRT line and Cedar Creek Trail. A pedestrian and bicycle bridge across the channel is also planned in the middle of the reach near Meadowbrook apartments. The upland trail will be constructed as a bituminous path, while wetland trails will be constructed as a standard piling mounted boardwalk. The boardwalk will allow handicapped access for both the general public and Methodist Hospital users. Final configuration of wetland and upland trails will depend upon final hydrologic modeling results.

The reach currently has two canoe launch locations, which will be reconstructed in the restoration design. The Creekside Park canoe launch will be rebuilt into a tiered step design that will allow for easy parallel launching over a range of water levels and will give a variety of boaters an easier launching experience. A

spur off of the main trail will provide a portage to the new launch location. The canoe launch on the downstream end of the project reach, near Louisiana Avenue, will also be rebuilt in a similar design.

The project is planned for early to fall 2012 and is expected to be completed within 120 days of construction start.

- c. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

The Minnehaha Creek Watershed District and the City of St. Louis Park will carry out this project to restore geomorphic and ecological function to a segment of Minnehaha Creek, to improve water quality through the application of stormwater Best Management Practices; and to implement a trail system that links Methodist Hospital and Meadowbrook Golf Course to the SW LRT trail.

This project will improve the ecological integrity in and out of the stream channel throughout this reach, providing a vital habitat corridor. Stormwater management elements of this project will assist in meeting the TMDLs for Minnehaha Creek and downstream Lake Hiawatha; benefiting the natural resources and the people that use them. The trail systems will provide valuable pedestrian linkages, consistent with the City of St. Louis Park's Comprehensive Plan, along an environmentally restored greenway that connects major activity generators (SW LRT – Methodist Hospital – Meadowbrook Golf Course). Ultimately, trails will be constructed on the north side of the LRT on MCWD owned properties, further increasing connectivity.

The project will tie into the previously restored Methodist Hospital segment. It is understood that full restoration is not possible given watershed constraints, but this project seeks to reclaim function lost when Minnehaha Creek was channelized and relocated for wetland drainage and urban expansion. The project will include channel restoration of Minnehaha Creek and restoration of specific upland areas into storm water drainage BMP's and provide pedestrian and canoe access to a recreational and educational area.

- d. Are future stages of this development including development on any outlots planned or likely to happen?
 Yes No
If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

- e. Is this project a subsequent stage of an earlier project? Yes No
If yes, briefly describe the past development, timeline and any past environmental review.

This project is an extension of the channel and wetland restoration project completed in 2009 immediately downstream of Louisiana on the Methodist Hospital property. The earlier project involved the re-meandering of 2,000 feet of stream channel, in-stream habitat features, creation of vernal ponds, and restoration of the riparian zone vegetation. The Methodist Hospital project will serve as a template for the Reach 20 project. The Methodist project included an EAW and similar waters permitting as is expected for the Reach 20 project.

7. Project Magnitude Data

Total Project Area (acres) 32.38 or Length (miles) _____

Number of Residential Units: Unattached 0 Attached 0 maximum units per building _____

Commercial/Industrial/Institutional Building Area (gross floor space): total square feet 0

Indicate area of specific uses (in square feet): _____

Office _____	Manufacturing _____
Retail _____	Other Industrial _____
Warehouse _____	Institutional _____
Light Industrial _____	Agricultural _____
Other Commercial (specify) _____	
Building height _____	If over 2 stories, compare to heights of nearby buildings _____

8. Permits and approvals required. List all known local, state and federal permits, approvals and financial assistance for the project. Include modifications of any existing permits, governmental review of plans, and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure.

Government Unit	Type of Application	Status
U.S. Army Corps of Engineers	Section 404 Permit for impacts to navigable waters/jurisdictional wetlands	Application to be submitted (Included in the DNR Public Waters Work Permit)
Hennepin County	Permit to work in county right-of-way	Application to be submitted County Approval for construction - Manhole reconstruction only
City of St. Louis Park	Permit to work in city property	Application to be submitted
	Floodplain No-Rise Application Approval	Application to be submitted
	Erosion Control Permit	Application to be submitted
	Building Review for boardwalk construction	Application to be submitted
	Approval of Planting Plan	Application to be submitted to City Environmental Coordinator
	Conditional Use Permit	Application to be submitted if needed (removal or exporting of fill in excess of 400 cubic yards)
	Public Right-of-Way Permit	Application to be submitted
Minnesota Pollution Control Agency (MPCA)	MPCA dredge disposals confirmation of no permit reqd.	Confirmation will be made prior to construction
	NPDES general permit for discharge of stormwater during construction activities	Application to be submitted
Minnesota Department of Natural Resources (MDNR)	Public Waters Work Permit	Application to be submitted
	Water Appropriation Permit (for dewatering wells >10,000 gal./day)	Application to be submitted
Minnehaha Creek Watershed District	Wetlands Conservation Act determination	Application to be submitted
	Combined Joint Notification Water Resource Application Form (includes permits for: Erosion control, stormwater management,	Application to be submitted

	floodplain alteration, dredging, wetland alteration, waterbody crossing (boardwalks) and shoreline/streambank improvements)	
Minnesota Board of Water and Soil Resources (BWSR)	Landowner Statement and Contractor Responsibility for Work in Wetlands or Public Waters	Application to be submitted

9. Land use. Describe current and recent past land use and development on the site and on adjacent lands. Discuss project compatibility with adjacent and nearby land uses. Indicate whether any potential conflicts involve environmental matters. Identify any potential environmental hazards due to past site uses, such as soil contamination or abandoned storage tanks, or proximity to nearby hazardous liquid or gas pipelines.

Land use within the delineated project area is mostly vacant, with Minnehaha Creek and associated wetlands covering the majority of the project area. The City of St. Louis Park designated parks, Isaac Walton League/Creekside Park and the Meadowbrook Manor Park, make up the remainder of the project area. A large part of the project area is owned by the City of St. Louis Park (eastern portion, creek itself, and northern portion of project area) and the remaining area is owned by MCWD (western portion of the project area that lies south of the creek). Adjacent property includes: Hennepin County right-of-way, the St. Louis Park Forestry Department and commercial buildings to the north, Meadowbrook Manor Apartments to the south, recently restored length of Minnehaha Creek and Methodist Hospital buildings to the east, and commercial buildings to the west. Historical USGS quadrangle maps show the entire project area as wetland. Excelsior Avenue appears on older maps, but Louisiana Avenue, the Meadowbrook Apartments, and the office parks to the north, east, and west appear to be constructed on area formerly identified as swampy areas (See Appendix A).

There are several listed environmental sites from adjacent properties. The only onsite area of environmental concern, currently, is a Voluntary Investigation and Cleanup (VIC) Site. The offsite and adjacent property environmental concerns include: possible leak sites within the Meadowbrook Apartments, hazardous waste sites, a tank site to the east, an unpermitted dump site to the west, and several VIC Sites near the project area (See Figure 3). A Phase II Subsurface Investigation Report was completed for Weis Builders, Inc., for Parcels 7200, 7202, 7250 and 7252 (Wenck 2010). Native material consisting primarily of organic and fine- to coarse-grained silty sand and gravel was encountered during the investigation. Soil vapor results were less than the residential and industrial ISV for the TO-15 method. Although vinyl chloride was detected in one groundwater sample that exceeded the HRL, other detected VOCs did not exceed established HRLs. In 2010, a due diligence review of potential contaminant sources yielded the following results:

Watershed Superfund Sites

- Schloff Chemical Company
- Reilly Tar and Chemical Corporation/St. Louis Park at Louisiana and Walker St.
 - Potential PAH source from tar
- NL Industries/Taracorp Golden Auto
 - Potential lead source, but deleted from National Priorities List as cleanup was completed

EPA Cleanup Sites

- Control Data Printed Circuit Operations Site – Delisted PLP site
- Rt7/Wooddale Ave - on edge of watershed
 - Potential local VOC source
 - Soil vapor study being conducted in large area by EPA

Leaking Underground Storage Tanks

- Hundreds of LUSTs within the Minnehaha Creek watershed upstream of Louisiana Ave.
 - Many USTs have leaked in past few decades
 - Most have been closed, but some still open
 - Many areas still have contaminated soil and/or groundwater

- o Spilled substances include diesel, unleaded gas, used oil, fuel oil, waste oil, and hydraulic fluid

This review suggested sampling and laboratory analysis of PCBs, PAHs, hydrocarbon fuels, VOCs (already done for this area), EPA Priority Pollutant Metals and lead. A sediment sampling plan was submitted to and reviewed by the Minnesota Pollution Control Agency (MPCA), and two rounds of testing were completed in 2011 within the proposed restoration area. No samples exceeded EPA thresholds for special handling of dredged material, and the MPCA has indicated that the MCWD may reuse excavated sediment on site.

If obviously contaminated soils (eg. underground tanks) are discovered during construction, the material will be excavated to the extent necessary to complete construction utilizing MPCA approved methods and the material shall be transported and disposed of per MPCA guidelines. Additional BMPs such as floating booms or sedimentation traps shall be utilized to prevent downstream migration of contaminated materials.

10. Cover Types. Estimate the acreage of the site with each of the following cover types before and after development:

	Before	After		Before	After
Types 1-8 wetlands	30.4	29.42	Lawn/landscaping	--	--
Wooded/forest	--	--	Impervious Surfaces	0	0.98
Brush/grassland	--	--	Other (describe)	--	--
Cropland	--	--			
			TOTAL	30.4	30.4

11. Fish, Wildlife, and Ecologically Sensitive Resources.

- Identify fish and wildlife resources and habitats on or near the site and describe how they would be affected by the project. Describe any measures to be taken to minimize or avoid impacts.

The project area is currently Minnehaha Creek watercourse and wetland. Wetland areas are typical of urban disturbed wetland. Dense uniform stands of invasive exotic cattails (*Typha* sp.) and reed canarygrass (*Phalaris arudinacea*) cover the wetland area. The segment of existing channel itself is lined with grasses, sedges, rushes, wetland forbs, and riparian trees, including black willow, American elm, green ash, silver maple and cottonwood. Another invasive, buckthorn (*Rhamnus cathartica*), is present in the riparian forested areas. Field staking and surveying of the trails system will minimize impact to monument canopy trees on the site. Wildlife species area likely to include those species common to urban and low-density urban development, such as rabbit, mice and other common rodents, geese, ducks, raptors, songbirds, a variety of other common bird species, and small reptiles and amphibians. Whitetail deer have also been observed inhabiting the site. Fish species common to Minnehaha Creek include mostly lake origin species such as green sunfish, bluegill, white sucker, northern pike, largemouth bass, brown and black bullhead and various cyprinids.

Short-term impacts on wildlife caused by the project will include the disruptive effects of construction, including excavation, stockpiling of soils and materials, noise, potential erosion, and sedimentation and vehicle movement. Habitat and individual animals may be temporarily impacted by clearing habitat in the excavation corridor, vehicle movement, or soil stockpiling. Seasonal activities such as nesting, migration or hibernation may be temporarily disrupted depending on the construction season.

Long-term impacts of the project will be positive, as one goal of the project is to *restore the ecological function* of the area. The project itself will not permanently displace wildlife and will provide better habitats through wetland restoration and stream alignment. Large woody debris and constructed banks will provide cover for fish, and improved sediment transport along with constructed riffles will improve spawning for common game fish and other species reproducing in the creek. Planting will attempt to restore native vegetation, creating diverse habitats and microhabitats.

Permits and approvals requiring mitigation measures to protect natural resources/wildlife habitat include: NPDES General Permit for Discharge of Stormwater during Construction Activities, stormwater management and sediment and erosion control; and the joint permit from Minnehaha Creek Watershed District. These, and other permits listed in Item 8 of this EAW, will include specific mitigation measures to be provided for erosion and sediment control and stormwater runoff. Measures will include erosion control best management practices such as erosion control blankets and prompt revegetation of disturbed areas.

- b. Are any state (endangered or threatened) species, rare plant communities or other sensitive ecological resources such as native prairie habitat, colonial waterbird nesting colonies or regionally rare plant communities on or near the site? Yes No
- If yes, describe the resource and how it would be affected by the project. Indicate if a site survey of the resources has been conducted and describe the results. If the DNR Natural Heritage and Nongame Research program has been contacted give the correspondence reference number. _____
- Describe measures to minimize or avoid adverse impacts.

- 12. Physical Impacts on Water Resources.** Will the project involve the physical or hydrologic alteration (dredging, filling, stream diversion, outfall structure, diking, and impoundment) of any surface waters such as a lake, pond, wetland, stream or drainage ditch? Yes No
- If yes, identify water resource affected. Describe alternatives considered and proposed mitigation measures to minimize impacts. Give the DNR Protected Waters Inventory (PWI) number(s) if the water resources affected are on the PWI.

This project physically alters the main channel of Minnehaha Creek (PWI # MhC) and the adjacent riparian wetlands (PWI #662W) (See Figure 4).

Four alternatives were examined:

- 1) The *no action* alternative has essentially been in place since the ditching of this segment of stream in the 1800s. The current ditch is wide and shallow with significant sediment deposition, limited riparian shading, homogenous channel form and no habitat complexity.
- 2) Adding complexity or structure to the existing channel was also considered, but eliminated because this option does nothing to improve sediment transport continuity in the reach, and would not improve the natural aesthetic of the resource.
- 3) Adding partial sinuosity to the existing ditch by differentially narrowing and filling opposite banks was eliminated as the sole option because it would not achieve stable planform in all areas and would require additional risk of construction site erosion. The preferred option will include some elements of this technique.
- 4) The fourth option, channel relocation was the preferred option, along with partial use of option #3 above. Mitigation measures to minimize impacts are built into this design. The offset channel relocation method minimizes extensive in-channel work and eliminates sediment movement downstream during and after construction.

13. Water Use. Will the project involve installation or abandonment of any water wells, connection to or changes in any public water supply or appropriation of any ground or surface water (including dewatering)? Yes No
If yes, as applicable, give location and purpose of any new wells; public supply affected, changes to be made, and water quantities to be used; the source, duration, quantity and purpose of any appropriations; and unique well numbers and DNR appropriation permit numbers, if known. Identify any existing and new wells on the site map. If there are no wells known on site, explain methodology used to determine.

14. Water-related land use management districts. Does any part of the project involve a shoreland zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district? Yes No
If yes, identify the district and discuss project compatibility with district land use restrictions.

In order to determine whether or not the proposed restoration would result in a significant change in the 100-year water surface elevation, hydraulic characteristics of the current and proposed conceptual channel and floodplain configuration were determined with the one-dimensional model HEC-RAS. The existing conditions model was based on a topographic survey completed in June 2011 and the proposed channel and floodplain configurations were designed in AutoCAD Civil3d and exported to the HEC-RAS model. Overall, the ineffective flow areas were much smaller in the proposed model than the existing model because the new channel alignment will reconnect the wetlands, to the south of the current channel, into an active floodplain region. Consequently, water surface profiles during the 100-yr flood event did not rise with restoration despite the lowered bed slope and the reduced bankfull area. Bank construction significantly increases the length of stream channel in this segment, but soil stabilization is achieved through bioengineering and the use of large wood for channel toe stabilization.

15. Water Surface Use. Will the project change the number or type of watercraft on any water body? Yes No
If yes, indicate the current and projected watercraft usage and discuss any potential overcrowding or conflicts with other uses.

16. Erosion and Sedimentation. Give the acreage to be graded or excavated and the cubic yards of soil to be moved: 22 acres; 10,000 cubic yards. Describe any steep slopes or highly erodible soils and identify them on the site map. Describe any erosion and sedimentation control measures to be used during and after project construction.

The total area project area is 32.38 acres with roughly 22 acres affected by stream restoration and trail construction earthwork and mobilization. The volume of material to be excavated from the new channel and sediment detention areas is roughly 10,000 cubic yards. This material will be used to fill the old channel segment and to build habitat features on site. The intention is to balance cut and fill on site. No material will be excavated for the boardwalk route.

No steep slopes are present in the project area.

Erosion control measures for this project include the following:

- General silt fence installation for general construction site erosion control in accordance with MNDOT and MNDNR guidelines
- Off-set channel relocation to eliminate moving water through the newly constructed channel

- Dewatering using guidelines set forth in the MNDOT/MNDNR document *Best Management Practices for Meeting DNR General Public Waters Work Permit GP 2004-0001 (March 2006)*
- Fabric encapsulation and bioengineering of streambanks and floodplain wetland construction areas
- Sediment boom capture of in-stream sediment
- In-situ dewatering of newly constructed channel areas including temporary infiltration basins
- Planting of native species including wetland mixes, wetland plants, eastern cottonwood and black willow
- Temporary wetland haul road construction
- Temporary stabilization of soil stockpiles

17. Water Quality – Surface-water Runoff.

- a. Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff. Describe any storm-water pollution prevention plans.

The project will have a storm-water pollution prevention plan, NPDES permit, and implement a number of erosion control measures discussed in section 16. Overall, the project will improve watershed quality through eventual increased wetlands and proposed storm-water treatment areas.

- b. Identify routes and receiving water bodies for runoff from the site; include major downstream water bodies as well as the immediate receiving waters. Estimate impact runoff on the quality of receiving waters.

Minnehaha Creek is the immediate receiving water body as it is part of the project area. No impairment of water quality is anticipated and a major driver for the project is an overall improvement in water quality for Minnehaha Creek.

18. Water Quality – Wastewater.

- a. Describe sources, composition and quantities of all sanitary, municipal and industrial wastewater produced or treated at the site.

Not applicable.

- b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies, and estimate the discharge impact on the quality of receiving waters. If the project involves on-site sewage systems, discuss the suitability of site conditions for such systems.

Not applicable.

- c. If wastes will be discharged into a publicly owned treatment facility, identify the facility, describe any pretreatment provisions and discuss the facility's ability to handle the volume and composition of wastes, identifying any improvements necessary.

Not applicable

- d. If the project requires disposal of liquid animal manure, describe disposal technique and location and discuss capacity to handle the volume and composition of manure. Identify any improvements necessary. Describe any required setbacks for land disposal systems.

Not applicable.

19. Geologic hazards and soil conditions.

- a. Approximate depth (in feet) to Ground water: 0 minimum; 3 average.
Bedrock: 200 minimum; 220 average.
Describe any of the following geologic site hazards to ground water and also identify them on the site map: sinkholes, shallow limestone formations or karst conditions. Describe measures to avoid or minimize environmental problems due to any of these hazards.

No shallow limestone formations are known in the project area.

- b. Describe the soils on the site, giving SCS classifications, if known. Discuss soil granularity and potential for ground-water contamination from wastes or chemicals spread or spilled onto the soils. Discuss any mitigation measures to prevent such contamination.

The 2004 Hennepin County Soil Survey classifies most of the soil in the project area as Urban land-Udorthents, wet substratum, complex, 0 to 2 percent slopes, U1A (See Figure 6). A soil unit that coincides with the Minnehaha Creek channel is Sucker creek fine sandy loam, 0 to 2 percent slopes, occasionally flooded, L28A. Also present is Urban land-Udipsamments (cut and fill land) complex, 0 to 2 percent slopes, U4A; and Urban land- Udorthents, (cut and fill land) complex, 0 to 6 percent slopes.

The soil granularity, in general is fine. Groundwater contamination from wastes or chemicals spread or spilled is high because the water table is very near the surface throughout the project area.

The NRCS has classified soils within the four BMP subwatersheds as being either hydrologic group B soils or unclassified Udorthents type soils. Since Udorthent soils in urban environments typical represent fill media placed in remnant floodplain environments, it was assumed these soils closely emulate drainage properties of a type B soil.

A geotechnical evaluation was completed for the proposed Methodist Hospital Cancer Research Center and Parking Ramp areas in May 2004 by Braun Intertec. The investigation areas are adjacent to the wetland project area. The report indicates the following:

“The soil profile at the boring locations consisted of a variable layer of fill over glacially deposited clays and sands to the boring termination depths. A majority of the borings also encountered a layer of swamp deposited and/or alluvial deposited soils below the fill. It should be noted that Borings ST-1, ST-3, ST-5, ST-6, ST-8 and ST12 were extended to an approximate depth of 60 feet or greater. The remaining borings were extended to a general depth of 30 feet below grade.”

The above boring information is applicable to the Reach 20 site. Sediment samples for contamination and soil coring conducted by Inter-Fluve in 2011 indicated peat and silty loam soils in the Reach 20 area within 0-5 feet. No excavation is expected below 5 feet.

20. Solid Wastes, Hazardous Wastes, Storage Tanks.

- a. Describe types, amounts and compositions of solid or hazardous wastes, including solid animal manure, sludge and ash, produced during construction and operation. Identify method and location of disposal. For projects generating municipal solid waste, indicate if there is a source separation plan; describe how the project will be modified for recycling. If hazardous waste is generated, indicate if there is a hazardous waste minimization plan and routine hazardous waste reduction assessments.

No hazardous waste will be generated by the project. Potential construction waste will be disposed of at an appropriate landfill. Excess excavated material will be trucked off site to a pre-approved dump site. It is likely that the material will be valued for topsoil and may be used by the selected contractor in exchange for lower excavation rates.

- b. Identify any toxic or hazardous materials to be used or present at the site and identify measures to be used to prevent them from contaminating ground water. If the use of toxic or hazardous materials will lead to a regulated waste, discharge or emission, discuss any alternatives considered to minimize or eliminate the waste, discharge or emission.

During construction, equipment and vehicles using gasoline, diesel fuel, antifreeze, and oil will be used at the project site. Portable storage tanks of fuel may be temporarily located at the site during construction. Fueling of vehicles and equipment will be conducted away from sensitive areas.

- c. Indicate the number, location, size and use of any above or below ground tanks to store petroleum products or other materials, except water. Describe any emergency response containment plans.

Portable fuel storage tanks may be temporarily located at the site. The contractor will be responsible for emergency and containment plans.

21. Traffic. Parking spaces added: 0 Existing spaces (if project involves expansion): 0

Estimated total average daily traffic generated: NA Estimated maximum peak hour traffic generated (if known) and its timing: NA Provide an estimate of the impact on traffic congestion affected roads and describe any traffic improvements necessary. If the project is within the Twin Cities metropolitan area, discuss its impact on the regional transportation system.

Not applicable.

22. Vehicle-related Air Emissions. Estimate the effect of the project's traffic generation on air quality, including carbon monoxide levels. Discuss the effect of traffic improvements or other mitigation measures on air quality impacts. Note: If the project involves 500 or more parking spaces, consult *EAW Guidelines* about whether a detailed air quality analysis is needed.

Not applicable.

23. Stationary Source Air Emissions. Describe the type, sources, quantities and compositions of any emissions from stationary sources of air emissions such as boilers, exhaust stacks or fugitive dust sources. Include any hazardous air pollutants (consult *EAW Guidelines* for a listing), any greenhouse gases (such as carbon dioxide, methane, and nitrous oxides), and ozone-depleting chemicals

(chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride). Also describe any proposed pollution prevention techniques and proposed air pollution control devices. Describe the impacts on air quality.

Not applicable.

- 24. Odors, noise and dust.** Will the project generate odors, noise or dust during construction or during operation? Yes No

If yes, describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts. Also identify locations of nearby sensitive receptors and estimate impacts on them. Discuss potential impacts on human health or quality of life. (Note: fugitive dust generated by operations may be discussed at item 23 instead of here.)

Noise will be generated by equipment and machinery during construction. Because of the wetland soil conditions, it is unlikely that significant dust will be generated in the wetland area. Odors from digging saturated soils and construction equipment exhaust are likely. Equipment will include two small to medium sized excavators, two track mounted skid loaders, trucks, small bulldozers, manual vibratory soil compactors, compressors, and de-watering pumps. Although these machines generate noise, it is unlikely that more than three machines will be running at any given time, and there is a considerable buffer (100 ft+) between the new channel construction area and the majority of adjacent buildings. However, the adjacent Meadowbrook Apartment buildings and several of the office parks to the north may be within less than 100 feet of earth moving equipment during construction of the new channel, filling of the old ditch, construction of trails, and any construction associated with the adjacent BMP's; depending on the exact final design plans. Operation of construction equipment will meet City of St. Louis Park noise ordinance requirements.

- 25. Nearby resources.** Are any of the following resources on or in proximity to the site?

- a. Archaeological, historical, or architectural resources? Yes No
- b. Prime or unique farmlands or land within an agricultural preserve? Yes No
- c. Designated parks, recreation areas, or trails? Yes No
- d. Scenic views and vistas? Yes No
- e. Other unique resources? Yes No

If yes, describe the resource and identify any project-related impacts on the resources. Describe any measures to minimize or avoid adverse impacts.

a) Archaeological, Historical, or Architectural Resources

Currently, there are no anticipated cultural resources within the project area. The entirety of the project area is historically wetland (Appendix A) and past land use changes observed within historical aerial photography (Appendix B) show that the area has been previously disturbed due to urban development in the immediate vicinity. However, after discussions with the U.S. Army Corps of Engineers (USACE), it has been determined that a phase 1 archeological survey may still be required. To determine the exact course of action, the USACE will collaborate with the Minnesota SHPO through the Section 404 Permit to determine if there is a need for future action regarding any potential archeological and historical resources within the project area.

b) Prime or Unique Farmlands, Lands within an Agricultural Preserve

There is no agricultural land in the project corridor or in proximity to the site.

c) Designated Parks, Recreation Areas or Trails

There are currently only two designated parks, owned by the City of St. Louis Park, within the project area: Isaac Walton League/Creekside Park (canoe landing and parking lot) in the northwest corner and the Meadowbrook Manor Park (open space) in the southeast corner. The only other designated park or recreation area near to the project area is the Minneapolis Park and Recreation Board's Meadowbrook Golf Course (south and downstream of the project area). No recreational trails currently exist in the project area. This project will create new access to wetland and creek features via the proposed boardwalk and improved canoe launches.

Minnehaha Creek receives occasional canoe traffic. Although large segments of the channel will be constructed off-line, a central portion of the channel will require in-channel modification which may temporarily disrupt canoeing if construction proceeds through the fall. Signage and portage information will be posted if construction occurs during the spring, summer, or fall canoe season.

d) Scenic Views and Vistas

Terrain in the project area is very flat. No scenic views or vistas are present.

e) Other Unique Resources

No other unique resources are known to occur in the project area.

- 26. Visual impacts.** Will the project create adverse visual impacts during construction or operation? Such as glare from intense lights, lights visible in wilderness areas and large visible plumes from cooling towers or exhaust stacks? Yes No
If yes, explain.

- 27. Compatibility with plans and land use regulations.** Is the project subject to an adopted local comprehensive plan, land use plan or regulation, or other applicable land use, water, or resource management plan of a local, regional, state or federal agency? Yes No
If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.

This project is being sponsored entirely by the Minnehaha Creek Watershed District (MCWD) and St. Louis Park; and is part of the District's long term restoration plan for the creek. The project is in keeping with the MCWD 509 Watershed Management Plan. A long term use and maintenance agreement for the boardwalk and trail system, the Creek itself, and other improvements as proposed must be approved by both the City and the property owner, including agreed uses on both public and private property. This would include the granting of an easement for public access to the proposed boardwalk, and access for maintenance of the Creek. The City land is designated in the Comprehensive Plan as Park and Open Space (POS) and any new land acquired by the City for the project will be rezoned to POS. The St. Louis Park Comprehensive Plan calls for trails in this area. This project is being planned in conjunction with St. Louis Park, Hopkins and transportation agencies to ensure connectivity with existing trails and planned Light Rail Transit stations.

- 28. Impact on infrastructure and public services.** Will new or expanded utilities, roads, other infrastructure or public services be required to serve the project? Yes No
If yes, describe the new or additional infrastructure or services needed. (Note: any infrastructure that is a connected action with respect to the project must be assessed in the EAW; see *EAW Guidelines* for details.)

- 29. Cumulative impacts.** Minn. R. 4410.1700, subp. 7, item B requires that the RGU consider the

“cumulative potential effects of related or anticipated future projects” when determining the need for an environmental impact statement. Identify any past, present or reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause cumulative impacts. Describe the nature of the cumulative impacts and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to cumulative impacts (or discuss each cumulative impact under appropriate item(s) elsewhere on this form).

The project has the potential to further remediation efforts in Minnehaha Creek and the Minnehaha Creek Watershed District. The cumulative effect of these efforts would result in only positive impacts, including the greater health and restoration of the watershed and contributing toward the Minnehaha Creek/Hiawatha Total Maximum Daily Load (TMDL) goals.

30. Other Potential Environmental Impacts. If the project may cause any adverse environmental impacts not addressed by items 1 to 28, identify and discuss them here, along with any proposed mitigation.

None anticipated.

31. Summary of issues. List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.

MCWD must acquire previously mentioned and other potentially necessary permits before proceeding with construction. Detail plans and specifications must be reviewed and approved prior to construction. Issues identified in this EAW that may require additional investigation include:

- Erosion and sediment control plans must be prepared and approved by the MPCA prior to constructions.
- The U.S. Army Corps of Engineers (USACE) Section 404 permit will need to be submitted as soon as possible. Once the permit is received, USACE can begin to collaborate with the Minnesota SHPO and determine if any future action is required to address potential archaeological and historical features in the project area prior to construction.

RGU CERTIFICATION.

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minn. R. 4410.0200, subps. 9b and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Name and Title of Signer: _____

Date: _____

The format of the Environmental Assessment Worksheet was prepared by the staff of the Environmental Quality Board at Minnesota Planning. For additional information, worksheets or for *EAW Guidelines*, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-296-8253, or at their Web site <http://www.eqb.state.mn.us/review.html>.