

Attach each of the following to the EAW:

- County map showing the general location of the project;
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable);
- Site plan showing all significant project and natural features.

The following figures are provided in Appendix A:

- Figure 6-1 County Location Map
- Figure 6-2 USGS Topo Map
- Figure 6-3 Project Location
- Figure 9-1 2005 Existing Land Use
- Figure 10-1 Land Cover Classification (MLCCS)
- Figure 10-2 Land Cover Classification (MLCCS) - Trail Segments 1 & 2
- Figure 10-3 Land Cover Classification (MLCCS) - Trail Segments 3 & 4
- Figure 10-4 Land Cover Classification (MLCCS) - Trail Segments 5, 5D, 5E & 9
- Figure 10-5 Land Cover Classification (MLCCS) - Trail Segments 7, 8 & 11
- Figure 10-6 Land Cover Classification (MLCCS) - Trail Segment 13
- Figure 10-7 Land Cover Classification (MLCCS) - Trail Segment 19
- Figure 10-8 Land Cover Classification (MLCCS) - Trail Segment 20
- Figure 12-1 Hydrological Features
- Figure 12-2 Wetland Ranking
- Figure 14-1 DNR Floodplains
- Figure 16-1 Steep Slopes and Eroded Soils
- Figure 19-1 Soil Types
- Figure 25-1 Parks and Trails
- Figure 27-1 2030 Future Land Use Plan
- Figure 27-2 Zoning Map

6. Description

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

Plan a multi-use, paved 10' wide regional trail through the City of Edina with connections to the Edina High School campus, Edina Promenade, greater regional trail system, employment centers, residential areas, and other regional destinations.

- 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.

Summary

The City of Edina (City) and Three Rivers Park District (Park District) are working together to determine the preferred route for Nine Mile Creek Regional Trail through the City. The regional trail extends beyond the boundaries of Edina into the cities of Hopkins, Minnetonka, and Richfield. Nine Mile Creek Regional Trail will connect to the planned Intercity Regional Trail in Richfield and provide connections into Minneapolis and Bloomington. As proposed the regional trail is about 14 miles long and will generate approximately 500,000 annual trail visits.

When complete, Nine Mile Creek Regional Trail will provide recreation and non-motorized transportation opportunities to an area of the Twin Cities Metropolitan Area underserved by regional trails.

Planning and Approval Phase

Currently, fourteen routes within Edina are under consideration and include routes within City right-of-way and adjacent to existing roads and City-owned park property adjacent Nine Mile Creek, Lake Edina, and Fred Richards Golf Course. If creek based routes become part of the preferred route, these segments will be designed and constructed in conjunction with Nine Mile Creek restoration efforts by Nine Mile Creek Watershed District to minimize potential construction impacts to water and natural resources in the creek corridor. No plans currently exist for the Nine Mile Creek restoration efforts to review for this EAW.

Each of the fourteen routes under consideration presents a unique set of opportunities and challenges. As part of the evaluation process for each segment, the Park District is completing a voluntary EAW. The purpose of the voluntary EAW is to document potential environmental impacts of constructing and operating the regional trail within each of the alternative trail routes. The voluntary EAW is being conducted early in the process to assess potential environmental impacts prior to designing the trail. The voluntary EAW will be used to guide decision makers in determining if any routes should be eliminated from further consideration based on potential environmental impacts, and ultimately, in the selection of a preferred regional trail corridor.

The Park District is also coordinating a Community Assessment Team made up of nominated representatives for each alternative trail route and representatives from the City, Park District, Nine Mile Creek Watershed District, Bike Edina, and Edina School District. The Community Assessment Team will conduct a thorough assessment based upon feedback from the community, available public land, technical feasibility, estimated cost, and access to important local nodes such as parks, schools, and commercial areas. The results of this work will be a social, technical, and economical assessment.

The Edina City Council and Park District Board of Commissioners will review the environmental assessment (EAW) as well as the social, technical, and economical assessment, prior to their determination of the preferred route through the City. Upon approval of the preferred route by the Edina City Council, the preferred route will be forwarded other agencies as appropriate such as the Edina School District if the route is proposed on School District Property and Nine Mile Creek Watershed District if the route parallels Nine Mile Creek. Following approval all necessary parties, the preferred route will be forwarded to Three Rivers Park District Board of Commissioners for final consideration and approval.

Prior to construction of any trail segment, the City of Edina, School District, Hennepin County, and the Minnesota Department of Transportation (MnDOT) must provide the Park District with the necessary easements/permits for locating and/or constructing the trail on public lands and right-of-ways.

Design and Construction Phase

As a regional trail, Nine Mile Creek Regional Trail will be developed in accordance with all prevailing local, state, and federal guidelines, rules and/or standards. More specifically Nine Mile Creek Regional Trail will adhere to the *2007 Minnesota Bikeway Facility Design Manual* (Minnesota Department of Transportation); *Trail Planning, Design, and Development Guidelines* (Minnesota Department of Natural Resources); *Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide* (Federal Highway Administration); *ADA Accessibility Guidelines for Outdoor Developed Areas* (Federal Access Board); and *ADA and ABA Accessibility Guidelines for Buildings and Facilities* (Federal Access Board) unless more current guidelines and standards exist at the time of development.

The regional trail, associated trailheads, and trail amenities such as rest stops, parking, restrooms, and water access will be designed to accommodate individuals with disabilities. Rest stops are located approximately every two miles along regional trails and include a bench, bike parking, and a garbage receptacle. No new trailheads are proposed at this time. The Park District will work with the City of Edina to use existing public amenities such as the parking lots, restrooms, and water fountains at Walnut Ridge and/or Bredesen Park. In addition, the 10' wide paved trail will safely accommodate two-way directional pedestrian/bicycle traffic and incorporate periodic rest stops to provide users an opportunity to rest, overlook the natural environment, and to comfortably interact with other trail users.

The proposed project consists of various routes that will construct approximately 7 miles of bituminous trail within the City of Edina, depending on which alternative is chosen. Generally, the proposed trail section will consist of a 10-foot wide bituminous trail surface with 3-foot wide vegetated safety zones on either side of the trail. Side slopes extending from the safety zones will be designed to be 1:3 (vertical:horizontal) unless there are site constraints that require steeper slopes.

While the general design intent will be to minimize the amount of disturbance needed, this project will require the excavation and embankment of soil in order to construct the proposed trail section. Excavated materials will be retained on site to use for embankment areas if the engineering properties of the soil are adequate and the soils are free of hazardous materials. Any excess excavated material will be removed from the site and disposed of properly.

Construction equipment will consist of small excavators and skid-steers, pavers, dump trucks, and any equipment needed for tree removal. Construction will generally proceed in a linear fashion along the trail and staged in a manner that allows the most efficient completion of the project. Access for construction vehicles will be limited to specific stabilized points of entry that will be monitored to ensure sediment is not being tracked into adjacent city streets.

In the event wetland mitigation or compensatory floodplain storage is required as part of this project, the Park District will complete the wetland and floodplain mitigation requirements in accordance with all permitting authorities and standard industry practices.

In the event additional structures such as bridges, boardwalks, or tunnels are required for this project, specialized equipment and construction practices may be employed. Specialized equipment may include but is not limited to cranes and pile drivers. In some instances work may occur outside the typical construction season when the ground is frozen such may be the case with boardwalk construction. Construction practices will be in accordance with standard industry practices.

Best Management Practices (BMPs) will be used to protect sensitive natural resources near the project area, such as wetlands, trees, or water bodies. These BMPs will be designed and implemented to meet or exceed the requirements of state, local, and watershed district requirements. Erosion control BMPs and

traffic control measures will be in place prior to beginning construction and will remain until the project is completed.

The construction schedule at this point is unknown due to the extensive amount of planning remaining on the project and designated construction funding. Construction is expected to occur over several years and will coincide with City, Watershed District, and other agency construction work as appropriate and feasible. Construction may be staged to reduce potential impact on water and natural resources.

Operation and Maintenance Phase

Nine Mile Creek Regional Trail will be operated by the Park District for public use during the spring, summer, and fall. Spring, summer, and fall trail activities include non-motorized uses such as bicycling, walking, running, in-line skating, and dog walking.

The Park District will be responsible for all operations and maintenance for the regional trail during the non-winter months.

Winter use of Nine Mile Creek Regional Trail is dependent on weather conditions and independent use agreements with local communities to maintain and operate the trail during the winter season (defined as November 15 through March 15). Potential winter use activities include snowshoeing and cross country skiing and the aforementioned activities.

Full-time professional operations and maintenance staff will oversee the operations and maintenance required to meet the expectations of the Park District and the trail users. The Park District may employ seasonal staff to assist in operations and maintenance activities during the peak season generally defined as Memorial Day to Labor Day weekends.

Maintenance

During the growing season, the Park District mows a three-foot-wide shoulder of turf grass adjacent to the trail surface at regular intervals to ensure a manageable and groomed appearance. The level of mowing reflects community expectations for the landscapes through which the trail traverses. Overhead vegetation is maintained to provide a clear-zone to a recommended minimum height of 10 feet over the trail and shoulders. Occasionally, trimming of woody vegetation may extend to a greater width to avoid situations where limbs may overhang shoulder zone. Also, in areas with tall grasses, additional clear-zone may be maintained to inhibit grasses from falling onto the trail or clear-zone.

The Park District staff conducts trail inspections to identify possible safety issues, vandalism, and non-routine maintenance concerns on the same schedule as trash and litter pickup. Leaf debris is blown mechanically or swept from the trail on an as-needed basis. Trail bridge and boardwalk structures are inspected on an annual basis and with visual review as part of ongoing maintenance operations. Supplemental maintenance occurs in response to storm damage, vandalism or other unplanned circumstances.

Detailed regional trail maintenance standards are included in Appendix B.

The Park District has developed and utilizes a comprehensive Pavement Management Program to manage the long-term life cycle costs of its paved trail infrastructure. Over the anticipated 40-year life cycle of Nine Mile Creek Regional Trail, numerous preventative maintenance actions will be performed to preserve the integrity of the paved surface and to prolong serviceability and trail user satisfaction at acceptable levels.

Table 6-1. Pavement Management Program

Preventative Maintenance Activity	Estimated Year (or Frequency)
Initial construction	Year 0
Pavement markings	Every 1-3 years depending on type
Crack seal, rubberized sealant product	Year 2
Seal coat, asphalt emulsion	Year 5
Crack seal, rubberized sealant product	Year 10
Seal coat or micro-surface	Year 12
Crack seal, rubberized sealant product	Year 15 or as conditions warrant
Rehabilitation overlay, improvements	Year 20
Crack seal, rubberized sealant product	Year 22
Seal coat, asphalt emulsion	Year 25
Crack seal, rubberized sealant product	Year 28
Seal coat or micro-surface	Year 30
Crack seal, rubberized sealant product	Year 33 or as conditions warrant
Total rehabilitation and replacement	Year 40

The pavement management system provides the Park District with a tool to assist in making consistent, cost-effective decisions about maintaining and preserving the pavement investment.

- 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.

Regional trails provide safe opportunities for recreation, fitness, and non-motorized transportation. As proposed, Nine Mile Creek Regional Trail will extend 14 miles and experience 500,000 annual trail visits. Although Nine Mile Creek Regional Trail is a regional trail, the majority of its users will come from within the local community. Fifty percent of trail users are expected to come from within 0.75 miles of the regional trail corridor and seventy-five percent are expected to come from within 1.5 miles of the regional trail corridor.

The proposed regional trail will primarily serve the City of Edina within Hennepin County in which no other regional trails exist and provide connections to the existing regional park and trail system as well as connections to schools, employment centers, business districts, and other regional destinations. The Nine Mile Creek Regional Trail will connect the Minnesota River Bluffs Regional Trail in Hopkins and to the planned Intercity Regional Trail, which will connect to the Grand Rounds Trail System at Lake Nokomis in Minneapolis, and the Mall of America and Minnesota Valley National Wildlife Refuge in Bloomington.

Implementation of Nine Mile Creek Regional Trail is consistent with the findings of a Needs Assessment Survey completed by the City of Edina in 2006. The Needs Assessment Survey was mailed to more than 3,000 Edina homes with almost a third returning the survey. The survey found:

- 86% of the respondent households reported a need for walking and bike trails;
- 84% of the respondent households indicated they would use walking and biking trails in Edina for exercise/fitness and enjoying outdoors/nature; and
- Walking and bike trails were the most important parks and recreation facility in Edina.

The preferred regional trail route through Edina has not been determined; however, routes under evaluation include both creek-based routes on city-owned property and road-based routes within the public right-of-way. As a natural resource based park system, Three Rivers Park District park and trail facilities are designed and located to promote opportunity for interaction with the natural environment,

where feasible, while minimizing potential impact on water and natural resources. Creek-based routes present an opportunity to integrate natural public open space areas that are generally inaccessible by the general public and complement the results of the City's 2006 Needs Assessment Survey. Road-based routes are under study to provide an alternative to routing the regional trail through natural public open space areas that are determined to be environmental, technically, socially, or economically unfeasible.

Different trail user groups have different preferences depending on if their primary use of the trail is for commuting or recreation purposes. Approximately 12% of the Park District's regional trail users are commuting trail users. They generally prefer direct routes with safe, efficient access to commercial, employment, transit, and other destinations. Recreation trail users, approximately 88% of the Park District's regional trail users, generally prefer routes that offer opportunities for high-quality experiences and are destinations in themselves. Despite these differences, trail user research indicates that the majority of all trail users prefer trails through the natural environment separated from traffic and with limited road crossings. This research indicates that both commuting and recreation trail users would prefer the creek-based routes which are proposed through the natural environment, generally separated from traffic, and have less road crossings compared to the alternative road-based routes assuming similar safety, directness, and access to destination.¹

d. Are future stages of this development including development on any other property 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.

Hopkins and Minnetonka

Nine Mile Creek Watershed District has completed design work for Nine Mile Creek Regional Trail in conjunction with Nine Mile Creek restoration work between 11th Avenue and Highway 169. Trail construction is anticipated to occur in 2010/2011 pending successful negotiation of trail easements and approval from the Army Corp of Engineers.

An existing sidewalk and trail between the Minnesota River Bluffs Regional Trail and 7th Street, the start of the trail segment coordinated by the Watershed District, will serve as a temporary connection between the two regional trail facilities. The Park District will work with the City to update this connection to meet regional trail standards in the future.

Edina

There is an existing local trail between the Edina Promenade and Adams Hill Park which will serve as a segment of the regional trail. There are also existing trail segments through Walnut Ridge Park and Bredesen Park which may be utilized for the regional trail.

¹ 2008-2009 Three Rivers Park District Regional Trail Visitor Survey

Chon, J.H. (2004) Aesthetic Responses to Urban Greenway Trail Corridors: Implications for Sustainable Development in Tourism and Recreation Settings. Retrieved from <http://repository.tamu.edu/handle/1969.1/2262>

Tilahun, N.Y., Levinson, D.M. & Krizek, K.J. (2007) Trails, lanes or traffic: Valuing bicycle facilities with an adaptive state preference survey. *Transportation Research: A Policy and Practice*, 41(4), 287-301.

Richfield

The design for the east-west portion of Nine Mile Creek Regional Trail along 75th and 76th Streets in the City of Richfield is complete. Construction for this section of regional trail is planned to occur with the Metropolitan Council Environmental Services sewer project and is anticipated to begin in 2010.

7. Project magnitude data

Total project acreage: 20.76 acres (based on a 10-foot wide trail with 3-foot shoulders on either side of the trail, and a length of 10.7 miles).

It is noted that these approximations of area and length represent the total for all trail segments under consideration as part of this EAW. In reality, the actual area and length will be less after final trail alignments are selected, which will result in some of the segments being removed from future steps in the trail planning and implementation process.

The response to several EAW items includes the consideration of a “worst case scenario” permanent impact zone width of 16-feet, which assumes a 10-foot wide impervious paved trail and 3-foot grass shoulders on each side. Depending on the final trail route location, trail width, and trail type (at grade, raised trail set on fill, or elevated boardwalk), the quantified potential impacts in the EAW may be less. Construction impacts may occur outside the 16’ permanent impact zone; however, these are generally temporary in nature and will be restored.

Number of residential units: 0 unattached 0 attached NA maximum units per building
Commercial, industrial or institutional building area (gross floor space): total square feet

Indicate areas of specific uses (in square feet): Not applicable.

Office	Manufacturing
Retail	Other industrial
Warehouse	Institutional
Light industrial	Agricultural
Other commercial (specify)	

Building height NA If over 2 stories, compare to heights of nearby buildings NA

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). *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

Permits and approvals likely to be required are listed in Table 8-1. It is noted that not all of the permits/approvals may be necessary depending on the final trail alignment and trail type (at grade, raised trail set on fill, or elevated boardwalk).

Table 8-1. Permits and Approvals Likely Required

Unit of Government	Type of Application
U.S. Army Corps of Engineers	Section 404 Permit
Minnesota Pollution Control Agency	National Pollutant Discharge Elimination System (NPDES) Construction Permit
	Stormwater Pollution and Prevention Plan (SWPPP)
	CWA Section 401 Water Quality Certification
	Future Review and Permitting pending TMDL plans for Nine Mile Creek, Minnesota River and/or Lake Pepin
Minnesota Department of Natural Resources	Public Waters Work Permit (for work within a DNR Public Water)
Minnesota Department of Transportation	Permit to work in State Highway right-of-way
Hennepin County Highway Department	Permit to work in County right-of-way
Nine Mile Creek Watershed District	Development Review and Approval/Permitting: <ul style="list-style-type: none"> • alteration or filling of land below 100-year flood elevation; • alteration of surface water flows below the 100-year flood elevation; • draining, excavation, or filling of a wetland regulated by the Wetland Conservation Act; • stormwater management plan; • erosion and sediment control permit; • waterbody crossing and structure; • shoreline alterations; and • sediment removal.
City of Edina	Easements for locating trail on public lands and rights-of-way
	Determine preferred trail route through Edina
	Erosion and sediment control plan
Edina School District	Easement for locating trail on school district property
Three Rivers Park District Board of Commissioners	Approve final trail route.

Public Financial Assistance

The Metropolitan Council and State of Minnesota provide funding for regional trail construction through the Regional Parks Capital Improvement Program. Nine Mile Creek Regional Trail may be funded through the Regional Parks Capital Improvement Program, Park District bonds, donations, and other funding sources such as federal and state grants available at the time of construction.

Annual operating costs are funding through the Park District General Fund Budget. The primary source of these funds is through property taxes of suburban Hennepin County residents. Additional revenue is received from the State of Minnesota as part of the Operations and Maintenance Fund allocations from the Metropolitan Council. Some annual rehabilitant costs may also be funded from the Park District’s Preservation, Rehabilitation, and Maintenance Fund which includes revenues allocated to the Park District from the State of Minnesota Lottery in Lieu of funds as well as Park District general obligation bonds.

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.

According to the Metropolitan Council's 2005 existing land use data, the project area and conceptual trail route segments are located within public right-of-way and land classified as: Park, Recreational or Preserve; Golf Course; Institutional; and Office (Figure 9-1). The conceptual trail routes extend along or across transportation corridors (including Highways 100, 62, and 169). Adjacent and nearby land uses include park and recreation, residential, commercial, office, industrial, and institutional uses. The trail itself would be constructed on public lands and/or public right-of-way wherever possible. A few locations would require easements from private parties.

The trail is compatible with adjacent and nearby land uses. The EQB rules define "environment" to include: land, air, water, minerals, flora, fauna, ambient noise, energy resources, and man-made objects or natural features of historic, geologic or aesthetic significance (part 4410.0200, subpart 23). "Environment" does not include other land use related concerns such as safety, privacy, or property values. No present land use conflicts that involve environmental matters have been identified other than past land uses that represent potential contamination issues, which are discussed below.

Potential Environmental Hazards

A search of the Minnesota Pollution Control Agency (MPCA) website accessing "What's in My Neighborhood" data indicated the following sites are identified within or near the project boundary:

- 1 former CERCLIS/Superfund site near Trail Segment 3
- 1 abandoned unpermitted dump located west of Tracy Avenue between Trail Segments 5D and 5E
- 5 leaking underground storage tank sites (some with more than one release event)
- 2 air permitted sites
- 28 hazardous waste generators (small to minimal quantity)
- 21 tank sites

The following is a brief summary of the sites most likely to present environmental concerns. The approximate locations of these sites are shown on Figure 9-1. If a trail segment that passes close to these properties is selected, it is possible that contaminated soil may be encountered. A contingency plan should be incorporated into the project to ensure that proper procedures would be followed and the appropriate authorities notified if contamination is found.

Former CERCLIS/Superfund site, near Trail Segment 3:

Alliant Techsystems (Honeywell), at 5901 Lincoln Drive, is identified as a former CERCLIS – Comprehensive Environmental Response, Compensation, Liability Information System - (Superfund) site. Environmental Protection Agency (EPA) information indicates three actions associated with the site: Discovery 7/17/1991; Preliminary Assessment 1/17/1992; and Archive Site 12/19/1995. EPA information indicates the site was transferred to the Resource Conservation and Recovery Act (RCRA) program. MPCA information categorizes the site as an inactive RCRA Cleanup site and indicates the following actions are associated with the site.

Action	End Date
TSD/ISF: Date CMI Completed (CA 550)	09/25/1997
TSD/ISF: Date Groundwater Releases Controlled Determination (CA 750)	09/30/1997
TSD/ISF: Date Human Exposures Controlled (CA 725)	09/30/1997
TSD/ISF: Date Remedy Selected (after public notice and modifications) (CA 400)	09/25/1997
TSD/ISF: RFI will be Required (CA 070) "NO" Determination	09/25/1997

Abandoned Dump - 8, west of Tracy Avenue between Trail Segments 5D and 5E:

Unpermitted Dump Site - REM03444 – MPCA information categorizes the site under Investigation and Cleanup. Details regarding activities at the site were not accessible on the MPCA website. Hennepin County staff visited the site in 2004 and reported that no evidence of a former dumpsite could be seen, however, the thick vegetation hindered their observation. In general, unpermitted dumps are usually old farm or municipal disposal sites that accepted household waste. Many of these predate the existence of the Minnesota Pollution Control Agency.

In addition, there are five leaking underground storage tank (LUST) sites identified in the area. All have been issued closure by the MPCA. The MPCA issues closure to sites it believes no longer present a threat to human health or the environment.

Fountainwoods Condominium, near Segment 3:

LUST #14195 & #14196 - release of fuel oil 1 & 2 reported 5/2/2001; closure issued 2/18/2005. Contaminated soils remain and groundwater was contaminated. It is unknown if there is off-site contamination associated with the release.

One Corporate Plaza, near Segment 13:

LUST #631 - release of fuel oil 1 & 2 reported 3/10/1988; closure issued 10/30/1992.

Contaminated soils remain; off-site contamination unknown.

LUST #7491- release of fuel oil 1 & 2 reported 6/9/1994; closure issued 4/6/1995. Off-site contamination unknown.

Pentagon Office Park, near Segment 19:

LUST #627 - release of fuel oil 1 & 2 reported 3/22/1988; closure issued 10/15/1990.

Contaminated soils remain; off-site contamination unknown; no groundwater contamination.

LUST #4105 - release of fuel oil 1 & 2 reported 6/7/1991; closure issued 10/30/1992.

Contaminated soils remain; no off-site contamination; no groundwater contamination.

Ted Steen Residence, near Segment 8:

LUST #7402 - release of fuel oil 1 & 2 reported 5/23/1994; closure issued 8/25/1994.

Contaminated soils remain; off-site contamination unknown; no groundwater contamination.

York Plaza Apartments, near Segment 20:

LUST #15797 - release of fuel oil 1 & 2 reported 8/5/2004; closure issued 10/7/2008.

Groundwater was contaminated. It is unknown if contaminated soils remain or if there is off-site contamination.

10. Cover types. Estimate the acreage of the site with each of the following cover types before and after development: See Tables 10-1 thru 10-4

	Before	After		Before	After
Types 1-8 wetlands			Lawn/landscaping		
Wooded/forest			Impervious surfaces		
Brush/Grassland			Stormwater Pond		
Cropland			Other (describe)		
TOTAL					

If **Before** and **After** totals are not equal, explain why:

The land cover evaluation for this effort is based on Minnesota Land Cover Classification System (MLCCS) mapping data completed by Critical Connections Ecological Services in 2007 for the project area (Figures 10-1 thru 10-8). MLCCS data for the site was developed through a combination of remote sensing using aerial photographs as well as adequate field review throughout the project area. Bonestroo also conducted a site visit to assess site conditions and site quality along with potential for wildlife and fisheries species within the proposed alignment on September 23rd, 2009 and again conducted a walk-through of the proposed alignment with Three Rivers Park staff on October 9th, 2009. A brief description of the different land cover types based on the Minnesota Land Cover Classification System version 5.4 follows. More information about MLCCS and the complete MLCCS manual is available online, at <http://www.dnr.state.mn.us/mlccs/index.html>.

Wetlands – Many of the wetlands in this project area are included in the herbaceous vegetation and are differentiated from upland herbaceous areas by having a “wet” attribute in their final 5 digit land cover code.

MLCCS Defines Herbaceous as: *Herbs(graminoids, forbs, and ferns) dominant (generally forming at least 25% cover: trees, shrubs, and dwarf-shrubs generally with less than 25% cover). Herb cover may be less than 25% where it exceeds tree, shrub, dwarf-shrub, and non-vascular cover respectively.*

Wetlands area also classified as open water which is defined as Water in the MLCCS Manual.

Water: This Formation Class cover type is to be used for open water. Open water may include large mats of floating algae or non-rooted vascular vegetation. Emergent vegetation generally contributes less than 5% total cover. Where emergent vegetation found in rivers, intermittent streams, lakes and wetlands is greater than 4%, they are to be classified under other Formation Class cover types. Definitions contained herein are based on those for Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et. Al.).

Woods/forest

MLCCS Defines Forests as: *Trees with their crowns overlapping (generally forming 60 – 100% cover). Forests are defined primarily by the dominant species present, not by the current height of the cover.*

MLCCS Defines Woodlands as: *Open stands of trees with crowns nor usually touching (generally forming 25-60% cover). Canopy tree cover may be less than 25% in cases where it exceeds shrub, dwarf-shrub, herb, and nonvascular cover, respectively.*

Brush/Grassland - Grassland is considered herbaceous vegetation and the definition can be found above under Wetlands. Grassland cover type differs from herbaceous wetland cover type by lacking the “wet” characteristic. MLCCS defines Shrubland as: *Shrubs and dwarf-shrubs with individuals or clumps*

overlapping to not touching (generally forming more than 25% cover, trees generally less than 25% cover). Shrub cover may be less than 25% where it exceeds tree, herb, and nonvascular cover, respectively. Vegetation dominated by woody vines is generally treated in this class.

Cropland – the proposed project area does not include any cropland within the project boundary.

Lawn/landscaping – This cover type is categorized as Planted or Maintained Grasses and MLCCS defines as: *Grass species are dominant, generally greater than 75% of the total vegetation cover. Grass species often are typical of lawns, parks, and roadsides. Trees and shrubs each contribute <10% cover. Forbs may be present, though contribute less than 25% of the vegetative cover.*

Impervious surfaces – This cover type is defined as Artificial surfaces and associated areas by the MLCCS manual and is defined as: *MLCCS defines Artificial Surfaces and Associated Areas as: This class is determined by the presence of manmade impervious surface. In these areas vegetation has been altered, with a vegetative cover of <96%. Vegetation may be planted or cultivated, or consist of pre-development vegetation that has been altered or fragmented by humans. These areas contain artificial cover as a result of human activities, such as construction (e.g. buildings, pavement), extraction sites (e.g. open mines, quarries, pits) and waste disposal sites. This subsystem loosely correlates to typical land uses such as those defined as residential, industrial, transportation, etc.*

Stormwater Pond – The proposed project area does not include any designated stormwater ponding areas.

The project boundary includes a mix of cover types most of which parallel the Nine-Mile Creek corridor. These cover types include wetlands, woods and forests, upland grass areas, landscaped lawn areas, and impervious areas such as roadways and the associated areas. The conceptual trail route is divided into segments and “before and after” development land cover types shown in Table 10-1 were prepared for each segment consistent with the following assumptions:

- The estimated “before” acreage is based on MLCCS land cover within the project boundary, see Figure 10-1.
- The “after” acreage is based on the “worst case scenario” permanent impact zone width of 16-feet, which assumes a 10-foot wide impervious paved trail and 3-foot grass shoulders on each side. Temporary construction impacts may occur outside the 16’ permanent impact zone; however, these are generally temporary in nature and not quantified in EAW. Depending on the final trail route location, trail width, and trail type (at grade, raised trail set on fill, or elevated boardwalk), the quantified potential impacts in Tables 10-1 thru 10-4 may be less.
- Landscape scale MLCCS data does not account for each individual tree that may be removed to construct the trail.
- Woods and forests that contain wetland are mapped as woods and forests on Figures 10-1 thru 10-8 and are quantified as woods and forests in the “before and after” information presented on the following pages. Additional information regarding wetlands is provided in the response to EAW Question 12, physical impacts on water resources.
- MLCCS data does not always account for the existing impervious surfaces associated with the existing trails and sidewalks that may be reconstructed to regional trail standards; therefore, the amount of “before” existing impervious surface may be understated in the tables (e.g., the existing trails in Bredesen Park are mapped as Woods/Forest). Analysis regarding the impacts of impervious surface is further discussed in response to EAW Question 17.

- According to the MLCCS manual, impervious surfaces are included in the MLCCS category “artificial or impervious surfaces and associated areas”. The amount of impervious surface within this category ranges from 4-100% of the total land area (acres). Along with impervious surfaces this category also includes “associated areas” that may consist of individual trees, shrubs, herbaceous vegetation or lawns. MLCCS data does not accurately account for the specific delineation between the location of existing impervious surfaces (i.e., sidewalks, trails, driveways, etc.) and associated areas (i.e., individual trees, shrubs, herbaceous vegetation or lawns adjacent to impervious surfaces). As a result, the amount of existing impervious surface in the “before” or “after” may be overstated or understated. For example, “before” MLCCS land cover within the proposed 3-foot trail shoulder area may be classified as impervious surface in Table 10-1 when it is currently lawn (i.e., “associated areas”). This would result in an “after” acreage of impervious surface that is less than the “before” impervious surface. Segments 3, 7, and 19 show a decrease in impervious surface “after” for this reason. Analysis regarding the impacts of impervious surface is further discussed in response to EAW Question 17.

Table 10-1. Potential Land Cover Conversion (Acres) within 16’ Impact Zone by Segment

Segment 1					
	Before	After		Before	After
Types 1-8 wetlands	5.81	5.61	Lawn/landscaping	0.0	0.42
Wooded/forest	6.58	6.27	Impervious surfaces	2.63	2.72
Brush/Grassland	0.0	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	15.02	15.02
Segment 2					
	Before	After		Before	After
Types 1-8 wetlands	31.68	31.0	Lawn/landscaping	9.04	9.31
Wooded/forest	9.85	9.21	Impervious surfaces	3.18	4.23
Brush/Grassland	0.0	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	53.75	53.75
Segment 3					
	Before	After		Before	After
Types 1-8 wetlands	0.04	0.04	Lawn/landscaping	2.09	2.91
Wooded/forest	1.16	1.16	Impervious surfaces	8.73	7.91
Brush/Grassland	0.0	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	12.02	12.02
Segment 4					
	Before	After		Before	After
Types 1-8 wetlands	10.40	10.34	Lawn/landscaping	0.53	0.94
Wooded/forest	26.09	25.58	Impervious surfaces	3.78	3.94
Brush/Grassland	0.0	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	40.80	40.80
Segment 5					
	Before	After		Before	After
Types 1-8 wetlands	15.52	15.44	Lawn/landscaping	26.19	25.99
Wooded/forest	20.11	19.76	Impervious surfaces	13.58	14.31
Brush/Grassland	6.01	5.91	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	81.41	81.41

Segment 5D					
	Before	After		Before	After
Types 1-8 wetlands	3.19	2.98	Lawn/landscaping	0.93	1.03
Wooded/forest	7.70	7.41	Impervious surfaces	1.26	1.75
Brush/Grassland	1.51	1.42	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	14.59	14.59
Segment 5E					
	Before	After		Before	After
Types 1-8 wetlands	10.0	9.77	Lawn/landscaping	0.13	0.36
Wooded/forest	4.21	3.85	Impervious surfaces	0.64	1.0
Brush/Grassland	0.0	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	14.98	14.98
Segment 7					
	Before	After		Before	After
Types 1-8 wetlands	0.0	0.0	Lawn/landscaping	0.0	0.15
Wooded/forest	0.10	0.10	Impervious surfaces	3.82	3.67
Brush/Grassland	0.0	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	3.92	3.92
Segment 8					
	Before	After		Before	After
Types 1-8 wetlands	0.0	0.0	Lawn/landscaping	0.58	0.52
Wooded/forest	0.03	0.03	Impervious surfaces	8.81	8.87
Brush/Grassland	0.0	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	9.42	9.42
Segment 9					
	Before	After		Before	After
Types 1-8 wetlands	0.59	0.59	Lawn/landscaping	0.35	0.57
Wooded/forest	4.46	4.12	Impervious surfaces	1.13	1.25
Brush/Grassland	0.0	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	6.53	6.53
Segment 11					
	Before	After		Before	After
Types 1-8 wetlands	6.15	5.95	Lawn/landscaping	5.56	4.88
Wooded/forest	18.18	16.89	Impervious surfaces	0.52	2.69
Brush/Grassland	0.0	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	30.41	30.41
Segment 13					
	Before	After		Before	After
Types 1-8 wetlands	3.09	3.06	Lawn/landscaping	1.56	1.78
Wooded/forest	1.43	1.07	Impervious surfaces	3.69	4.07
Brush/Grassland	2.03	1.82	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	11.80	11.80

Segment 19

	Before	After		Before	After
Types 1-8 wetlands	3.30	3.22	Lawn/landscaping	16.18	17.01
Wooded/forest	2.36	2.16	Impervious surfaces	11.12	10.80
Brush/Grassland	1.85	1.62	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)		
			TOTAL ACRES	34.81	34.81

Segment 20

	Before	After		Before	After
Types 1-8 wetlands	0.0	0.0	Lawn/landscaping	5.51	5.16
Wooded/forest	0.12	0.12	Impervious surfaces	3.27	3.62
Brush/Grassland	0.0	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)	0.0	0.0
			TOTAL ACRES	8.90	8.90

A summary of the existing land cover within the project area and the potential land cover conversion within the 16' impact zone is provided in Table 10-2. Cumulatively, the conversion of land cover within the 16' impact zone may result in the conversion of 4.53 acres of wooded/forest, 0.67 acres of brush grassland, and 1.75 acres of wetland to impervious cover and lawn/landscaping.

Table 10-2. Potential Land Cover Conversion (Acres) within Project Area

	Before	After	Change	% Change		Before	After	Change	% Change
Types 1-8 wetlands	87.57	85.82	-1.75	-2.0%	Lawn/landscaping	68.34	72.27	3.93	5.8%
Wooded/forest	100.71	96.18	-4.53	-4.5%	Impervious surfaces	65.28	68.3	3.02	4.6%
Brush/Grassland	10.26	9.59	-0.67	-6.5%	Stormwater Pond	0	0	0	0.0%
Cropland	0	0	0	0.0%	Other (describe)	0	0	0	0.0%
					TOTAL ACRES	332.16	332.16	0	0.0%

A summary of the existing land cover within the City of Edina and the potential land cover conversion within the 16' impact zone is provided in Table 10-3.

Table 10-3. Potential Land Cover Conversion (Acres) within City of Edina

	Before	After	Change	% Change		Before	After	Change	% Change
Types 1-8 wetlands	714.91	713.2	-1.75	-0.2%	Lawn/landscaping	955.81	959.74	3.93	0.4%
Wooded/forest	860.76	856.2	-4.53	-0.5%	Impervious surfaces	7,440.69	7,443.71	3.02	0.0%
Brush/Grassland	252.91	252.2	-0.67	-0.3%	Stormwater Pond	0	0	0	0.0%
Cropland	0	0	0	0.0%	Other (describe)	0	0	0	0.0%
					TOTAL ACRES	10,225.08	10,225.08	0	0.0%

Cumulative Impacts

The Edina segments of the Nine Mile Creek Regional Trail are part of a larger regional trail. Through Hopkins and Minnetonka, Nine Mile Creek Watershed District has completed design work for Nine Mile Creek Regional Trail in conjunction with Nine Mile Creek restoration work between 11th Avenue and Highway 169. Trail construction is anticipated to occur in 2010/2011 pending successful negotiation of trail easements and approval from the Army Corp of Engineers. Within Richfield, the design for the east-west portion of Nine Mile Creek Regional Trail along 75th and 76th Streets in the City of Richfield is complete. Construction for this section of regional trail is planned to occur with the Metropolitan Council Environmental Services sewer project and anticipated to begin in 2010.

The same land cover conversion assumptions applied to the Edina segments were applied to the segments in Hopkins, Minnetonka, and Richfield to assess the cumulative impacts to land cover. The additional segments may result in the conversion of 0.23 acres of wooded/forest, 0.12 acres of brush grassland, and

0.83 acres of wetland to impervious cover and lawn/landscaping. Cumulatively, the entire Nine Mile Creek Regional Trail may result in the conversion of 4.76 acres of woods/forest, 0.79 acres of brush/grassland, and 2.58 acres of wetland to impervious cover (trail) and lawn/landscaping.

Table 10-4. Potential Land Cover Conversion (Acres) outside City of Edina

	Before	After		Before	After
Types 1-8 wetlands	0.83	0.0	Lawn/landscaping	0.97	3.43
Wooded/forest	0.23	0.0	Impervious surfaces	6.97	5.69
Brush/Grassland	0.12	0.0	Stormwater Pond	0.0	0.0
Cropland	0.0	0.0	Other (describe)	0.0	0.0
			TOTAL ACRES	9.12	9.12

11. Fish, wildlife and ecologically sensitive resources

- a. 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 wildlife habitat located within the project boundary is the result of past land use/disturbances that resulted in presettlement vegetation changing to present land cover (see EAW Question 10) and resulted in presettlement hydrology changing to present hydrology (see EAW Questions 12, 14, and 17). The proposed trail corridor would be constructed in a heavily urbanized and populated area of Edina where most wildlife species have already been introduced to human activities (e.g., existing trails and sidewalks, adjacent land uses, etc.).

Wildlife respond to vegetation structure, the variety of plant life, and the presence of key resources such as water; insects and other animal prey; or fruits, seeds, and nuts. In the discussion below, the major land cover types identified within the project area are presented along with the wildlife that might be expected to utilize these areas.

Each segment is listed below indicating potential impacts to land cover types and potential impacts to associated wildlife species for each segment. The potential wetland impact totals presented in EAW Question 12 indicate the potential impacts to wetlands if boardwalks are not used; however boardwalks are anticipated to be used in wetland areas. Although boardwalks may have the potential to have a negative impact on some wildlife species, they do not have a direct impact on the wetland themselves. The proposed impact area is based on the maximum proposed construction width of 16-feet which includes a 10-foot trail and 3-foot shoulders on either side. After construction, the shoulder area would be restored and stabilized back to lawn/landscaping cover type.

Wetlands – The majority of the wetland habitat that is located throughout the project area includes monotypic stands of narrow-leaved cattail and wetland composed primarily of Reed canary grass. These are both non-native species that have been introduced throughout this area and are very aggressive at taking over native vegetation. These plant communities provide valuable habitat for muskrats, amphibians, red-winged blackbirds, sedge wren, swamp sparrow, and rails. Depending on the season, these habitat types can also serve as cover to terrestrial animals such as deer, raccoon, and other small mammals. Open water habitats provide habitat for ducks, geese, shorebirds, herons, egrets, amphibians, and fish species. Ducks and geese are common in open slow moving water portions of Nine Mile Creek and will use wetland to nest and feed and also to rest while migrating through the area. Deer are common throughout these areas and primarily use wetland areas as corridors to move to and from different habitat types. Shorebirds have the potential to be found in areas of open, slow moving water habitats although many of these areas are heavily vegetated up the waters edge. Herons and egrets are common in these

areas, wading the shallows to hunt for food. Amphibians are abundant in these areas, along with providing habitat for possible threatened species that have the potential to inhabit this area. Nine Mile Creek drastically fluctuates, from very high during rainfalls from runoff due to surrounding impervious surfaces to shallow water during dry times. This fluctuation allows only small tolerant fish species to survive within this environment s such as creek chubs, mud minnows, and darters.

Barr Engineering created a Use Attainability Analysis in 2004 for stretches of the Nine Mile Creek. The Use Attainability Analysis identifies differences between potential and actual stream uses and then creates the streams attainable ecological use or the highest achievable use. The stretches of Nine Mile Creek that are within the project boundary are classified as Class C and D.

The classification of ecological use was based on the aquatic life associated with different stretches of Nine Mile Creek and compiled into the following classes based upon flow, habitat, and water quality.

- A. Cold water fishery (trout)
- B. Warm water sport fishery (e.g. bass and sunfishes)
- C. Intolerant forage fishery (e.g. species, such as rosyface shiner, that are intolerant of environmental degradation)
- D. Tolerant forage fishery (e.g. species such as creek chub, which can tolerate a wide range of environmental degradation)
- E. Very tolerant macroinvertebrates or no aquatic life

The stretch of Nine Mile Creek from Highway 62 to Valley View Road has an attainable ecological use of Class C. This indicates that intolerant forage fish, intolerant macroinvertebrates, or a valuable population of tolerant forage fish have the potential to be present. Intolerant species are those that are sensitive to many types of environmental stress and are absent in the presence of environmental degradation. These streams are generally too small to support cold or warm water sport fish, but have natural water quality and habitat sufficient to support forage fish or macroinvertebrates. This stretch of the creek was given Class C due to reduced watershed erosion, reduced bank erosion, increased depth pools, and improved bend ratio. However, biological data has not been collected from this area, so it may have the potential to support tolerant fish species based on the habitat. It is also noted in the analysis that biologic surveys are recommended to determine whether the improved habitat results in an improved biological community.

The remainder of the creek is classified as Class D which states that tolerant or very tolerant forage or rough fish, or tolerant macroinvertebrates have the potential to be present. In other words, the habitat in Class D is of a lesser quality than Class C. Class D streams that are capable of supporting only a small population of tolerant forage fish, very tolerant fish, or tolerant macroinvertebrates. Tolerant species are able to tolerate a wide range of environmental conditions and are often common in highly degraded environments. The aquatic community in such a stream is usually limited due to naturally poor water quality or habitat deficiencies.

Woods/forest – The wooded habitats within the project area provide cover and habitat for species such as raccoon, red fox, gray fox, white-tailed deer, woodcock, vireos, owls, and woodpeckers.

Brush/grassland – These are primarily upland herbaceous habitats with sparse trees present within the project area. During the breeding season, a variety of bird life may be found in these areas – especially areas where the grassland meets other habitat types (e.g. savanna and wetland). Pocket gophers and other rodents use tall upland grasslands which in turn attracts other predatory species such as hawks, owls, and snakes. Insects are also prominent in these areas.

Lawn/landscaping – These are primarily open areas of mowed lawn such as parks or residential yards. These areas provide habitat for some wildlife species including birds utilizing tree canopies for nesting and foraging. Typical species utilizing these areas include house sparrow, and house finch in the vicinity of buildings, and also common grackle, European starling, and American robin foraging on mowed areas. Several mammals (e.g. house mouse, domestic cats, raccoon, and gray squirrel) are also common in these areas.

Impervious surfaces – Roads make up the majority of this cover type throughout the project area serving as little to no wildlife value.

Segment 1 –The Wooded/forest habitat within this segment is composed of altered/non-native deciduous woods. The species consist mainly of Cottonwood and Boxelder with some elm species, and Green ash present. The shrub layer is thick and composed mainly of European buckthorn. Wetlands that are present in the area are composed of saturated and semipermanently flooded altered/non-native dominated vegetation made up mostly monotypical stands of cattails and reed canary grass.

Segment 2 - Wetlands that are present in the area are composed of seasonally flooded, semipermanently flooded, and intermittently exposed altered/non-native dominated vegetation made up mostly monotypical stands of cattails and reed canary grass. The Wooded/forest habitat within this segment is composed of altered/non-native deciduous woods. The species consist mainly of Cottonwood, and Boxelder with some Elm, and Ash present. The shrub layer is thick and composed mainly of Buckthorn. The proposed trail along this segment looks to adjoin the current trail system that extends through Walnut Ridge Park.

Segment 3 – The proposed trail within this segment parallels Lincoln Drive. Most of the impacts would occur along the roadway with little impact to habitat that is suitable to wildlife. There is a chance for an impact to a small isolated area of altered/non-native deciduous woodland composed primarily of Cottonwood, Boxelder, and European buckthorn species.

Segment 4 –The true impact would be considerable less through this area and should be noted that the majority of this area already has trails which the proposed trail is designed to follow. Nine Mile Creek Regional Trail would likely utilize the existing trail system which separates pedestrians and bicyclists and only minor trail improvements would be needed, these will likely minimized potential impacts to wildlife. Cover types that could potentially be affected by the construction of the trail along this segment include: Altered/non-native deciduous woodland and an aspen forest. The woodland is composed primarily of Cottonwood, Boxelder, and European buckthorn while the aspen forest is composed primarily of Quaking aspen and Cottonwood species. Wetlands found within this segment include seasonally flooded altered/non-native dominated emergent vegetation composed primarily of Reed canary grass.

Segment 5 – The trail proposed along this segment includes a portion of an overpass pedestrian bridge crossing Highway 62. This alignment is located directly north of Creek Valley Elementary School and intersects with the adjoining sections near Edina Middle and High School. The majority of this proposed alignment is located within current lawn/landscape cover types located near each school. The woodland areas are composed primarily altered/non-native dominated vegetation with Cottonwood, Boxelder, and European buckthorn as the dominant species. The trail also proposes to disturb a small portion of altered/non-native grassland vegetation with sparse deciduous trees. Wetlands within this segment include semipermanently flooded altered/non-native dominated vegetation and willow swamp cover types.

Segment 5D – This segment is proposed to cross Nine Mile Creek which is composed mainly of willow swamp and open water cover types. The trail alignment then proposes to impact an altered/non-native temporarily flooded deciduous forest composed primarily of Cottonwoods with European buckthorn

present along the edges of the forested area. The alignment would also potentially impact a small area composed of altered/non-native grassland species with sparse deciduous trees.

Segment 5E – The majority of this trail alignment consists of wetlands including a willow swamp, saturated non-native graminoid vegetation and open water habitats including a large deep water habitat. A portion of non-native temporarily flooded deciduous forest is located along the east of this segment and would be impacted.

Segment 7 – The proposed trail within this segment parallels Valley View Road. Most of the impacts would occur along the roadway with little impact to habitat that is suitable to wildlife.

Segment 8 – The proposed trail within this segment parallels Antrim Road and 70th Avenue. Most of the impacts would occur along the roadway with little impact to habitat that is suitable to wildlife.

Segment 9 – Segment 9 follows along Valley View Road for a portion of the alignment and then follows along 9-Mile Creek as it heads to the southeast and ends near a park in which a trail system currently resides. The cover type in this area is composed primarily of non-native deciduous woodlands that are temporarily flooded. The primary species within this woodland includes Cottonwood as the dominant tree species and European buckthorn and the dominant shrub species.

Segment 11 – The proposed trail within Segment 11 follows the creek in a southeast direction until it merges with the railroad tracks, where the trail runs parallel to the tracks before ultimately crossing the tracks and following the creek again to the southeast until 70th Street. The majority of the proposed impacted cover types include non-native deciduous woodlands composed primarily of Cottonwood species. Wetlands within this segment include saturated altered/non-native dominated graminoid vegetation, semipermanently flooded altered/non-native dominated vegetation, and willow swamp cover types.

Segment 13 – The proposed trail alignment within Segment 13 starts at 70th Street in the northern portion of the segment and follows along the creek, crosses 72nd Street, then follows along the edge of Metro Boulevard, crossing Metro Boulevard and eventually crossing back over the creek and ultimately crossing over Highway 100. The northern portion of this segment includes altered/non-native deciduous woodland cover types that would potentially be impacted. The portion of the alignment that parallels Highway 100 is composed primarily of lawn/landscape cover type. Wetland habitats found throughout this segment include semipermanently flooded altered/non-native dominated vegetation composed primarily of Reed canary grass.

Segment 19 – Segment 19 is a long segment with the western portion of the segment composed primarily of grassland with sparse deciduous trees lawn/landscape cover type where it crosses Hwy 100 near Lake Edina. The eastern two-thirds portion of this segment follows parking lots edges in a commercial business area along the southern boundary of Fred Richards Golf Course and then utilizes road right-of-way in a highly dense residential area.

Segment 20 – This segment proposes to have little disturbance to wildlife habitat and utilizes portions of the Edina Promenade trail system. The majority of the cover types within this segment are composed of lawn/landscape or impervious surfaces, both of which have little value to wildlife species.

Mitigation Strategies

A large portion of the project area surrounds the Nine Mile Creek corridor, which includes closely related land cover types that create a wildlife corridor for many species. Wildlife may be affected by implementing the trail project. Construction and human use of the proposed trail may disturb wildlife currently using the habitat. Human activity would include regular trail use such as biking or walking along with maintenance activities such as sweeping and possibly snow removal. Disturbances may consist of impacting portions of habitat that wildlife species currently use or fragmenting larger tracts of habitat by introducing the trail in areas without formal trails.

The following discussion describes measures that can be taken to minimize or avoid impacts.

- Potential impacts to wildlife and fisheries could be minimized or possibly avoided by:
 - Locating the trail on cover types that provide minimal habitat value such as lawns/landscaping and impervious surfaces.
 - Minimizing the width of the trail corridor through cover types that provide habitat value.
 - Minimizing the number of trail crossings over the creek and maximizing the distance (buffer) between the trail and the creek to minimize habitat fragmentation.
 - Managing surface water run off volumes and rates and implementing best management practices in accordance with applicable rules and regulations to minimize impacts to water quality.
- Although the woods/forest areas within the project boundary are not high quality natural communities, they provide many benefits such as wildlife habitat, shade, rainfall interception, carbon sequestration, and improved air and water quality. The impact to woods/forest would be minimized by:
 - Placing the final trail alignment to avoid individual trees to the greatest extent practical.
 - Protect preserved trees located in the immediate vicinity of trail construction with tree protection fencing around the root protection zone (approximately 5 feet from the identified drip line of the tree).
 - Replacing individual trees that are removed by planting new trees in the immediate vicinity of the tree removal location. It is noted that the City of Edina does not have tree replacement requirements. The Edina Planning Commission discussed creating tree replacement requirements at their meeting in September 2009.
- Wetlands are regulated by the Wetland Conservation Act (WCA) through Nine Mile Creek Watershed District (NMCWD) as the Local Government Unit (LGU) and may be regulated by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act (CWA). The response to EAW Question 12 includes a full discussion of wetland impact avoidance or minimization strategies.

b. Are any state-listed (endangered, threatened or special concern) species, rare plant communities or other sensitive ecological resources on or near the site? Yes No
If yes, describe the resource and how it would be affected by the project. Describe any measures that will be taken to minimize or avoid adverse impacts. Provide the license agreement number (LA-___) and/or Division of Ecological Resources contact number (ERDB [20100164-0002](#)) from which the data were obtained and attach the response letter from the DNR Division of Ecological Resources. Indicate if any additional survey work has been conducted within the site and describe the results.

The Natural Heritage Information System (NHIS) was queried to determine if any rare species or other significant features are known to occur within an approximate one-mile radius of the proposed project. NHIS consists of a collection of databases that contains information about Minnesota's rare and natural resources and is maintained by the Minnesota Department of Natural Resources (MnDNR). The NHIS is the most complete source of Minnesota's rare and significant natural features and is continually updated

although it may not contain all of the ecologically significant features within the proposed project area.

The following species have been known to occur within a one-mile radius of the proposed project alignment:

- Two Blanding's Turtles (*Emydoidea blandingii*)
- One Peregrine Falcon (*Falco peregrines*)
- One Common Moorhen (*Gallinula chloropus*)
- One Forester's Tern (*Sterna forsteri*)

The Blanding's Turtle and Peregrine Falcon are considered a Threatened Species in the state of Minnesota and the Common Moorhen and the Forester's Tern are considered Special Concern Species within the state. The Peregrine Falcon, Common Moorhead, and Forester's Tern are not anticipated to be impacted by the project.

Correspondence from the MnDNR located in Appendix C indicates that Blanding's turtles may be impacted by the proposed project. The correspondence includes: DNR response letter, index report, and Blanding's Turtle Fact Sheets, which includes recommendations for avoiding and minimizing impacts to Blanding's Turtles and a flyer pertaining to Blanding's Turtles that will be given to all contractors working in the project area. The following are excerpts from the MnDNR's recommendations for avoiding and minimizing impacts to Blanding's turtle populations:

- A flyer with an illustration of a Blanding's turtle should be given to all contractors working in the area. Homeowners should also be informed of the presence of Blanding's turtles in the area.
- Turtles which are in imminent danger should be moved, by hand, out of harms way. Turtles which are not in imminent danger should be left undisturbed.
- Silt fencing should be set up to keep turtles out of construction areas. It is critical that silt fencing be removed after the area has been revegetated.
- Small, vegetated temporary wetlands (Types 2 & 3) should not be dredged, deepened, filled, or converted to storm water retention basins (these wetlands provide important habitat during spring and summer).
- Wetlands should be protected from pollution; use of fertilizers and pesticides should be avoided, and run-off from lawns and streets should be controlled. Erosion should be prevented to keep sediment from reaching wetlands and lakes.
- Wetland crossings should be bridged, or include raised roadways with culverts which are 36 in or greater in diameter and flat-bottomed or elliptical (raised roadways discourage turtles from leaving the wetland to bask on roads).
- Culverts under roads crossing streams should be oversized (at least twice as wide as the normal width of open water) and flat-bottomed or elliptical.
- Terrain should be left with as much natural contour as possible.
- Graded areas should be revegetated with native grasses and forbs (some non-natives form dense patches through which it is difficult for turtles to travel).

No rare plant communities or other sensitive ecological resources have been documented on or near the conceptual trail alignment segments.

Northern Cricket Frog is a state listed endangered species in Minnesota and has been found within a small stretch of Nine Mile Creek downstream from the project area. This species has declined rapidly since the 1970's, historically being found in SE, SW, and East Central part of the state. In 1998 a documented finding of Northern Cricket Frog occurred in Hennepin County, within Nine Mile Creek. The location to

which this population was documented is miles downstream from the project location, near the confluence with the Minnesota River. This area is surveyed annually by the MnDNR and has documented up to 20 male frogs at times. This population and its urban location have caused suspicion by many officials as to the population viability. There are thoughts that this population may have been introduced to this site.

Northern Cricket Frogs prefer slow moving, permanent, algae-filled bodies of water with sunny banks. Along the edges of shallow wetlands, lakes, streams, or rivers with muddy shorelines and abundant vegetation are all likely places to find this species. Little is known about overwintering habitat with this species although they are thought to use crayfish burrows or cracks in the banks to escape from the frost.

These frogs are active throughout the summer and will travel overland to find new habitat during dry spells. Breeding season in this region is in June and July at which time the males call to the females by making a series of clicking noises. This is the time of year to conduct surveys, although positive visual identification is needed to make a positive identification due to other species making similar sounds. The Minnesota Department of Natural Resources and the Minnesota County Biological Survey have funded and conduct several surveys and continue to survey areas for new populations each year.

Slow moving, shallow open water wetland stretches of Nine Mile Creek within the project area could potential produce suitable habitat for this species. Because a population was found within Nine Mile Creek, extensive surveys are conducted each year throughout stretches of Nine Mile Creek with no other populations found. Given the extensive surveys conducted each year it is unlikely that Northern Cricket frogs inhabit this stretch of Nine Mile Creek. . Indirect impacts could be associated with unmitigated stormwater runoff from the project; however, stormwater impacts will be mitigated and are discussed in the response to EAW Question 17.

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 and give the DNR Public Waters Inventory number(s) if the water resources affected are on the PWI: (see Figure 12-1). Describe alternatives considered and proposed mitigation measures to minimize impacts.

Hydrologic features in and near the project area are shown on Figure 12-1. These features include Nine Mile Creek, wetlands, and DNR protected waters.

DNR Public Waters

The DNR Protected Waters and Wetlands Inventory for Hennepin County (Minnesota DNR, 1996) indicates that Nine Mile Creek, two public waters lakes (Heights and Edina) and three public waters wetlands are located within the project area. Figure 12-1 depicts the locations of the DNR public waters and Table 12-1 includes additional information.

Table 12-1. DNR Public Water Characteristics

Name	DNR ID (Wetland ID)	Surface Area (acres)
Edina	27-29P (27-028-24-31-002)	23.7
Heights	27-673P (27-116-21-05-003)	3
Unnamed	27-804W (27-116-21-31-002)	18.8
Unnamed	27-1106W (27-116-21-31-003)	13.4
Unnamed	27-1041W (27-116-21-09-002)	2.6

The DNR has jurisdiction over all activities that take place below the ordinary high water level (OHWL) in Nine Mile Creek and the basins listed in Table 12-1. The OHWL is a reference point that defines the DNR's regulatory authority over development projects that are proposed to alter the course, current, or cross section of public waters and public waters wetlands. For lakes and wetlands, the OHWL is the highest water level that has been maintained for a sufficient period of time to leave evidence upon the landscape. The OHWL is commonly that point where the natural vegetation changes from predominately aquatic to predominantly terrestrial.

Nine Mile Creek Watershed District also regulates waterbody crossings and structures. According to District rules, no person shall construct, improve, repair, or remove an existing crossing in contact with or under the bed or bank of any waterbody, without first securing a permit from the District.

Wetlands

Based on review of the National Wetlands Inventory (NWI) and City of Edina wetland inventory, there are 21 wetlands wholly or partially located within the project area. The current extent of wetlands is a result of past land use/disturbances that resulted in presettlement vegetation changing to present land cover and resulted in presettlement hydrology changing to present hydrology.

Each conceptual trail route segment and wetlands are described in this section. These wetland areas are regulated by the Wetland Conservation Act (WCA) through Nine Mile Creek Watershed District (NMCWD) as the Local Government Unit (LGU) and may be regulated by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act (CWA).

Any unavoidable impacts to wetlands within the project area and any wetland replacement would need to occur in accordance with the rules of the WCA, CWA, and NMCWD.

The Army Corps of Engineers, St. Paul District, regulates the discharge of fill into waters of the U.S. The jurisdictional status of wetlands under the CWA is dependent on wetlands being adjacent to traditional navigable waters or having a significant nexus to a tributary of navigable waters. In short, the Corps does not regulate isolated wetlands.

The WCA regulates excavation, fill, and drainage in most wetland types. The NMCWD rules and regulations incorporate the WCA rules, but the rules also have additional wetland restrictions that are not included in the WCA. Most notably, the NMCWD rules and regulations include increased replacement ratios and buffer widths based on the value of the wetland.

The NMCWD classifies wetlands into three categories: high value, medium value, and low value wetlands based on the Minnesota Routine Assessment Methodology (MnRAM). High value wetlands are the highest quality wetlands and receive the highest level of protection. They require an average 60 foot buffer, with a minimum buffer of 30 feet. The NMCWD rules allow for boardwalks and trails designed for non-motorized use within buffer areas upon approval from the District.

Impacts to high value wetlands require a nine-to-one replacement ratio, with at least one-to-one replacement within the seven-county metropolitan area of the Minnesota River-Shakopee watershed (Watershed #33). Medium value wetlands are medium quality wetlands and require an average 40 foot buffer with a minimum buffer of 20 feet. Low value wetlands are lower quality wetlands and require an average 20 foot buffer with a minimum buffer of 10 feet. For Medium and Low value wetlands, NMCWD requires a 2.25:1 replacement ratio if the replacement occurs within the seven county metropolitan area of the Watershed #33 and requires a 3:1 replacement ratio outside the seven county metropolitan area of Watershed #33 with at least 1:1 replacement within the seven county metropolitan area of Watershed #33.

A MnRAM 3.2 assessment was conducted on the 21 wetlands within the project area. These wetlands are shown on Figure 12-2 and are discussed by each conceptual trail segment below. A summary of the MnRAM assessment of each wetland is also available in Appendix D. Based on the MnRAM assessment and the Watershed District's rules, ten wetlands within the project area are rated as high value and eleven are rated as medium value. NMCWD Rules utilize six criteria from MnRAM to determine the wetland classification. They are: Vegetation Diversity, Wildlife Habitat, Fish Habitat, Stormwater Sensitivity, Aesthetics/Education/Recreation/Cultural, and Maintenance of Hydrologic Regime. Only those wetland's ranking low in all six categories are consider a Low classification. There are no low value wetlands within the project area.

The MnRAM assessment resulted in the majority of the wetlands having high and medium values for most categories with the exception of low rankings for vegetation diversity. The wetlands in the study area ranked high or medium for wildlife habitat due to the natural corridor along the creek, stormwater sensitivity due to the higher tolerance of the existing wetland types against stormwater inundation and duration, maintenance of hydrologic regime from the lack out restricted outlets and aesthetics/education/recreation/cultural due to the many public access and viewing opportunities.

Potential Impacts on Water Resources

Two scenarios will be discussed regarding potential wetland impacts. The first scenario assumes wetland fill and the second assumes a board walk will be constructed over all wetland and waterbody crossings.

Scenario 1. This scenario assumes that all trail crossings will involve a 16-foot wide area of wetland impact that includes a 10- wide trail and 3' shoulders. All wetland impact calculations are based on the conceptual trail alignment and estimated wetland boundaries from the City's wetland inventory. Final wetland impact numbers are subject to change based on the final trail design, completion of an approved wetland delineation for the project area, and permit decisions by Nine Mile Creek Watershed District, MnDNR and ACOE. Potential direct wetland impacts under scenario 1 are summarized in Table 12-2. Potential impacts may affect 2.9 acres of wetland, which represents 2.7% of wetlands in the project area and 0.4% of wetlands in the City,

Scenario 2. Scenario 2 assumes that all wetland and waterbody crossings will be constructed using raised boardwalks. Per the WCA, DNR and Corps of Engineers rules, raised boardwalks do not typically qualify as wetland impacts. This is dependent on the type of construction methods, materials used and level of ground disturbance. For example, small driven pilings with an elevated decking would not be considered impacts. Conversely, excavated wood pilings with poured concrete and/or boardwalk decking level with the surface would be considered impact. Therefore, if boardwalks are used at all of the wetland crossings, wetland impacts would be minimized. Temporary impacts to wildlife and vegetation may be experienced during construction. A boardwalk would have little long-term negative affect on the vegetation community or hydrology. However, once a boardwalk design is chosen discussions with the WCA LGU, DNR, and ACOE would be recommended to obtain a decision on what would constitute a wetland impact.

Cumulative Impacts. The Edina segments of the Nine Mile Creek Regional Trail are part of a larger regional trail that includes segments in Hopkins, Minnetonka, and Richfield. Nine Mile Creek Watershed District has completed design work for Nine Mile Creek Regional Trail in conjunction with Nine Mile Creek restoration work between 11th Avenue and Highway 169.

If creek based routes become part of the preferred route, these segments will be designed and constructed in conjunction with Nine Mile Creek restoration efforts by Nine Mile Creek Watershed District to minimize potential cumulative construction impacts to water and natural resources in the creek corridor. No plans currently exist for the Nine Mile Creek restoration efforts to review for this EAW.

The potential wetland impacts associated with the Hopkins, Minnetonka, and Richfield segments were assessed based on the same assumptions applied to Scenario 1. The additional segments may result in impacting 0.8 acres of wetland. Cumulatively, the entire Nine Mile Creek Regional Trail may result impact 3.7 acres of wetland.

Table 12-2. Scenario 1: Potential Wetland Impact and Replacement for At-grade Trail

Trail Segment	Wetland Rank	Wetland ID	Wetland Acres in Project Boundary*	Potential Impact (acres)	Replacement Ratio	Minimum Replacement (acres)
1	High	27-117-21-31-001	6.76	0.36	9	3.23
2	High	27-117-21-31-002	17.21	0.52	9	4.67
2	High	27-117-21-31-003	16.70	0.33	9	2.93
3	Medium	27-117-21-31-004	0.10	0.00	NA	NA
3	Medium	27-117-21-31-005	0.07	0.00	NA	NA
3	Medium	27-117-21-31-006	0.06	0.00	NA	NA
4	High	27-116-21-06-001	2.56	0.02	9	0.14
4	Medium	27-117-21-31-006	0.64	0.00	NA	NA
4	High	27-117-21-31-007	2.82	0.00	NA	NA
5	High	27-116-21-05-001	19.41	0.14	9	1.22
5D	High	27-116-21-05-001	5.09	0.28	9	2.52
5D	High	27-116-21-05-002	0.73	0.00	NA	NA
5E	High	27-116-21-05-001	11.65	0.26	9	2.33
5E	High	27-116-21-05-002	0.01	0.00	NA	NA
7		No wetlands	0.00	0.00	NA	NA
8		No wetlands	0.00	0.00	NA	NA
9	High	27-116-21-05-002	0.38	0.00	NA	NA
9	High	27-116-21-05-003	1.37	0.06	9	0.55
11	High	27-116-21-05-003	6.68	0.22	9	2.00
11	Medium	27-116-21-05-004	3.79	0.17	2.25	0.38
11	High	27-116-21-05-005	5.27	0.42	9	3.80
13	Medium	27-028-24-31-001	0.42	0.02	2.25	0.03
13	Medium	27-116-21-09-003	0.53	0.02	2.25	0.03
13	High	27-028-24-31-002	0.95	0.00	NA	NA
13	Medium	27-116-21-09-001	0.04	0.00	NA	NA
13	Medium	27-116-21-09-001	0.06	0.00	NA	NA
13	Medium	27-116-21-09-002	1.43	0.00	NA	NA
19	High	27-028-24-31-002	0.46	0.00	NA	NA
19	Medium	27-028-24-31-003	0.77	0.00	NA	NA
19	Medium	27-028-24-31-004	0.11	0.02	2.25	0.04
19	Medium	27-028-24-31-005	0.39	0.08	2.25	0.18
20		No wetlands		0.00	NA	NA
Sub total High			98.05	2.60	9	23.38
Sub total Medium			8.39	0.30	2.25	0.68
Totals			106.44	2.90		24.06

* Total wetland acres within the City of Edina is 695.91 acres

Mitigation Strategies

Wetland impact calculations are based on the proposed trail alignment and estimated wetland boundaries. Final wetland impact numbers are subject to change based on establishment of a preferred trail route, final trail design, completion of an approved wetland delineation for the project area, and permit decisions by Nine Mile Creek Watershed District, MnDNR and ACOE. Due to the high wetland replacement ratios from the NMCWD Rules, replacement of potential impacts will result in a net increase of wetland area.

Should wetland impacts be unavoidable under any of these scenarios, wetland replacement in the area, watershed, or wetland banking options must be explored. Replacement location sequencing should meet the priority siting as identified by the WCA and NMCWD (following these principles in descending order: avoiding, minimizing, rectifying, reducing, and replacing the wetland) as discussed below:

- Wetland impacts can be largely avoided by selecting trail alignment alternatives that do not impact wetlands or constructing the trail on an elevated boardwalk through wetland areas.
- Wetland impacts can be minimized by locating the trail along the upland edge of wetland areas, minimizing the length of the trail through wetland areas, and minimizing the width of the trail through wetland areas.
- Wetland impacts due to construction (i.e., not the final trail surface and shoulder area) can be restored.
- Generally, wetland replacement should replace, at minimum, the impacted wetland(s) lost functions, values, and community type.
- Additionally, indirect impacts to the wetlands should be minimized by focusing on the following strategies: protection of recharge areas, maintain drainage area for wetlands, promote infiltration and/or filtration of surface runoff prior to reaching wetlands, and establish and maintain buffers of native vegetation that meet or exceed the WCA, NMCWD, or city standards

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.

The project will not require connection to a public water supply. No new drinking fountains or restroom facilities are proposed as part of the trail project at this time. The trail proceeds through fully developed areas served by the City of Edina municipal water supply system.

A search through the County Well Index database did not indicate any known or suspected well to be present along the trail alignment, though old domestic wells may exist on some properties adjacent to the alignment. Since the County Well Index database is not a full accounting of every well constructed in the area, there exists the possibility that unused/abandoned wells may be encountered during the construction of the project. In the event that wells are discovered during construction, these wells will need to be sealed by a licensed well contractor according to Minnesota Well Code.

14. Water-related land use management district. 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.

The project area includes 157.9 acres that fall within the delineated 100-year floodplain (the entire City includes 709.12 acres) developed as a part of the Draft Hennepin County Flood Insurance Study (FIS) (Figure 14-1). The Draft Hennepin County FIS is still in the process of being approved by the Federal Emergency Management Agency (FEMA) and was developed utilizing the Nine Mile Creek Watershed District model developed in conjunction with their 2006 Water Management Plan. Although the FIS is not yet approved, the floodplain and mapping associated with this FIS were utilized for this EAW for several reasons:

- the floodplain generated with this model is more conservative than the previous floodplain,
- it represents ultimate development conditions versus 1970s land use data, and
- the mapping generated with the current FIS represents the floodplain in terms of the existing two foot contours versus a somewhat ambiguous floodplain limits on the old floodplain map.

It is anticipated that the City of Edina will adopt a final version of the FIS map, which will replace the existing Official Floodplain Zoning Map. The City of Edina City Code Section 850.21 regulates the floodplain and specifically defines land uses that are permitted or conditional uses within the floodplain. The floodplain is delineated into the floodway and flood fringe and is defined in the City Code as follows:

- Floodway. The bed of a wetland or lake and the channel of a watercourse and those portions of the adjoining flood plain which are reasonably required to carry or store the regional flood discharge.
- Flood Fringe. That portion of the flood plain outside of the floodway. Flood fringe is synonymous with the term "floodway fringe" used in the Flood Insurance Study for the City developed by the Federal Emergency Management Agency.

Single or multipurpose recreational trails are permitted uses in both the floodway and flood fringe district. Within the floodway, trails and other permitted uses are only allowed if they comply with the following standards:

- The use shall be a permitted use in the underlying zoning district
- The use shall have a low flood damage potential.
- The use shall be permissible in the underlying zoning district if one exists.
- The use shall not obstruct flood flows or increase flood elevations and shall not involve structures, fill, obstructions, excavations or storage of materials or equipment.

It is noted that docks, piers, and fill are permitted as a conditional uses within the floodway.

Within the flood fringe, trails and other permitted uses are allowed if they comply with several standards. A key distinction between the floodway and flood fringe is that fill, obstructions, and excavations are allowed in the floodway as a conditional use, but are permitted use within the flood fringe.

Nine Mile Creek Watershed District (NMCWD) allows construction of impervious trails that are 10 feet wide or less within 50 feet of the centerline of Nine Mile Creek per their Rules section 2.3.4. The maximum width of the proposed trail is 10 feet, which is compatible with Nine Mile Creek land use regulations.

Both NMCWD and the City of Edina have requirements regarding fill in the floodplain (both the floodway and flood fringe). The City of Edina allows fill as long as there is no increase in the stage of the 100-year or regional flood. NMCWD also allows fill below the 100-year flood elevation if compensatory storage at the same elevation (+/- 1foot) and within the floodplain of the same waterbody is provided. The floodplain compensatory storage must also be provided within the term of the original permit. Project compliance with these requirements is largely dependent on the trail type chosen. An at-grade or boardwalk trail would both be consistent with these requirements and not involve creation of compensatory storage. The concern with an at-grade trail is with the potential for frequent flooding and maintenance. A raised trail would require fill in the floodplain which in turn would require a No Rise Certification from the Minnesota Department of Natural Resources. This would entail modeling the proposed fill areas and verifying that the 100-year flood elevation would not be raised by more than 0.00 feet (this requirement would also apply to the pilling locations for a boardwalk). The modeling of proposed fill area would determine if there is an increase in the 100-year flood stage and if so would require that provision be made for compensatory storage.

The 16-foot wide potential trail impact corridor (10-foot wide trail with 3-foot shoulders) encompasses 3.2 acres (or 2 percent) of the 100-year floodplain within the project area. This potential impact corridor represents a “worst case scenario” that assumes the trail would be raised above the 100-year flood elevation (i.e., not an at-grade trail or elevated boardwalk). It is likely that portions of the trail that go through floodplain areas will be constructed at-grade or as elevated boardwalks, which would lessen the potential impacts to the 100-year floodplain.

The regional trail segments in Hopkins and Minnetonka were designed in conjunction with creek restoration work. To assess potential cumulative potential effects, the same 16-foot wide potential trail impact corridor was applied to the Hopkins and Minnetonka trail segments (it is noted that the Richfield segments do not encompass floodplain areas). The potential trail impact corridor encompasses 1.64 acres. Cumulatively, the Hopkins, Minnetonka, and Edina segments may impact 4.84 acres of floodplain. If creek based routes become part of the preferred route, these segments will be designed and constructed in conjunction with any Nine Mile Creek restoration efforts by Nine Mile Creek Watershed District to minimize potential construction impacts to water and natural resources in the creek corridor. No plans currently exist for the Nine Mile Creek restoration efforts to review for this EAW.

The project may also trigger streambank improvements in a few locations. NMCWD restricts the total length of streambank improvements on Nine Mile Creek to less than or equal to five times the width of the creek measured at bankfull conditions. NMCWD also outlines specific requirements for use of materials and slope. This requirement may have an effect on the trail location to the streambank and may also impact several of the potential crossings. If creek based routes become part of the preferred route, these segments will be designed and constructed in conjunction with stream restoration efforts by Nine Mile Creek Watershed District to minimize potential construction impacts to water and natural resources in the creek corridor.

The City of Edina does not have a shoreland zoning district.

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.

New direct access to Nine Mile Creek is not proposed, nor is new direct access to other water bodies in the area proposed. Water surface use is not anticipated to increase as a result of the project.

16. Erosion and sedimentation. Give the acreage to be graded or excavated and the cubic yards of soil to be moved: 20.76 acres 22,000 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 estimation of potential quantities of excavated soils is based on the cumulative linear feet of trail for all segments (56,500 linear feet), an excavation width of 16 feet, and a excavation depth of 8 inches. It is noted that these approximations of area and length represent the total for all trail segments under consideration as part of this EAW. In reality, the actual area and length will be less after final trial alignments are selected, which will result in some of the segments being removed from future steps in the trail planning and implementation process.

Steep slopes are shown on Figure 16-1 are based on available topographic data.

Eroded soils are designated with a “2” in their mapping symbol. Three soils in the project area are identified as eroded: L22C2 Lester loam, morainic, eroded, 6-12% slopes; L22D2 Lester loam, morainic, eroded, 12-18% slopes; L70C2 Lester-Malardi complex, eroded 6-12% slopes. Soil types are listed in Table 16-1. The locations of the soil types are shown on Figure 16-1.

Table 16-1. Soil Characteristics

Soil Map Unit Symbol	Soil Name	% Slope	Soil Erodibility Factor (K-Factor)*	Soil Erodibility Rating	Hydrologic Group**
D34B	Urban land-Hubbard complex	0-8% slopes	---	---	---
L17B	Angus-Malardi complex	2-6% slopes	.28	Medium	B
L22C2	Lester loam, morainic, eroded	6-12% slopes	.28	Medium	B
L22D2	Lester loam, morainic, eroded	12-18% slopes	.28	Medium	B
L23A	Cordova loam	0-2% slopes	.28	Medium	B/D
L24A	Glencoe loam, depressional	0-1% slopes	.28	Medium	B/D
L25A	Le Sueur loam	1-3% slopes	.28	Medium	B
L36A	Hamel, overwash-Hamel complex	1-4% slopes	.28	Medium	B
L37B	Angus loam, morainic	2-5% slopes	.28	Medium	B
L49A	Klossner soils, depressional	0-1% slopes	---	---	A/D
L50A	Houghton-Muskego soils, depressional	0-1% slopes	---	---	A/D
L52C	Urban land-Lester complex	2-18% slopes	---	---	B
L52E	Urban land-Lester complex	18-35% slopes	---	---	B
L54A	Urban land-Dundas complex	0-3% slopes	---	---	B
L55B	Urban land-Malardi complex	0-8% slopes	---	---	B
L55C	Urban land-Malardi complex	8-18% slopes	---	---	B

Soil Map Unit Symbol	Soil Name	% Slope	Soil Erodibility Factor (K-Factor)*	Soil Erodibility Rating	Hydrologic Group**
L56A	Muskego and Klossner soils, frequently flooded	0-1% slopes	---	---	D
L70C2	Lester-Malardi complex, eroded	6-12% slopes	.28	Medium	B
L70E	Lester-Malardi complex	18-35% slopes	.28	Medium	B
L132A	Hamel-Glencoe, depressional, complex	0-3% slopes	.28	Medium	B/D
M-W	Water, miscellaneous	NA	NA	NA	NA
U1A	Urban land-Udorthents, wet substratum complex	0-2% slopes	---	---	--
U2A	Udorthents, wet substratum	0-2% slopes	---	---	--
U3B	Udorthents (cut and fill land)	0-6% slopes	---	---	--
U4A	Urban land-Udipsamments (cut and fill land) complex	0-2% slopes	---	---	--
U6B	Urban land-Udorthents (cut and fill land) complex	0-6% slopes	---	---	--
W	Water	NA	NA	NA	NA

* K-Factor indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69; the higher the value, the more susceptible the soil is to water erosion.

** Hydrologic soil groups are used to estimate runoff from precipitation: A=high infiltration rate, low runoff potential, through D=slow infiltration rate, high runoff potential. If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Because construction of the project would disturb more than one acre of land, an application for a National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities would be submitted to the MPCA. This permit requires the applicant to develop a Stormwater Pollution Prevention Plan (SWPPP) which includes both temporary and permanent erosion and sediment control plans; the NPDES permit also requires the applicant to perform inspections and maintain inspection records. Erosion and sediment control plans would also be submitted to the City and the Nine Mile Creek Watershed District for review and approval.

Erosion control measures to be used during construction are expected to include rock construction entrances, floating silt curtain, silt fence, rock ditch checks, temporary sediment traps, biorolls, riprap, inlet protection, temporary seeding and mulch. Initially, these erosion control devices would be placed at the downstream end of the construction limits; the devices would be installed prior to the start of any land disturbing activity. Additional devices as noted on the construction drawings may be added as construction progresses. The devices would be maintained as directed under permit requirements to maintain their effectiveness.

Within the timeframes stipulated in approved plans, graded areas would be paved; seeded and mulched; or covered with fiber blankets, stabilization mats, or sod. Erosion control devices would remain in place until site stabilization has been achieved and vegetation has been reestablished.

Permanent strategies to control erosion and manage stormwater would include the direction of runoff to grassy swales, ponds, and, if supported by onsite soils, stormwater infiltration areas where the water can infiltrate.

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 stormwater pollution prevention plans.

The proposed regional trail project has been split into two primary sections – trail sections that follow existing roadways (3, portion of 4, 7, 8, portion of 13, 19) and trail sections that follow Nine Mile Creek (1, 2, 4, 5, 5D, 5E, 9, 11, portion of 13). These two sections have different existing landscape features which affect the quantity and quality of stormwater runoff. The existing landscape for the portions of the trail adjacent to existing roadways are located within a combination of different land uses described in response to EAW Question 9 including commercial, low and high density residential. The commercial areas are characterized by densely impervious land use types. The residential land uses have varying impervious percentages typical of these land use types. The existing land cover types for the trail sections that will abut the creek is primarily woods and wetlands as described in response to EAW Question 10.

Proposed conditions will result in the construction of a 10 foot wide trail. For the portions of the trail adjacent to roadways this will consist of a separate trail segment that will either consist of widening the existing sidewalk (where present) to the regional trail section or constructing a new trail. For the portions of the trail adjacent to Nine Mile Creek there are three potential options – a raised boardwalk trail, an at-grade trail and a raised trail set on fill. A combination of these three options is likely.

The increase in impervious surface along the entire trail system will generate an additional runoff of about 7 acre-ft (100-year event) of runoff. The total volume of runoff for the entire watershed basin is over 8,800 ac-ft (100-year event). The impervious surface would result in an about 0.08% increase in runoff volume to the watershed.

Unmitigated runoff has the potential to exacerbate existing erosion issues adjacent to the trail. Unmitigated runoff from the trail also has the potential to adversely affect the water quality of the waterbodies it is tributary to. Therefore best management practices are recommended to minimize erosion potential. Nine Mile Creek Watershed District (NMCWD) rules further define the requirements for the design of the best management practices.

Proposed stormwater management measures will be required to be designed to comply with NMCWD Rules:

- Onsite retention of the one inch runoff from all impervious surfaces
- Post development discharge rates must be less than or equal to existing conditions discharge rates
- Provide water quality treatment volume equivalent to the runoff from a 2.5-inch storm event or to at least 60% annual total phosphorus removal and 90% annual total suspended solids removal. Volume management techniques used for onsite retention can be counted towards the water quality treatment requirement.

A variety of best management practices can be utilized as potential options for meeting the NMCWD requirements. These best management practices would be further defined during the permit process. The potential permanent controls to manage and treat the runoff from the proposed project may include:

- Raised boardwalk trail which greatly minimizes the impervious surfaces for trail sections adjacent to the creek
- Grass filter strips and other vegetated buffers
- Mulching
- Erosion control blanket

- Expansion/modifications to existing regional facilities
- Pervious/porous pavement
- Depressed infiltration and bioretention areas

Buffer strips and grass filter strips are generally a highly viable option for the trail sections that abut the creek. These methods minimize the disturbance to the existing landscape while still providing water quality treatment. Recommendations on the length of the filter strip vary and depend on the drainage area, imperviousness and filter strip slope. The Minnesota Stormwater Manual recommends that a 10-20 foot wide filter strip be provided for trails that are sanded. Metropolitan Council sites studies from urban areas that a minimum removal rate of 35 percent of solids and 40 percent of nutrients can be achieved through properly sized filter strips and that a minimum of 15 feet is recommended. The Environmental Protection Agency (EPA) and Minnesota Pollution Control Agency (MPCA) in their manual “Protecting Water Quality in Urban Areas” recommend a minimum of a 25 foot filter strip to provide water quality treatment. Other local watershed districts have variances to their rules for trail projects with widths ten feet or less and with down gradient green space of a minimum width of five feet. Each of the sources recommends repairing and enhancing existing wooded filter strips versus destroying and replacing them with engineered filters.

The sections of the trail adjacent to existing roadways also pose a challenge in terms of managing stormwater since they are linear projects in fully developed areas. Therefore space is limited and BMPs will need to be distributed throughout the project area versus utilizing a regional collection point type of stormwater management strategy. In some instances there are regional ponds that the proposed trail may discharge to and will need to be determined during preliminary design. Pervious/porous pavement, depressions designed for bioretention and infiltration at existing low points, and gradual swales for bioretention adjacent to the trail in green space should all be considered.

Pervious/porous pavement use for the trail for both segments (adjacent to the creek and adjacent to existing roadways) would eliminate the need for any additional stormwater measures since it essentially acts as a pervious surface. Additional study is needed to determine if this is a feasible design consideration due to soil hydrology, compaction, drainage capacity, and other considerations.

The Park District has inspection and maintenance procedures in place to mitigate any particular localized erosion issues that are identified during or after trail construction.

Because the project will disturb more than one acre of land, an NPDES General Stormwater Construction Permit will be required. A stormwater pollution prevention plan (SWPPP) will be prepared as a part of the NPDES permit.

- 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.

The entire project corridor is tributary to the North Branch of Nine Mile Creek, except for segment 19. The North and South Branch of Nine Mile Creek connect with the main stem at Normandale Lake in Bloomington. Eventually Nine Mile Creek is tributary to the Minnesota River. The trail is also tributary to several unnamed wetlands, all of which discharge to Nine Mile Creek. A small portion of Segment 19 is tributary to Lake Edina and the majority is tributary to the ponds constructed as a part of Fred Richards Golf Course. Item 12 addresses the tributary waters that are identified as public waters.

Nine Mile Creek is listed on the Minnesota Pollution Control Agency’s (MPCA) Section 303(d) Draft 2010 Impaired Waters list because of turbidity, chloride and biotic impairments. Nine Mile Creek

Watershed District (NMCWD) in conjunction with the MPCA is working on a TMDL project for the creek. NMCWD also has a stream water quality monitoring program in place for Nine Mile Creek. The Minnesota River is also listed on the MPCA's Section 303(d) Draft 2010 Impaired Waters list due to turbidity, dissolved oxygen, fecal coliform, and PCBs. The TMDL for the Lower Minnesota River has been completed by the MPCA for dissolved oxygen. The project area is not within this portion of the Minnesota River TMDL. The Minnesota River turbidity TMDL is also underway by the MPCA. The TMDL implementation plans for Nine Mile Creek and the Minnesota River will set waste load allocations to areas tributary to these water bodies, potentially including the project area. The Minnesota River discharges to Lake Pepin. The Lake Pepin TMDL implementation plan is currently being written which may have a waste load allocation for Nine Mile Creek that may affect the project area.

Lake Edina is also listed on the MPCA's Section 303(d) list as impaired for phosphorus but NMCWD is in the process delisting the lake.

The requirements listed by NMCWD are intended to reduce total phosphorus, total suspended sediments and volume loads for the project which in turn improve turbidity levels, dissolved oxygen, and result in a reduction in fecal coliform (through infiltration and bioretention). The trail project will not contribute to existing PCB loads. This is in line with the goal of removing Nine Mile Creek and the Minnesota River from the impaired waters list. Although it should be noted that additional measures may be required beyond those set by NMCWD in their current rules for complying with future TMDL implementation plans for Nine Mile Creek and the Minnesota River.

18. Water quality: wastewaters

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

There are existing public restroom facilities at Bredesen Park and Walnut Ridge Park, which are located within the project boundary. The increase in wastewater as a result of the project is expected to be negligible.

b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies (identifying any impaired waters), 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.

No pretreatment is provided for the wastewater generated onsite. Wastewater is currently treated at the Metropolitan waste water treatment plant (WWTP) in St Paul which provides advanced secondary treatment with chlorination/dechlorination. Treated water is discharged to the Mississippi River. Impacts to the receiving waterbodies are not likely due to the waste produced by this project.

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.

All waste generated from the project corridor is currently discharged through the City of Edina's sanitary sewer pipe facilities into Metropolitan WWTP in St Paul which has a current capacity of 251 MGD. No pretreatment of any kind will be provided within the site boundary. The increase in flow rates is not expected to be an issue for the existing structures as the increase from the high school will be negligible in relation to the current flow to the WWTP. Improvements to the existing structures will not be needed.

19. Geologic hazards and soil conditions

- a. Approximate depth (in feet) to ground water: 0 feet minimum 10 feet average; to bedrock: 125 feet minimum 150 feet 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.

Depth to water in most completed wells across in this portion of Hennepin County is 40 feet or greater. But the water table across much of the project area may be locally perched, resulting in water at or near the surface. Wetlands located along segments 4 and 5 of the trail are indicative of shallow groundwater.

Depth to bedrock ranges from approximately 125 feet to 250 feet across the project area. The uppermost bedrock unit is the St. Peter sandstone over much of the project area, but a small buried bedrock valley exposes the Prairie du Chien dolomite over portions of the project area, albeit at greater depths.

In areas where carbonate (limestone or dolomite) bedrock is the uppermost bedrock, karst conditions are possible. However, since the Prairie du Chien dolomite is covered by more than 100 feet of sediment over the entire project area, it is considered a “covered karst” condition. As such, there is very little likelihood of karst features (such as sinkholes) being evident at the land surface.

A review of the Hennepin County Geologic Atlas (County Atlas Series C-4, University of Minnesota, 1989) indicates that the sensitivity of the water table aquifer to pollution over the project area ranges from “low” to “very high” depending on the presence of surficial geologic deposits. Only a small portion of the project area is “low” in vulnerability, indicating that the majority of the area is sensitive to pollution. Additionally, the sensitivity of the Prairie du Chien-Jordan aquifer system ranges from “low” to “high moderate” over the project area, with all of the “high-moderate” areas in the eastern section of the trail.

It is unlikely that the proposed trail will negatively impact water table or bedrock aquifer quality. However, there exists a possibility of spills or leaks originating from machinery during the construction of the trail. Therefore, any storage of fuel-containing machinery or any re-fueling operations should be conducted over impervious surfaces whenever possible, with containment measures in place to address any accidental spills or leaks.

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

According to Hennepin County soils information, the soil types listed in the following table are identified at the project corridor. The soil type locations are depicted on Figure 16-1. Figure 16-1 also depicts the soils that pose limitations for paths and trails.

Table 19-1. Soil Map Unit Characteristics

Map Symbol	Map Unit Name	Landform	Dominant Drainage Condition	Hydrologic Group**	Hydric	Limitations for Paths and Trails
D34B	Urban land-Hubbard complex, 0-8% slopes	Stream terraces	(No drainage class assigned for urban land)	--	No	Not rated
L17B	Angus-Malardi complex, 2-6% slopes	Summits and backslopes of hills on moraines	Well drained	B	Yes	Not limited
L22C2	Lester loam, morainic, 6-12% slopes, eroded	Backslopes and shoulders of hills on moraines	Well drained	B	Yes	Not limited
L22D2	Lester loam, morainic, 12-18% slopes, eroded	Shoulders and backslopes of hills on moraines	Well drained	B	Yes	Not limited
L23A	Cordova loam, 0-2% slopes	Flats and swales on moraines	Poorly drained	B/D	Yes	Very limited - Depth to saturated zone
L24A	Glencoe loam, depressional, 0-1% slopes	Depressions on moraines	Very poorly drained	B/D	Yes	Very limited - Depth to saturated zone, ponding
L25A	Le Sueur loam, 1-3% slopes	Flats and slight rises on moraines	Somewhat poorly drained	B	Yes	Somewhat limited - Depth to saturated zone
L36A	Hamel, overwash-Hamel complex, 1-4% slopes	Drainageways and swales on moraines	Somewhat poorly drained	B	Yes	Somewhat limited - Depth to saturated zone
L37B	Angus loam, morainic, 2-5% slopes	Hills on moraines	Well drained	B	Yes	Not limited
L49A	Klossner soils, depressional, 0-1% slopes	Depressions on moraines	Very poorly drained	A/D	Yes	Not rated
L50A	Houghton-Muskego soils, depressional, 0-1% slopes	Depressions on moraines	Very poorly drained	A/D	Yes	Not rated
L52C	Urban land-Lester complex, 2-18% slopes	Moraines	(No drainage class assigned for urban land)	B	No	Not rated
L52E	Urban land-Lester complex, 18-35% slopes	Moraines	(No drainage class assigned for urban land)	B	No	Not rated
L54A	Urban land-Dundas complex, 0-3% slopes	Moraines	(No drainage class assigned for urban land)	B	No	Not rated
L55B	Urban land-Malardi complex, 0-8% slopes	Stream terraces and outwash plains	(No drainage class assigned for urban land)	B	No	Not rated
L55C	Urban land-Malardi complex, 8-18% slopes	Outwash plains and stream terraces	(No drainage class assigned for urban land)	B	No	Not rated
L56A	Muskego and Klossner soils, 0-1% slopes, frequently flooded	Flats on floodplains	Very poorly drained	D	Yes	Not rated
L70C2	Lester-Malardi complex, 6-12% slopes, eroded	Shoulders and backslopes of hills on moraines	Well drained	B	Yes	Not limited

Map Symbol	Map Unit Name	Landform	Dominant Drainage Condition	Hydrologic Group**	Hydric	Limitations for Paths and Trails
L70E	Lester-Malardi complex, 18-35% slopes	Shoulders and backslopes of hills on moraines	Well drained	B	Yes	Somewhat limited - Slope
L132A	Hamel-Glencoe, depressional, complex, 0-3% slopes	Drainageways on moraines	Poorly drained	B/D	Yes	Very limited – depth to saturated zone
M-W	Water, miscellaneous	NA	NA	NA	NA	Not rated
U1A	Urban land-Udorthents, wet substratum complex, 0-2% slopes	Stream terraces, moraines, and outwash plains	(No drainage class assigned for urban land)	--	No	Not rated
U2A	Udorthents, wet substratum, 0-2% slopes	Filled depressions on outwash plains, moraines, and stream terraces	(No drainage class assigned for urban land)	--	No	Not rated
U3B	Udorthents (cut and fill land), 0-6% slopes	moraines	(No drainage class assigned for urban land)	--	No	Not rated
U4A	Urban land-Udipsamments (cut and fill land) complex, 0-2% slopes	Outwash plains and stream terraces	(No drainage class assigned for urban land)	--	No	Not rated
U6B	Urban land-Udorthents (cut and fill land) complex, 0-6% slopes	Moraines	(No drainage class assigned for urban land)	--	No	Not rated
W	Water	NA	NA	NA	NA	NA

** Hydrologic soil groups are used to estimate runoff from precipitation: A=high infiltration rate, low runoff potential, through D=slow infiltration rate, high runoff potential. If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

In general, water moves through coarse textured soils at a faster rate than through medium or fine textured soils. Therefore, potential impacts to ground water from spilled chemicals would be expected to be greater in areas with coarse textured soils. However, many factors in addition to soil granularity can affect infiltration and percolation rates in soils. Some of these factors include: soil water content, soil frost, the temperature of soil and water, surface roughness, the nature of the soil pore openings, vegetative ground cover, and the degree of soil compaction.

Based on the nature of the project (a trail) use or storage of chemicals or petroleum products is not anticipated. However, fuel-containing equipment present on-site during construction activities have the potential to develop leaks. Also, re-fueling of equipment can result in accidental spills. Storage of fuel-containing equipment and any fueling activities should be done over an impervious surface whenever possible, with containment in place for any spills that may occur.

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.

Solid waste generated by trail users should be disposed of in trash and recycling receptacles located in existing public parks along the trail corridor or in new trash and recycling receptacles at new rest stops.

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 groundwater. 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.

No toxic or hazardous materials are associated with the proposed project will be produced during the operation or construction of the trail

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.

During construction activities, it is likely that portable storage tanks of fuel for construction vehicles and machinery may be temporarily located in various portions of the project area during construction activities. For the purpose of minimizing impacts due to potential spills, the re-fueling of vehicles and machinery will be conducted away from water resources such as wetlands and Nine Mile Creek.

21. Traffic. Parking spaces added: 0

Existing spaces (if project involves expansion): NA (non-motorized trail)

Estimated total average daily traffic generated: NA (non-motorized trail)

Estimated maximum peak hour traffic generated and time of occurrence: NA (non-motorized trail). Indicate source of trip generation rates used in the estimates. NA (non-motorized trail)

If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Using the format and procedures described in the Minnesota Department of Transportation's Traffic Impact Study Guidance (available at: <http://www.oim.dot.state.mn.us/access/pdfs/Chapter%205.pdf>) or a similar local guidance, provide an estimate of the impact on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system.

Nine Mile Creek Regional Trail is proposed to be non-motorized trail. No new trail head facilities or additional parking spaces are proposed at this time. Existing public restrooms, parking, water fountains, and other trail head type amenities will be utilized for regional trail users. Trail users will access the trail via non-motorized modes of travel (i.e., bicycles and walking) or drive and utilize existing parking allowed along city streets and parking provided at existing park facilities. Some of the proposed trail segments are located adjacent to or upon city streets and parking lots. A parking study was prepared for this EAW to document parking conditions along the proposed alternatives, quantify parking demand, identify conflicts, and propose mitigation. The full parking study is located in Appendix E. A summary of the results and proposed mitigation strategies follow.

Parklawn Avenue (Segment 19) experiences a high number of residential parking. A road-based trail will impact parking for those residents along Parklawn Avenue if the right-of-way is reconfigured to remove parking to allow for the trail. The following are some mitigation strategies to minimize the impact to parking along Parklawn Avenue.

- Limit the trail to one side of the roadway, allowing residents to continue parking on the other side of the street. This would mitigate some parking impacts.
- Locate the trail on the east/south side of the street and construct the trail within existing right-of-way. This would eliminate parking impacts to residents, but the City prefers a five-foot boulevard between the curb and the sidewalk. Parking impacts would be limited as residents could continue to park on the opposite side of the street.

The office parking lots along W 77th Street (Segment 19) also experienced demand for those rows adjacent to the proposed trail. Demand was highest at the Pentagon Park east and west buildings, and the 7600 building south row. The northern and western row of the 7600 building saw little demand. It should be noted that available parking spaces were abundant in those lots during both the weekday and weekend.

The Edina Gateway Pentagon Park Redevelopment plans are included in Appendix E. This redevelopment plan was examined for potential cumulative effects on parking demand and supply. The east and west building are shown to be redeveloped into a mixed-use office and residential area. The existing parking lots immediately adjacent to the golf course would be eliminated under the redevelopment, so that the proposed Nine Mile Creek Regional Trail would have no impact to parking when the redevelopment takes place.

On other city streets, only Antrim Road and W 70th Street (Segment 8) saw parked vehicles during data collection. The duration of these vehicles was two hours or less in each instance. Although reconfiguring the right-of-way to remove parking to allow for the trail will impact parking on these streets, the frequency of parking is infrequent and no mitigation is necessary for this Segment.

Demand for on-street parking was not observed for the other city streets. Segments 1 through 7, 9, 11, and 13 will not be affected.

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.

Not applicable – see response to EAW Question 21, Traffic

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) and any greenhouse gases (such as carbon dioxide, methane, nitrous oxide) and ozone-depleting chemicals (chloro-fluorocarbons, 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.)

The project will not generate major odors, noise or dust during operation. Routinely expected noise and dust may be generated during construction. The City has a full complement of general nuisance ordinances that protect the public health, safety and welfare. These cover nuisances as related to odors, dust (related to construction) refuse, attractive nuisance, and noise. The City has adopted the full MPCA noise regulations for sound levels, prohibited noise and hourly restrictions.

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

Archaeological, historical or architectural resources? Yes No

Prime or unique farmlands or land within an agricultural preserve? Yes No

Designated parks, recreation areas or trails? Yes No

Scenic views and vistas? Yes No

Other unique resources? Yes No

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

Archaeological, historical or architectural resources

Cultural resource database search results are provided in Appendix F and summarized below.

The Minnesota Historical Society's State Historic Preservation Office (SHPO) was contacted to determine if any known archaeological, historical or architectural resources are on or in proximity to the project area. SHPO recommended that an archaeological survey be completed for trail alternatives located along Nine Mile Creek, which includes Segments 1, 2, 4, 5, 9, 11, and a portion of 13. The archaeological survey does not need to occur as part of the EAW process, but will occur prior to ground disturbing activities. According to SHPO, previously disturbed sites (i.e., soils were removed) or previously surveyed areas may not need to be surveyed. As part of any future archaeological surveys along creek based alternatives, an archaeologist would need to determine if any individual sites were disturbed and do not require a survey.

SHPO's inventory coordinator provided a list of known archeological, historical, or architectural resources. No known archaeological sites are located along the corridor. The history/architecture inventory indicates that seven properties are located in proximity to the site. The trail will not impact any of the listed sites. A summary for each site is included in Table 25-1.

Table 25-1. Summary of History/Architecture Inventory

Property Name	Property Address	Proximity to Trail Segments	Potential Impacts <i>(Information from Edina Heritage Preservation Board's staff liaison)</i>
St. Patrick's Catholic Church (razed)	7000 Cahill Rd	Adjacent to Segment 8	None. <i>(Original structure destroyed and rebuilt 1924. Very prominent structure and social center in the past.)</i>
Calvary Lutheran Church	5420 70 th St. W.	Adjacent to Segment 8	None. <i>(Became a residence in 1960)</i>
Colonial Church of Edina	6200 Colonial Way	Across Hwy 62 from Segment 5D	None.
Southdale-Hennepin Branch Library	7001 York Ave.	¼ mile north of Segment 19	None.
YMCA Southdale Branch	7355 York Ave	Adjacent to Segment 20	None.
Sturges House	6813 Oaklawn Ave	¾ mile north of Segment 19	None.
Bruce A. Abrahamson House	7205 Shannon Dr.	¼ mile south of Segment 8	None.

The staff liaison to the Edina Heritage Preservation Board provide published materials to review for information on history and architecture in the City of Edina. In addition to the properties include in SHPO's database, the following sites/areas/information were included in the City's information:

- Cahill School- Frank Tupa Park (formerly Cahill and 70th). The school moved from Cahill Road (Segment 8) to Eden Ave/Hwy 100. The school is on the National Register of Historic Places and is known as the oldest building in Edina. The trail will not impact the school.
- Cahill. Irish families settled along the Nine Mile Creek area in the area known as Cahill. The area was predominantly Irish until the 1900's. The area was centered around Cahill road and West 70th Street (Segment 8). Segment 8 is proposed to go through the Cahill area; however, no impacts are anticipated.
- Dakota Tribal families passed through the area traveling north from their reservations at the turn of the century. As stated in SHPO's response, an archaeological survey is recommended along the creek based segment.

Designated parks, recreation areas or trails

Portions or the entirety of all proposed trail segments adjoin or go through designated parks, recreation areas, and/or existing and proposed trails. Figure 25-1 shows the location of existing and proposed parks, golf courses, open space, and trails, including the Nine Mile Creek Regional Trail conceptual route. The trail will provide connections to the existing regional park and trail system as well as connections to schools, employment centers, business districts, and other regional destinations. Therefore, the location of the proposed trail is intentionally located adjacent to or within existing park and recreation areas.

The viewshed analysis renderings located in Appendix G and discussed below show examples of the proposed trail in Walnut Ridge, Bredesen, and Heights Park as well as School District recreation areas. Existing trail segments through Walnut Ridge Park (View 2) and Bredesen Park (View 3) may be utilized for the regional trail. View 4 (Segment 5) shows the trail passing through school district property along the edge of a soccer field. View 5 (Segments 9 and 11) show the creek based trail passing through public open space and Heights Park. The Park District will continue to work closely with the City of Edina and

the School District to ensure that the proposed trail complements existing uses and recreational programming.

Scenic views and vistas

The Nine Mile Creek corridor is not a designated scenic view or vista; however, it is a locally important public open space corridor that can be viewed from existing public parks and recreation areas, public roadways, and adjacent private land. The viewshed analysis was created to give the local community and future trail users a sense of what the trail may look like once it's built. The trail is not anticipated to significantly interrupt views of Nine Mile Creek corridor or views across other segments of the trail located in parks, recreation areas, and rights-of-way.

The viewshed analysis graphics are located in Appendix G. The views of the trail shown in the renderings were taken of the proposed trail alignments from various vantage points along the trail. The trail renderings were created using a combination of photographs and Adobe Photoshop. Panoramic photos were taken in seven specific locations of the proposed trail alignment. Adobe Photoshop was used to overlay the proposed trail over the panoramic photograph. All of the renderings show a 10' wide multi use trail.

The viewshed analysis renderings show the following potential views of the trail along Nine Mile Creek, residential roads, and through various parks.

- Nine Mile Creek. Views 1 and 5 represent creek based alignments. View 1 (Segment 2) shows an example of a trail on an raised boardwalk through a wetland/floodplain area and an at grade trail along the edge of the wetland. View 5 (Segments 9 and 11) shows an at grade trail through wetland/floodplain areas and along the upland edge of the wetland.
- Parks. Views 2, 3, 4, and 5 represent trail segments through existing parks. View 2 (Segment 2) shows a trail through an open field in Walnut Ridge Park that may connect to the existing trail system. View 3 (Segment 4) shows an existing trail through a forested area in Bredesen Park that may be utilized for the regional trail. The existing trail in View 3 was widened to 10' in the rendering. View 4 (Segment 5) shows the trail passing through school district property along the edge of a soccer field. View 5 (Segments 9 and 11) show the creek based trail passing through public open space and Heights Park.
- Road Based. View 6 (Segment 19) shows the trail along Parklawn Avenue. The view shows the expansion of an existing sidewalk to regional trail standards.

Although the trail illustrations are as accurate in that they were created off of a photograph, the renderings are conceptual and the actual trail design (final placement and materials) may differ from what is depicted in the renderings.

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.

Nine Mile Creek Regional Trail is not anticipated to generate any permanent adverse visual impacts during construction or operation. Additional discussion regarding potential visual impacts is included in the response to EAW Question 25. As with all construction, it is expected that construction equipment, exposed earth, and work in progress will be visible to the adjacent properties at different phases during the construction. Construction is expected to be typical for trail construction, will comply with local

ordinances, and is not expected to exceed normal working hours. The need for construction lighting is not expected.

The visual impact from construction will be temporary and minimized through efficient and logical phasing of work. Construction will also be coordinated with other construction initiatives as appropriate to minimize the duration of potential visual impact on adjacent properties.

There are no plans to add permanent lighting to the proposed regional trail. Currently, the Park District regional trails are open from 5:00 AM to 10:00 PM. It is expected that trail users will utilize personal lighting devices such as flash lights and bicycle lights during non-day light hours. It is also expected that public safety and maintenance vehicles will utilize standard and specialized lighting during non-daylight hours and as appropriate. The additional lighting which may occur from trail users, public safety, and maintenance is considered temporary in nature and is comparable, if not less intense, to the existing lighting of adjacent streets, parking lots, residents, and businesses.

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.

Regional Trail Guidelines, Rules, and Standards

As a regional trail, Nine Mile Creek Regional Trail will be developed in accordance with all prevailing local, state, and federal guidelines, rules and/or standards. More specifically Nine Mile Creek Regional Trail will adhere to the: *2007 Minnesota Bikeway Facility Design Manual* (Minnesota Department of Transportation); *Trail Planning, Design, and Development Guidelines* (Minnesota Department of Natural Resources); *Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide* (Federal Highway Administration); *ADA Accessibility Guidelines for Outdoor Developed Areas* (Federal Access Board); and *ADA and ABA Accessibility Guidelines for Buildings and Facilities* (Federal Access Board) unless more current guidelines and standards exist at the time of development.

Metropolitan Council

The Metropolitan Council's *Regional Parks Policy Plan*, adopted on June 29, 2005 and amended on June 28, 2006 identifies proposed trail corridors on its *2030 Regional Parks System Plan map* and shows a proposed regional trail corridor running through Hopkins, Edina, Richfield, and eventually ending at the Fort Snelling site. This identified regional corridor is in approximately the same location as the proposed trail. However, east of Normandale Boulevard, the proposed trail alignment ventures significantly further south than the proposed regional corridor on the Metropolitan Council's plan.

City of Edina Comprehensive Bicycle Transportation Plan

The City of Edina's *Comprehensive Bicycle Transportation Plan*, dated September 19, 2007 (and adopted as part of the City's most recent Comprehensive Plan) "strongly recommends development of the Regional Canadian Pacific Trail and the Nine Mile Creek Regional Trail." The plan noted that the City of Edina did not have a dedicated connection to the regional trail system and characterized its connections to existing bicycle transportation and regional trails in adjoining communities as "poor". The plan points to widespread support for the trail and indicates that approved resolutions of support have been in place for all cities along its route since 2003.

The City of Edina's recommended bicycle route network illustrates priority regional trails with the same intent but somewhat different alignments than shown on the Metropolitan Council's plan. The primary differences are in the segments east of Tracy Avenue where the City's proposed route is more meandering than the routes shown on the Metropolitan Council plan.

The plan has a detailed four page section (Section 2.5.2) devoted to the Nine Mile Creek Regional Trail that indicates a draft of the Master Plan for the Nine Mile Creek Regional Trail (prepared by Three Rivers Park District) was reviewed as part of the preparation of the City of Edina's plan. The plan indicates the City should seek opportunities to work collaboratively with The Park District to enhance the proposal under review at that time. The City of Edina's plan expresses concern that the design of the regional trail needs to be able to accommodate potentially high numbers of bicycle riders and it recommended separation of bicycles and pedestrians with a wider cross section consisting of a 14 foot wide bicycle trail and a parallel 6 foot wide pedestrian trail wherever possible. The proposed trail corridor subject to this EAW is narrower than the City's plan recommends.

The City's plan expressed a desire to explore alternative alignments east of Normandale Road and suggest 70th Street as a possible corridor.

Developing the Nine Mile Creek Regional Trail is identified as a Medium Term goal in the plan's implementation section.

City of Edina Comprehensive Plan

The City of Edina approved an update to its *Comprehensive Plan* in 2009 that contained many sections that are relevant to the proposed Trail.

The Land Use Chapter has the following land use goals that would be relevant to the proposed trail:

- Goal 7. Increase pedestrian and bicycling opportunities and connections between neighborhoods, and with other communities, to improve transportation infrastructure and reduce dependence on the car.
- Goal 8. Ensure the public realm corridor design is contextual, respectful of adjacent neighborhood character, supportive of adjacent commercial and/or mixed use development, promotes community identity and orientation, and creates the highest quality of experience for pedestrians, cyclists, and transit users.

This chapter also includes the following relevant Guideline:

Guideline 4. Open Space Networks. Use public and semi-public open space as a citywide network fostering activity and civic life. This system should include parks, trail corridors, informal greenways, the Minnehaha and Nine Mile Creek valleys, and local streets that complement major thoroughfares and may be better suited to pedestrian and bicycle circulation.

The trail alignment abuts eight land uses including: Office-Residential, Medium Density Residential, High Density Residential, Mixed Use Center, Office, Industrial, Public/Semi Public and Parks and Open Space (Figure 27-1). The trail alignment follows existing right-of-way or trails in most locations that are not designated as Public/Semi Public or Parks and Open Space land uses. The description of Public/Semi Public and Parks and Open Space applies to uses such as parks, trails, as well as other public uses including schools and golf courses thus the trail alignment in these land use designations is compatible.

The alignment also falls within non-public land uses in a few segments at the rear of the properties where buffering, open space or landscaping exists. The first is Segment 2 where the alignment falls within an off-road landscaped area of an Office-Residential land use area abutting the creek. This land use

designation contains development guidelines supporting the use of land for open space linkages thus the trail is not incompatible. A second area is Segment 13 where the trail alignment falls between Industrial, Office and Medium Density land uses in an off-road landscaped area before connecting to right-of-way. Development guidelines in these land use designations require buffer and transition from lower density residential areas and on-site landscaping. A trail in the existing landscape areas supports these guidelines. A third location is in Segment 19 where the alignment runs along the south edge of Fred Richards Golf Course and as it extends easterly it follows an the internal parking and drive area of an Office-Residential land use area before connecting to right-of-way. Again, development guidelines of this land use support open space linkages with emphasis on enhancement of the pedestrian environment.

The Parks, Open Space and Natural Resources Chapter indicates that the Community Needs Assessment Survey listed the community's highest need/desire as "walking and biking trails" with 86% of surveyed residents identifying this issue. This was followed by "natural areas and wildlife habitats" at 66%.

The Parks, Open Space and Natural Resources Chapter has the following goals that would be relevant to the proposed trail:

Goal 3. Create connectivity between Edina's individual interior trails and regional trails that connect Edina's parks to neighboring community trails and particularly trails that are part of the greater regional trail system.

This policy direction was further refined by the following policies:

Policy 3. Continue to work with Three Rivers Park District and neighboring communities to develop a comprehensive trail system that connects to the greater regional trail system.

Policy 4. Acquire easements and purchase property where needed and available to develop future greenways that connect Edina's parks and connect to neighboring community trails and ultimately the greater regional trail system, such as the Southwest LRT and the Minneapolis Grand Rounds.

This chapter also indicated that the City had been working closely with The Park District to identify the most appropriate alignment for the Nine Mile Creek Regional Trail. The trail alignment illustrated on Figure 9.2 shows an alignment that is substantially the same as the alignment shown in the earlier *Comprehensive Bicycle Transportation Plan*.

There is compatibility between the City of Edina's Land Use, Park, Open Space and Natural Resource plans, goals and polices and the proposed Nine Mile Regional Trail as the project is mentioned frequently in City plans and strong support is expressed. The one significant area of difference between the proposed trail plan and the City of Edina's plans is the alignment of the trail east of Tracy Avenue. The proposed alignment is approximately 1 – 1.5 miles south of the alignment shown in City plans.

City of Edina Zoning Ordinance

Similar to the Land Use Plan the trail alignment abuts eight zoning districts: Planned Industrial District (PID), Planned Residential District (PRD) 2, 3 and 4, Park, R-1 Single Family, Planned Office District and Planned Commercial District (PCD) 3. As with the land use designations public space used for trails is considered a compatible use.

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.)

Police Protection

Park District Police and Park Service Officers will provide daily coverage of the regional trail on foot and by horse, bicycles, electric scooter, and motor vehicles. Public safety staff strive to be proactive; however, when necessary, ordinances may be enforced via citations. A copy of the ordinance may be available from the Park District Web site (www.ThreeRiversParkDistrict.org).

The Public Safety Section consists of Park Police Officers, Park Service Officers and support staff. Park Police Officers are licensed peace officers in the State of Minnesota and have the authority to arrest and detain criminal offenders and enforce a variety of traffic laws just like other law-enforcement officers throughout the state.

Park Service Officers have enforcement authority as well, but it is limited to minor park offenses. Park Service Officers communicate directly with the Park Police Officers when they observe suspicious or criminal behavior. Park Service Officers are very knowledgeable about park activities and readily assist with traffic flow, parking issues, and park guest information. Park Police Officers and Park Service Officers are also highly trained in administering first aid.

The Park District's Public Safety Plan includes the general patrol of regional parks, park reserves and regional trails by a Park Police Officer or Park Service Officer.

The Park District also participates in a statewide mutual aid program that facilitates the sharing of public safety resources in times of emergency or other unusual conditions. This program serves to facilitate the assistance received from surrounding police agencies.

Roads

Road based routes may result in road redesign/reconstruction; however, new or expanded roads will not be required.

29. Cumulative potential effects. Minnesota Rule part 4410.1700, subpart 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 potential effects. (Such future projects would be those that are actually planned or for which a basis of expectation has been laid.)

Describe the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects (*or discuss each cumulative potential effect under appropriate item(s) elsewhere on this form*).

Cumulative potential effects are discussed throughout this EAW. The EAW analysis recognizes that existing conditions are the result of past land use/disturbances that changed presettlement conditions (land cover, wetlands, hydrology, soils, etc.). Present and reasonably foreseeable future projects that may

interact with the Edina segments of the Nine Mile Creek Regional Trail discussed in this EAW include the Hopkins, Minnetonka, and Richfield segments of the regional trail, redevelopment of Pentagon Park East and West, and the potential Nine Mile Creek restoration project being contemplated by Nine Mile Creek Watershed District.

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.

Impacts in addition to those discussed previously in this EAW are not anticipated.

31. Summary of issues. *Do not complete this section if the EAW is being done for EIS scoping; instead, address relevant issues in the draft Scoping Decision document, which must accompany the EAW.*

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.

The City of Edina (City) and Three Rivers Park District (Park District) are working together to determine the preferred route for Nine Mile Creek Regional Trail through the City. Currently, fourteen routes within Edina are under consideration and include routes within City right-of-way and adjacent to existing roads and City-owned park property adjacent Nine Mile Creek, Lake Edina, and Fred Richards Golf Course.

The purpose of the voluntary EAW is to document potential environmental impacts of constructing and operating the regional trail within each of the alternative trail routes. The voluntary EAW is being conducted early in the process to assess potential environmental impacts prior to designing the trail. The voluntary EAW will be used to guide decision makers in determining if any routes should be eliminated from further consideration based on potential environmental impacts, and ultimately, in the selection of a preferred regional trail corridor. The alternatives and mitigation strategies contained in the EAW can also be used during the design and construction phase and as part of future permit processes (see Table 8-1. Permits and Approvals Likely Required).

The following list of potential issues and mitigation strategies will require further investigation before the project is begun. The topics are listed in the order of the EAW Questions.

Potential Environmental Hazards

The approximate locations of potential environmental hazards are shown on Figure 9-1. If a trail segment that passes close to these properties is selected, it is possible that contaminated soil may be encountered. A contingency plan should be incorporated into the project to ensure that proper procedures would be followed and the appropriate authorities notified if contamination is found.

Fish, Wildlife, and Ecologically Sensitive Resources

A large portion of the project area surrounds the Nine Mile Creek corridor, which includes closely related land cover types that create a wildlife corridor for many species. Wildlife may be affected by implementing the trail project. Construction and human use of the proposed trail may disturb wildlife currently using the habitat. Human activity would include regular trail use such as biking or walking along with maintenance activities such as sweeping and possibly snow removal. Disturbances may consist

of impacting portions of habitat that wildlife species currently use or fragmenting larger tracts of habitat by introducing the trail in areas without formal trails.

The following discussion describes measures that can be taken to minimize or avoid impacts.

- Potential impacts to wildlife and fisheries could be minimized or possibly avoided by:
 - Locating the trail on cover types that provide minimal habitat value such as lawns/landscaping and impervious surfaces.
 - Minimizing the width of the trail corridor through cover types that provide habitat value.
 - Minimizing the number of trail crossings over the creek and maximizing the distance (buffer) between the trail and the creek to minimize habitat fragmentation.
 - Managing surface water run off volumes and rates and implementing best management practices in accordance with applicable rules and regulations to minimize impacts to water quality.
- Although the woods/forest areas within the project boundary are not high quality natural communities, they provide many benefits such as wildlife habitat, shade, rainfall interception, carbon sequestration, and improved air and water quality. The impact to woods/forest would be minimized by:
 - Placing the final trail alignment to avoid individual trees to the greatest extent practical.
 - Protect preserved trees located in the immediate vicinity of trail construction with tree protection fencing around the root protection zone (approximately 5 feet from the identified drip line of the tree).
 - Replacing individual trees that are removed by planting new trees in the immediate vicinity of the tree removal location. It is noted that the City of Edina does not have tree replacement requirements. The Edina Planning Commission discussed creating tree replacement requirements at their meeting in September 2009.
- Correspondence from the MnDNR located in Appendix C indicates that Blanding's turtles may be impacted by the proposed project. The correspondence includes: DNR response letter, index report, and Blanding's Turtle Fact Sheets, which includes recommendations for avoiding and minimizing impacts to Blanding's Turtles and a flyer pertaining to Blanding's Turtles that will be given to all contractors working in the project area.

Wetlands

Wetland impact calculations are based on the proposed trail alignment and estimated wetland boundaries. The calculations estimate that 2.9 acres of wetland may be impacted under a "worst case scenario" analysis. Final wetland impact numbers are subject to change based upon establishment of a preferred trail route, final trail design, completion of an approved wetland delineation for the project area, and permit decisions by Nine Mile Creek Watershed District, MnDNR and ACOE.

Should wetland impacts be unavoidable under any of these scenarios, wetland replacement in the area, watershed, or wetland banking options must be explored. Replacement location sequencing should meet the priority siting as identified by the WCA and NMCWD (following these principles in descending order: avoiding, minimizing, rectifying, reducing, and replacing the wetland) as discussed below:

- Wetland impacts can be largely avoided by selecting trail alignment alternatives that do not impact wetlands or constructing the trail on an elevated boardwalk through wetland areas.
- Wetland impacts can be minimized by locating the trail along the upland edge of wetland areas, minimizing the length of the trail through wetland areas, and minimizing the width of the trail through wetland areas.
- Wetland impacts due to construction (i.e., not the final trail surface and shoulder area) can be restored.

- Generally, wetland replacement should replace, at minimum, the impacted wetland(s) lost functions, values, and community type.
- Additionally, indirect impacts to the wetlands should be minimized by focusing on the following strategies: protection of recharge areas, maintain drainage area for wetlands, promote infiltration and/or filtration of surface runoff prior to reaching wetlands, and establish and maintain buffers of native vegetation that meet or exceed the WCA, NMCWD, or city standards

Floodplain

Both NMCWD and the City of Edina have requirements regarding fill in the floodplain, which includes both the floodway and flood fringe. The City of Edina allows fill as long as there is no increase in the stage of the 100-year or regional flood. NMCWD also allows fill below the 100-year flood elevation if compensatory storage at the same elevation (+/- 1foot) and within the floodplain of the same waterbody is provided. Project compliance with these requirements is largely dependent on the trail type chosen. An at-grade or boardwalk trail would both be consistent with these requirements and not involve creation of compensatory storage. The concern with an at-grade trail is with the potential for frequent flooding and maintenance. A raised trail would require fill in the floodplain which in turn would require a No Rise Certification from the Minnesota Department of Natural Resources. This would entail modeling the proposed fill areas and verifying that the 100-year flood elevation would not be raised by more than 0.00 feet (this requirement would also apply to the piling locations for a boardwalk). The modeling of proposed fill area would determine if there is an increase in the 100-year flood stage and if so would require that provision be made for compensatory storage.

The 16-foot wide potential trail impact corridor (10-foot wide trail with 3-foot shoulders) encompasses 3.2 acres (or 2 percent) of the 100-year floodplain within the project area. This potential impact corridor represents a “worst case scenario” that assumes the trail would be raised above the 100-year flood elevation (i.e., not an at-grade trail or elevated boardwalk). It is likely that portions of the trail that go through floodplain areas will be constructed at-grade or as elevated boardwalks, which would lessen the potential impacts to the 100-year floodplain. The regional trail segments in Hopkins and Minnetonka were designed in conjunction with creek restoration work.

The project may also trigger streambank improvements in a few locations. NMCWD restricts the total length of streambank improvements on Nine Mile Creek to less than or equal to five times the width of the creek measured at bankfull conditions. NMCWD also outlines specific requirements for use of materials and slope. This requirement may have an effect on the trail location to the streambank and may also impact several of the potential crossings. If creek based routes become part of the preferred route, these segments will be designed and constructed in conjunction with stream restoration efforts by Nine Mile Creek Watershed District to minimize potential construction impacts to water and natural resources in the creek corridor.

Erosion and Sedimentation

Because construction of the project would disturb more than one acre of land, an application for a National Pollutant Discharge Elimination System (NPDES) General Permit for Construction Activities would be submitted to the MPCA. This permit requires the applicant to develop a Stormwater Pollution Prevention Plan (SWPPP) which includes both temporary and permanent erosion and sediment control plans; the NPDES permit also requires the applicant to perform inspections and maintain inspection records. Erosion and sediment control plans would also be submitted to the City and the Nine Mile Creek Watershed District for review and approval.

Erosion control measures to be used during construction are expected to include rock construction entrances, floating silt curtain, silt fence, rock ditch checks, temporary sediment traps, biorolls, riprap, inlet protection, temporary seeding and mulch. Initially, these erosion control devices would be placed at the downstream end of the construction limits; the devices would be installed prior to the start of any land disturbing activity. Additional devices as noted on the construction drawings may be added as construction progresses. The devices would be maintained as directed under permit requirements to maintain their effectiveness.

Within the timeframes stipulated in approved plans, graded areas would be paved; seeded and mulched; or covered with fiber blankets, stabilization mats, or sod. Erosion control devices would remain in place until site stabilization has been achieved and vegetation has been reestablished.

Permanent strategies to control erosion and manage stormwater would include the direction of runoff to grassy swales, ponds, and, if supported by onsite soils, stormwater infiltration areas where the water can infiltrate.

Surface Water Runoff

The increase in impervious surface along the entire trail system will generate an additional runoff of about 7 acre-ft (100-year event) of runoff. The total volume of runoff for the entire watershed basin is over 8,800 ac-ft (100-year event). The impervious surface would result in an about 0.08% increase in runoff volume to the watershed.

Because the project will disturb more than one acre of land, an NPDES General Stormwater Construction Permit will be required. A stormwater pollution prevention plan (SWPPP) will be prepared as a part of the NPDES permit. Best management practices are recommended to address surface water runoff and minimize erosion potential. Nine Mile Creek Watershed District (NMCWD) rules further define the requirements for the design of the best management practices.

Proposed stormwater management measures will be required to be designed to comply with NMCWD Rules:

- Onsite retention of the one inch runoff from all impervious surfaces
- Post development discharge rates must be less than or equal to existing conditions discharge rates
- Provide water quality treatment volume equivalent to the runoff from a 2.5-inch storm event or to at least 60% annual total phosphorus removal and 90% annual total suspended solids removal. Volume management techniques used for onsite retention can be counted towards the water quality treatment requirement.

A variety of best management practices can be utilized as potential options for meeting the NMCWD requirements. These best management practices would be further defined during the permit process. The potential permanent controls to manage and treat the runoff from the proposed project may include:

- Raised boardwalk trail which greatly minimizes the impervious surfaces for trail sections adjacent to the creek
- Grass filter strips and other vegetated buffers
- Mulching
- Erosion control blanket
- Expansion/modifications to existing regional facilities
- Pervious/porous pavement
- Depressed infiltration and bioretention areas

Parking

Parklawn Avenue (Segment 19) experiences a high number of residential parking. A road-based trail will impact parking for those residents along Parklawn Avenue if the right-of-way is reconfigured to remove parking to allow for the trail. The following are some mitigation strategies to minimize the impact to parking along Parklawn Avenue.

- Limit the trail to one side of the roadway, allowing residents to continue parking on the other side of the street. This would mitigate some parking impacts.
- Locate the trail on the east/south side of the street and construct the trail within existing right-of-way. This would eliminate parking impacts to residents, but the City prefers a five-foot boulevard between the curb and the sidewalk. Parking impacts would be limited as residents could continue to park on the opposite side of the street.

Archaeological Resources

SHPO recommended that an archaeological survey be completed for trail alternatives located along Nine Mile Creek, which includes Segments 1, 2, 4, 5, 9, 11, and a portion of 13. The archaeological survey does not need to occur as part of the EAW process, but would occur prior to ground disturbing activities.

Parks, Recreation Areas, and Trails

Portions or the entirety of all proposed trail segments adjoin or go through designated parks, recreation areas, and/or existing and proposed trails. The Park District will continue to work closely with the City of Edina and the School District to ensure that the proposed trail complements existing uses and recreational programming.

RGU CERTIFICATION. *(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

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 Minnesota Rules, parts 4410.0200, subparts 9b and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature 
Larry Blackstad

Date 06/03/10

Title Board Chair

Environmental Assessment Worksheet was prepared by the staff of the Environmental Quality Board at the Minnesota Department of Administration, Office of Geographic and Demographic Analysis. For additional information, worksheets or for *EAW Guidelines*, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-201-2492, or <http://www.eqb.state.mn.us>