

DRAFT
ENVIRONMENTAL ASSESSMENT
STURGEON LAKE, PINE COUNTY, MINNESOTA
WASTEWATER COLLECTION AND TREATMENT FACILITY

SUMMARY

Major Findings and Conclusions

The city of Sturgeon Lake in Pine County, Minnesota, is proposing to construct a new wastewater collection system and a new three-cell stabilization pond wastewater treatment facility with a four-cell rapid infiltration basin system that has an average wet weather design flow of 83,000 gallons per day (gpd). This land treatment proposal would avoid a discharge of treated effluent to surface water.

The U.S. Army Corps of Engineers is providing funding as authorized by Section 569 (Environmental Infrastructure) of the Water Resources Development Act of 1999, as amended. Funding would be cost-shared with the sponsor, the city of Sturgeon Lake, Minnesota, at the rate of 75 percent Federal and 25 percent non-Federal.

Federal funding would be applied to construction of a new sewer line and the rapid infiltration basins. This environmental assessment (EA) is to evaluate the portion of the project for which Federal funds are used. Parts of the project described below are under construction, having been funded by other than Federal funds, and an environmental review was conducted by others.

An environmental review of the proposed action indicated that the project would not result in significant effects on the environment. Therefore, an environmental impact statement will not be prepared. If the public review identifies significant issues, a revised National Environmental Policy Act (NEPA) document may be prepared.

Relationship to Environmental Requirements

The proposed action would comply with Federal environmental laws, executive orders and policies and State and local laws and policies including the Clean Air Act, as amended; the Clean Water Act, as amended; the Endangered Species Act of 1973, as amended; the Fish and Wildlife Coordination Act of 1958, as amended; the Land and Water Conservation Fund Act of 1965, as amended; the National Historic Preservation Act of 1966, as amended; the National Environmental Policy Act of 1969, as amended; Executive Order 11988 - Floodplain Management; and Executive Order 11990 - Protection of Wetlands. The proposed action would not result in the conversion of farmland to nonagricultural uses. Therefore, the Farmland Protection Policy Act of 1981 does not apply to this project.

An Environmental Assessment Worksheet (EAW) describing a proposal to construct a wastewater treatment facility that would discharge treated effluent to the Moose Horn River was placed on public notice on September 2, 2002. A Findings of Fact, Conclusions of Law, and Order indicating a negative declaration on the need for an environmental impact statement was signed on October 21, 2002.

After environmental review for the 2002 proposal had been completed, two governmental agencies raised concerns that the 2002 EAW did not include a description of potential wetland impacts and that no mention had been made about the intention to provide sewer service to the Willow River Correctional Facility. On May 24, 2004, a second EAW was placed on public notice. The only difference between the two EAWs is a description of potential wetland impacts and mention of the force main to be constructed to provide sewer service to the Willow River Correctional Facility. The Findings of Fact, Conclusions of Law, and Order indicating a negative declaration on the need for an environmental impact statement for the 2004 project proposal was signed on July 3, 2004. Ultimately, this project was never constructed.

The complete project, part of which is described in this environmental assessment, differs from the previous two in that it proposes a land treatment option and avoids the direct discharge of treated effluent to the Moose Horn River.

NEED FOR AND OBJECTIVES OF ACTION

The city is currently served by individual sewage treatment systems for wastewater treatment. The city inspected many of these individual systems as part of a study conducted in November 2000 and found that most of those inspected did not comply with current State statutes, which suggests that many of these systems are not effectively treating wastewater. Many noncompliant individual systems located in a discrete area could potentially affect public health and the quality of groundwater and lakes and streams in the area. Because most of the city residents generally have small lot sizes and configurations not conducive to the use of individual systems, individual systems cannot be reconstructed on existing lots and meet all the required setbacks. For this reason, the city has explored a community-wide wastewater treatment alternative.

Wastewater will be generated by the city residents, Willow River Correctional Facility, and visitors staying in the campground during the summer. Currently, the city has 189 residential units. The proposed project is designed to handle a 20-year design population equivalent of 830 people or roughly 293 residential units. This projection includes commercial connections to the city, as well as homes in Sturgeon Lake. Population projections were generated using the city's existing population and adding a 4-percent growth rate.

ALTERNATIVES

No Action

Many of the individual systems in the city do not meet current standards and would continue to constitute a potential public health concern if no action would be taken.

Wastewater Collection and Treatment Alternatives

The city has considered and evaluated other alternatives for the treatment of wastewater over the past several years. The following options were assessed but not selected by the city.

Collection System

Two collection systems were considered – a conventional gravity system and a low-pressure system. The cost analyses indicated that a gravity collection system would best suit the Sturgeon Lake area. The gravity system has a much higher initial capital cost but lower operation and maintenance costs.

Treatment Strategies

The city evaluated three treatment strategies during facilities planning:

1. Community drainfield wastewater treatment. This alternative is similar to individual systems (the treatment method currently used by the city) with one significant difference: septic tanks and drainfields are shared by groups of homes. Individual systems are not feasible for many homeowners in the Sturgeon Lake planning area because of small lot sizes. With community drainfield systems, wastewater would be collected for groups of homes using gravity or low pressure sewers and conducted to a set of community septic tanks. Groundwater monitoring would ensure the quality of the groundwater would not be degraded. Septage must be periodically pumped from the septic tanks and disposed of by trucking it to a land application site or to a municipal wastewater treatment facility.

2. Conventional wastewater treatment. The city evaluated the option of discharging to the Moose Horn River versus exfiltration into the surrounding soils through the use of rapid infiltration basin systems. The surface water discharge option was determined to be the most cost effective; however, this option was not permitted in wake of a decision issued by the Minnesota Court of Appeals on August 9, 2005. The city also considered three alternative types of wastewater treatment systems: stabilization ponds, mechanically aerated ponds, and a mechanical package plant. These alternatives provided the most cost effective treatment solution for the planning area's needs.

3. Regionalization with a local wastewater treatment facility. The city evaluated the alternative strategy of connecting to an existing wastewater treatment facility, the Moose Lake/Windemere Sanitary Sewer District (MLWSSD), located approximately 2 miles north of the Sturgeon Lake planning area. The MLWSSD wastewater treatment facility discharges to the Moose Horn River. The collection system for the MLWSSD currently extends as far south as Sand Lake, which appeared to be the point where connection would be most appropriate. Even though regionalization with MLWSSD had an affordable initial capital cost, when operation, maintenance, and replacement costs were considered, this alternative was the most expensive. Additionally, conversations with the MLWSSD indicated a reluctance to accept flows from Sturgeon Lake.

Proposed Plan

The proposed project essentially contains two components: a collection system, and a rapid infiltration basin system. This proposed project would serve the core area of the city, the Willow River Correctional Facility, and the campground north of the city and would replace the city's individual systems entirely. The stabilization pond and rapid infiltration basin system would be constructed on the west side of the city, north of County State Aid Highway (CSAH) Highway 46 (Figure 1) (project Location: T. 45 N., R. 20 W., Sections 11, 12, 13, and 14).

Collection System

The city is primarily a residential area, with a few commercial locations and a nearby campground. The collection system would be designed to serve the residential areas in the core of the city, the Willow River Correctional Facility, the campground to the north of the city, and any future development within the city.

The collection system would be installed in the road right-of-way, which is typically 66 feet wide. Depending on how far back the residences are set from their property lines, the installation of the collection system could be anywhere from 60 feet to 100 feet from the residences. Additionally, service connections would be installed between the residences and the sewer main. These service connections could be as close as 30 feet from the existing residences.

The collection system would consist of a gravity and force main network with 33 grinder pumps (Figure 2). Raw wastewater would be collected through each connection where it would be pumped by lift stations or flow by gravity to the proposed stabilization pond and rapid infiltration basin system. The collection system would consist of approximately 35,000 linear feet of 8- to 10-inch polyvinyl chloride (PVC) sewer pipe; 130 manholes; seven lift stations; 8,500 linear feet of 2- to 10-foot polyethylene force main pipe; 10,300 linear feet of 6-inch PVC lateral sewer pipe; and 9,600 linear feet of 1 1/4-inch polyethylene lateral pressure pipe.

Construction of the gravity portion of the collection system would involve open trenching. The depth of the trench would vary but would typically be 8 to 10 feet; the width would be 12 to 15 feet. The low pressure and force main components in the system would be

constructed using directional boring methods. The collection system would be constructed in the right-of-way of the existing roads, where possible.

The force main from the Willow River Correctional Facility to Sturgeon Lake would be installed using directional boring (Figure 4). Because of the length of force main, some excavation would be required to set the boring machine and air release manholes. These areas of excavation would be minimal and would be backfilled and restored to their original condition after pipe has been installed.

Rapid Infiltration Basin System

The rapid infiltration basin system would be constructed on the west side of the city, north of CSAH 46 (Figure 2) and would be sized to accommodate growth anticipated over the next 20 years. A stabilization pond system with an average wet weather design flow of 83,000 gpd would consist of three cells: two primary pond cells and one secondary pond cell. Each pond cell would be approximately 4.5 acres in size and have a PVC liner. The pond cells would be operated at a depth of between 2 and 6 feet. The wastewater would be stored and treated within the cells over a period of 210 days (which is the required detention time for the design of a stabilization pond system in the northern part of the State), after which the effluent would be discharged to the rapid infiltration basin system, which would be located approximately 100 feet away from the pond cells (Figure 3).

Rapid infiltration basin systems are shallow depressions dug in moderately to very permeable soils (such as sands and gravels). They operate by receiving wastewater effluent, which slowly infiltrates into the soil, thereby avoiding a direct surface water effluent discharge. The wastewater is further treated as it moves through the soil profile by filtration, adsorption, ion exchange precipitation and microbial action. The treated effluent eventually reaches the groundwater and can be expected to move via subsurface flow to nearby water resources, such as wetlands, lakes or streams. A typical rapid infiltration basin system is managed by repetitive cycles of flooding, infiltration and drying. With a domestic wastewater discharge, the drying period allows any organic material that has collected within the basin to decay and also allows the soil to reaerate.

The proposed rapid infiltration basin system would consist of four individual cells with common dikes between cells. Each cell would be approximately 1.25 acres in size and have a maximum operating depth of 2 feet. In general, effluent within the secondary pond cell would be tested to ensure it meets effluent limits and would then be slowly discharged to one of the rapid infiltration basin cells over a period of days during spring and in fall. A drying period of 1 to 2 weeks would follow the application period. Only one rapid infiltration basin cell would be used for each wastewater discharge event, cycling through the other three before being used again.

Once the secondary pond cell has been emptied, one of the primary pond cells would discharge into the empty secondary pond. This newly transferred effluent would be held until it has been shown to meet effluent limits. This process of transfer/hold/test/discharge would be

repeated until all the ponds are lowered and ready to accept flow until the next discharge period. Note that no discharge to the rapid infiltration basin system would occur during winter.

Dikes would surround each stabilization pond and rapid infiltration basin cell. The dikes have a defined slope shape with the top of the dike designed for vehicular access. Stabilization pond and rapid infiltration basin systems do require some operation and maintenance, such as fence repair around ponds, mowing dike slopes, weed control on pond slopes, and riprap to prevent erosion where the treated wastewater is discharged to the rapid infiltration basin cells.

Construction of the stabilization ponds is underway. Project completion is preliminarily scheduled for September 2008.

ENVIRONMENTAL SETTING

Soils

Soils in the project area consist primarily of Cloquet soils with some Milaca, Omega, Askov and Onamia soils. Cloquet soils are sandy loams that have good to excessive drainage. Milaca soils are very fine sandy loams that are well drained. Omega soils are loamy fine sands that are excessively drained. Askov soils are fine sandy loams that have good to excessive drainage. Onamia soils are very fine sandy loams with excellent drainage.

Wildlife in the area primarily consists of species native to northern Minnesota woodlands, including but not limited to, deer, raccoons, foxes, coyotes, skunks, and songbirds. The proposed project would eliminate approximately 12.1 acres of wooded/forest area. Construction activities would cause some of the wildlife to leave the surrounding areas.

Upon completion of construction, the types of species that return might differ from the existing inhabitants. For example, woodland species that may currently live in the area may not find the pond site a suitable habitat; however, other species that prefer open areas and open water and can tolerate an increased human presence may return or find their way to the area.

The Moose Horn River is also located approximately 110 feet east of the easternmost point of the proposed project location. The National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) General Permit for Construction Activities and the Certificate of Wetland Conservation Act Exemption to be obtained from the Pine County Soil and Water Conservation District will include specific mitigation measures to be provided for erosion control and control of stormwater runoff to ensure that sediment from the construction of the proposed project does not affect the Moose Horn River or other nearby wetlands.

Wetlands

Approximately 38 acres of wetlands are in the project area. The wetlands are primarily type 6 and 7 wetlands, with some type 2 and 3 wetlands. Type 6 wetlands are also known as shrub wetlands and are usually waterlogged during the growing season and populated with alder, willow, buttonbush, dogwood, and swamp privet. Type 7 wetlands are forested wetlands and are usually waterlogged within a few inches of the surface during the growing season and populated with various hardwood, conifer, or deciduous trees. Type 2 wetlands are typically saturated or nearly saturated during most of the growing season, with grasses, sedges, rushes, and various broad-leaved plants. Type 3 wetlands are typically waterlogged early during the growing season with grasses, bulrush, spike rush and various marsh plants, such as cattail.

All the wetlands identified in the project area are under the jurisdiction of the Minnesota Wetland Conservation Act and the U.S. Army Corps of Engineers. None of the wetlands in the project area are identified as Protected Waters by the Minnesota Department of Natural Resources.

Threatened and Endangered Species

Federal listed species are not present in the project area, so none would be adversely affected. Although likely to be in the vicinity, the bald eagle has been removed from the Endangered Species List. It is still protected by the Bald and Golden Eagle Protection Act.

The Minnesota Natural Heritage and Nongame database has been reviewed to determine if any rare plant or animal species or other significant natural features are known to occur within an approximate 1-mile radius of the proposed sites to be disturbed. Based on this review, the Department of Natural Resources identified two threatened mussel species, mucket (*Actinonaias ligamentina*) and round pigtoe (*Pleurobema coccineum*), and two special concern mussel species, fluted-shell (*Lasmigona costata*) and black sandshell (*Ligumia recta*), that have been documented in the Moose Horn River near where the proposed sewer pipeline would cross the river. The Department of Natural Resources also identified the Blanding's turtles (*Emydoidea blandingii*), a State-listed threatened species, to have been reported in the vicinity of proposed construction.

Cultural Resources

In accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, the National Register of Historic Places has been consulted. As of April 1, 2008, no properties listed on or eligible for inclusion on the National Register are at or immediately adjacent to the proposed rural infiltration basins and wastewater collection force main construction areas. No previously recorded archeological sites are in and no prior archeological surveys have been conducted in these two project areas. The rural infiltration basins will be constructed at the existing wastewater treatment facility, which formerly was a gravel pit. The

wastewater force main will be installed in the right-of-way for CSAH 46/Laketown Road between General Andrews Drive and Interstate 35, east of the city of Sturgeon Lake. No buildings or structures with records in the Minnesota State Historic Preservation Office's standing structure files for either the rural infiltration basins are located in Sturgeon Lake township project area or the force main location in Windemere township, both in Pine County. The three properties with records in the standing structure files for the city of Sturgeon Lake itself are outside of and would not be affected by the proposed construction.

AFFECTED ENVIRONMENT

The stabilization pond and rural infiltration basins system would be constructed on a 22.8-acre site, approximately 0.7 mile west of the city. Land in the vicinity of the pond site is predominantly undeveloped, containing aspen forest, brush, and grasslands. North of the site is a series of abandoned gravel pits, the southernmost of which would be graded to accommodate the secondary stabilization pond cell. Wetlands are located along the eastern side of the project site.

Three residences are near the proposed pond and rural infiltration basins system site. The distances of these residences from the pond site are 1,330 feet, 1,480 feet, and 2,420 feet. All three are farther away from the site than the recommended ¼-mile separation distance for stabilization ponds.

A search was conducted of the Master Entities List and Leaking Underground Storage System sites within the city limits of Sturgeon Lake. The Master Entities List search includes a search of superfund, voluntary investigation and cleanup, and dump sites. Both searches confirmed that that no known environmental hazards are located on the proposed construction sites.

Threatened and Endangered Species

The location of most concern to the Department of Natural Resources with regard to the possibility of affected mussels is the sanitary force main crossing the Moose Horn River near CSAH 46 and grading operations for the stabilization pond and rural infiltration basins system. The force main crossing would be directionally-drilled and would not require any disturbance of the riverbed. Boring pits are not anticipated, but, if needed, the pits would be located away from the riverbank, and a silt fence would encircle the disturbed area and excavated material. Upon completion of boring operations, grades would be restored to preconstruction conditions and the silt fence would be removed upon establishment of vegetation. The silt fence would be installed around the perimeter of the area to be graded for the stabilization pond and rural infiltration basins system prior to excavation and would be inspected and maintained during construction. The silt fence would be removed upon vegetative establishment.

Department of Natural Resources recommendations for avoiding and minimizing impacts on the Blanding's turtles would be generally followed. A flyer describing the Blanding's turtle and its life history would be given to each general contractor and would be posted at the contractor's field office. The flyer would also be mailed to each city residence as part of a

construction newsletter. Silt fencing would be installed in areas of grading prior to construction and would be removed promptly after vegetation is established. All areas of trenching would be backfilled and graded to preconstruction contours.

Wetlands

Approximately 11.5 acres of wetlands would be eliminated in the course of constructing the proposed project and the stabilization ponds (Figure 3).

The wetlands that would be affected by the proposed project are primarily type 6 and 7 wetlands, with some type 2 and 3 wetlands affected. All the wetlands identified in the project area are under the jurisdiction of the Minnesota Wetland Conservation Act and the U.S. Army Corps of Engineers. None of the wetlands in the project area are identified as Protected Waters by the Department of Natural Resources.

The Wetland Conservation Act requires anyone proposing to drain, fill, or excavate a wetland to, first, try to avoid disturbing the wetland; then, to try to minimize any impact on the wetland; and, finally, to replace any lost wetland acres, functions, and values. This process is called “sequencing.” For the proposed project, the local government unit responsible for making decisions on Wetland Conservation Act applications is the Pine County Soil and Water Conservation District Board, with the assistance of the local wetland Technical Evaluation Panel, consisting of the Minnesota Board of Water and Soil Resources (BWSR), Minnesota Department of Natural Resources, and the Corps of Engineers.

Through the Wetland Conservation Act process, the city has investigated several alternatives for wetland mitigation, including not constructing the proposed project, construction on alternative sites, using alternative treatment processes, minimizing the wetland impacts, and replacing the affected wetlands through either onsite replacement or wetland banking, all in an effort to reduce or eliminate the impacts of construction on the wetlands in the area. The most cost effective alternative was a combination of minimizing the impacts through designing the stabilization pond and rural infiltration basins cells around the wetlands and replacing lost wetlands through wetland banking.

A wetland banking program, whereby wetlands previously restored or created can be deposited into the wetland bank, was set up under the Wetland Conservation Act and is administered by BWSR. The Wetland Conservation Act allows wetland losses from drain or fill activities to be replaced by “purchasing” acres of restored wetland from the wetland bank. Under the Wetland Conservation Act, for Pine County, where 80 percent or more of the presettlement wetlands exist, the minimum replacement requirement for wetlands to be permanently destroyed is 1 acre of replaced wetland for each acre drained or filled.

The city completed the mitigation process under the Minnesota Wetland Conservation Act for the previously approved project. Through that process, the city has demonstrated compliance with “sequencing” by, first, trying to avoid wetland impacts as much as possible; second, trying to minimize impacts that cannot be avoided; and, finally, replacing the affected

wetlands that could not be avoided. The city replaced the wetlands that were to be affected by that previous project proposal by purchasing 11.5 acres of New Wetland Credits (NWC) and 2.90 acres of Public Value Credits (PVC) from Douglas County Public Works from the State wetland bank, a ratio of 1.25 acres for every 1 acre affected. Because that project was never constructed, the city is hopeful that the Pine County Soil and Water Conservation District will allow the mitigation completed for the previously proposed project to be used to satisfy Wetland Conservation Act requirements for the project described in this environmental assessment.

In addition to following the Wetland Conservation Act procedures through the Pine County Soil and Water Conservation District, the city will also be required to obtain a Section 401 certificate from the Minnesota Pollution Control Agency and a 404 permit from the Corps of Engineers. Staff from the Corps will coordinate with staff from the Pine County Soil and Water Conservation District while issuing permits and approvals affecting the wetlands in the area.

Stabilization pond and rural infiltration basin systems require an SDS Permit from the Minnesota Pollution Control Agency, which is a permit required for any ground surface or subsurface discharge to waters of the State. Compliance with permit conditions is established through periodic sampling and analysis of the groundwater from wells beneath and around the perimeter of the site. Nitrate-nitrogen is the greatest concern for groundwater that enters a drinking water aquifer.

Effluent from the secondary pond would be monitored for fecal coliform bacteria, total ammonia (as nitrogen), total Kjeldahl nitrogen, total nitrate (as nitrogen), chloride, specific conductance potential of hydrogen (pH), total suspended solids (TSS), biochemical oxygen demand (BOD) and flow before it is discharged to the rural infiltration basins. To gather the needed information on the rural infiltration basins' impact to groundwater quality and the water quality within Moose Horn River, the Minnesota Pollution Control Agency staff has determined that the proposed system would require three groundwater monitoring wells located around the perimeter of the rural infiltration basin cells (Figure 6). One would be located upgradient of the subsurface flow of groundwater and two would be located downgradient of the subsurface flow of groundwater. These wells would monitor the groundwater for total chloride, elevation to groundwater, total ammonia (as nitrogen), total Kjeldahl nitrogen, total nitrate (as nitrogen), pH, specific conductance, and water temperature.

Soils in the area are suitable for the construction of the proposed project. Sandy loams will provide a good base on which the piping may be placed. To prevent wastewater in the stabilization pond cells from seeping through the soils to the groundwater, a 30-milliliter PVC liner, which typically last for 50 years, would line the ponds. According to Minnesota Pollution Control Agency guidelines, the maximum seepage loss through the seal must be no greater than 500 gallons/acre/day. Considering a total mean surface area of roughly 13.5 acres for the stabilization pond cells, this equates to a seepage loss of 6,750 gpd. The pond cells would be tested according to Minnesota Pollution Control Agency guidelines prior to operation, including a water balance test, to ensure that the liner has been properly installed and that the ponds do not exceed the maximum seepage loss.

Groundwater elevations do not appear to be a concern with regard to the PVC liner, and a minimum separation distance (4 feet) must be maintained between the liner and the seasonal high groundwater elevation. At least 3 feet of separation would be between the groundwater elevations and the bottom of rural infiltration basin cells.

During construction, the level of traffic would increase as a result of additional vehicles bringing laborers and materials to the area. This increase would temporarily affect the air quality, but it would not violate air quality standards. Upon project completion, the traffic levels would return to normal, and air quality would gradually return to its current levels.

Noise and dust would be generated during construction. Noise mitigation would include restricting the construction hours to those times that will not disturb residents. Construction hours would likely be 7:00 a.m. to 6:00 p.m. Adding water when necessary to prevent dust from forming would mitigate dust generated during construction.

Other Unique Resources

The stabilization pond and rural infiltration basin system would be located within 150 feet of the Moose Horn River, which is known to support a variety of aquatic life (including mussels). The river would be protected during construction of the stabilization pond and rural infiltration basin system.

The Kettle River is 1.35 miles downstream of the proposed discharge and has been designated an Outstanding Resource Value Water. Although effluent discharge from the secondary pond cell to the rural infiltration basin system would infiltrate in the ground and can be expected to travel through subsurface flow to either the Moose Horn River or the groundwater, it would receive treatment above and beyond that achieved in the stabilization pond cells by filtration, adsorption, ion exchange precipitation and microbial action as it moves through the soil profile. Its effect on the Moose Horn River and the Kettle River is expected to be negligible.

Cultural Resources

As of April 1, 2008, no National Register of Historic Places eligible or listed historic properties are within or near either the proposed rural infiltration basins' location at the existing wastewater treatment facility or the wastewater collection force main alignment along CSAH 46. Because the rural infiltration basin and force main would be constructed in areas previously disturbed by gravel pit operations and highway construction, respectively, the Corps believes a cultural resources survey of these areas is not necessary and that the project would have no effect on historic properties. The Corps has requested the Minnesota State Historic Preservation Officer's concurrence with this no effect determination.

Cumulative impacts

The proposed project is designed to treat wastewater flows from the 20-year projected population. A potential future project identified in previous EAWs is the expansion of the

collection system to serve the Cathedral Pines development south of the city. This development is new, with lots sized to provide individual sewage treatment systems. Because these systems are new and working properly, it is anticipated that it would be approximately 15 years before the city would consider extending the collection system to serve this area. Potential cumulative effects between the proposed project and the Cathedral Pines project may include the potential for erosion and sedimentation impacts on the Moose Horn River. Because the development would entail disturbing more than 1 acre of land, an NPDES/SDS General Stormwater Permit for Construction Activities would be required and can be expected to mitigate the potential for a degradation of water quality and the potential for increased volumes of stormwater runoff from the areas to be developed.

Other potential future development projects are dependent on local economics, and the timing of future development is uncertain. Thus, it is difficult to determine how such development may combine with the proposed project and present the potential for cumulative effects. Considering what is known at this time, significant cumulative effects from this project and those that are known and have been approved by the city are not expected.

Table 1. Environmental Assessment Matrix

Section 122 of the River and Harbor and Flood Control Act of 1970 (Public Law 91-611)														
PARAMETER	No Action Alternative						Preferred Alternative							
	BENEFICIAL			ADVERSE			BENEFICIAL			ADVERSE				
	SIGNIFICANT	SUBSTANTIAL	MINOR	NO EFFECT	MINOR	SUBSTANTIAL	SIGNIFICANT	SIGNIFICANT	SUBSTANTIAL	MINOR	NO EFFECT	MINOR	SUBSTANTIAL	SIGNIFICANT
A. SOCIAL EFFECTS				X							X			
1. Noise Levels				X								T		
2. Aesthetic Values				X							X			
3. Recreational Opportunities				X							X			
4. Transportation				X							X			
5. Public Health and Safety						X					X			
6. Community Cohesion (Sense of Unity)				X							X			
7. Community Growth and Development				X							X			
8. Business and Home Relocations				X							X			
9. Existing/Potential Land Use				X							X			
10. Controversy				X							X			
B. ECONOMIC EFFECTS														
1. Property Values				X							X			
2. Tax Revenue				X							X			
3. Public Facilities and Services						X					X			
4. Regional Growth				X							X			
5. Employment				X							X			
6. Business Activity				X							X			
7. Farmland/Food Supply				X							X			
8. Commercial Navigation				X							X			
9. Flooding Effects				X							X			
10. Energy Needs and Resources				X							X			
C. NATURAL RESOURCE EFFECTS														
1. Air Quality				X								T		
2. Terrestrial Habitat				X							X			
3. Wetlands				X							X			
4. Aquatic Habitat				X							X			
5. Habitat Diversity and Interspersion				X							X			
6. Biological Productivity				X							X			
7. Surface Water Quality				X							X			
8. Water Supply				X							X			
9. Groundwater				X							X			
10. Soils				X							X			
11. Threatened or Endangered Species				X							X			
D. CULTURAL RESOURCE EFFECTS														
1. Historic Architectural Values				X							X			
2. Prehistoric & Historic Archeological Values				X							X			

T: Temporary Effect

COORDINATION

Coordination with the Minnesota State Historic Preservation Office is in progress. It is expected that the State Historic Preservation Office will concur that the project as proposed would have no effect on historic properties.

This document has been sent to the following:

U.S. Fish and Wildlife Service
Minnesota Board of Soil and Water Conservation
Minnesota Department of Natural Resources
Minnesota Pollution Control Agency
Minnesota State Historic Preservation Officer

Attachment A

Letter to State Historic Preservation Office (includes plates listed below)

Figure 1 Map showing the general project location in Pine County, Minnesota

Figure 2 Map of rural infiltration basin system

Figure 3 Map of collection system



DEPARTMENT OF THE ARMY

ST. PAUL DISTRICT, CORPS OF ENGINEERS
SIBLEY SQUARE AT MEARS PARK
190 FIFTH STREET EAST, SUITE 401
ST. PAUL, MN 55101-1638

REPLY TO
ATTENTION OF

Planning, Programs and Project Management Division
Environmental and Economic Analysis Branch

**DRAFT
FINDING OF NO SIGNIFICANT IMPACT**

In accordance with the National Environmental Policy Act, the St. Paul District, Corps of Engineers, has assessed the environmental impacts of the following project:

**STURGEON LAKE
PINE COUNTY, MINNESOTA
WASTEWATER COLLECTION AND TREATMENT FACILITY**

The intent of this project is to provide funding under Section 569 (Environmental Infrastructure) of the Water Resources Development Act of 1999 for the construction of a wastewater collection system and rapid infiltration basin treatment system in Sturgeon Lake, Minnesota. The proposed project involves the construction of a wastewater treatment and collection system to replace individual sewage treatment systems that are inadequate and a public health risk. This finding of no significant impact is based on the following factors: the project would have no adverse impacts on fish and wildlife resources or on air and water quality; the project would have short-term minor impacts on the social environment; the project would have no impact on the cultural environment; and continued coordination would be maintained with appropriate State and Federal agencies.

The environmental review process indicates that the proposed action does not constitute a major Federal action significantly affecting the environment. Therefore, an environmental impact statement will not be prepared.

Date

Jon L. Christensen
Colonel, Corps of Engineers
District Engineer