Version 8/08rev

# ENVIRONMENTAL ASSESSMENT WORKSHEET

**Note to preparers: This form and EAW Guidelines are available at the Environmental Quality Board's website at: http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm.** The Environmental Assessment Worksheet provides information about a project that may have the potential for significant environmental effects. The EAW is prepared by the Responsible Governmental Unit or its agents to determine whether an Environmental Impact Statement should be prepared. The project proposer must supply any reasonably accessible data for — but should not complete — the final worksheet. If a complete answer does not fit in the space allotted, attached additional sheets as necessary.
The complete question as well as the answer must be included if the EAW is prepared electronically.
**Note to reviewers:** Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation, and the need for an EIS.

**1. Project title:** Split Rock Lighthouse State Park Campground Expansion

**2. Proposer:** Minnesota Department of Natural Resources, Division of Parks and Trails

| | |
|---|---|
| Contact person: | Deb Boyd |
| Title: | Park Development Consultant |
| Address: | 500 Lafayette Road |
| City, state, ZIP: | St. Paul, MN, 55155-4025 |
| Phone: | 651-259-5595 |
| Fax: | |
| E-mail: | Deb.Boyd@state.mn.us |

**3. RGU:** Minnesota Department of Natural Resources (DNR)

| | |
|---|---|
| Contact person: | Ronald Wieland |
| Title: | Environmental Review Planner |
| Address: | 500 Lafayette Road |
| City, state, ZIP: | St. Paul, MN, 55155-4025 |
| Phone: | 651-259-5157 |
| Fax: | 651-297-1500 |
| E-mail: | Environmentalrev.dnr@state.mn.us<br>Include phrase "Split Rock EAW" in subject line |

**4. Reason for EAW preparation (check one)**

☐ EIS Scoping ☒ Mandatory EAW ☐ Citizen petition ☐ RGU discretion ☐ Proposer volunteered

Minnesota Rules, part 4410.4300, subpart 20 (Campgrounds and RV Parks)

**5. Project location**

| COUNTY: Lake | CITY/TOWNSHIP: Beaver Bay Township | | |
|---|---|---|---|
| TOWNSHIP NAME | TOWNSHIP | RANGE | SECTION |
| Beaver Bay Township | 55 North | 8 West | 32 |
| | | | |

| GPS COORDINATES | CORNER | EASTING | NORTHING |
|---|---|---|---|
| (UTM Zone 15) | Northwest | 622450 | 5229735 |
| | Southwest | 622450 | 5228833 |
| | Northeast | 623261 | 5229735 |
| | Southeast | 623261 | 5228833 |

| TAX PARCEL NUMBERS | | | |
|---|---|---|---|
| 26550828860 | 26550832670 | 26550832820 | 26550832910 |
| 26550832130 | 26550832730 | 26550832830 | |
| 26550832430 | 26550832790 | 26550832850 | |
| 26550832490 | 26550832810 | 26550832852 | |

**Attach each of the following to the EAW:**

- **County map showing the general location of the project;**

  Figure 1 – Split Rock Lighthouse State Park Campground Expansion – General Location, Lake County, Minnesota.

- **U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable);**

  Figure 2 – Split Rock Lighthouse State Park Campground Expansion – Project Area.
  Figure 3 – Split Rock Lighthouse State Park Campground Expansion – Park Map, Summer Use with Project Area.
  Figure 4 – Split Rock Lighthouse State Park Campground Expansion – Aerial Photo.

- **Site plan showing all significant project and natural features s of project**

  Figure 5 – Split Rock Lighthouse State Park Campground Expansion – Proposed Development.

- Attachments to the EAW:

  Attach. A. Natural Heritage Information System Report (DNR) (December 2010).
  Attach. B. Minnesota Historical Society State Historic Preservation Office Correspondence (2011)

**6. Description**

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

The Minnesota Department of Natural Resources (DNR) proposes to expand the campground at Split Rock Lighthouse State Park by constructing access roads and adding up to 77 additional campsites and four camper cabins. The expansion is located within the existing State Park, northwest of Trunk Highway 61 in southern Beaver Bay Township, Lake County.

**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.**

Split Rock Lighthouse State Park (the Park) is located along the North Shore of Lake Superior, approximately 40 miles northeast of Duluth, near the towns of Beaver Bay and Silver Bay, Minnesota (Figure 1). The

historical lighthouse station, managed by the Minnesota Historical Society, and the State Park encompass approximately 2,400 acres and serve as a popular tourist destination, receiving over 343,000 visitors annually (Figures 2 and 3). The Park's campground and associated facilities are open throughout the year. Currently the State Park has a campground with 20 cart-in sites, two of which are handicapped accessible, and four lakeshore backpack sites, three of which are accessible to travelers using the Lake Superior Water Trail. Existing facilities include showers, flush toilets, vault toilets, a picnic area, two picnic shelters, and a trail center. None of the campsites have electrical hookups.

**Proposed Development.** The DNR is proposing to increase the capacity of its camping facilities at Split Rock Lighthouse State Park by developing a campground in an area northwest of Trunk Highway (TH) 61, about one-half mile north of the present camping area. This area, hereafter referred to as the project area, was identified among possible park sites and later selected for designing the facility. The project area refers to the 179 acre area that was studied for selecting, locating, and designing the campground (Figure 4). The State Park's statutory boundary was expanded in 2011 to include the campground site. The construction area disturbed during the campground development would be about 28 acres in size (Figure 5).

The proposed campground expansion includes access roads, approximately 77 electric campsites, four camper cabins, a picnic shelter, a small parking area, several vault toilets, a sanitation building, and a RV dump station/recycling center. The proposed project would be completed in two phases, as funding becomes available, with construction of the first phase beginning no earlier than the summer of 2012 and the second phase at least a year after the first phase. Both phases of construction are described and considered as part of this EAW. The main access road, one campground loop road with 47 campsites, and the sanitation facility would be constructed during the first phase. Three campground loop roads, 30 campsites, four camper cabins, and a sanitary dump station would be built during the second phase. Campsites will be designed to accommodate both recreational vehicles (RV) and tent campers. The sanitation facility will include showers, toilets, water supply system, and a gathering space/shelter. The DNR would internally manage proposed well-water supply/distribution and wastewater collection/treatment facilities for the campground expansion. The project would require the construction of utility lines for distributing electric power supply to its facilities.

The main access road would branch off the existing campground access road at a point just west of the Park's information center. The 0.8 mile access road would pass under a recently constructed TH 61 bridge to reach the proposed campground area. It would be built 18-22 feet wide to handle two-way traffic. The one-way loop roads would be 12-14 feet wide and have a total length of approximately one mile. A 10-foot wide, 0.9 mile non-motorized paved trail would connect the campground to the Gitchi-Gami State Trail (Figure 5).

**Current Condition of the Project Area.** The project area is situated in the watershed of a small intermittent creek that flows through the first flank of hills rising behind the historic Split Rock Lighthouse Station located 0.5 mile southeast of the project area. The project area generally consists of sloping lands along the creek, clayey soils on moderately sloping areas, and rugged slopes and ridge tops, where shallow soils and bedrock outcrops are common. The project area is mostly wooded, with the exception of grassy areas associated with a few residential buildings that have since been removed from the site. No public utilities or pedestrian trails are established on the site. A service road runs in a northwesterly direction several hundred feet southwest of the creek. The project ares is presently used for forest recreation and is managed according to state park objectives. A few residences are located on adjacent private lands but most of the surrounding area is managed by the Lake County Forestry Department according to principles that promote sustainable forestry.

**Assessment of Project Area and Design of Project.** In the 1979 management plan for Split Rock Lighthouse State Park, a semi-modern family campground development was proposed in the Park on the west side of TH 61, where about 80 percent of the Park is located. No suitable sites were identified on the east side of the highway due to the rugged nature of the landscape flanking the Lake Superior shoreline, the proximity of the shoreline, and the occurrence of numerous special elements of landscape and biodiversity. Several potential sites were identified on the west side of the highway and the merits of each were weighed to

determine their suitability. Numerous factors played a part in selecting the final location and in designing the layout of the proposed campground facility. Sites primarily to the south and west of the final proposed campground location were evaluated and removed from consideration due to their landscape and topographic limitations—abundant steep slopes, interspersed wetlands, intersecting water courses, and a greater presence of shallow soils/bedrock outcrops. The suitability for development was also limited by higher costs of developing their access roads and pavement areas. The proximity of the proposed site to the Park's main entrance and facilities improved the feasibility for managing the site as a campground. The proposed site also provided more opportunities for establishing campsites with better access and privacy than the other sites.

Eventually the point of access to the campground expansion was fixed by the selection of the TH 61 bridge site completed this year as part of Minnesota Department of Transportation's (Mn/DOT) Split Rock River to Chapin's Curve project. The bridge was built to provide passage of the Park's internal pedestrian and vehicle traffic underneath TH 61, effectively allowing controlled access to the proposed campground from the nearby Park's visitor center, historical site, Lake Superior shoreline, and other attractions and facilities. The bridge location was selected for its close connectivity to the main Park entrance and fee station. This is a highly desired feature of the site and greatly improves efficiency of campground operations by reducing staff travel from work stations and equipment storage areas. After the campground expansion site was selected, the facility layout was designed to avoid areas with limitations, such as steep slopes, rock outcrops, and wetland areas, to the greatest extent possible.

**Proposed Construction Activity.** Construction will consist of clearing vegetation and preparing sites to support the proposed structures; placing culverts at wetlands or stream crossings; coarse and fine grading, gravelling, and paving the access road, loop roads, and connecting trail; and building the septic wastewater treatment system, vault toilets, four camper cabins, water pump house, well and well house, dump station, and other utilities. The utilities will include electrical main and service lines, water main installation, water treatment and distribution equipment and pipe network. Equipment necessary for the construction will include backhoes, bull dozers, trucks, and blasting equipment. Blasting of the bedrock may be necessary along some segments of the road system and for developing a few campsites. Vegetation clearing and implementing erosion control measures would be sequenced as construction proceeds.

Campsites would be approximately 1000 square feet in size; irregularly shaped; and designed with "pull through" or "single" spur access and parking areas to accommodate recreational vehicles. Pull through access campsites have parking areas with separate entrance and exit ramps. Single spur access campsites use the same ramp for vehicle entry and exit. Typically the access spurs and campsites would have a two to three percent grade and designated parking areas would be leveled. The parking areas would be surfaced with six inches of aggregate and the campsites, with four inches of a mixture of compacted aggregate, sand, and compost. After preparation and grading of the base materials, the campsite areas would be scarified and seeded with approved seed mixes. Each campsite would be fitted with a fire ring and picnic table. An electrical pedestal would be located at the edge of the spur parking area. Some campsites would incorporate a 16 by 16 foot tent pad area. The tent pad may be prepared and surfaced with wood chips or other appropriate materials and framed with timbers.

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

The additional camping facilities would enable visitors to take advantage of the wide variety of outdoor recreation activities along this section of the North Shore. The Park campground is a very popular facility that frequently reaches full occupancy during the summer. The Park staff frequently turns away potential campers. Currently no campsites with electricity are available to RV users. The existing campground has four reservable backpack sites and 20 cart-in sites (fourteen reservable). In 2010, all campsites were occupied nightly during July and August. During June and September, the campground achieved full occupancy 50 percent of the time; and during May and October, full occupancy was reached 25 percent of the time.

Several parks along this section of the North Shore of Lake Superior offer additional camping facilities. Gooseberry Falls State Park, seven miles southwest of the proposed site, offers 69 drive-in sites, three pull-through non-electric sites, one kayak site, and three group camps that each accommodates 50 campers. Tettegouche State Park, twelve miles northeast of the site, has 28 drive-in sites (includes 22 with electricity), five backpack sites, six walk-in sites, 13 cart-in sites, five kayak sites and two group camps that each accommodate 35 campers. The completion of both phases of the campground expansion would increase the number of individual campsites among the three state parks by approximately 50 percent. The number of campsites with electricity would increase from 22 to 99. A few other private campsites are available within a 20 mile radius of the Park. With the high demand for recreational campground facilities along the North Shore, the proposed expansion of the Park campground is not anticipated to impact the other private campgrounds in the area.

**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.**

No future stages are planned for this area. It is likely that some ancillary trail developments will be considered in the future for providing the opportunity for short hikes near the campground or connecting it to existing trails, such as the Superior Hiking Trail that runs within one-mile of the project area. No defined trail location, length, project schedules, or plans are available at this time. The need for environmental review will be assessed when a specific trail project is defined.

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

Use of the State Park and Historic Lighthouse Station has increased over time as their popularity and facilities grew. In 1967, legislative action authorized the establishment of Split Rock Lighthouse State Park. The original statutory boundary, encompassing about 1000 acres, included the Split Rock Wayside, lighthouse, Little Two Harbors, and areas between the lighthouse and Split Rock River. In 1971, the federal government deeded the lighthouse station to the State of Minnesota to be operated as a historic site. In 1976, the Minnesota Historical Society (MHS) assumed operation of the historic lighthouse site within the Park. The Park's present campground facilities, trail center, and picnic shelter were built in 1985. The Historic Lighthouse Station expanded its parking area and opened the visitor center in 1986. The Gitchi-Gami State Trail segment through the Park was completed in 2000. No environmental review was required for the prior campground construction.

**7. Project magnitude data**

**Total project acreage:** 179 acres, of which 28 acres will be disturbed by construction activities.

**Number of residential units:** none **unattached** none **attached** none **maximum units per building**
**Commercial, industrial, or institutional building area (gross floor space):** none **total square feet (sf):** 6,300

**Indicate areas of specific uses (in square feet):**

| | | | |
|---|---|---|---|
| **Office** | none | **Manufacturing** | none |
| **Retail** | none | **Other Industrial** | none |
| **Warehouse** | none | **Institutional** | none |
| **Light industrial** | none | **Agricultural** | none |
| **Other commercial (specify)** | none | | |
| **Building height** | N/A | **If over 2 stories, compare to heights of nearby buildings** | |

The maximum building area for the project would be 6,300 square feet (sf). During the first phase, the sanitation facility (3,600 sf), well house (65 to 100 sf), pump house (100 sf), and water storage structure (500

sf) would be constructed. During the second phase, the Park would build a picnic shelter (250-1,000 sf) and four-250 sf camper cabins, designed as rustic, one room facilities with table, bunkbeds, and benches.

**8. Permits and approvals required. List all known local, state, and federal permits, and 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.**

| Unit of Government | Type of Application | Status |
|---|---|---|
| Lake County | Review of septic system plan (per North Shore Management Zone) | To be obtained |
| MPCA | Section 401 Water Quality Certification | To be obtained |
| MPCA | NPDES Construction Stormwater Permit | To be obtained |
| MPCA | State Disposal System (SDS) Permit | To be obtained if necessary |
| DNR | Wetland Conservation Act Permit | To be obtained |
| DNR | Minnesota Sustainable Building Guidelines B3 | To be implemented for Sanitation Building & Camper Cabins |
| Department of Labor | Building Permit | To be obtained |
| US Corps of Engineers | Section 404 Permit | To be obtained |

**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**.

Early settlements along the North Shore of Lake Superior were dependent on ships to transport goods, timber, and other natural resource between the coastal ports and commercial centers. From 1899 to 1906, the Merrill and Ring Lumber Company logged most of the Norway and white pine from the local area, including accessible tracts within the present boundary of the State Park. Following logging, mixed forests of quaking aspen and paper birch became more common. During peak logging years, the company operated a short railroad up the Split Rock River, where pilings from the old wharf and dam can still be seen jutting out of the water at the mouth of the river (two miles southeast of the project area). Tourism and mining have long been important land uses of the area. There are no mines within the coastal zone, but ports were set up to get ore from the iron range to processing mills.

In 1905, a severe November gale sunk the Edenborn, the Madiera (a tow barge of the Edenborn), and five other ships, within a dozen miles of the Split Rock River. The tragic sinking of these ships fueled the demand for a lighthouse along this section of the coast. The lighthouse and fog signal buildings were completed in 1909 and commissioned a year later. The Split Rock lighthouse guided ships along the treacherous North Shore for the next 59 years, enabling steady commercial development of the area's resources. With the development of advanced ship guidance systems, the lighthouse was no longer needed.

Split Rock Light Station was placed on the National Register of Historic Places in 1969. Two years later, the federal government deeded the lighthouse station to the State of Minnesota to be operated as a historic site. In 1976, the Minnesota Historical Society (MHS) assumed operation of the site. On June 23, 2011 U.S. Secretary of the Interior Ken Salazar announced the designation of Split Rock Light Station as a National Historic Landmark, which denotes a much higher level of historic significance.

Lake County manages lands along the western and northern flank of the project area according to the principles of sustainable forestry, as designated in its Working Forest Management Plan of 2005. The County has traditionally limited its harvest of timber resources along this section of the Park boundary. Only minor

acreage is slated for logging in the watershed containing the project area. Since September 2005, Lake County's forestlands have been certified by SmartWood to the standards of the Forest Stewardship Council (FSC). The FSC certification insures that Lake County lands are managed using the standards and principles of responsible forest management. In addition to Lake County lands, a few private parcels flank the eastern edge of the project area. One of the parcels is seasonally occupied and another one farther east is without buildings but has a road and well. The southern portion of the project area, which has been under DNR's control since the Park's inception, is managed according to the 1979 park management plan.

MPCA's "What's In My Neighborhood" website was reviewed to identify any potential environmental hazards from past land uses. No hazards where identified in the project area. The Split Rock Lighthouse was identified as a small quantity hazardous waste generator and tank site. A diesel leak from a private party was also identified near the State Park. The proposed campground will not affect these hazards or require additional remediation during campground construction and operation.

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

| | **Before (acres)** | **After (acres)** | | **Before (acres)** | **After (acres)** |
|---|---|---|---|---|---|
| Types 1-8 wetlands | 23.0 | 19.0 | Lawn/landscaping | 3.0 | 6.0 |
| Wooded/forest | 151.0 | 146.5 | Impervious surfaces | 2.0 | 7.0 |
| Brush/Grassland | 0.0 | 0.0 | Other (describe) * | | |
| Cropland | 0.0 | 0.0 | Settling ponds | 0.0 | 0.5 |
| **TOTAL** | | | | **179.0** | **179.0** |

*Five settling ponds, totaling about 0.5 acres, are proposed for the project.

Of the 28 acres disturbed by construction, 8.5 acres of forest/wetlands would be permanently converted to: impervious surfaces (5 ac), lawn/landscaping (3 ac), and settling ponds (0.5 ac). The remaining 19.5 acres would be revegetated with ground cover and allowed to revert to grass, brush, or woodland. The construction area also included many small areas, such as the margins of campsites, that would remain vegetated.
**If Before and After totals are not equal, explain why:** N/A

**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.**

**General Landscape Characteristics and Plant Communities.** The Park is within the Laurentian Mixed Forest Province, a broad area of forests, bogs, and swamps found in northeastern Minnesota. The Province's Northern Superior Uplands section generally refers to Minnesota's arrowhead region and coincides with the Canadian Shield in Minnesota. The section is characterized by glacially scoured bedrock terrain with thin and discontinuous deposits of coarse loamy till and numerous lakes. The Park is located in the North Shore Highlands subsection, a narrow strip of land, approximately 20-25 miles in width, which extends along the shore of Lake Superior from Duluth to the Canadian border. The terrain varies from gently rolling hills to steep cliffs and is dissected by numerous streams and drainage ways. Almost the entire subsection remains forested, with aspen and birch forests being the dominant forest type, and white and red pine, mixed hardwood-pine, conifer bog, and swamp communities covering a lesser extent. Major land uses within the subsection are forest management and recreation.

The project area is dominated by young to mature Aspen-Birch forest (hardwood subtype) (FDn43b2). It is a dry to mesic forest community on level to sloping terrain, occurring mostly on clay soils. Some patches have a strong component of conifers, mainly balsam fir and white spruce. The Park's aspen-birch stands typically

have open canopies due primarily to birch decline associated with age, site suitability, insects (bronze birch-borer), heavy deer browsing, or disease. Regeneration of conifers, primarily white cedar and white pine, is also severely limited by recent high levels of browsing by deer and snowshoe hare. Aspen stands in the area are typically comprised of a mixture of species, with aspen being 60 percent of the volume, followed by birch, 16 percent, balsam fir, 9 percent, and spruce species, about 6 percent, as listed in the following table. Aspen and alder are common plants found in wetland areas (Figure 5). The project area contains several small patches of Crystalline-Bedrock Outcrop (ROn12b) and an occurrence of the Bedrock Shrubland (Lake Superior subtype) (ROn23b), totaling less than two acres. A variety of droughty lichens, herbs, and shrubs persist on these harsh sites. About eight acres of the project area are open and grassy due to past residential practices and the development of recreational access corridors.

**Typical Species Composition of Aspen Stands in the DNR forest management area in which Split Rock Lighthouse State Park is located.**

| Species | Percent | |
|---|---|---|
| Aspen | 60.0 | |
| Birch | 16.0 | |
| Balm of Gilead | 1.6 | |
| Maple/Basswood/Oak | 1.8 | |
| Ash | 0.9 | |
| **Deciduous** | | 80.3 |
| Balsam Fir | 9.0 | |
| White Spruce | 3.1 | |
| Black Spruce | 2.5 | |
| Cedar | 0.9 | |
| White Pine | 0.6 | |
| Jack Pine | 0.5 | |
| Red Pine | 0.2 | |
| Tamarack | 0.1 | |
| **Conifer** | | 16.9 |
| **Misc. Species** | 2.8 | 2.8 |

**Wildlife.** The North Shore Highlands provide habitat for many woodland mammals, northern woodland birds, migratory birds, and a variety of other animal groups. Overall, the aspen-birch woodland in the project area has a good to excellent rating for wildlife. The forests provide an important source of food and cover for a wide variety of game and non-game species. Species lists of the North Shore Highlands and accounts provided for nearby Gooseberry Falls State Park, seven miles southwest of the Park, were used to characterize wildlife usage in the project area. Gooseberry Falls State Park bird surveys have recorded 225 bird species and have documented over 150 birds during spring migration. The relatively intact habitat of the Split Rock area is used by mammals (deer, rodents, fox, wolf, moose, etc.), birds (wood warblers, roughed grouse, raven, raptors, gulls, loons and shorebirds) as well as amphibians and reptiles (northern leopard frog, gray tree frog, painted turtle, and others). Seasonal variability of wildlife usage includes: the passing of numerous migratory birds in spring; the ranging or nesting of bald eagles, peregrine falcons, and many wood warblers along the North Shore; the southward migration of the common nighthawk in August, songbirds in September, raptors in September and October, and arctic birds in late October; and northern owls and winter finches sometimes visit from Canada in the winter.

The temporary impacts from operating construction equipment, such as increased levels of noise and air pollution, would affect behavior and movements of local wildlife. The construction of the roads, trails, campsites, and other infrastructure would locally increase forest fragmentation within the Park. A loss of 4.5 acres of forest cover and 4 acres of mostly forested wetlands would occur in the forest matrix that

encompasses the project area. Additional wildlife disturbance could result from the general campground operations, the increased vehicular traffic, and the anticipated higher numbers of recreational user during the spring and summer seasons and moderate rates, during the fall season. Disturbances to resting or nesting wildlife could increase, potentially causing some animals to leave the project area. Wildlife that can adapt to human presence will likely continue to use the area while other animals may move to surrounding wooded areas. The Park's rare coastal forest and cliff top communities are vulnerable to the increase in visitor use and damage caused by pedestrians not staying on designated trails.

Guidelines within the management goals of the state park system emphasize the requirement that natural resources will be protected. Management of the campground would be integrated into the overall Park plan that currently specifies two main objectives: to maintain or reestablish plant and animal life which represents pre-European settlement biotic communities; and to utilize resource management that will harmonize with the Park's natural systems. Specific resource objectives include: avoiding steep slopes for developments other than trails; using the most suitable soils available for developments; eliminating existing erosion or compaction problems; reestablishing some of the original conifer forests; improving hardwood stands; improving habitat for wildlife; and protecting sensitive species and their habitat.

Portions of the project area that were previously impacted by home site development have been incorporated into the campground plans to help reduce forest habitat losses. Reducing erosion and sedimentation rates in the project area would help conserve wetlands, the stream system, and wildlife habitats in the project area. Slopes and disturbed areas along roads, buildings, and campsites would be re-vegetated with native species after sufficient grading. The campground design will maintain patches of forest vegetation that are interspersed between campsites. While providing privacy between units the vegetation buffers would also help to reduce erosion and provide limited habitat for some wildlife species. The dispersion of campsites within surrounding natural vegetation helps reduce the level of disturbances experienced by wildlife around the developments. Efforts to avoid wetlands would help to maintain vegetative buffers along the creek bottoms. The project may benefit wildlife by reducing the affect of the TH 61 road corridor. The underpass would likely become a natural route for animals to move across the highway.

The development of the campground will not limit efforts to conserve the integrity of the surrounding forest habitat managed by the Park and Lake County Forestry. Resource management programs (e.g. invasive species treatments, deer hunts and controlled burns) that require prescriptive 'windows' and changes in standard operating procedures in order to accomplish goals would not be limited by the development of the campsite. Possibly the biggest resource concern post-development of the site, as with most development projects on the North Shore, is the attractiveness of the area's vegetation to deer and hare. Plant restoration activities for the campground will need to include some protection from deer browsing, such as fenced exclosures for protecting vulnerable conifers and sensitive areas.

**Fisheries.** The proposed project is largely confined to the watershed of Unnamed Creek (S-031), which flows through the project area and discharges directly to Lake Superior. Unnamed Creek (S-031) is not designated as a DNR Public Waters or a DNR trout stream. Although the stream has not been sampled for the presence of fish, it is possible that trout use the stream during years of adequate stream flow. Shipwreck Creek (S-032) is approximately 0.1 mile northeast of the project area and Stream Number 30 (S-030) (Split Rock Creek) is approximately 0.7 mile southwest of the project area. Both of the creeks, which are designated as DNR Public Waters and DNR trout streams, would not be affected by the proposed development.

The proposed crossings of Unnamed Creek (S-031) will likely consist of natural bottom culverts or culverts sized to accommodate bank-full events and depressed to allow free movement of substrates and aquatic organisms. Crossings of other seasonal drainageways will likely consist of culverts, possibly including reptile and amphibian crossings.

Lake Superior is oligotrophic, indicating low nutrient levels of the water body. It is the least productive but most pristine of the Great Lakes, and has demonstrated the capacity to support self-sustaining fish populations. Lake Superior supports a variety of sport fishing opportunities, such as open water trolling for salmon and lake trout. No work is proposed directly in Lake Superior. Secondary impacts would result from the potential increase of sediments carried in stormwater runoff. The site will be designed to minimize stormwater impacts and to meet the requirements of the NPDES permit for special waters.

**Species in Greatest Conservation Need.** Species in Greatest Conservation Need (SGCN) are species that have been identified as rare, declining, or vulnerable in Minnesota and their available habitats are declining in quality or extent. The North Shore Highlands subsection contains 84 SGCN, including 25 state or federally listed species. The DNR's Comprehensive Wildlife Conservation Strategy (Tomorrow's Habitat for the Wild and Rare: An Action Plan for Minnesota Wildlife) identifies five key habitats in the subsection as follows:

- Forest – Upland Coniferous (red and white pine)
- Forest – Lowland Coniferous
- Shoreline-Dunes-Cliff/Talus
- Lake – Deep
- River – Headwater to Large

Loss and degradation of habitat is a major factor contributing to the decline of SGCN populations.
The proposed project area mostly consists of widespread cover of aspen-birch forest with minor areas situated along undevelopable ridge tops, where conifers are dominant. These forests provide habitat for approximately 26 SGCN in the subsection. However, with such large areas along the North Shore Highlands dominated by this forest type, it is not considered a conservation target as the key habitats mentioned above.

**Invasive Plant Species.** Construction, campground use and maintenance, other resource management activities and visitor movements within the Park can contribute to the spread of invasive species. Sixteen terrestrial invasive plant species are known to exist within or near the Park and some specific problem areas have been documented. Tansy (very common) and knapweed are targeted and treated because they are more aggressive and difficult to manage. Other species, such as thistle, mullein, and reed canary grass, are treated to prevent or limit new populations or to protect high resource value sites.

The DNR Operational Order 113 provides guidance and directives on agency procedures for implementing site-level management to prevent or limit the introduction, establishment, and spread of invasive species. As a subpart of the order, the DNR Division of Parks and Trails prepared guidelines specific to the lands and programs they administer. The guidance and governance for applying herbicides has also been completed under the DNR Operational Order 59. All herbicide applications would need to comply with labeling, safety protocols, and precautions as prescribed. Pesticide application must be preceded by a natural heritage information database review to insure endangered or threatened species or significant native plant communities are not harmed.

Implementation of Operational Order 113, as defined in the subpart specified for State Parks, State Recreation Areas and State Waysides (G-019), will be incorporated into the project design by reference to help prevent the introduction and spread of invasive species related to the campground development. Prevention measures would include such activities as: assessing the project area for the presence of invasive species prior to initiating work; treatment of invasive species before work begins; locating sources of weed-free materials; cleaning equipment before it arrives and departs; and re-vegetating disturbed areas as soon as possible. The stormwater management protocol requires that revegetation of road shoulders be completed quickly after construction is completed. Invasive species that are found within the project area or along access routes will be managed to minimize their spread and potential for introduction to other areas.

With the increased emphasis on the control of invasive species, as indicated by the updated operational orders, the DNR Division of Parks and Trails has mapped and treated terrestrial invasive species at priority locations throughout the Park for the past several years. Management priorities within the Park are to: keep new invasive species out of the Park and area by cooperating with other DNR Divisions and Mn/DOT; manage existing populations of well-established species; and minimize new establishments, especially during the project's post-development period.

**b. Are any state-listed (endangered, threatened, or special concern) species, rare plant communities, or other sensitive ecological resources on or near the site? X 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 Minnesota Department of Natural Resources, Division of Ecological Resources contact number (ERDB** 20100250) **from which the data were obtained and attach the response from the MDNR, Division of Ecological Resources. Indicate if any additional survey work has been conducted within the site and describe the results.**

The Minnesota Natural Heritage Information System (NHIS) Database was reviewed to determine whether any rare, threatened, or endangered plant or animal species or other significant natural features were known to occur within or near the project area. This query identified one known occurrence of a threatened bird, two colonial waterbird nesting areas, fourteen occurrences of plant species of special concern, and one endangered lichen occurrence within one mile of the project area. Based on the work proposed and the locations of the known occurrences, the proposed project will not affect any of these rare features (Attachment A). The NHIS review and consultation with staff who previously surveyed the Park indicated that a rare plant survey prior to initiating construction would not be necessary.

In addition to the species tracked in NHIS, the Canada lynx (*Lynx canadensis*), a federally-listed threatened species is known to occupy habitats similar to those found on the project area and is known to use the arrowhead region of Minnesota, an 8,000 square mile area designated as Critical Habitat by the U.S. Fish and Wildlife Service. It is possible that the Canada lynx uses suitable habitat in the Park and animals may occasionally pass through the project area. The proposed project should have minimal adverse affects on the Canada lynx. The project area is near a heavily traveled corridor and the Lake Superior shoreline, where distribution records indicate only a minor presence of animals.

The Park contains parts of three contiguous Sites of Biodiversity Significance (SBS) that are ranked as either Outstanding (SOBS) or High (SHBS). The SBS have varying levels of native biodiversity and are ranked based on the relative significance of this biodiversity at a statewide level. The project area falls within two SHBS. The SHBS contain very good quality occurrences of the rarest species, high quality examples of rare native plant communities, and/or important functional landscapes.

The complex of native plant communities occurring within the SBS are a part of a relatively undeveloped landscape and contribute to the high biodiversity of the Park environment. The native plant communities within the SBS have been assigned statewide conservation ranks to prioritize conservation management of natural areas. The project area contains plant communities that have assigned conservation ranks ranging from critically imperiled to relatively secure: Bedrock Shrubland (Critically Imperiled); Crystalline Bedrock Outcrops (Apparently Secure); and Aspen-Birch Forest (Secure) (Figure 5, also Attach. A). In the lower right-hand corner of the figure, it is shown that the access road passes through a patch of Crystalline Bedrock Outcrop. This area has been recently confirmed to be a disturbed site and no longer is a conservation target. The Aspen-Birch Forest community, which covers ninety percent of the project area, and the Crystalline Bedrock Outcrop community are considered secure based on their presence over a relatively large geographic range, relatively large portion of their range still occupied, the number of occurrences, or other factors. Both of the communities are common in northeastern Minnesota. The project area's Aspen-Birch forest cover has fair ecological integrity, suggesting strong evidence of disturbance that has the potential for recovery with

appropriate protection and management. The vegetation composition of this community is consistent with its expected characteristic species. Lake Superior Bedrock Shrubland community that is located along the south boundary of the project area is a rare plant community occurring only in the North Shore Highlands Subsection.

The proposed project would mostly affect the Aspen-Birch Forest community. The 0.2 ac. Lake Superior Bedrock Shrubland community, which is situated away from the project developments, would not be affected. About 8.5 acres of Aspen-Birch forest and palustrine wetlands would be permanently converted to alternative cover types. This forest type is relatively common, secure, and is not considered a key habitat for SGCN. The area of disturbance has been minimized by incorporating about 5 acres of disturbed habitat into the construction area. Wetland disturbances have been minimized and mitigation requirements will be followed (see Item No. 12). The spread of invasive species through construction and use of the campground would be minimized to conserve the affected communities.

Development of the campground would likely increase the number of visitors and length of stay at the Park and the nearby historic site. This could lead to an increased in the exposure of other nearby sensitive areas of the Park, such as Gold Rock Point, located about a mile east of the proposed campground (Figure 3). Additional bedrock shrubland areas (Lake Superior and Inland types), several types of Cliff communities, and the critically imperiled Spruce-Fir Woodland (North Shore) community, located within the Park near the Lake Superior shoreline, could be vulnerable to an increase in use of the State Park.

Gold Rock Point's native plant communities are in proximity to other recreational venues, including the Gitchi-Gami State Trail and the Madeira shipwreck. The DNR has developed measures to protect the natural communities in the Gold Rock Point area. Land access to the shipwreck is only available by permit via a locked gate to a special diver's parking area. A trail has been constructed to enable divers to transport their gear from the parking lot to the shoreline near the wreck. Signs and other tools are used to educate and inform visitors of unique resources, responsible use/behavior, and stewardship. The condition of the nearby sensitive areas will be monitored as needed and additional protection measures would be taken, if warranted.

**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? X 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:** None **Describe alternatives considered and proposed mitigation measures to minimize impacts.**

A small Unnamed Creek (S-031) that drains the project area and the associated wetlands are not on the Public Waters Inventory. Its watershed is approximately one square mile in size. The creek occupies a v-shaped valley with side-slopes generally ranging from 10 to 25 percent (Figure 5). Its channel measures less than four feet across and two feet deep, displays low sinuosity, exhibits "rapids" morphology when flowing, and has a bouldery base. It has a 480 foot gradient between the western rim of the watershed and Lake Superior. The stream gradient below TH 61 is nearly six percent; within the project area, two to three percent; and above the project, two percent. To size the box culvert that was recently built under TH 61, Mn/DOT's hydraulic engineer estimated S-031 stream's flow volume for a 50-year flood at 340 cubic feet per second (cfs), a 100-year flood, 440 cfs, and a 500-year flood,780 cfs. Mean velocities for the respective flood years are: 7.1 feet per second (fps), 7.9 fps, and 9.7 fps. Sixty percent of the project area has slopes ranging above 12 percent. The steeper slopes and bedrock exposures are prone to shed precipitation towards the stream.

The access and loop road system will require the installation of several stream crossings consisting of natural bottom culverts or culverts sized to accommodate bank-full events. The structures will be depressed to allow free movement of substrates and aquatic organisms. Culverts with reptile and amphibian crossings would likely be used for crossing smaller drainages. The Mn/DOT culvert underneath TH 61 has a 208 ft length, 12

ft width, and 7 ft height (inside dimensions). The culvert has a continuous rock bed that aids the movement of aquatic organisms and helps to reduce the creek's flow velocity.

The National Wetland Inventory (NWI) database was reviewed to determine whether any wetlands were located in the project area. No wetland occurrences were identified on the NWI maps. However, during preliminary field surveys conducted by the DNR, approximately 23 acres of wetlands were identified in or within the vicinity of the campground construction area (Figure 5). A preliminary wetland map was completed but additional field mapping and verification will be necessary as part of permit application preparation. The wetlands are found on flats and gentle slopes along the creek channel and are often associated with clayey substrates that retain moisture for longer periods and perch water in the root zone during the growing season. Runoff from shallow bedrock areas and seepage from the stream channel help support the wetland features. The wetland vegetation is dominated by shrubs or trees, typically alder, aspen, and a wetland herbaceous layer and would be considered palustrine forested or palustrine scrub-shrub using the Classification of Wetlands and Deepwater Habitats of the U.S. (Cowardin *et al*., 1979).

Based on the site plans, it is anticipated that three to four acres of wetland could be impacted by the proposed project. Many of the wetland impacts would occur at the stream crossings. Settling ponds proposed for managing stormwater could be placed within wetlands or near wetland (Figure 5).

In October 2009, the DNR's Division of Parks and Trails staff convened a preliminary Technical Evaluation Panel (TEP) to facilitate early coordination for evaluating the potential wetland impacts of the proposed project. The TEP enabled the participation of some TEP members who were soon retiring; gave the panel some familiarity with the project if granted priority status; and provided guidance as the project design continued to evolve. The discussions during the TEP review led to several plan changes to reduce the extent of wetland disturbances. The official TEP review will likely occur during the spring of 2012 as part of the Wetland Conservation Act and Clean Water Act Section 404 permitting processes. The wetland application will be completed once the site has been further surveyed and the TEP recommendations are available.

Natural bottom culverts or culverts designed to accommodate bank-full events would be installed at the crossings to reduce environmental effects on wetlands. Road and side-slope widths will be minimized to the greatest extent practical without jeopardizing safety. Additional ground-truthing will be carried out to fine-tune the placement of campsites, trails, and roads around wetlands. Some wetlands affected by trail development could be avoided by bridging affected areas. Additional wetland sequencing (avoidance and minimization) will be completed as part of the permitting process.

There are no opportunities for wetland restoration within the Park, so the DNR proposes to fulfill the mitigation requirements through the use of wetland bank credits. Currently there are no wetland banks in Lake County. There are approximately 2.5 acres of credits within Bank Service Area 1, which is located along the North Shore of Lake Superior (includes portions of St. Louis, Lake, and Cook counties). Additional credits may be needed outside of the Bank Service Area. The TEP will assist with determining wetland mitigation requirements and opportunities.

**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)?**
**_X_ 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.**

According to a review of the County Well Index developed by the Minnesota Geological Survey (MGS) and the Minnesota Department of Health (MDH), Well No. 113925 is within the project area but on private

property and apparently still used (Figure 4). If any derelict wells are identified during the project construction, they will be capped in conformance with Minnesota Department of Health regulations.

Test wells were drilled to determine flow rates and water quality. The results indicated that the water may need to be treated for boron. A new well with a four inch service line will be used for supplying sufficient amounts of potable water. An above ground water storage system will be built to ensure a continuous supply is available. The water line would generally follow the loop roads servicing the campground. With a thirty percent margin of error added to the use calculation, the maximum use anticipated for the campground is approximately 7,500 gallons per day (GPD) to 10,000 GPD for the summer season only. Water demands were estimated as follows:

| Number of Campsites Proposed | Projected Water Usage per Campsite (gallons/day) | Total Water Usage per Day (Summer Only) (gallons/day) |
|---|---|---|
| 77 | 75 – 100 | 5,775 – 7,700 |

Water use estimates from the Metropolitan Council assume 75 GPD per campsite for a facility with central sanitation facilities. However, a nearby state park campground with similar facilities uses approximately 100 GPD per campsite during the summer camping season. Water usage will be monitored to determine whether actual water use meets or exceeds the projected values. If consumption reaches 10,000 GPD, a water appropriation permit would be applicable.

**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?**
**_X_ Yes _____ No If yes, identify the district and discuss project compatibility with district land use restrictions.**

The proposed project is not located in a 100-year flood plain or within 300 feet of a stream listed as a Public Water. Unnamed Creek (S-031), which drains most of the project area, is not on the Public Water Inventory.

Part of the project's construction area is located within the boundary of Lake County's North Shore Management Zone (NSMZ), which generally follows the northern edge of the quarter-section above and touching TH 61. The boundary of the shoreland zoning district along Lake Superior follows the boundary of the NSMZ. The North Shore Management Plan defines the minimum standards and criteria for the subdivision, use, and development of the shoreland of Lake Superior. The NSMZ compliance calls for the DNR to provide the campground's septic system plan to the County for review when it is available.

The intent of the project is to preserve as much of the natural habitat as possible for the public. Any alterations to existing conditions from the campground development shall be minimized. The mitigation of wetland impacts resulting from the proposed campground construction would be considered on the basis of whether the impacts occur within or beyond the bounds of the Lake Superior shoreland zoning district. In addition, the public value of a wetland and the replacement ratio required for wetland mitigation is contingent on whether the wetland impacts occur within the shoreland zoning district.

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

**16. Erosion and sedimentation. Give the acreage to be graded or excavated and the cubic yards of soil to be moved: _28_ Acres; _67,760 to 135,520_ 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 material moved is based on 1.5-3.0 feet grading depth for access roads and the additional landscaping required for infiltration zones, campsite and parking areas, trails, and building sites.

Soil conditions generally consist of areas of clayey soils and areas of shallow soils and bedrock outcrops. Approximately 60 percent of the proposed construction area has slopes greater than 12 percent that are prone to higher erosion rates. The areas with clayey soils have reduced infiltration rates, which leads to more sheet flow during stormwater events.

The site's limitation has required that additional design specifications and construction measures be incorporated into plans to prevent erosion and sedimentation. Many areas exhibiting limitations that could not be overcome without major soil reclamation or expensive installation procedures would be avoided. Areas with slopes greater than 12 percent would be avoided to the greatest extent possible. A 2:1 back-slope and 3:1 fore-slope grade would be applied along unavoidable steep areas to reduce erosion.

The application for the NPDES Stormwater Permit will include the following erosion control BMPs:

- Silt fence or bio-rolls around the perimeter of graded areas to contain sediment on site.
- Erosion control blankets or mulch for disturbed soils and areas graded with 2:1 slopes or steeper.
- Energy dissipation devices at culvert outfalls.
- Temporary seeding of areas that are not actively being worked.
- Permanent seeding and revegetation with native plant species.
- Settling ponds with rock boulders.
- Rapid stabilization by planting and revegetation.

The rapid stabilization method refers to the application of temporary ground cover protection and reseeding as soon as possible after grading and other site preparations have been completed. The project would use Board of Soil and Water Resource (BSWR) seed mixes recommended for various disturbed habitats, i.e., mesic, wetland, woodland or turf grass seed mixes. The seed mixes and planting instructions will be stipulated in the construction plans. Construction schedules should sequence disturbance events early in the growing season to enable seeding and sufficient growth of the cover crop prior to the onset of winter.

**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 construction zone is approximately 28 acres in size. The development would result in an additional five acres of impervious surfaces. A total of eight acres of impervious surface area (nine acres when including the TH 61 highway corridor) are anticipated after project completion. A model to determine the project's existing and proposed stormwater conditions was developed to predict the additional runoff from the new impervious surface areas. The additional runoff generated will need to be retained and treated on site.

The construction zone is 1,100 feet away from Lake Superior, which is listed as a Special Water per the NPDES permit requirements. Soils of the project area consist mostly of bedrock and clay. Therefore absorption of the runoff from the construction area will require additional control measures. Enhanced runoff controls and stormwater treatment will be incorporated into the proposed project, pursuant to Appendix A of the NPDES permit. These provisions would be outlined in the Stormwater Pollution Prevention Plan (SWPPP) to be completed. Campground development would include the following BMPS to address surface water runoff:

- Areas with the most severe limitations (steep slopes, shallow soils, wetlands) would be avoided.
- During construction, all exposed soils will be stabilized within seven days.Temporary sediment basins will be used if there is a common drainage location that serves an area with five or more disturbed acres.

- The permanent water quality volume of on-site systems will provide treatment for one inch of runoff from the new impervious surface created by the project.
- An undisturbed buffer of 100 feet between construction activity and Lake Superior and Shipwreck Creek (S-032) will be maintained.
- Crushed aggregate would be used on some paths, trails, and parking areas to improve infiltration.
- On-site stormwater management will meet the NPDES requirements by employing a series strategically located swales, rock checks, and ponding areas.

The swales will serve as conveyance and treatment sites. After flowing through the swales, the treated water will flow overland into existing drainage ways. The swales will only have minor capabilities for absorbing runoff but would enable sedimentation by reducing the rate of flow. Eventually sediments would build up behind the rock checks and vegetation would become established (Figure 5). Existing site grades prohibit a centralized stormwater treatment area.

**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 the impact of runoff on the quality of receiving waters.**

Unnamed Creek (S-031) flows from the project area approximately 1,100 feet southeast to Lake Superior. Runoff from approximately 94 percent the project area and the entire construction zone flows into the intermittent creek. The runoff from the remaining six percent of project area flows overland to Lake Superior without reaching any defined creek channel. Lake Superior is included on the MPCA's 2010 Draft 303d List of Impaired Waters as impaired for aquatic consumption due to mercury and PCB's in fish tissue. The proposed project will not result in any additional release of mercury or PCB's into Lake Superior. The use of best management practices, both during construction and campground operation, will limit the environmental effects on Lake Superior waters.

**18. Water quality: wastewaters**

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

Based on water use levels identified under Item No. 13, the maximum amount of wastewater generated at the campground is estimated to range from 7,500 to 10,000 gallons per day (GPD). The flowage applies only to the summer season when the campground is open for use. All wastewater generated from the sanitation facility will be conveyed to a septic system for treatment.

If boron or other materials need to be removed from the campground's water well, additional wastewater may be generated by the water treatment system. The wastewater produced at the RV dump station, vault toilets, and the water treatment system will not be treated on-site but will be hauled to a local wastewater treatment plant for disposal.

**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.**

An on-site Individual Sewage Treatment System (ISTS) designed with a mound system is proposed to treat wastewater generated by the sanitation facility. Soil borings in the project area identified soil conditions, generally consisting of clayey substrates with shallow bedrock areas that often exhibited very limited infiltration rates. A study of possible sites for placement of the mound system was completed to determine whether they had sufficient capacity to treat anticipated wastewater volumes. Preliminary soils tests indicated that a suitable upland site with adequate permeability was available. The proposed ISTS will be located subject to Shoreland Zoning setback requirements and be designed to meet state water quality standards. Per

North Shore Management Zone provisions, Lake County will be provided the septic system plan to review prior to construction.

Provisions in the Subsurface Treatment System (SSTS) rules require an SDS permit when multiple systems under common ownership are within one-half mile of each other and their combined flow is greater than 10,000 gallons per day (*Minnesota Rules*, part 7081.0040, subpart 1B). Permit flows would need to be determined for volumes from both the existing ISTS and the proposed facility, using the methods described in *Minnesota Rules*, part 7081.0130. There are several existing septic systems within the Park that are approximately 0.5 miles away from the proposed system drain field. With the assistance of MPCA, the DNR will fully assess the Park's ISTS system to confirm whether an SDS permit will be needed.

**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**.

Reverse Osmosis (RO) may be necessary for the treatment of well water to remove impurities. Wastewater collected from the water treatment system, the RV dump station, and the vault toilets would be hauled to a local wastewater treatment plant for disposal during the seasons of campground operation. The volume of wastewater that would be produced and need treatment offsite is approximated to range from 2,500 GPD to 3,500 GPD, should well water treatment be necessary.

**19. Geologic hazards and soil conditions**

**a. Approximate depth (in feet) to ground water: minimum:** 0 **average:** More than 6 feet

**to bedrock (feet): Minimum:** 4-8 inches **Average:** More than 5 feet

**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.**

There are no known sink holes, shallow limestone formations, or karst conditions within the study area.

**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.**

The Minnesota North Shore uplands consist largely of bedrock, as opposed to other parts of the state, where deep glacial till is widely expressed on morainal uplands. The boundary between the North Shore Volcanic Bedrock Group and the Beaver Bay Complex geologic units extends from Split Rock Point northward along the western edge of the project area. Most of the project area is underlain by the Beaver Bay Complex, which consists of an extensive mafic dike and sill complex that extends from Split Rock Point to Lutsen. The main bedrock type of the area is Beaver River ophitic olivine diabase bedrock, an extremely hard intrusive igneous rock, which is a fine- to medium-grained, granular olivine. Anorthosite inclusions are exposed on the point where the lighthouse stands and on ridge tops in the project area. The inclusions are gray to pale-green, coarse-to medium-grained anorthosite to gabbroic anorthosite. The eastern valley of the small creek that drains through the area occupies an area containing Baptism River lavas, a bedrock type that is composed of basalt, basaltic andesite and rhyolite, and locally contains porphyritic basalt.

The watershed encompassing the project area ranges from 610 feet to 1090 feet in elevation. Landforms in the project area include steep slopes and ridge tops where soils are shallow or the bedrock is exposed, moderate to gentle slopes of clayey glacial till, and a stream-eroded valley caused by rapid downcutting after glaciation. A large portion of the project area has deep clayey substrates but coarser textured silt and sand deposits are also encountered.

A preliminary soil survey from the Natural Resource Conservation Service (NRCS) is available for part of the project area. The soils of the west and central part of construction area are composed of: Ahmeek, Badriver, Barto, Cuttre, Greysolon, Miskoaki, and Sanborg Soil Series and rock outcrops. Ahmeek and Barto are respectively, deep or shallow soils, associated with bedrock outcrops, and consist of sandy and gravely loams formed from glacial till materials. Barto and Greysolon soils are found on gentle slopes on upper or shoulder hill slopes. The soils are usually quite shallow, ranging from 8 to 20 inches and from 20 to 40 inches deep to bedrock, respectively. The Badriver and Sanborg Series are comprised of deep clayey glacial till on gentle to moderately sloping areas. Badriver soils that occur on 0 to 2 percent slopes are often hydric, with saturation at the soils surface occurring during the spring and early summer. Cuttre Series are somewhat poorly drained soils on gentle slopes formed in clayey till materials. Miskoaki Series are also formed in clayey till and consist of well drained soils generally situated on steeper slopes. Both Cuttre and Miskoaki Series are found in mapping units that contain inclusions of wetland soils on flats and floodplains along the creek channels. The wetland soils are saturated at the soil surface from April through July. Quetico soils are found on ridge tops south of the construction area.

Soils in the construction zone were evaluated to determine whether their engineering qualities would meet the requirements of the proposed campground. Deep borings were mainly dug along the main access road and in the area proposed for the sanitary facility. The soil borings identified mostly fine alluvium, lacustrine deposits, till, and some coarse alluvium. Most of the test borings terminated in clay deposits. Most of the deep borings were completed in the areas supporting the Badriver or the Miskoaki soil units. Additional three-to-seven foot borings were dug by hand in areas inaccessible to the drill rig (generally in the northeast and southwest campsite areas). Bedrock or rock obstructions were frequently encountered between 0.5 feet to 7 feet below the ground surface.

The soils identified from the borings were characterized to have moderate to high strength and stability; slight to moderate compressibility under anticipated structural loads; moderately frost susceptibility; and low to very low permeability. The study recommended that organic, disturbed, wet, or soft soils and larger rock materials be removed from building areas. Some fill materials and grading may be necessary to improve conditions for construction of stable building foundations. Unsuitable soil materials along some road segments will need to be removed and replaced with qualified fill materials. Specific excavation, bedding, and trench backfill recommendations for utility lines were defined in the report. Increased potential for runoff in the construction zone and encounters with boulders and cobbles, bedrock areas, and unstable side slopes will pose construction challenges at some locations. On-site observation by a geotechnical engineer or a representative is recommended to evaluate potential differences in soil conditions from those found at boring sites.

The upland soils of the project area have a low susceptibility for groundwater contamination. The NPDES Construction Site permit requires a site specific Stormwater Pollution Prevention Plan (SWPPP) to be completed for construction. This SWPPP is required to include pollution prevention management measures for solid waste and hazardous material spills that occur during construction. Refueling spills and equipment breakdowns, such as a broken hydraulic line, could introduce contaminants into the soil during construction. Equipment operators are instructed to take precautions when refueling equipment. Refueling would be conducted away from surface waters and equipment would be regularly inspected and repaired to prevent inadvertent loss of fuels, oils, or other hazardous fluids. If chemicals are to be located on site, they are anticipated to consist of chlorine for water treatment. If stored on-site, secondary containment will be established. Spills will be reported to the Minnesota Pollution Control Agency and Lake County.

**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.**

Sludge, animal waste, and ash materials will not be generated during construction or operation of the proposed project. General municipal waste will be disposed of using a local garbage hauler. Recycling containers will be provided at the RV dump station/recycling center and the materials will be collected by a local waste management company. Signage will be used to encourage recycling of acceptable types of food and beverage containers.

**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**. N/A

**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.** N/A

**21. Traffic. Parking spaces added**: 100 spaces: 77 (one per campsite) + 8 (2 per camper cabin site) + 15 (sanitation facility parking lot).

**Existing spaces (if project involves expansion)**: 24 spaces (at two existing parking lots for visitor center)

**Estimated total average daily traffic generated**: 425 trips per day (peak weekday)

**Estimated maximum peak hour traffic generated and time of occurrence:** 43 trips per hour (PM peak hour)

**Indicate source of trip generation rates used in the estimates:** Daily traffic is based on assuming up to 4 trips per campsite. PM peak hour is based on ITE Trip Generation Manual (8th addition).

**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 format and procedures described in the Mn/DOT Transportation's Traffic Impact Study Guidance (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.**

Trunk Highway 61 connects Duluth to Thunder Bay, Canada, and provides the main access to the North Shore on Lake Superior. The highway follows the coastline, generally staying within a mile of the lake. The existing (2008) average daily traffic (ADT) on TH 61 is 4,000 vehicles per day. Recently reconstruction and realignment of the section passing through the Park was completed. The Split Rock River to Chapin's Curve project (SP-3806-60) purpose was to provide smoother and safer driving surface, improve drainage, improve access to a parking lot at Split Rock River, build a new pedestrian underpass at Split Rock River, and build a bridge to allow access to the proposed project area. The lane configuration on TH 61 included a raised concrete median with an eastbound right turn lane and a westbound left turn lane. The existing traffic conditions and lane configuration pose no capacity or safety concerns at this time. No additional traffic improvements are necessary to accommodate the proposed campground expansion. The highway project has greatly improved the conditions necessary to safely access the proposed campground expansion area.

**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.**

The machinery and vehicles used during the construction and operation of the proposed project will result in an increase in air emissions in the project area. Diesel fuel exhaust emissions contain pollutants such as carbon monoxide, nitrogen oxides, reactive organic gasses, sulfur dioxide and suspended particulate matter, all of which carry associated health risks.

Local vehicle-related air emissions are anticipated to increase moderately as a result of the use and operation of the campground expansion. The proposed campground may reduce some trip distances by providing accommodations near the visitor's primary destinations of interest. The DNR promotes the use of pedestrian modes of travel in the State Park by offering a wide variety of hiking and biking trails to enjoy the Park's natural features or to access nearby points of interest.

**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.**

No stationary source air emissions would be created by the proposed project.

**24. Odors, noise and dust. Will the project generate odors, noise, or dust during construction or during operation? X 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.)**

Construction activities at the site would create some temporary odors, dust, and noise during the project development. Blasting of bedrock may be necessary to prepare approximately five campsite platforms and a few sections of the road system. The blasting would be temporary and performed in conformance with local and state requirements. Construction activities will be limited to normal daily work periods and conducted during the summer months only.

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

| | | | | |
|---|---|---|---|---|
| **Archaeological, historical, or architectural resources?** | **X** | **Yes** | ____ | **No** |
| **Prime or unique farmlands or land within an agricultural preserve?** | ____ | **Yes** | **X** | **No** |
| **Designated parks, recreation areas, or trails?** | **X** | **Yes** | ____ | **No** |
| **Scenic views and vistas?** | **X** | **Yes** | ____ | **No** |
| **Other unique resources?** | **X** | **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.** The Minnesota State Historical Society (MHS) was contacted for information regarding historical, architectural or archaeological resources within the project area. Identified resources from the MHS review include: Gitchi-Gami State Trail; Split Rock Lighthouse; and Split Rock Lighthouse overlook, located immediately southeast of the proposed project in the existing campground (Attachment B). In 2009, an on-site archaeological survey by an approved MHS archaeologist identified no historical or cultural properties within the footprint of proposed developments. The field report will soon be completed and sent to the State Historic Preservation Office for review. The report will summarize the findings and provide conclusions to the survey that the proposed project would have no impact to existing historical, architectural or archaeological resources. The campground expansion would enable more people to visit the public historical sites in the vicinity.

**Designated Parks, Recreation Areas or Trails.**

Split Rock Lighthouse State Park – The project would expand the camping and recreational opportunities offered at the Park. The Park offers a variety of recreational opportunities including 0.3 mile of handicapped-accessible trail, 6 miles of self guided hiking trails, and 6 miles of natural surface biking trails. In the winter,

snowshoeing is available throughout the Park and cross country skiing is promoted on eight miles of groomed trails. In total, about 14.5 miles of trails are available for biking, hiking and cross-country skiing. Popular water-based recreational activities include scuba diving and sea kayaking in Lake Superior. Two other state parks that provide similar yet unique amenities and recreational opportunities are located nearby. Gooseberry Falls State Park is located seven miles southwest of the proposed site and Tettegouche State Park is twelve miles to the northeast.

Split Rock Lighthouse Historic Site – The Split Rock Lighthouse Historic Site is operated by the Minnesota Historical Society and includes a parking lot, visitor center, gift shop, and a variety of historical buildings, including the picturesque lighthouse structure. The Historical Society offers tours of the historical site from mid-May to mid-October.

Gitchi-Gami State Trail – When complete, the Gitchi-Gami State Trail, a paved bike trail, will run along an 86-mile corridor from Two Harbors, via Split Rock Lighthouse State Park, to Grand Marais. Much of the trail alignment will be located within Highway 61 right-of-way or on adjacent abandoned segments. The trail will eventually connect several North Shore communities, five state parks, four Scientific and Natural Areas, and numerous historic sites. It provides many scenic vistas of Lake Superior.

Currently, 21 miles of the Gitchi-Gami State Trail have been completed and paved, including the 4.2 mile segment that passes through the Park. The longest completed segment passes through the Park, starting at Gooseberry Falls State Park and ending at the Beaver River in Beaver Bay, a distance of 13.1 miles. This segment provides access to Thompson Beach, Twin Points Lake Superior Public Water Access and the Split Rock River beach. A pedestrian trail that follows the proposed project's access road would connect the campground expansion to the Gitchi-Gami State Trail.

Superior Hiking Trail – The Superior Hiking Trail is a 277-mile footpath that follows the rocky ridgeline above Lake Superior from Duluth to the Canadian border. With trailhead access and parking available every 5-10 miles and over 80 well distributed backcountry campsites, the Superior Hiking Trail is an ideal destination for day hikes and backpack camping. Volunteers of the Superior Hiking Trail Association build, maintain, and manage the trail. The trail runs less than a mile west of the project area.

Lake Superior Water Trail – The Lake Superior Water Trail extends from St. Louis Bay in Duluth to the Pigeon River on the Canadian border, a distance of approximately 150 miles. The water trail is primarily used by sea kayakers. Its development and maintenance is a joint effort of the DNR and the Lake Superior Water Trail Association of Minnesota. Three of the existing campsites within the State Park are accessible from the water trail.

Although the campground would enable additional access to the Park, historical sites, and trail systems, the proposed project would not adversely impact them.

**Scenic Views and Unique Resources.** A number of scenic views of Lake Superior and its surroundings are available from locations near the project area. The Split Rock Lighthouse Historic Site provides scenic views of the historic lighthouse, one of the most photographed lighthouses in the United States. Scenic views are available from Gold Rock Point, Split Rock Point, and Corundum Point (Figure 3). A parking area and trail for scuba divers are available near Gold Rock Point to access the lake and the Madeira shipwreck, a popular destination for scuba divers. The proposed project would not affect any of these scenic views or resources.

Lake Superior is the largest, coldest, and deepest of the five Great Lakes of North America. The lake is the largest freshwater lake in the world by surface area and third by volume. It has average elevation of about 600 feet above sea level, a maximum depth of over 1,300 feet, covers a surface area of 31,700 square miles, and an average water temperature of 40 degrees Fahrenheit. The proposed project would not affect the views or access to Lake Superior.

**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 X No**
**If yes, explain.**

No environmental effects associated with visual glare or exhaust plumes would occur during construction and campground operation. The proposed sanitation facilities and other campground facilities will likely be lit throughout the night to improve camper convenience and safety. The lights will use low intensity bulbs, stand below the canopy of surrounding trees, and project downward to minimize light pollution.

**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? X Yes ____ No.**
**If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.**

In 1979, the DNR approved "A Management Plan for Split Rock Lighthouse State Park." This plan described the need for and proposed the expansion of the Park and campground facilities. The surrounding land use along the Park boundary is largely forest management administered by Lake County; some commercial resort and residential areas are near the project area. The existing campground is considered a public commercial land use. The proposed project is compatible with the mission of the State Park and its management plan. No conflict with the uses of adjacent lands is expected.

**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 X 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.)**

During planning for the reconstruction of the TH 61 segment that passes through the Park, the DNR collaborated with Mn/DOT to design a way for local park traffic to safely reach park lands on the northwest side of TH 61. The Mn/DOT agreed to include a new TH 61 bridge to allow access to the project area from the existing campground road. The proposed bridge (Bridge 38015), which has already been constructed, is similar to the one successfully used at Tettegouche State Park to access its main campground. The reconstruction of TH 61 has recently been completed.

No public utilities exist on the project area. The project would require the construction of a utility line to connect the campground to an electric power supply.

**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).***

The proposed project will entail the construction of access roads, campsites and companion parking spaces, electric and water utility lines, and sanitary facilities. The potential environmental effects related to this project could combine with environmental effects from other past, present, or reasonably foreseeable future projects for which a basis of expectation has been laid. Stormwater runoff and loss of habitat are

environmental effects from the project that could locally contribute to cumulative potential environmental effects.

The Mn/DOT's Split Rock River to Chapin's Curve road improvement project on TH 61 has recently been completed. This work involved constructing safety improvements, straightening curves, flattening hills, installing a pedestrian underpass and parking slots at Split Rock River, establishing signage, striping and vegetation. The project will make the road safer for the traveling public and provide safe access for internal park vehicles to the west side of the highway.

Streams generally maintain a stable channel if the amount of impervious surfaces in the watershed is kept below five percent. The watershed in which the project area is located was analyzed to determine its impervious surface (IS) area. Two projects, the TH 61 reconstruction project and the proposed campground development, would produce additional IS area within the watershed. Prior to the projects being constructed, about 0.6 percent of the watershed was IS area (0.5 ac along TH 61 and three acres in the rest of the watershed). The TH 61 project increased the IS area of the watershed by 0.3 ac and the proposed campground expansion project would increase the IS area by five acres. After the projects are completed, the IS area is estimated to be approximately 8.8 acres, which represents about 1.4 percent of the watershed. The cumulative impervious surface area would not reach a threshold in which the stream would likely begin to show instability.

Most of Lake County's forest harvesting activities would be conducted outside of the watershed of Creek S-031. Several other stands are slated for harvest or were recently harvested in adjacent watershed to the north and west of the project area. A 35-acre portion of a timber stand of aspen and senescent birch, which is located in the Creek S-031 watershed, was sold for harvest in 2008. At this time it has not been harvested. The stand is about one-half mile away from and at an elevation about 100 feet above the proposed construction area. Logging of the stand could occur during the period that the campground expansion is under construction. Logging would be conducted according to guidelines established in the Sustainable Forest Resources Management Act. Winter logging is a mitigation technique used by foresters to prevent soil and ground cover disturbances. No other stands within the watershed and nearby areas are slated for harvest for the next five or ten years.

Several minor development/maintenance projects within the Park are scheduled to occur during the 2012 construction season. They include making access improvements at the trail center, picnic shelter, and Little Two Harbors trail, parking stalls, and cart-in campsites. Repaving the trail center parking lot is also planned. Some minor soil disturbance would occur when implementing these improvements. According to Lake County officials, no other known or proposed development projects in the vicinity of the proposed project are being planned or under development at the present time.

Stormwater management of the proposed campground will incorporate a variety of BMPs designed to limit the project's contribution to cumulative potential effects from surface water runoff. Combined wildlife habitat loss is relatively minor compared to the habitat available and types of habitat that will be affected by these projects. The Park goals are to maintain or reestablish plant and animal life which represents pre-European settlement biotic communities; and to utilize resource management that will harmonize with the Park's natural systems. Actions that would meet these goals include controlling invasive species, protecting habitats from further development, controlling stormwater runoff, and encouraging compatible types of outdoor recreation.

The area surrounding the proposed development has historically been forest recreation, residential, public commercial, and resort commercial land uses. The County's Comprehensive Plan indicates there are no future land use plan or zoning changes. This project will include minimal land use change and is compatible with the surrounding land uses. The cumulative environmental effects of the proposed project on the watershed and other resources in the area are expected to be limited and manageable.

**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.**

No other potential environmental impacts have been identified; all known or anticipated environmental impacts have been addressed under Items 1 through 28.

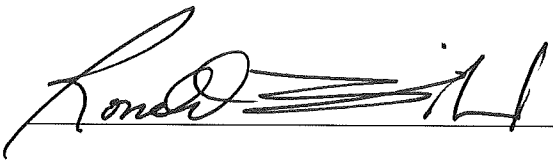
**31. Summary of issues.** ***Do not complete this section if the EAW is being done for EIS scoping; instead, address relevant issues in the draft Scoping Decision document, which must accompany the EAW.***
**List any impacts and issues identified above that may require further investigation before the 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.**

No additional issues have been identified that require further investigation before this project can begin.

**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**  **Date** **December 22, 2011**

**Title** **EAW Project Manager for the Minnesota Department of Natural Resources**

**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.***