UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Upper Peninsula Power Company Project No. 10856-061--MI

NOTICE OF AVAILABILITY OF ENVIRONMENTAL ASSESSMENT

(June 11, 2008)

In accordance with the National Environmental Policy Act of 1969 and the Federal Energy Regulatory Commission's regulations, 18 CFR Part 380 (Order No. 486, 52 F.R. 47879), the Office of Energy Projects has reviewed Upper Peninsula Power Company's proposed shoreline management plan for the Au Train Hydroelectric Project, located on the Au Train River in Alger County, Michigan, and has prepared an Environmental Assessment (EA).

A copy of the EA is on file with the Commission and is available for public inspection. The EA may also be viewed on the Commission's website at http://www.ferc.gov using the "eLibrary" link. Enter the docket number (P-10856) excluding the last three digits in the docket number field to access the document. For assistance, contact FERC Online Support at FERCOnlineSupport@ferc.gov or toll-free at 1-866-208-3676, or for TTY, (202) 502-8659.

Any comments on the EA should be filed by July 14, 2008 and should be addressed to the Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1-A, Washington, D.C. 20426. Please reference the project name and project number (P-10856) on all comments. Comments may be filed electronically via Internet in lieu of paper. The Commission strongly encourages electronic filings. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's website under the "eFiling" link. For further information, contact Jon Cofrancesco at (202) 502-8951.

Kimberly D. Bose,
Secretary.

ENVIRONMENTAL ASSESSMENT

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Administration and Compliance
Washington, DC

Au Train Hydroelectric Project
FERC Project No. 10856-061

I. APPLICATION

Application Type:	Au Train Shoreline Management Plan
Date Filed:	November 29, 2007
Applicant's Name:	Upper Peninsula Power Company
Water Body:	Au Train River
County and State:	Alger County, Michigan
Federal Lands:	The project does not occupy any Federal lands

II. BACKGROUND

The Federal Energy Regulatory Commission (Commission or FERC) issued a license for the 0.9-megawatt (MW) Au Train Hydroelectric Project (FERC No. 10856) to Upper Peninsula Power Company (UPPCO or licensee) on June 26, 1997.[1] The project is located on the Au Train River in the central portion of Michigan's Upper Peninsula, about 7 miles south of the town of Au Train, Michigan, and about 15 miles southwest of Munising, Michigan (figure 1). The project consists of (1) a 1,500-foot-long dam with a spillway section topped with 2-foot-high wooden flashboards; (2) a 2,516-foot-long steel pipeline connecting the impoundment intake to the surge tank; (3) an impoundment with

[1] 79 FERC ¶62,217, Order Issuing Original License (Minor Constructed Project), June 26, 1997.

a storage capacity of 12,342 acre-feet and a surface area of approximately 1,557 acres at elevation 780 feet local datum (781.7 feet above mean sea level [msl]); (4) a powerhouse containing two turbine generators with a total installed capacity of 1,120 kilowatts (kW); (5) a 2.3-kilovolt (kV), 2,500-foot-long overhead transmission line; and (6) an earth-filled dike at the south end of the basin (referred to as the south levee) that is designed as a non-overflow structure. The powerhouse discharge bypasses 0.7 mile of the Au Train River.

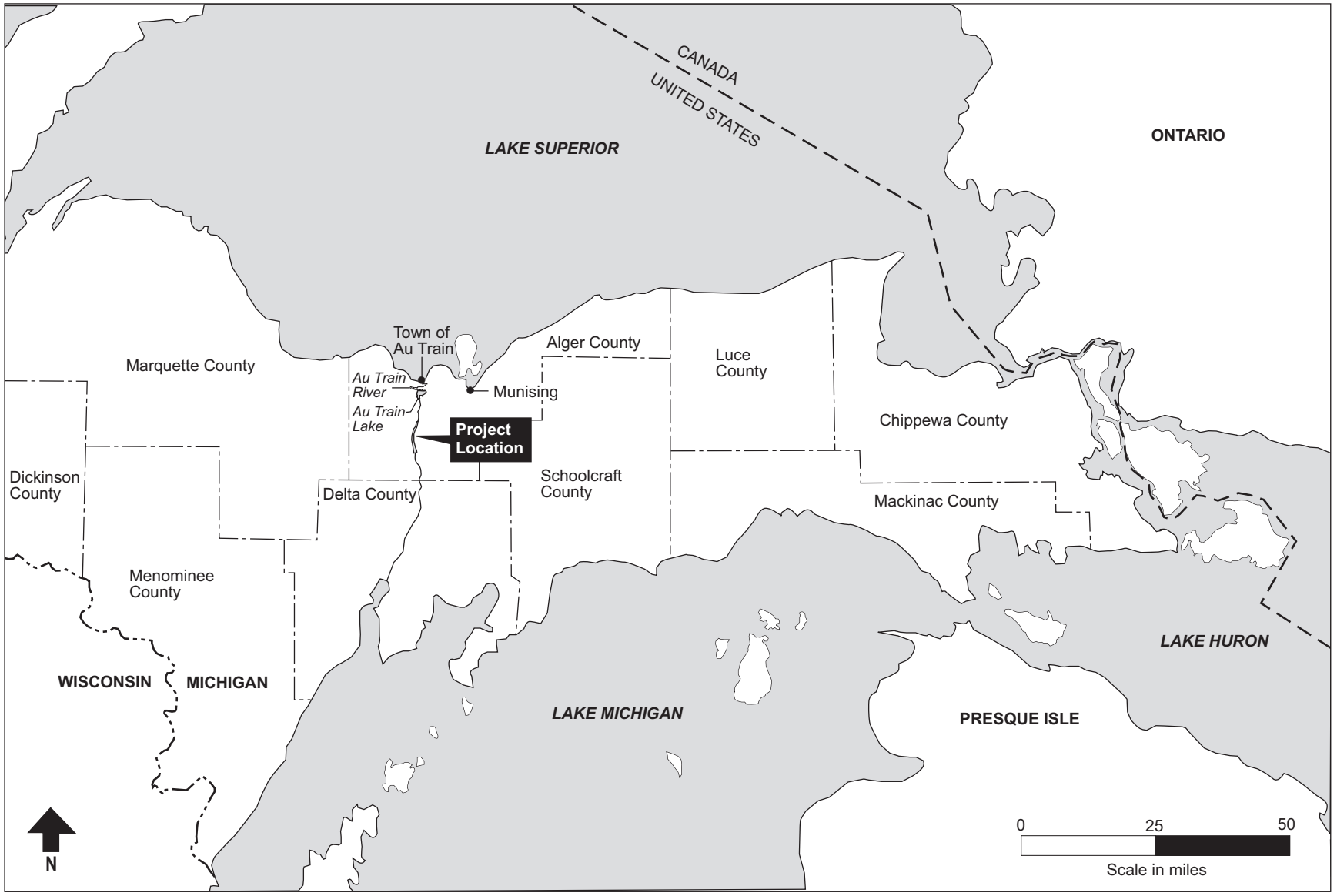

Figure 1. Location map of the Au Train Project.

The Au Train River flows in a northerly direction from the dam to Au Train Lake (not part of the Au Train Project), about 6 miles downstream. From the outlet at the northern end of Au Train Lake, the Au Train River meanders about 8.5 miles north to Lake Superior.

The licensee is required, pursuant to the project license, to operate the project in a modified run-of-river mode, with a steady drawdown of the impoundment in the winter and impoundment draw-downs as necessary at other times of the year to provide a continuous minimum powerhouse discharge of 50 cubic feet per second (cfs). The licensee is further required to maintain an absolute minimum water surface elevation in the impoundment of 772.0 feet local datum (773.7 feet above msl).

The impoundment is approximately 1,530 acres in size and has more than 15 miles of shoreline. The project boundary generally includes all licensee-owned lands within 200 feet of the impoundment shoreline and along the river downstream of the dam. The width of this buffer zone varies as necessary according to topography or species habitat needs.

III. PURPOSE AND NEED FOR ACTION

On November 29, 2007, UPPCO filed a proposed shoreline management plan (SMP) for the Au Train Project to address the land use pressures and potential impacts anticipated from UPPCO's potential future sale of adjacent non-project lands to residential real estate developers. The licensee has also requested to amend its approved recreation plan and comprehensive land management plan (CLMP) to include the recreational enhancements specified in the SMP. The Commission must determine whether and under what conditions to approve the proposed SMP and amendment requests.

Currently, the licensee manages shoreline resources and development activities at the project through certain license conditions (includes the implementation of the historic resources management plan [HRMP] [Article 408] and the standard land use article [Article 410]) and Commission-approved plans filed pursuant to license requirements (includes the operation and compliance plan [Article 402], noxious plant monitoring plan [Article 404], bald eagle protection plan [Article 405], wildlife management plan]Article 406], CLMP [Article 407], and recreation plan [Article 409]).

UPPCO's approved CLMP includes the delineation of a buffer zone of about 200 feet around the impoundment and downstream of the dam. The objectives of the plan are to manage timber resources in the buffer zone using aesthetic management practices that make the resource available for consumptive and non-consumptive uses, protect and manage for endangered and cultural resources, and use Best Management Practices (BMPs) for all ground-disturbing activities within the buffer zone. The CLMP provided

provisions for annual consultation efforts with MDNR. A review of the record in this proceeding indicates that currently there are three docks on the impoundment. UPPCO's filing of the proposed SMP at this time indicates its desire to codify existing policies and to be proactive in ensuring that inevitable future development, whether or not UPPCO follows through with its future land sale to residential developers, on adjacent lands does not impact the natural resources of project lands. The proposed SMP would zone the lake according to the location of natural resources and allow or prohibit activities accordingly. This zoning system would be something beyond what is already required by the above-mentioned approved plans. When an applicant applies to UPPCO for permission to use certain project lands or waters, UPPCO would have a convenient reference or tool to help it decide whether and under what conditions to allow the activity.

UPPCO's approved recreation plan includes, among other things, two formal recreation sites on the impoundment, a formal viewing area at the Upper Au Train Falls overlook, directional signs, and interpretive signs. UPPCO proposes to fund recreation enhancements within the Au Train Project boundary as part of its overall SMP. The majority of these recreation enhancements are not currently required as part of the approved recreation plan. UPPCO proposes these recreational enhancements to accommodate anticipated increased general public recreation use of the impoundment that would inevitably occur and increased use that may occur as the result of anticipated development of non-project lands[2] in the vicinity of the project and increased economic activity in the region. In addition, some enhancements are being proposed to upgrade public boat access sites to conditions that would be more user-friendly and, in some cases, barrier free, to meet public expectations for water access.

IV. PROPOSED ACTION AND ALTERNATIVES

1. Proposed SMP

UPPCO's plans to sell most of its non-project lands to residential real estate developers would result in increased residential development and increased use pressures on project environmental resources. The licensee states in its proposal that a maximum of 193 private boat slips are proposed at the Au Train impoundment. The proposed SMP is intended to improve upon existing practices and help protect and enhance the impoundment's natural resources and the project's primary function, the production of electricity. The proposed SMP is also intended to provide public recreational enhancements and direct, manage, and mitigate the impacts of anticipated development

[2]The project boundary must enclose only those lands necessary for operation and maintenance of the project and for other project purposes, such as recreation, shoreline control, or protection of environmental resources. Non-project lands are located outside of the project boundary and considered not needed for operation and maintenance and other project purposes.

of non-project lands so as to complement or have neutral effects on those natural resources.

The licensee's proposed plan includes a description of the project and adjacent land uses, current management policies, SMP classification and guidelines, proposed development and recreation enhancements, expected impacts of implementing the SMP on the natural resources in the area, enforcement procedures (permits, oversight), provision for continued consultation throughout the term of the license, and a description of the history and consultation process used in its development. UPPCO developed the SMP in consultation with Resource Agencies, local governments, and nongovernmental organizations, and conducted local public outreach sessions. The SMP provides for pedestrian paths and trails, public and private individual and cluster docks, enhanced view areas, protection of wildlife and fishery habitat, public recreational access to the lakes, and water quality.

Three key components of the proposed SMP include its shoreline management guidelines, shoreline classifications and facilities design criteria, and prohibited and permitted shoreline activities.

Shoreline Management Guidelines

The proposed SMP includes guidelines providing detailed procedures and criteria for regulating activities within the project boundary. UPPCO states the objectives of the guidelines were developed to protect UPPCO's interests in power generation; protect and enhance the public recreational, public safety, scenic, cultural, and other environmental values of the project; and comply with applicable Federal regulations. UPPCO also states the guidelines were developed to address commercial and residential marina facilities, conveyances, excavations, private facilities, shoreline stabilization, vegetation management, general lake-use policies, and miscellaneous uses.

Shoreline Classifications and Prescriptions

In consultation with governmental agencies and with input from local stakeholders, the licensee developed five shoreline classifications for the Au Train Project and identified the shoreline areas to which these classifications would apply (see table 1). These shoreline classifications, and associated prescriptions of allowable uses and restrictions, are generally described below and shown in figure 2.

Table 1. Shoreline Classification Categories and Percent of the Shoreline within Each Category[3]

Shoreline Classification Area	% of Shoreline
Conservation – Limited Public Trail	23.5
Conservation – Limited Enhanced View Areas	15.5
Conservation – Limited Public Paths and Limited Enhanced View	39.4
General Use/Formal Recreation	8.9
Project Operations	12.7

The **Conservation – Limited Public Trail Area** classification is assigned to areas within the project boundary that have been set aside for conservation purposes only, in many cases above and beyond the current requirements of the license. With the possible exception of a public trail, and any management deemed necessary by the Resource Agencies to move towards preserving or enhancing forest resources, these areas are not to be disturbed. Conservation – Limited Public Trail Areas typically would include identified rare, threatened, or endangered species habitat, wetlands, cultural resources, and/or other highly sensitive terrestrial or aquatic habitat. The Conservation – Limited Public Trail Areas would not contain any dock structures.

The **Conservation – Limited Enhanced View Area** classification is assigned to areas within the project boundary where enhanced view areas could be developed. Generally, enhanced view area activities would (1) require prior written approval from UPPCO; (2) be no longer than 200 feet in length and no more than 40 feet in width; (3) be created by removing brush of less than 2 inches in diameter at a height of 5 feet above ground level and/or the trimming of tree limbs as approved by UPPCO; (4) include the restriction that no eastern hemlock, den cavity/nesting trees, wolf trees, and/or fruit and mast bearing tress be removed or trimmed in the enhanced view areas; (5) not allow any ground-disturbing activity in the development or maintenance of the enhanced view area; and (6) not permit stump removal. With the exception of the enhanced view areas, no other activities would be allowed.

[3]The percentages of shoreline contained in the SMP were measured in feet. The method used the GIS base layer with a project boundary and surface water overlay. The linear feet were calculated using the GIS system. Any location where the surface water of the reservoir came into contact with the project land was considered shoreline. The shoreline estimate includes shoreline on islands and oxbows (personal communication, J. Potvin, Louis Berger Group, and S. Puzen, UPPCO, April 14, 2008).

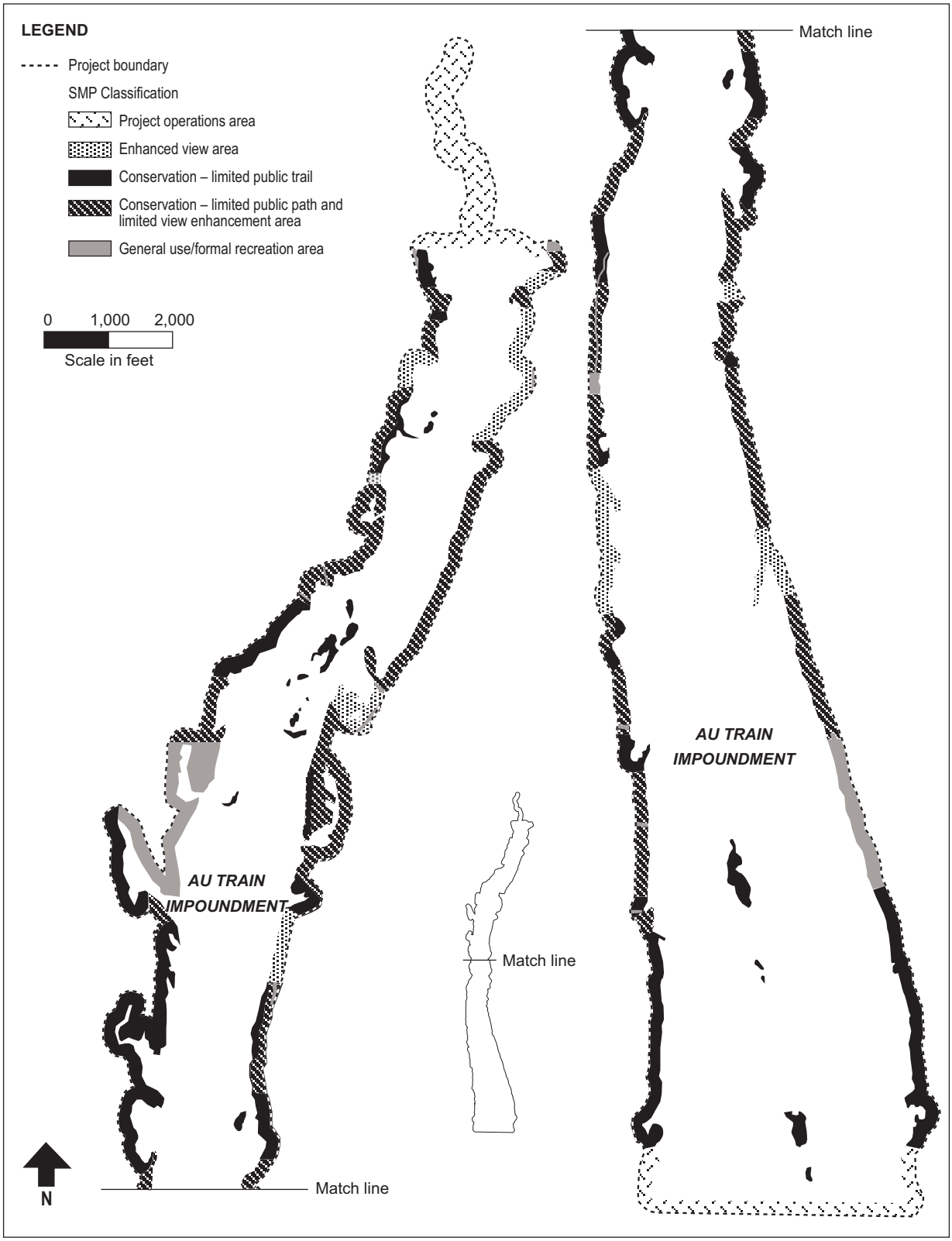

Figure 2. Shoreline classifications for the Au Train Project from proposed Shoreline Management Plan.

The **Conservation – Limited Public Path and Limited Enhanced View Area** classification is assigned to lands within the project boundary where paths from the adjacent non-project land owners would lead to shoreline areas suitable for the placement of seasonal individual and cluster docks and the creation of enhanced view areas. To the extent possible, the SMP specifies that new path development follow existing paths, trails, or roads, and should be commonly shared by abutting land owners. The Conservation – Limited Public Path and Limited Enhanced View designation represents the total areas where the pathways or enhanced view areas could be placed; however, the actual acreages occupied by paths at a maximum width of 4 feet would be expected to be small.

The **General Use/Formal Recreation Area** classification is assigned to areas within the project boundary with existing and proposed formal recreation areas that are not allowed under other classifications. In these areas, the reasonable construction of recreation areas/facilities, roads, pedestrian paths, enhanced view areas, and motorized vehicle trails, as well as the placement of docks and seasonal dock storage, would be permitted in designated areas. The locations of these areas were planned based upon data collected as part of the 2006 environmental studies. UPPCO would maintain these roads according to County specifications. In addition to the above-listed uses, there are two private camp leases that extend into the project boundary/buffer.

The **Project Operations Area** classification is assigned to lands that are currently occupied by hydropower generation and transmission and related structures or facilities that are necessary for the operation of the Au Train Project. The construction of recreation areas/facilities, roads, pedestrian paths, enhanced view areas, and motorized vehicle trails, as well as the placement of dock structures, would be permitted in areas classified as Project Operations Areas.

Should additional lands be required outside of the Project Operations Areas for the continued safe operation of the Au Train Project, UPPCO would prioritize the use of lands that are located in the General Use/Formal Recreation Area; however, any lands within any of the classifications might be required for project purposes as required by the Commission.

Shoreline Management Activities

The following sections list prohibited activities and allowable uses by the general public within UPPCO lands and waters at the Au Train Project, as presented in the SMP. In general, the following activities would fall within the types of use and occupancy for which the licensee already has the authority to grant or deny permission under the standard land use article (Article 410). The licensee is now proposing to codify activities and policies by initiating an SMP to use as a tool to make consistent decisions.

Prohibited Activities

The following activities would be prohibited by anyone other than UPPCO on its property within the project boundary at the Au Train Project. The activities include, but are not limited to:

- Any use or activity conducted without prior UPPCO written permission for that use or activity.
- The construction of permanent structures or improvements, except those authorized via a permit or Non-exclusive License Agreement (NLA).[4]
- The construction of paved, concrete or loose stone/gravel roads, boat ramps, or parking lots within Conservation areas.
- Storage of docks and access ramps on any project lands other than those that are so designated.
- Other than snowmobile use in the winter, the use or parking of motorized vehicles except at designated recreation areas, existing roads and project operations areas, and as necessary for the launching and removal of boats or the drop-off and pick up of boating supplies, or as needed for access by people with disabilities.
- Vegetation removal, cutting, or installation of any sort unless allowed under a permit.
- The burning or piling of brush or organic material such as compost, grass clippings or leaves.
- The raking of leaves into the impoundments, i.e., below the normal high-water mark of the impoundment.
- The construction of wastewater disposal facilities such as but not limited to septic tanks, drain fields, underground pipes, and portable toilet facilities.

[4]Prior to undertaking any improvements or modifications on UPPCO lands within the project boundary, a completed permit application must be submitted to UPPCO. An applicant would be required to apply in writing for the permit. Information and a permit application would be furnished to the applicant concerning the necessary instructions and appropriate application fee. Activities requiring a permit would not begin until all plans and specifications have been approved in writing by UPPCO.

- The routing of stormwater drainage onto UPPCO land or into the waters of the impoundments through open ditches or drains without UPPCO permission.
- The discharge of any septic effluent onto UPPCO land or into the waters of the impoundments from septic systems or other sources.
- The installation or use of rail launches for boats.
- The storage of gasoline, oil, propane, or other combustible materials.
- The overnight placement of lawn furniture, picnic tables, playground equipment such as a swing set or slide, or flagpole placement on UPPCO property.
- The placement of floating rafts used for purposes other than docking.
- The placement and use of boat lifts.
- The installation of permanent electrical dock lighting and electric service.
- Placement of fill or structures on or in intermittent or perennial streams or wetlands on UPPCO property under a permit is strictly prohibited.
- Any use, activity, or encroachment that in UPPCO's judgment interferes with the enjoyment of UPPCO lands and the impoundment by the general public or by neighboring property owners.
- Any other use that UPPCO determines would degrade the scenic, recreational, or environmental value of the Au Train impoundment. Any such determination lies with the sole and uncontestable discretion of UPPCO.

Permitted construction activities must be in accordance with all applicable laws, building codes, regulations, and ordinances. In addition, such facilities would have to be installed on the UPPCO property as close as feasible to directly fronting the permittee's property. In no case would any work create conditions that would cause erosion on UPPCO lands or sediment to enter waterways or the lake. All activities on UPPCO property must be done so as to minimize the removal of live trees or brush.

Allowed Activities

Owners of residential property located immediately adjacent to UPPCO-owned land within the project boundary, and who maintain such property for non-commercial use, may request that UPPCO grant them a permit or NLA to allow additional non-exclusive uses of UPPCO project land. Allowable uses would be subject to the express written approval of UPPCO in the form of a permit and/or NLA. An UPPCO-approved

permit or NLA issued to the eligible property owner may authorize the following activities on UPPCO property or the impoundment:

- The creation of a pedestrian path and associated stairs and elevated wooden walkways.
- The installation of a dock and an access ramp to the dock.
- The creation of enhanced view areas.

These standard activities would be subject to the design criteria listed in the following section.

Other SMP Components

Design Criteria

The criteria for specific allowable uses are summarized as follows.

Pedestrian Paths. Paths may be permitted to provide walking access to the high-water mark of the lake and, in some cases, may interconnect with a public trail. These paths would be available for use by the general public. Where practicable, UPPCO may direct a single path to serve multiple residential areas. Installation of a new path or maintenance of an existing path is subject to the following:

- To the extent possible, new path development should follow existing paths, trails, or roads and should be commonly shared by abutting land owners.
- Where feasible, new paths should not be laid out in a straight line; rather they should meander through the woodland to a reasonable extent taking into consideration topography, visual impact, and natural features in an effort to reduce the need for vegetation trimming, adverse aesthetic impacts and shoreline erosion.
- Paths are for pedestrian use only; no motorized vehicles are permitted on the paths except for project maintenance and enforcement action as directed by UPPCO.
- Paths would be no more than 4 feet in width.
- Paths would be developed and maintained in a manner that avoids where possible, and otherwise minimizes, the removal of vegetation; with the exception of trees that are hazardous, only brush less than 2 inches in diameter at a height of 5 feet and/or tree limbs below a height of 8 feet within the 4 foot width of the path may be removed. In addition, no eastern hemlock, den

cavity/nesting trees, wolf trees, and/or fruit and mast bearing tress would be removed or trimmed.

- Only natural woodchips and/or bark may be used to improve the path. No other materials including, but not limited to, stone, brick, gravel, sand, stepping stones, flagstone, and colored stones, or any other materials, may be used on the paths.

- In limited instances where extreme topography or sensitive ecological areas warrant, steps or wooden walkways may be incorporated into a pedestrian path.

- Steps and elevated walkways would not be more than 2 feet above the contour of the ground.

Docks. A dock is a seasonal/temporary structure connected to the shoreline by a walkway/access ramp and is most often used for mooring boats. Under the SMP, a permit or NLA may grant the permittee permission to install an individual dock or a cluster dock of 10 or less slips in which no individual parcel owner could occupy more than one slip. UPPCO states that the following is consistent with the state of Michigan guidelines for docks and defines its criteria for all residential docks:

- A dock may not obstruct the free flow of water or include any features which trap or accumulate aquatic plants or sediment.

- A dock may be floating or freestanding.

- To the greatest extent possible, docks and access ramps would be of natural tone colors so as to blend into the natural shoreline.

- Access ramps to docks must be removable and would not have railings.

- Docks would not be placed in the water prior to Memorial Day weekend of each year and docks and access ramps must be removed from the water by October 15 of each year.

- All docks would either be securely anchored with mooring cable or chain, or secured to a subsurface removable support frame. Such support frames may have wheels for ease of manual installation and removal.

- UPPCO's dock permit number must be displayed on all sections of a permitted dock. The number must be located so as to be visible from a boat on the lake.

- Permittees are responsible for maintaining docks in a safe manner.

- During the period from October 16 to just prior to Memorial Day weekend, docks and access ramps cannot be present on the project land unless they are specifically authorized by UPPCO and the stored docks are located within areas so designated for dock storage.

- The removal of any submerged/emergent aquatic vegetation or submerged substrate or woody debris for the placement of the dock is prohibited.

In addition to the criteria listed above, individual and cluster docks would have to meet the following criteria, as specified in the permit or NLA:

Individual Docks. Individual docks would be installed to achieve a maximum depth of 10 feet (as measured at the end of the dock) at the normal summer high water elevation, but in no case would an individual dock exceed 60 feet in length (combination of access ramp and dock) measured from the shore out into the impoundment.

Individual docks would not exceed 5 feet in width. This width would be sufficient for the safe loading of gear and passengers. Individual floating dock configurations would generally conform to the schematic diagram in the SMP shown in figure 7-1, and individual non-floating dock configurations would generally conform to the schematic diagram in figure 7-4 of the proposed SMP. Only one watercraft could be stored over night at each individual dock.

Cluster Docks. Cluster docks would be installed in order to achieve a summer maximum depth of 10 feet (as measured at the end of the dock/slip) at the normal summer high water elevation, but in no case would the overall length of the cluster dock be allowed to exceed 150 feet (combination of access ramp and dock).

Dock sections could not exceed 5 feet in width. This width would be sufficient for the safe loading of gear and passengers. Cluster docks could not accommodate more than 10 boats. Cluster dock configurations would generally conform to the schematic diagrams shown in the proposed SMP (figures 7-2 or 7-3), depending on shoreline bathymetry and on-site environmental conditions. Only one watercraft could be stored over night in each individual boat slip.

Enhanced View Areas. Enhanced view areas on project lands at the Au Train impoundment would be developed in the following manner:

- Any enhanced view area activities require prior written approval from UPPCO.

- As measured from the outer edge of the project boundary, enhanced view areas would be no longer than 200 feet in length and no more than 40 feet in width. If the distance from the Project Boundary to the water is greater than 200 feet, UPPCO would determine the feasibility of establishing an enhanced view area.

- The enhanced view area may be created by removing brush of less than 2 inches in diameter at a height of 5 feet above ground level and/or the trimming of tree limbs as approved by UPPCO. In addition, no eastern hemlock, den cavity/nesting trees, wolf trees, and/or fruit and mast bearing tress may be removed or trimmed in the enhanced view areas.

- No ground-disturbing activity is allowed in the development or maintenance of the enhanced view area; stump removal is not permitted.

Enhanced view areas according to the requirements of section 7.3.3.3 of the SMP also could be constructed in the pedestrian path areas.

2. Recreational Enhancements

UPPCO proposes to fund numerous recreation enhancements within the project boundary of the Au Train Project as part of its overall SMP. The majority of these recreation enhancements are not currently required as part of the approved recreation plan. UPPCO proposes these recreational enhancements to accommodate anticipated increased general public recreation use of the impoundment that would occur naturally and increased use that may occur as the result of anticipated development of non-project lands in the vicinity of the project and increased economic activity in the region. In addition, some of the enhancements are being proposed to upgrade public boat access sites to conditions that would be more user-friendly and, in some cases, barrier free, in order to meet public expectations for water access. UPPCO would design, fund, operate, and maintain the proposed recreation enhancements.

For scheduling purposes UPPCO has selected amenities to existing formal public recreation facilities that would make them more user-friendly and accessible. In addition, UPPCO considered public requests by regular users as well as the levels of public and private recreational use associated with proposed non-project use of project lands. Table 2 shows the proposed recreation enhancements, priority, and implementation schedule.

Table 2. Proposed Recreational Enhancements[a]

Recreational Enhancement	Facility/ Priority	Implementation Schedule
Construct a park pavilion for rental by the general public at Forest Lake State Campground located on the northwest side of the impoundment	1	1-5 years after SMP approval
Install a hard surface boat launch at the existing boat launch on the southeast end of the basin	2	1-5 years after SMP approval

Recreational Enhancement	Facility/ Priority	Implementation Schedule
Install a fish cleaning station at Forest Lake State Campground located on the northwest side of the impoundment	3	1-5 years after SMP approval
Install a skid pier at the existing boat launch on the southeast end of the basin	4	1-5 years after SMP approval
Install a barrier-free fishing pier on the basin (exact placement would be determined upon final approval of the SMP by the Commission)	5	1-5 years after SMP approval
Install a public viewing area on the basin (exact placement would be determined upon final approval of the SMP by the Commission)	6	1-5 years after SMP approval
Install a historical interpretive sign for public education and viewing at the west end of the dam	7	1-5 years after SMP approval
Install a public trail as part of a trail network around the impoundment (exact placement would be determined upon final approval of the SMP by the Commission)	8	1-5 years after SMP approval
Install a new hard surface boat launch and parking on the southwest side of the basin	9	1-5 years after SMP approval
Install a skid pier at the new boat launch on the southwest side of the basin	10	1-5 years after SMP approval
Develop a bathymetric map of the flowage for use by the general public	11	1-5 years after SMP approval
Develop a recreation brochure for Au Train and make it available to the general public	12	1-5 years after SMP approval

[a] The licensee's filing dated November 29, 2007, which contained the proposed SMP listed 13 recreational enhancements. In error, the licensee listed "Install a public trail as part of a trail network around the impoundment" twice. We make the correction here (personal communication, J. Potvin, Louis Berger Group and S. Puzen, UPPCO, April 14, 2008).

The licensee states the proposed public trail referenced in the recreational enhancements above was specifically requested by the public during SMP development outreach meetings. UPPCO's proposed Conservation – Limited Public Trail Area classification would allow the placement of the public trail in consultation with the

appropriate Resource Agencies to minimize impacts on sensitive environmental resources. The public trail would generally be located within 100 feet of the shoreline and would have a maximum width of 6 feet. Additionally, the trail would be developed and maintained in a manner that avoids where possible, and otherwise minimizes, the removal of vegetation. The licensee states where extreme topography or sensitive ecological areas warrant, steps or wooden walkways may need to be incorporated into the public trail.

UPPCO states it would use BMPs when constructing the public trail and would install necessary measures to prevent the erosion of soil into the water. Some portions of the public trail may not be constructed after detailed planning if trail construction and/or operation may result in significant resource impacts.

3. CLMP Amendment

Within the project's current 200-foot buffer zone, UPPCO proposes to classify lands to provide for hydropower operations, future recreational enhancements, and lake access by the general public and adjacent landowners. UPPCO proposes to prohibit all timber harvesting on project lands. UPPCO also proposes to revise the approved Exhibit G drawings for the Au Train Project to include all licensee-owned lands within 200 feet of the Au Train impoundment, and downstream of the dam, in the project boundary. UPPCO proposes to prohibit all timber harvesting on project lands. UPPCO proposes to replace Appendix B of the approved comprehensive land management plan with the revised project buffer zone map from the SMP that illustrate the entirety of lands that would be subject to the CLMP. UPPCO also proposes to amend the CLMP to clarify that uses and prohibitions specified in the SMP are consistent with the CLMP's objectives.

4. Action Alternative

No viable action alternatives have been identified for consideration.

5. No-action Alternative

Under the no-action alternative, the licensee would not implement its proposed SMP and would continue to manage the impoundment's shoreline under its existing license conditions and Commission-approved plans filed pursuant to license requirements as stated in section III, *Purpose and Need for Action*. The licensee would continue to permit activities and the placement of docks on a case-by-case basis, and therefore not benefit from an overall plan designed to protect environmental resources of the project.

V. CONSULTATION AND COMMENTS

This section discusses comments received on the proposed action as follows: (1) comments received during the preparation of the proposed SMP and (2) comments received during the Commission's public notice period for the proposed SMP.

A. Pre-Filing Consultation

In 2005, UPPCO originally worked with local governments in designing a draft plan for non-project uses of project land. After working with township and county governments, UPPCO conducted a public and agency outreach and education program. Through this process, UPPCO states it consulted with a representation of interests, including, but not limited to, some groups in opposition to the development and sale of non-project lands and any new uses of non-project and project land. This outreach resulted in agencies requesting the development of an SMP for the project.

UPPCO continued its outreach throughout the development of its SMP, involving the public and agencies by:

- Establishing a website with a comprehensive library of information on the land sale and shoreline management process as well as questions and answers about the project.
- Holding monthly stakeholder focus groups, consisting of representatives from economic development, government, hunting and fishing, and conservation groups in the Eastern and Western Upper Peninsula.
- Holding four public meetings to gather feedback.
- Providing a draft SMP for public and agency comment.
- Issuing news releases and fact sheets to media throughout the Upper Peninsula, sending informational letters to citizens in affected townships, and meeting with local media editorial boards.
- Meeting with state and Federal legislators, Resource Agencies, and hunting, fishing, ATV, and snowmobiling organizations.
- Conducting interviews with print and on-air reporters, responding to email information requests, and making presentations before township and county boards and planning commissions in and around the project.

In addition, postpaid, pre-addressed comment cards were made available at all public meetings, and the public was encouraged to contact UPPCO with their comments and suggestions.

The following Federal and state agencies worked collaboratively with the licensee during the pre-filing process: the U.S. Department of Agriculture (Forest Service-Hiawatha and Ottawa National Forests); the U.S. Department of the Interior (National Park Service and Fish and Wildlife Service); Michigan Department of Natural Resources; Michigan Department of Environmental Quality, Michigan Attorney General's Office, Michigan Hydro Relicensing Coalition; and Keweenaw Bay Indian Community.

Generally, the Federal and state agencies, private individuals, and public and private non-governmental organizations' issues concerned the potential impacts of implementing the proposed SMP on water resources, fishery resources, terrestrial resources, threatened and endangered species, aesthetic resources, cultural resources, recreation resources, and socioeconomic resources. The Resource Agencies requested the licensee conduct 19 resource studies at the Au Train Project. The licensee conducted 11 of the 19 studies requested, and 3 modified studies. The licensee did not conduct 5 studies requested by the Resource Agencies.

UPPCO did not conduct the water quality study, lake sturgeon study, and habitat surveys - Old growth, mesic conifer, and red oak-timber surveys. stating that adequate data exists for these resources. The licensee did not conduct a nuisance plants study stating it is not necessary because the current project license already requires periodic nuisance plant surveys and that Best Management Practices (BMPs) would be implemented during ground-disturbing activity within the project boundary. The licensee also stated that homeowner restrictions on acceptable vegetation plantings were not within the purview of these studies. The agencies also requested an archaeological/geologic/cultural features study; however, the licensee states archaeological investigations were conducted during the relicensing phase of the project. Known significant archaeological/geological/cultural features would be mapped.

Common Loon Research and Conservation, the Resource Agencies (Michigan Department of Natural Resources, Forest Service-Hiawatha and Ottawa National Forests, FWS, National Park Service, Michigan Hydro Relicensing Coalition, and Keweenaw Bay Indian Community), John Novak, Merrill Horswill, and Barbara and Rick Querzi all state in comments filed with the Commission during its public notice period that the pre-filing environmental studies were inadequate because they failed to address the potential negative impacts of proposed private uses of project lands and waters. UPPAC, Tom Church, FOLK, Northwood Alliance Inc., Northwoods Wilderness Recovery and its executive director Douglas R. Cornett, Tom Wolfe, and Common Loon Research and Conservation also commented with the Commission that the licensee's pre-filing consultation process was flawed. Except as discussed in the appropriate resource sections of this document, we find that either UPPCO has adequately responded to the

agencies comments or that the issues raised are outside the scope of this environmental assessment (EA).

B. Public Notice and Commission Correspondence

On December 28, 2007, the Commission issued a public notice of the application for the proposal, which solicited comments, motions to intervene, and protests. The deadline for filing responses to the notice was January 29, 2008. Table 3 shows the entities who filed comments and/or motions; entities who filed late have been italicized:

Table 3. Entities who filed Comments and/or Motions Pursuant to the Commission Public Notice.

Entity	Filing Date	Comment and/or Motion
Upper Peninsula Public Access Coalition (UPPAC)	January 5, 2008 January 25, 2008	Intervention in protest Supplement to Intervention in protest with signatures on petition
U.S. Department of the Interior, Fish and Wildlife Service (FWS)	January 2, 2008	Correction to the Administrative Record
Upper Peninsula Construction Council (UPCC)	January 9, 2008	Comments in support
Ontonagon Conservation District	January 10, 2008	Comments in support
SaveOurSchools/SaveOurShorelines (SOS)	January 17, 2008 January 25, 2008 January 29, 2008 January 30, 2008 January 30, 2008	Intervention in support Comments in support Comments in support Comments in support Comments in support
Michigan Department of Natural Resources (MDNR)	January 23, 2008	Intervention
Tom Church	January 23, 2008	Protest
John Novak	January 18, 2008	Protest
United States Department of the Interior	January 24, 2008	Intervention

Entity	Filing Date	Comment and/or Motion
Rachel Hovel	January 24, 2008	Requests a 30-day EOT for filing comments
William F. Delacourt	January 25, 2008	Intervention in support
Upper Peninsula Environmental Coalition (UPEC)	January 25, 2008	Intervention with comments
Friends of the Land of Keweenaw (FOLK)	January 26, 2008	Intervention in protest
Anglers of the Au Sable, Inc.; the Great Lakes Council, Inc. of the Federation of Fly Fishers, Inc.; the Michigan United Conservation Clubs; and the Michigan Council of Trout Unlimited (The Michigan Hydro Relicensing Coalition)	January 27, 2008	Intervention
Michigan Department of Natural Resources, U.S. Forest Service Hiawatha and Ottawa National Forests, FWS, National Park Service, Michigan Hydro Relicensing Coalition and Keweenaw Bay Indian Community (collectively “Resource Agencies”)	January 28, 2008	Comments
Northwood Alliance, Inc.	January 28, 2008	Intervention in protest
Tom Casperson, Michigan House of Representatives	January 25, 2008	Comments in support
Steven Lindberg, Michigan House of Representatives	January 25, 2008	Comments in support
Doug Welker	January 29, 2008	Comments in opposition
Common Loon Research and Conservation	January 29, 2008	Intervention not in support
Northwoods Wilderness Recovery and its executive director Douglas R. Cornett	January 29, 2008	Intervention in protest

Entity	Filing Date	Comment and/or Motion
Nancy Warren	January 29, 2008	Protest
Upper Peninsula Power (UPPCO)	January 28, 2008	Comments in support
Alger County Board of Commissioners	January 28, 2008	Comments in support
Western U.P. Michigan Works	January 28, 2008	Comments in support
Ontonagon County Board of Commissioners	January 28, 2008	Comments in support
Merrill Horswill	*January 30, 2008*	*Protest*
Scott Hickman	*January 31, 2008* *February 4, 2008*	*Comments in opposition* *Protest*
Tom Wolfe	*February 4, 2008*	*Protest*
Robert and Sarah Wagner	*February 4, 2008*	*Comments in opposition*
Barbara Querzi and Rick Querzi	*February 4, 2008*	*Comments in opposition*
Nicole Pollack	*February 4, 2008*	*Comments and protest*

FWS filed a correction to the administrative record stating that UPPCO repeatedly asserts throughout the SMP that "based on our consultation with Christie Deloria (FWS), not all potential loon habitat requires protection." FWS further states that, although Ms. Deloria has addressed loon habitats in other venues, such as with campground development and reorganization at the Bond Falls Project, she has not made statements of prioritization of habitats during SMP deliberations.

The MI Hydro Relicensing Coalition (which includes the Keweenaw Bay Indian Community, U.S. Forest Service, MI Department of Natural Resources, National Park Service, and FWS) commented that a water quality monitoring plan should be required, because of the potential for water quality impacts associated with increased recreation resulting from the SMP.

Common Loon Research and Conservation and in comments filed on January 28, 2008, the Resource Agencies state that a National Environmental Policy Act (NEPA) analysis is needed to fully analyze the direct, indirect, and cumulative effects on natural

resources of implementing the proposed SMP.[5] The Resource Agencies further state that although UPPCO has reduced some proposed non-project uses of project lands as compared to its draft SMP (e.g., reduced number of docks, no electricity at docks), most of the concerns raised in its May 21, 2007, comment letter remain unaddressed in the final SMP. The Resource Agencies state they remain concerned with the deficiencies in the environmental studies, the unwillingness to revise existing license plans to incorporate resource effects, and the potential adverse effects to resources. A list of concerns that have not been satisfactorily addressed in the final SMP were as follows: revision of license plans, conflict with license objectives, consistency with recreation plan and CLMP, inadequate environmental data, shoreline classifications are confusing and allow non-project uses in areas that contain sensitive species or habitats, boating capacity, nuisance species, and the lack of monitoring and enforcement.

UPPAC, Tom Church, UPEC, Folk, Northwood Alliance, Inc., Doug Welker, Northwoods Wilderness Recovery and its executive director Douglas R. Cornett, Nancy Warren, Merrill Horswill, Robert and Sarah Wagner, Barbara and Rick Querzi, and Nicole Pollack state the SMP would allow extensive shoreline development that is directly in conflict with the project license. UPPAC, Tom Church, FOLK, Northwood Alliance, Inc., Northwoods Wilderness Recovery and its executive director Douglas R. Cornett, Tom Wolfe and Common Loon Research and Conservation also state that the licensee's pre-filing public consultation process was flawed. UPPAC, FOLK, Northwoods Wilderness Recovery and its executive director Douglas R. Cornett, Merrill Horswill, Barbara and Rick Querzi, and Nicole Pollack state an environmental impact statement (EIS) should be completed prior to FERC approval of any conveyance of project lands because the pre-filing environmental studies were inadequate.[6] Common Loon Research and Conservation also felt the pre-filing environmental studies were inadequate. In UPPAC's filing dated March 19, 2008, it comments on an ongoing Federal law suit between Naterra and UPPCO.[7] Tom Church, and to some extent Nancy Warren and Merrill Horswill, further state the proposed exclusive use by the owners of the Non-Project Lands was intended to increase UPPCO and real estate developers' profit at the expense of natural resources and the other interested parties.

Doug Welker, John Novak, and Scott Hickman state concerns with the potential impacts on aesthetic resources if the proposed SMP is implemented. John Novak, Merrill

[5]NEPA requires Federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. This document initiates the NEPA process.

[6]Pursuant to NEPA, if the EA determines that the environmental consequences of a proposed federal undertaking may be significant, an EIS is prepared.

[7]Ongoing judicial procedures are outside the scope of this document.

Horswill, and Barbara and Rick Querzi further state the pre-filing environmental studies were inadequate because they failed to address the potential negative impacts of the proposed private uses of project lands and waters and potential negative impact on the segments of river designated under the Wild and Scenic Rivers Act.

UPEC and, to some extent, Northwoods Wilderness Recovery and its executive director Douglas R. Cornett, Scott Hickman, and Tom Wolfe, state the installation of private boat docks, pedestrian pathways, wooden walkways and stairs, clearing of view corridors, development of public trails systems, and the motorized use of project lands are inconsistent with the intent of the original license and further environmental analysis is needed. UPEC states concerns about the tourist industry and individual residents and further states the long-term economic health would be best served by keeping some of the forests, stream, and lakes in a wild natural condition. UPEC also stated the development of the project basin to increase the local tax base is not justified.

Merrill Horswill states a concern with the implementation of the proposed SMP with potential impacts on nesting waterfowl. Scott Hickman states that 200-foot-wide corridors cut through otherwise contiguous forest create a host of biological problems resulting in diminished reproductive success of forest interior birds already exhibiting rapidly decreasing populations. Common Loon Research and Conservation stated UPPCO selectively used information and that the SMP fails to include comprehensive management and protection measures to ensure the suitability of the impoundments to support loons.

VI. ENVIRONMENTAL ANALYSIS

A. General Setting

The Au Train Project is located in the central portion of Michigan's Upper Peninsula, about 7 miles south of the town of Au Train, Michigan, and about 15 miles southwest of Munising, Michigan. The Au Train River flows in a northerly direction from the dam to Au Train Lake, about 6 miles downstream. The powerhouse discharge bypasses 0.7 mile of the Au Train River. The bypassed reach contains two waterfalls; only dam leakage and groundwater seeps provide flow to this reach. Au Train Lake, which is not a part of the Au Train Project, is a natural lake providing a variety of recreational opportunities for the resort community along the lake shore. From the outlet at the north end of Au Train Lake, the Au Train River meanders about 8.5 miles north to Lake Superior.

The Au Train Project is located in a rural region and the surrounding land use is commercial forest, with most of the lands surrounding the project being part of the Hiawatha National Forest or the Escanaba River State Forest. With the exception of the recreation facilities, and a few residences, the Au Train Project area's shoreline is

undeveloped. UPPCO implements multiple-use forest management practices on its lands. In general, the impoundment has a narrow 200-foot strip of shoreline property within the project's boundary, which is managed as a buffer zone.

B. Scope of the Analysis

1. Geographic Scope

The geographic scope of this environmental analysis is focused on the immediate area of the shoreline and the 200-foot buffer zone within the project boundary. As appropriate, discussions of cumulative environmental effects are incorporated into the resource analyses in this document.

2. Temporal Scope

The temporal scope of this environmental analysis focuses on the period from now until the current project license expires in June 2037. The environmental effects of the entire project will be analyzed extensively during the license application process.

C. Environmental Analysis and Recommendations

UPPCO filed a proposed SMP for the Au Train Project to address the land use pressures and potential impacts anticipated from the sale of adjacent non-project lands to residential real estate developers.

This section describes the affected environment of the Au Train River and the general environmental effects of implementing the proposed SMP. Also, it provides FERC staff recommendations for reducing or avoiding any adverse impacts.

1. Geology and Soils

a. Affected Environment.

The topography of the area is dominated by large glacial outwash plains and low rolling hills or ridges with numerous scattered wet depressions. The project area is underlain by sandstone and limestone bedrock. The soils are relatively young, very complex, and intermingled (UPPCO, 1993).

The soils along the shoreline of the impoundment and within the 200-foot-wide buffer zone are predominately Kalkaska-Cusino complex sand and loamy sands (approximately 37 percent) or Eben very cobbly sandy loam (approximately 22 percent). Histolas and Aquents (areas of open marsh that are sandy, loamy or mucky) are less frequent (approximately 13 percent), as are Waiska cobbly loamy sand (12 percent) and

Carbondale, Lupton and Tawas mucks (9 percent). The remaining soils consist of various forms of silty or sandy loam or mucks.

Exposed embankments of Kalkaska sands, Cusino loamy sands, and Waiska cobbly loamy sands have weak fine granular structure and are therefore subject to cuts and caving, but are more susceptible to wind than water.

b. Environmental Impacts and Recommendations.

Based on known erosion sites and annual erosion surveys conducted since the license for the project was issued in 1993, erosion that presently occurs along the shoreline of the impoundment has been primarily associated with recreational access of shoreline areas by boaters. In these locations, recreationists beach their boats, exit the boats, and climb the embankments along the shoreline, causing erosion.

The proposed development of access trails across and along the buffer zone would increase potential erosion from runoff, although the proposed measures requiring trails to meander from the water's edge to the outer limit of the buffer and use of wood chips on the trails may reduce erosion potential somewhat. The construction, installation, removal, and storage of temporary boat docks on the shoreline would increase the potential for erosion on the shoreline embankments. The development of view areas across the buffer zone by removing small trees would allow for thinning of the forest understory, which would produce some temporary erosion potential due to runoff if the roots of the trees are removed.

Inevitable upland development outside of the 200-foot buffer zone associated with future shoreline uses would reduce vegetative cover in the watershed and ultimately result in increased sedimentation and erosion in the impoundment. Upland development outside of the project boundary; however, is outside of FERC's jurisdiction and would not be managed under the proposed SMP.

The extent of the potential erosion is difficult to assess because the there are no established plans for development of the lands adjacent to the buffer zone. The licensee states in its proposal that a maximum of 193 private boat slips are proposed at the Au Train impoundment. The SMP includes provisions for the protection of 78.4 percent of the impoundment shoreline by either prohibiting all activities in an area or allowing minimal activity by following specific design criteria. This would prevent erosion and runoff from construction along the shoreline. Approval of the SMP with the proposed use of the design criteria and BMPs would likely protect the project's resources from short-term erosion potential that could be caused by future construction of pathways and docks and related facilities in the water. Activities allowed under the SMP would allow for more compact surfaces that would result in greater run-off which would have a minor long-term erosion potential. The schedule for development may be spread over many

years, depending on the demand for access to the impoundment, so any impacts would similarly be spread over many years.

Implementation of the proposed SMP would result in some unavoidable sedimentation and erosion as the development allowed by the proposed SMP for non-project use is realized. However, if the anticipated development occurs gradually and if the licensee continues to adequately implement the proposed plan's shoreline management guidelines and associated programs, including the stabilization technique selection process and use of BMPs, the unavoidable impacts on soils are not expected to be significant.

2. Water Resources

a. Affected Environment.

The Au Train storage impoundment is about 6.5 miles long and from 0.25 to 0.5 mile wide. The impoundment has a surface area of 1,557 acres, an average depth of 8 feet, and a storage capacity of 12,342 acre-feet. Median monthly inflow to the impoundment ranges from 28 cfs in August to 240 cfs in April. The impoundment is operated to maintain a minimum water surface elevation of 772.0 feet (local datum) at all times.

The Au Train impoundment is classified as a warmwater fishery, which has a maximum monthly temperature standard ranging from 38 degrees Fahrenheit (°F) in January to 83°F in July, and minimum dissolved oxygen (DO) standard of 5.0 mg/l. FERC (1997) reported that the impoundment generally met the warmwater fishery standards, although DO levels below 5.0 mg/l were recorded in deeper parts of the impoundment during the summer months.

b. Environmental Impacts and Recommendations.

Approval of the SMP with the shoreline protection measures would likely protect water quality in the impoundment from the effects of future construction of docks and related facilities in the water The SMP includes provisions for protection of 78.4 percent of the reservoir shoreline, so that development would not be allowed or only allowed following specific design criteria. This would prevent effects on water quality associated with erosion and runoff from construction along the shoreline. The licensee does not propose any changes in reservoir operations from the license conditions.

The MI Hydro Relicensing Coalition (which includes the Keweenaw Bay Indian Community, U.S. Forest Service, MDNR, National Park Service, and FWS) commented that a water quality monitoring plan should be required, because of the potential for water quality impacts associated with increased recreation resulting from the SMP. In

particular, the addition of 193 private boat slips on the reservoir would lead to an increase in motorized boating on the reservoir and associated pollution. UPPCO stated that a water quality monitoring plan is not required because the potential for effects on water quality is low, and it is unaware of any other lakes in the area that were required to implement a monitoring plan with an increase in recreational usage.

The addition of the boat slips/docks is the only component of the SMP that would have the potential to affect water quality. The installation and removal of the boat slips would have the potential to disturb the reservoir bottom, whether the boat slips are floating (with anchors) or free-standing (with roller supports). Although the effects would be short-term and generally restricted to the immediate dock area, there would be the potential for some disturbance of bottom sediments and an increase in turbidity during installation and removal. The total number of docks that would actually be placed in the reservoir is unknown at this time. Although the licensee states there is the potential for a total of 193 private boat slips, the schedule for development may be spread over many years, depending on the demand for boating in the reservoir, so any impacts related to dock installation would similarly be spread over many years. Increased motorized boating in the reservoir would increase the potential for water quality effects, associated with oil and gas leakage from outboard motors, and the release of sewage from the boats. Although sewage discharge from boats would be prohibited, some leakage or illegal discharge of sewage may occur in small quantities. The overall effects of motorized boating, however, may not be substantial in that this boating may take some years to become fully established on the reservoir. In addition, motorized boating is generally not considered a major water quality issue – motorized boating is allowed and encouraged on lakes and reservoirs throughout the United States. Motorized boating would have no effect on water temperatures or DO concentrations in the reservoir, so the existing warmwater fishery criteria would not be violated as a result of any increased boating. For these reasons, we conclude that water quality would not be significantly affected and a water quality monitoring plan would not be required.

3. Fishery Resources

a. Affected Environment.

The Au Train impoundment is a relatively shallow water body with extensive fisheries habitat, with large areas of aquatic vegetation, logs, stumps, and other woody debris. The impoundment supports an excellent warmwater/coolwater fishery for northern pike, yellow perch, and walleye. Brown bullhead and white sucker are also common species.

b. Environmental Impacts and Recommendations.

Implementation of the proposed SMP would not change project operations. Generally, there would be no effects on the fishery resources in the reservoir. None of the commenting parties made any specific recommendations regarding fishery resources, in response to the Commission notice of the SMP, and implementation of the SMP would not require any specific mitigation for resident fishes. During pre-filing consultations on the SMP, agencies requested a lake sturgeon study. UPPCO did not conduct this study, stating that information on lake sturgeon spawning habitat was already available. We agree that another lake sturgeon study would not be required, related to the SMP, because implementation of the SMP would not adversely affect fishery resources.

Shoreline protection measures to be implemented as part of the SMP would act to protect near-shore shallow-water habitat that is important for fish spawning and juvenile rearing. Protection of shoreline vegetation along 78.4 percent of the reservoir shoreline would prevent erosion and sedimentation (associated with any shoreline construction activities) from reaching this important shoreline habitat.

As discussed in section VI.C.2, *Water Resources*, the installation and removal of the proposed docks/boat slips would disturb some of the shallow-water near-shore habitat. Installation and removal of anchors and "launching" and removal of docks with wheeled supports would disturb bottom sediments and affect submerged aquatic vegetation in the immediate area, resulting in the loss of some fish habitat. This habitat, however, would reestablish once the disturbance related to installation and removal subsides. The SMP would also prohibit installation of docks before Memorial Day in late-May, so the spring-spawning species, which would typically spawn before Memorial Day, would be protected. During boat operations near the docks in the summer months, there also would be the potential for disturbance of the reservoir bottom associated with propeller strikes or boats running aground, but the overall area of aquatic habitat likely affected would be small. A potential benefit of the docks would be to provide shade and cover for reservoir fishes, but there already is ample cover in the reservoir associated with logs and other woody debris.

4. Terrestrial Resources

a. Affected Environment.

The Au Train impoundment shoreline is generally undeveloped and surrounded by northern hardwood communities dominated by American beech, sugar maple, yellow birch, and basswood. Conifer species including white pine and eastern hemlock also occur in these communities. Some individuals of these species are taller than the surrounding hardwood canopy. Balsam fir, northern white cedar, and dogwood saplings dominate the mid-story. Groundcover species include raspberry, red elderberry, gooseberry, bracken fern, lady fern, wild sarsaparilla, meadow rue, trillium, and violet.

Other land cover types in the Au Train basin include forests with red pine, jack pine, quaking aspen and oak; areas with planted red pine; row crops; and retired agriculture that is now planted with waterfowl food crops and are part of the Au Train Basin Waterfowl Project.

In June 2006, UPPCO surveyed the Au Train shoreline for rare, threatened, or endangered species habitat, and nuisance plants (E-PRO, 2006). UPPCO did not observe any Federal or state rare, threatened, or endangered plant species. Surveyors did observe two invasive species, orange hawkweed and reed canary grass. Neither species is on the state of Michigan or Federal noxious weed lists.

In June 2006, UPPCO conducted wetland surveys along the Au Train impoundment shoreline, and results showed two vegetated wetland types. These were classified in accordance with Cowardin et al. (1979) and consisted of the palustrine emergent persistent (PEM1), and palustrine scrub-shrub Broad-leaved Deciduous (PSS1) cover types. These occurred at the southern end of the impoundment and in protected shores and coves along the western and eastern shorelines. Dominant plant species observed within the emergent wetland cover types included reed canary grass, tussock sedge, broad-leaved cattail, burreed, and lake sedge. Common plant species within the shrub wetland cover type included the above-listed species as well as tag alder, sandbar willow, sweet gale, silky dogwood, American elm, and black ash.

The Au Train basin provides a variety of wildlife habitat, and most of the animal species that are common within the Upper Peninsula of Michigan also occur within the project. Typical game species include black bear, white-tailed deer, and beaver. Common non-game mammals include red, grey, and fox squirrels; eastern cottontail and snowshoe hare; mink; weasel; raccoon; otter; bobcat; and coyote. Wetland habitats within the project provide habitat for a variety of reptiles and amphibian species including green frog and garter snake. Throughout the year, the project also supports a diverse bird community that includes year-round residents, breeders, and transients that stop to rest and feed during migrations. Common upland species include Blackburnian warbler, chickadee, ruffed grouse, evening grosbeak, tree swallow, and eastern wood-pewee. Waterfowl species include mallard, green-winged teal, bufflehead, Canada goose, common merganser, pied-billed grebe, ruddy duck, ring necked duck, wood duck, and American black duck. Several raptors and other predatory species are also prevalent and include red-tailed hawk, broad-winged hawk, and belted king fisher.

In addition to those listed above, several state-listed sensitive species occur within the project. The peregrine falcon is the only species occurring within the project listed as endangered by the state of Michigan. State-listed threatened species are red-shouldered hawk (*Buteo lineatus*), trumpeter swan (*Cygnus buccinator*), common loon (*Gavia immer*), osprey (*Pandion haliaetus*), and bald eagle (*Haliaeetus leucocephalus*). The northern harrier (*Circus cyaneus*) is a state of Michigan species of special concern.

federally listed species are discussed in section V.C.5, *Threatened and Endangered Species*.

During field surveys, UPPCO biologists observed one active bald eagle nest and several suitable perch trees. Surveyors documented 12 separate eagle observations across the study area. These observations included flying and perched adults and juveniles. UPPCO did not report any inactive nests.

On June 12, 2006, two UPPCO biologists conducted a specific survey focused on describing the presence of suitable loon habitat. The biologists conducted the survey from the water, slowly inspecting the entire shoreline and circumference of all islands. The surveyors identified potential loon nesting habitat based on the characteristics of the general physical habitat, hydrology, water quality, foraging habitat, chick rearing habitat, and existing human disturbance levels. During the study, the surveyors observed one pair of loons. The loons did not appear territorial or agitated by human presence. Other UPPCO consultant employees also observed loons while visiting the project area for other purposes. Following the habitat analysis, UPPCO identified 15 islands and 6 separate stretches of shoreline as supporting potential loon habitat.

b. Environmental Impacts and Recommendations.

To promote the protection of environmental resources UPPCO's SMP classifies non-project operations areas within the 200-foot buffer surrounding the Au Train reservoir into four categories: Conservation – Limited Public Trail Area, Conservation – Limited Enhanced View Area, Conservation – Limited Public Path and Limited Enhanced View Area, and General Use/Formal Recreation Area (see section IV.1 for complete descriptions of these classifications). Activities permitted by or resulting from implementation of the SMP that could affect vegetation and wildlife in the project boundary include (1) removal of forest undergrowth and tree limbs to create pedestrian access paths and enhance lake views from adjacent properties; (2) installation of seasonal docks and access ramps; (3) creation of a public recreational trail around the perimeter of the reservoir; and (4) increased human activity.

Vegetation

Under the proposed SMP, UPPCO would permit some limited vegetation removal in all zones. To minimize environmental effects, landowners could remove only shrubs less than 2 inches in diameter at a height of 5 feet, and tree limbs below a height of 8 feet above paths and trails. Landowners could remove such vegetation only within the 4-foot width of paths and the 6-foot width of the public trail. UPPCO would limit path construction by requiring abutting parcel owners share a common path and requiring new paths to follow existing paths wherever possible. UPPCO could allow additional limb removal in the 40-foot width of enhanced view, subject to approval by UPPCO. UPPCO would also permit the removal of shrubs meeting the above size restrictions within

enhanced view areas. The SMP would not allow removal or trimming of eastern hemlock, den cavity/nesting trees, wolf trees, or fruit or mast bearing trees. Additionally, the SMP would not permit ground disturbance or stump removal within enhanced view areas. In all areas not permitted for trail, path, or enhanced view clearing, the SMP would prohibit non-project related activities and vegetation disturbance.

In their January 28, 2008, letter, the Resource Agencies expressed concern that the removal of vegetation as permitted by UPPCO's SMP would not promote the development of a diverse forest and would result in the reduction of the forest understory canopy. The Resource Agencies also commented that the removal of vegetation for paths and view enhancement areas was not considered in the development of the CLMP and request that this plan be rewritten to address the proposed activities.

Removal of shrubs and tree limbs for the construction of trails, paths, and enhanced view areas would have an unavoidable negative effect on wildlife habitat. Wildlife species including a variety of perching birds, ground nesting birds, and small mammals utilize the shrubby mid-story canopy and cover provided by shrubby vegetation for nesting, foraging, and protection from predation. As proposed, 54.9 percent of the shoreline perimeter is within conservation zones where the SMP would permit clearing for enhanced view areas. The SMP would permit pedestrian paths in lands surrounding 39.4 percent of the shoreline. The creation of enhanced view areas and paths would result in the reduction of mid-forest canopy and shrub cover and decrease habitat connectivity within this layer. These effects would reduce nesting and perching habitat for some bird species, and reduce protective shrub cover for ground nesting birds and small mammals. The reduction in habitat connectivity would limit the ability of wildlife to move throughout the area while remaining within preferred habitat. Reduced connectivity also creates increases in edge habitat and could reduce the size of intact, non-effected forest patches to the point that they are not suitable for some species. The permitting process would limit disturbance in these areas because it requires landowners adjacent to UPPCO lands to receive UPPCO approval prior to removing vegetation.

A clear benchmark for unacceptable reductions in habitat connectivity does not exist. The degree that habitat fragmentation affects wildlife varies by species, with some species preferring edge habitat and others preferring intact forest patches. However, theories of landscape ecology suggest that, as patches of suitable habitat are removed, there is a non-linear relationship between the proportions of original habitat remaining and mean patch size and isolation (Turner, 1989; Gardner and O'Neill, 1991; Gustavson and Parker, 1992). For example, once 60 percent of suitable habitat is removed in a random pattern, patches of remaining habitat become isolated, or surrounded by non-suitable habitat. With less than 60 percent removal of suitable habitat, habitat patches remain connected with isolated areas of non-suitable habitat (Gardner and O'Neill, 1991). As patch size declines, the proportion of the patch area that functions as edge habitat increases. In northeastern deciduous forests, edge associated gradients in microclimate

components like light availability, temperature, and soil moisture were detected up to 50 meters (150 feet) into the forest (Matlack, 1993). As such, a forest patch would need to be at least 300 feet in diameter to contain interior forest.

In the case of the proposed SMP, habitat removal would not occur randomly but would consist of bands of view enhancement areas that run the length of the 200-foot buffer zone. As the density of these bands increases, the width of the uncleared area between them decreases. The potential for an intact forest patch to function as interior forest and not forest edge would depend on the patch width, or the distance from the center of the intact patch to view enhancement clearings on either side. The width of forest edge area created by view enhancement clearing is not expected to be as great as that cited above because not all of the vegetation would be removed. Shrubs and trees that are too large (greater than 2 inches at a height of 5 feet) to be cleared would continue to provide cover. However, to preserve some interior forest functionality within areas where view enhancement would occur, Commission staff proposes to limit the potential for high lot densities to effect vegetation by adding restrictions to the width of view enhancement areas.

Without knowing the number and size of parcels landowners would develop adjacent to the project, it is impossible to determine the cumulative effects of this clearing. For example, if all adjacent lots are developed with only 80 feet adjacent to project lands, and each landowner is permitted a 40 by 200 foot view enhancement area, 50 percent of the shrub cover could be removed. Resulting in alternating bands of 40 by 200 foot patches of intact forest and treated 40 by 200 foot patches of view enhancement areas. Under this scenario, the remaining patches of intact forest may not contain enough interior area to function as intact forest, but would essentially be two 20-foot bands of forest edge habitat along a gradient between two view enhancement areas. Conversely, if all lots are created with 250 feet adjacent to the project buffer area; the area of intact forest between the treated areas would be large enough contain a functioning forest interior. Limiting the removal to 30 percent of the 200-foot buffer area adjacent to a private parcel would leave 70 percent of the forest intact, which would be sufficient to preserve interior forest function. If UPPCO stipulates that the width of enhanced view areas would be 40 feet or 30 percent of the length of the parcel boundary adjacent to project lands, whichever is smaller, effects on vegetation would be reduced.

The selective removal of tree limbs would have a similar effect on the canopy layer in the forest, decreasing habitat and connectivity. The removal of limbs would also reduce canopy cover, allowing more sunlight to reach the forest floor and changing microhabitat conditions like temperature and humidity. However, because UPPCO would evaluate limb removal on a case-by-case basis, and limit the types of trees that would be pruned, effects would not be as great in this layer of the forest. The effects of the SMP would depend on the proportion of vegetation within the 200-foot buffer that would be removed for the construction of trail, path, and enhanced view areas. Low

levels of removal, relative to existing conditions, would have minimal effect. However, if permitted removal quantities result in a reduction of most of the existing vegetation, effects would include changes in wildlife communities, shifting towards species adapted to open forests.

Although UPPCO has developed design criteria for enhanced view areas and paths, states that site visits may be required, and states that violations may lead to cancellation of permits, removal of encroachments, and/or remediation of damages, the proposed SMP does not adequately address UPPCO's monitoring of such activities. Without proper guidance, the potential for landowners to accidently remove vegetation restricted by the SMP is high. Additionally, without visiting a site prior to vegetation removal, it would be difficult to determine whether violations occurred. Remediation of such violations would be difficult, and may not be possible. Pre-clearing site visits could flag the boundary of the area to be cleared, flag stems that are restricted from cutting due to size and/or species, and identify tree limbs where trimming would be allowed. Thereby assuring that the landowner would be in compliance with the design criteria. A pre-clearing visit would also provide UPPCO a baseline condition of the area, and enable the accurate identification of violations during a post-clearing site visit. If UPPCO would commit to pre- and post-clearing site visits, the potential for accidental violations to the design criteria, and the resulting effects on vegetation would be minimized.

UPPCO's proposed SMP includes amendments to the CLMP that eliminate restrictions and make it consistent with the proposed SMP. For example, UPPCO proposes eliminating restrictions on forest management practices currently in the CLMP such as placing emphasis on aesthetic value and minimization of biological pests. UPPCO also proposes eliminating the requirement that forest management prescription decisions within the buffer zone are based only on wildlife enhancement, aesthetics, or watershed management. If the proposed SMP is implemented, no further rewriting of the CLMP would be required.

Wetlands

In the proposed SMP, UPPCO states that potential effects on wetlands would be limited to the creation of paths, the public recreational trail, and seasonal access ramps to docks. While siting and constructing the public recreation trail, UPPCO would consult with Resource Agencies and work to avoid wetland effects wherever possible. In instances where wetland crossings are unavoidable, UPPCO may incorporate steps or wooden walkways. According to the SMP, if construction or maintenance activities would result in unacceptable effects, UPPCO may not construct some portions of the trail. UPPCO would determine the location of docks based on bathymetric, topographic, and on-site environmental data so as to minimize wetland effects. UPPCO also notes the prevalent occurrence of wetlands throughout the project area and states that any potential effects would not affect the overall function of this habitat.

In their January 28, 2008, letter, Resource Agencies expressed concern that UPPCO's SMP does not adequately protect wetlands. They assert that wetlands are important to overall ecological health, and UPPCO should make every effort to protect and enhance these areas. The Resource Agencies do not support the use of these areas for any non-project use.

Wetlands are a prevalent component of the shoreline surrounding the Au Train impoundment and the importance of this habitat type to ecological health includes improvements to water quality, providing habitat for wildlife, and preventing shoreline erosion. In many cases, identified wetlands within the project area are surrounded by the Conservation – Limited Public Trail classification. However there are also many instances where wetlands are abutted by Conservation – Limited Enhanced View Area, Conservation – Limited Public Path and Limited Enhanced View Area, and General Use/Formal Recreation Area. Wetland effects would occur if paths, trails, or docks were constructed in any wetland habitat. Of particular note are instances where PSS1 wetlands are adjacent to Conservation – Limited Public Path and Limited Enhanced View Areas. If UPPCO allows the removal of shrubs in these areas, following the guidelines set forth under the Enhanced View clearing protocol, PEM wetlands would replace the PSS wetlands, reducing habitat for birds and other wildlife species that prefer the scrub-shrub wetlands. Increased human presence both on shore and in boats would also affect wetlands, which would result in the displacement of some wildlife. If the proposed SMP included language prohibiting the removal of vegetation in PSS1 wetlands, and stipulated that the U.S. Army Corps of Engineers were to be consulted on any unavoidable effects under section 404 of the Clean Water Act, effects on wetlands would be further minimized.

Noxious Plant Species

Vegetation removal and increased human presence in the project area could result in an increased potential for nuisance species establishment. To mitigate these effects, UPPCO proposes to conduct a public awareness program using materials previously prepared by Resource Agencies and continue following the existing approved noxious plant control plan targeted at purple loosestrife and Eurasian water milfoil. UPPCO also proposes to monitor and control additional nuisance species identified by the Resource Agencies, provided the agencies have effective, economical, and reasonable control techniques to extirpate species from the reservoirs as demonstrated through the agencies' own control programs.

The Resource Agencies assert that monitoring of nuisance species should not be restricted to those that may be extirpated, but that a more realistic goal would be to control introduced populations. Furthermore, the Resource Agencies suggest that monitoring and control would be warranted for any species that is known to have negative environmental effects, not just species for which successful control measures

have been developed. The Resource Agencies request that the noxious plant control plan be rewritten to address new threats and expand monitoring and control efforts.

The removal of woody forest vegetation would allow additional sunlight to reach the forest floor. Additional sunlight and increased temperature would change microhabitat conditions and potentially alter the composition of forest floor vegetation. This change in microhabitat combined with soil disturbance associated with path and trail construction would increase the potential for invasive terrestrial weeds to colonize that area. UPPCO's proposed community education plan and additional monitoring for species not already identified in the approved noxious plan monitoring plan would partially mitigate the potential for nuisance species to have negative ecological effects. However, because the degree to which the SMP would result in disturbance to forest vegetation (i.e., acreage of enhanced view areas or feet of trails permitted) is currently unknown, it is not possible at this time to adequately evaluate the threat of noxious weed introduction. As currently written, the noxious plant monitoring plan only includes monitoring of aquatic and wetland areas. The plan does not evaluate the potential introduction of terrestrial invasive species such as garlic mustard and orange hawkweed, both of which have been documented in the vicinity of the project. If UPPCO evaluates the expected effects on vegetation in a quantitative manner and work with Resource Agencies to develop an appropriate monitoring and control plan, the risk of a negative effect resulting from noxious weeds would be minimized.

Wildlife

To minimize potential effects on wildlife, UPPCO's proposed SMP would place limits on the types and quantities of vegetation that landowners could remove to create trails, paths, and enhanced view areas; thereby limiting effects on wildlife habitat. The SMP specifies that all other areas be left in a natural state and any non-project activities are prohibited.

In their January 28, 2008, letter, the Resource Agencies state that vegetation removal permitted by the SMP would result in the reduction of wildlife habitat in the forest understory. The Resource Agencies also state that increases in human presence may result in disturbance to local wildlife. Finally, because these impacts were not considered during the development of the wildlife management plan, the Resource Agencies request the plan be rewritten to address the new proposed activities

In comments filed with the Commission, numerous individuals and organizations, including the Upper Peninsula Public Access Coalition, the Upper Peninsula Environmental Coalition, Friends of the Land of Keweenah, the Michigan Hydro Relicensing Coalition, Northwood Alliance, Common Coast Research and Conservation, and Northwoods Wilderness Recovery, wrote that the proposed SMP would result in the reduction of wildlife habitat and increased human disturbance to wildlife. Comments also included concerns about increases in habitat fragmentation and that the study of

existing natural resources was inadequate. Numerous other individuals and organizations, including state representatives, the Alger County Board of Commissioners, the Lake Superior Community Partnership, and Save Our Schools/Share Our Shorelines, wrote that UPPCO has sufficiently incorporated protection to wildlife within the SMP.

The proposed SMP's effects on wildlife would depend on the quantity of overall reductions in vegetation permitted by UPPCO. The potential exists for large reductions in understory canopy as shrubs and tree limbs are cleared around trails, paths, and enhanced view areas. This structure provides perching and foraging habitat for a variety of birds present in the project area including wood thrush, chickadee, and eastern wood pewee. Increases in human presence within the 200-foot buffer area and on the lake would likely result in some wildlife avoiding areas of expanded human disturbance. The proposed limits on vegetation removal should preserve some wildlife habitat. However, over the long term, it is anticipated that the dominant wildlife species would be those most accustomed to living in proximity to humans.

Management objectives presented in the existing Au Train wildlife management plan include the maintenance of the forest with a diversity of vegetation types and age classes and increasing the overall number of waterfowl which utilize the project. The extent to which the proposed SMP would affect these objectives would depend on final development plans for lands surrounding the 200-foot buffer. The SMP would permit certain levels of disturbance within the buffer zone by adjacent landowners, however, the cumulative effects are not known because development plans have not been finalized. However, as proposed, vegetation removal for enhanced view areas, trails, and paths would be focused in the mid- and under-story. If a large number of clearing permits are approved, such that much of the existing vegetation is removed, the effect would be counter to maintaining a diversity of vegetation types and age classes. If, following the finalization of relative development plans, UPPCO evaluates the cumulative effects and, in consultation with Resource Agencies, rewrites or amends the existing wildlife management plan, UPPCO would minimize the effects on local wildlife from implementation of the proposed SMP.

Bald Eagle

To minimize potential impacts on bald eagles, the proposed SMP would not permit any removal or trimming of eastern hemlock, wolf trees, fruit or mast bearing trees, or den cavity/nesting trees. UPPCO would designate lands surrounding existing nests as Conservation – Limited Public Trail. UPPCO would also identify 330-foot buffers around existing nests and route public paths and recreational trails to avoid these areas. UPPCO would place signs in aquatic areas marking the buffer and requesting that boaters avoid the area during the breeding season. Additionally, UPPCO would continue to follow protocols approved within its bald eagle management plan, which includes sharing the cost of future U.S. Forest Service surveys, maintaining records of

observations by UPPCO hydro operations personnel, and coordinating with Resource Agencies.

In their January 28, 2008, letter, the Resource Agencies assert that the environmental study UPPCO based management decisions on failed to identify all the bald eagle roosting and super canopy tree areas currently present within the project. Therefore, UPPCO completed the SMP while relying on insufficient data and the designation of different conservation zones did not adequately consider potential bald eagle habitat. The Resource Agencies also state that increases in human activity resulting from the proposed SMP would have additional impacts on the bald eagle. In response, UPPCO contends that the restrictions included in the SMP are consistent with the approved bald eagle management plan, and that no super canopy trees would be cut since the forest is managed for old-growth characteristics.

Implementation of the proposed plan has the potential to impact bald eagles through increased human presence within the project area and the removal of vegetation suitable for bald eagle roosting and nesting. The construction of docks and resulting increases in boat traffic would increase disturbance to foraging eagles that can be sensitive to noise. It is not possible at this time to determine if such disturbance would be detrimental to the local eagle population because eagles vary in their sensitivity to human presence, and the future level of boat activity is unknown. However, as stated in the U.S. Fish and Wildlife Service National Bald Eagle Management Guidelines, any human activity that agitates or bothers roosting eagles to the degree that causes injury or substantially interfered with breeding, feeding, or sheltering behavior and causes, or is likely to cause, a loss of productivity or nest abandonment constitutes a violation of the Eagle Act's prohibition against disturbing eagles (FWS, 2007). UPPCO's approved bald eagle management plan does not specifically include mechanisms for measuring productivity. If UPPCO, in coordination with Resource Agencies, monitors bald eagle behavior and nesting success and appropriately adapts management strategies based on the results of such monitoring, any violations to the Eagle Act's prohibition of eagle disturbance would be avoided.

While UPPCO stipulates that no eastern hemlock trees would be removed or limbed, no similar restriction is placed on red pine or white pine, both of which occur in the area and may provide habitat for eagles. Broadening the restriction to all super canopy trees would reduce the potential for reducing bald eagle roosting and/or nesting areas. This addition would protect such habitat, whether or not it has been previously identified.

Common Loons

The proposed SMP identifies areas where suitable loon nesting habitat exists. Many of these areas are included within the Conservation – Limited Public Trail Area. Other identified loon nesting habitat is bordered by Conservation – Limited Enhanced

View Area and Conservation – Limited Public Path and Limited Enhanced View Area, although near some Conservation – Limited Public Path and Limited Enhanced View Areas, loon habitat is surrounded by a 50-foot Conservation – Limited Public Trail Area classification. To help mitigate effects on the common loon, UPPCO also proposes to construct one loon nesting platform, to be located in consultation with Resource Agencies.

The Resource Agencies comment that the single-day survey conducted in mid-June was insufficient to adequately assess loon resources at the Au Train impoundment. This comment was also made by Common Coast Research and Conservation, a non-profit organization that studies common loons in Michigan. In their January 28, 2008, letter, the Resource Agencies comment that sensitive species habitats, including loon nesting areas, should be set aside for conservation purposes and not allowed to have any non-project use. The Resource Agencies also note that the approximate 50-foot wide Conservation – Limited Public Trail buffer between loon habitat and Conservation – Limited Public Path and Limited Enhanced View Areas would be insufficient to protect this species from disturbance. The Resource Agencies recommend that UPPCO produce a loon management plan for the Au Train impoundment.

Implementation of the proposed SMP would result in increased human activity within the 200-foot conservation buffer and on the impoundment. Scientific literature well documents the sensitivity of the common loon to human presence, yet numerous studies also indicate that this species can adapt to human disturbance and human activity does not always result in lower breeding success (Evers, 2004). Motorized watercraft, the ability of non-motorized watercraft to access shallow water, and irresponsible fishing practices all have the potential to disturb or harm loons (Evers, 2004), all of which would potentially occur within the project area under the proposed SMP.

Recommendations of buffer distances for protecting nesting loons vary. Heimberger et al. (1983) found the nesting success for loons was significantly lower at nest sites with cottages within 150 meters (492 feet) of the nest. FWS (Evers, 2004) recommends that floating signs be placed 450 feet from nest sites to request boats stay away from known nest areas. The state of Washington recommends a 490-foot buffer excluding all human activity from April to September (Washington Department of Fish and Wildlife, 2005) while the state of Maine recommends maintaining a distance of 250 feet (Maine Department of Inland Fisheries and Wildlife, 2008). The state of Michigan does not have a specific recommendation for loon protection.

While the proposed SMP incorporates all loon habitats within one of the three conservation areas and the addition of a nesting platform would mitigate some impacts, it could do more to reduce impacts on this species. For example, in some areas the Conservation – Limited Public Path and Limited Enhanced View Areas are separated from loon habitat by a 50-foot Conservation – Limited Public Trail buffer. A 50-foot buffer would not adequately protect nesting loons from human disturbance and could

affect nesting success. UPPCO could increase this buffer distance to 150 feet and still leave room at the outer edge the of 200-foot buffer for public paths accessing nearby boat docks. Additionally, where loon habitat is bordered by Conservation – Limited Public Trail, UPPCO could site the future trail near the outer edge of the 200-foot buffer area instead of within 100 feet from the shoreline as proposed.

Increased boat traffic expected to occur within the project also could affect loons. However, the proposed SMP does not include mitigation measures to address these impacts. A public notification strategy similar to the one used to protect bald eagles also would be appropriate for loon resource management. Specifically, the placement of signs in aquatic areas and informal recreation sites with loon habitat requesting that resource users avoid these areas during the breeding season would reduce impacts. Furthermore, a monitoring effort that measures nesting frequency and success within the project would enable UPPCO and Resource Agencies to determine if one nesting platform is adequate to mitigate for increases in shoreline disturbances, or if the addition of more nest platforms would be appropriate.

5. Threatened and Endangered Species

a. Affected Environment.

During the consultation process, the only species identified by FWS potentially requiring section 7 consultation was the Canada lynx (*Lynx canadensis*). The Canada lynx is listed as threatened under section 7 of the Endangered Species Act. Lynx prefer dense, mature stands of conifer or mixed conifer forests and are highly sensitive to the presence of humans (Michigan Natural Features Inventory, 2007). Common prey items include small mammals, beaver, deer, and birds, although the snowshoe hare is their primary prey. In Michigan, recorded observations of Canada lynx exist in Keweenaw and Mackinac counties. There is no record of the species within Alger County. Forest within the project area may be suitable for lynx; however, due to the narrow buffer of land managed by UPPCO, there would not be sufficient habitat area to support this species. If lynx are present in areas adjacent to the project, they could utilize project lands for dispersal, or as a component of their range.

b. Environmental Impacts and Recommendations.

Implementation of the proposed SMP would result in the removal of some mid-story and some upper story forest vegetation. Additionally, human presence within and adjacent to the impoundment is expected to increase in conjunction with increased development. However, UPPCO would continue to manage lands within the 200-foot buffer not subject to Enhanced View treatments, paths, or public trail as mature mixed forest. In their January 28, 2008, letter, Resource Agencies did not make any comments directly related to the Canada lynx.

Canada lynx are secretive and sensitive to human presence. If development and human activity within and adjacent to the Au Train impoundment occur, it is unlikely that lynx would utilize this habitat. However, because there is no evidence that lynx have utilized this habitat in the past, the proposed project is not expected to have an impact on the Canada lynx.

6. Aesthetic Resources

a. Affected Environment.

The Au Train Project is located in a rural area in the central portion of Michigan's Upper Peninsula. The region's natural landscape character is defined as rolling hills, water features, and extensive forest cover giving the area natural appearance and remote feeling. The visual character of the project area is consistent with most of the Upper Peninsula; it offers a pleasing setting although the scenic features are not unusual for the region (FERC, 1997). The project's impoundment is long and thin and tapers to the north. The Au Train shoreline has very little development giving the shoreline the appearance of wilderness, and the project features blend well with the surrounding landscape. The surrounding ridges and shore are largely covered with deciduous forest with pockets of mixed vegetation which makes the fall foliage season very colorful. Conifers are much less evident except where they line the shore, top a ridgeline at the south end, and dominate the islands at the north end. The water of the impoundment is colored as a result of high tannin concentrations that occur naturally. The only development, other than that related to power generation at the north end and a broad dike flanking the south end, is two public recreation areas, a couple of homes at the north end, and several camps along the southwestern shore. The Michigan Department of Natural Resources manages the area at the south end where the vegetation abruptly changes to lower growth as a wildlife refuge (E-PRO, 2006).

The dominant visual characteristic of the area is the land/water relationship. Views of the basin are limited to the two public recreation areas and occasional viewing areas from local service roads within the state and national forests. Views from the public recreation facilities are scenic, unobstructed, and aesthetically pleasing (FERC, 1997). The dam is visible from State Highway M-94, which runs parallel to it.

The powerhouse discharge bypasses 0.7 mile of the Au Train River. The geologic features in the bypassed reach are rugged and contain two waterfalls; only dam leakage and groundwater seeps provide flow to this reach. The falls are a staircase cascade over limestone and sandstone formations that drop approximately 100 feet over a distance of 2,200 feet. Upper Au Train Falls is visible from the powerhouse access road where there is an informal viewing area with parking. Upper Au Train Falls is characterized as a steady thin flow of water dropping over bedrock. Further downstream, in the vicinity of Lower Au Train Falls, the river is broader and flatter, and the drop is gradual. The

shoreline along the bypassed reach near both falls is vegetated adding complexity to the landscape. Scenic waterfalls are common in the Upper Peninsula. About 200 falls are located in the Upper Peninsula, with 20 of them located in Alger County, most of which are near the project (FERC, 1997).

b. Environmental Impacts and Recommendations.

Over the long-term, additional shoreline development at the Au Train impoundment would likely occur under the proposed SMP. Expected future residential development occurring on adjacent lands outside of the project boundary would lead to the creation of paths, enhanced views, and a maximum of 193 private boat slips at the Au Train impoundment. If developed to the fullest extent, this development would alter the existing landscape at the impoundment. Over time, the scenic character of the impoundment would change from a rural, wilderness nature to a more developed landscape, consisting primarily of residential boating facilities that serve single- and multi-family dwellings.

Doug Welker, John Novak, and Scott Hickman filled comments with the Commission stating concerns with the potential impact on aesthetic resources. The licensee's proposed SMP for the Au Train impoundment includes approved dock zones that were selected to minimize visual impacts. To further minimize visual impacts at the Au Train impoundment, UPPCO would require the docks be low profile and utilize natural (muted) colors that do not stand out against the background landscape. Additionally, the installation of boat lifts and associated permanent dock lighting and electric service would be prohibited. Given UPPCO's proposed measures, the physical presence of the proposed boat docks would have only a minor, long-term visual impact on the shoreline. Increased boating use on the impoundment would create long-term, intermittent noise impacts in the immediate vicinity.

7. Cultural Resources

a. Affected Environment.

No cultural resource surveys have been performed at the project during preparation of the SMP. The area of potential effects (APE) for this undertaking includes all lands within the project boundary around the Au Train impoundment. Review of the *National Register of Historic Places* does not indicate the presence of any historic properties within the APE for the project (NPS, 2008).

A 1991 Phase I cultural resources inventory of the project focused on the immediate vicinity of the hydroelectric facility (dam, penstock, and powerhouse), the access roads, and the public access areas on the shores of Au Train Basin. No prehistoric or historical cultural materials were encountered in the archaeological field work phase of

the inventory. The likelihood that significant historical or archaeological resources exist within the project area is low to medium depending on specific location (FERC, 1997).

A Programmatic Agreement (PA) was executed on December 30, 1993, among the Commission, the Michigan State Historic Preservation Officer (SHPO), the Wisconsin SHPO, and the Advisory Council on Historic Preservation. This PA was included in Article 408 of the Au Train license. The PA required the licensee to develop a historic resources management plan (HRMP) that addressed (1) shoreline monitoring, (2) unsurveyed lands within the project boundary, (3) archaeological properties on non-managed lands within the project boundary, and (4) protection of the historic generating facilities. The PA further required the licensee to file a copy of the HRMP with the Commission and the SHPO for review. If the SHPO agreed with the HRMP, the licensee implemented the HRMP. On March 3, 1999, the licensee filed an HRMP with the Commission. On March 17, 1999, the Commission issued a letter to the licensee stating it had reviewed the HRMP and found it met the requirements of Article 408 and the PA.

b. Environmental Impacts and Recommendations.

In the future, we expect that shoreline development would occur on the Au Train impoundment under the proposed SMP. As a result, there is the possibility of disturbing cultural resources at locations of ground-disturbing activity where shoreline facilities, such as boat launches, ramps, piers, barrier-free shoreline fishing areas, and ancillary facilities, would be constructed.

Unearthing archaeological artifacts or disturbing historically significant areas during any construction is a possibility and is considered a potential adverse impact of future development, including that which could occur under the proposed SMP. Disturbing currently unidentified archaeological sites could result in a loss of the sites' integrity and information that the site may offer. If sites are discovered during the implementation of an activity at the project, the licensee is required to follow the procedures outlined in the HRMP and the PA. Given this information, we find that implementation of the executed PA and HRMP would provide for adequate protection of historic properties, as it relates to the implementation of the proposed SMP.

8. Recreation and Land Use

a. Affected Environment.

The Au Train Project is located in a rural region, and the surrounding land use is commercial forest, with most of the lands surrounding the project being part of the Hiawatha National Forest or the Escanaba River State Forest. With the exception of the recreation facilities, a few residences, and approximately three docks, the Au Train Project area's shoreline is undeveloped. UPPCO implements multiple-use forest

management practices on its lands. In general, the impoundment has a narrow 200-foot strip of shoreline property within the project's boundary, which is managed as a buffer zone.

Many recreation opportunities are available within Alger County. Developed facilities include four national park campgrounds, six national park picnic areas, five national forest campgrounds, two national forest picnic areas, two state forest campgrounds, two state parks, four township or city parks, and ten hiking trails. About 125 miles of the Michigan snowmobile trail system wind its way through Alger County. The region provides a variety of recreational opportunities such as fishing, boating, canoeing, hiking, camping, and sightseeing (FERC, 1997). The Grand Island Bay De Noc hiking trail which follows the approximate route of an old Indian portage route used to carry supplies between Lake Michigan and Lake Superior, comes close to UPPCO land near the south east end of the impoundment but falls outside of the project boundary. The Hiawatha National Forest and Escanaba River State Forest are both located in the immediate vicinity of the Au Train Basin; however, there are no Federal lands located within the project boundary. These two forests provide many opportunities for dispersed recreation.

Au Train Lake, which is not a part of the Au Train Project, is a natural lake providing a variety of recreational opportunities for the resort community along the lake shore. Au Train Lake is moderately developed with year-round and seasonal residences and two resorts. The U.S. Forest Service maintains a campground and picnic area, a boat launch, and a swimming area at the lake. The Au Train River between Au Train Lake and Lake Superior is a popular canoeing river (FERC, 1997). The slow-moving, meandering Au Train River offers a 4- to 6-hour canoe trip. The trail begins at the Forest Service boat launch and proceeds north approximately 10 miles to Lake Superior.

The Au Train Project is located in a relatively remote area offering an abundance of recreation opportunities in an undeveloped setting. There are two formal recreation sites at the project and one formal viewing area downstream of the dam. These facilities provide opportunities for fishing, camping, canoeing, boating, and sightseeing. MDNR's Forest Lake State Campground is located on the west side of the impoundment and was originally developed with land and water conservation funds from the National Park Service. It provides the primary access to the impoundment. The facility consists of 23 campsites, a picnic area with three picnic tables, six sanitary facilities (two barrier-free), trash receptacles, a boat ramp, carry-in small boat access, shoreline fishing access, and parking for 25 car/trailers (FERC, 1997). The powerhouse road and parking area provide access to the bypassed reach of the river as well as to the tailrace area downstream of the powerhouse. Upper Au Train Falls is visible from an overlook on the access road. A pulloff area provides informal parking for about five cars. About 250 feet north, the licensee provides a 10-car parking area at the power access gate. The powerhouse road is accessible only by foot, so recreationists park at the gate and walk about 500 feet down

the road to view Lower Au Train Falls or to fish in the tailrace area. Well established footpaths to the powerhouse and tailrace area provide access to this area by recreationists. Because of the steep terrain, Lower Au Train Falls area is difficult to access by individuals with disabilities (FERC, 1997).

Public access is allowed except for small areas near the dam, powerhouse, and substation that are restricted for public safety reasons. The wildlife refuge located near the south levee is open to the public except from September 15 – October 10 of each year, at which time the area provides opportunities for migratory birds to rest and feed.

The second formal recreation area is a primitive access site on the east side of the impoundment on lands owned by the licensee. Small boat carry-in access and dispersed camping opportunities are provided at this location. There are approximately 10 unimproved campsites along the shore of the impoundment in the vicinity of the access site, and a parking area serves 10 cars or 5 car/trailers (FERC, 1997).

FERC's Licensed Hydropower Development Recreation Report (Form 80 report)[8] includes recreational data for all recreational activity occurring within the project boundary, collectively accounting for UPPCO facilities and those facilities provided by other recreation providers. Based on the Form 80 report, the Au Train Project had a total of about 7,110 visitors during the 2002 calendar year. Table 4 summarizes important findings of the Form 80 report.

Table 4. Summary of the Form 80 report for the Au Train Project in 2002.

Type of Recreation Resource	Number of Recreation Resources	Total Acres	Level of Use[a]
Access Areas	5		Low
Boat Ramps	2		Medium
Boat Launching Lanes	2		Medium
Canoe Portages	1	0.5 miles	Low
Tailwater Fishing Facilities	1		Low
Picnic Areas	1	10	High

[8]To evaluate recreational resources at the project, the Commission requires the licensee to prepare and submit a FERC Form 80 (Licensed Hydropower Development Recreation Report). See 18 CFR 8.11. Project owners must submit a Form 80 report every 6 years. Each Form 80 must describe a project's recreation facilities and the level of public use of these facilities.

Type of Recreation Resource	Number of Recreation Resources	Total Acres	Level of Use[a]
Overlooks		1	Low
Hunting Areas	1	426	Low
Camping Areas	2	10	Medium
Tent/Trailer/RV Sites	30	10	Medium
Winter Sports	2		Medium

[a] The level of use is the annual average percentage of actual use of a particular facility compared to its use at full capacity. Low use of the facility is equal or less than 40 percent of its full capacity, medium use is between 40 and 60 percent of its full capacity, and high use is 60 percent or more of its full capacity.

UPPCO's approved recreation plan includes, among other things, two formal recreation sites on the impoundment, a formal viewing area at the Upper Au Train Falls overlook, directional signs, and interpretive signs.

UPPCO's approved CLMP includes the delineation of a buffer zone of approximately 200 feet around the impoundment and downstream of the dam. The impoundment has over 15 miles of shoreline and is approximately 6.5 miles long. The objectives of the plan are to manage timber resources in the buffer zone using aesthetic management practices that make the resource available for consumptive and non-consumptive uses, protect and manage for endangered and cultural resources, and use BMPs for all ground-disturbing activities within the buffer zone. The CLMP provided provisions for annual consultation efforts with MDNR.

b. Environmental Impacts and Recommendations.

The proposed SMP, via its classification system, allows for both public and private recreational development along the shoreline. Private recreational development would include facilities such as docks that serve residential communities adjoining the impoundment. Public recreational development would include construction of a new park pavilion, improvements to existing formal recreation facilities, construction of new recreational facilities, a historical interpretive sign, public trail system, and production of recreation brochures and bathymetric map.

The percentage of proposed shoreline classifications in the project area is shown in section IV.1 in table 1 and figure 2. That section also contains full descriptions of each type of classification.

The Resource Agencies commented the shoreline classifications are confusing. The classification system identifies five categories along the project shoreline (see figure 2 in section IV.1) that would be available for different levels of development depending on the natural resources present. Areas with higher natural resource values such as areas containing sensitive species or habitats would allow minimal development. Areas that would be considered for more intensive development would be areas where the licensee would be required to maintain roads to county standards or project operation areas that could include the construction of recreational areas/facilities, roads, pedestrian paths, enhanced view areas, and motorized vehicle trails (snowmobiles) as well as the placement of dock structures.

The Resource Agencies commented that without defining a desired character for each basin, any assumptions made or conclusions reached regarding watercraft capacity, type of watercraft, or other appropriate recreation are premature and without context. As noted above, 8.9 percent of the project shoreline would be classified as General Use/Formal Recreation. Implementation of the proposed SMP and recreational enhancements would result in additional public access and use of the project shoreline. The licensee conducted a literature review/desk-top analysis of boating carrying capacity and looked at impoundment configuration, width of buffer zone, types of watercraft and their associated activities, and the expectations related to the water body. These are all factors which help determine the boat carrying capacity for a particular water body. For the Au Train impoundment, a boating carrying capacity range of as few as 39 (200-foot buffer, combined use), to as many as 312 watercraft (100-foot buffer with only non-motorized watercraft) was found to be appropriate based on the assumptions made in its determination (E-PRO, 2007).

Amendments to Recreation Plan and CLMP

The licensee has requested to amend its approved recreation plan and CLMP to include the recreational enhancements specified in the SMP. UPPCO also proposes to amend the recreation plan to clarify those recreation enhancements, policies, and development guidelines specified in the SMP. Common Loon Research and Conservation and the Resource Agencies state there are inconsistencies between the proposed SMP and the approved recreation plan and CLMP. It is important that the SMP, recreation plan, and CLMP are consistent with one another and are implemented in a cooperative manner; however, we do not concur with UPPCO's request to amend its approved recreation plan or CLMP at this time. Commission staff has not been provided with enough detail concerning the recreational facilities. In this regard, we recommend the licensee develop, in consultation with the appropriate agencies, an amendment request that would include, at a minimum, provisions for all 12 recreational enhancements listed in the SMP. We recommend the amendment request be filed for Commission approval and include design drawings of the 11 construction-related recreation measures, a cost estimate for each facility or production cost for the map and

brochure production, identification of the entity responsible for the operation and maintenance of the facilities, and an implementation schedule. Similarly, we recommend the licensee file for Commission approval, after consultation with the appropriate agencies; a request to amend the approved CLMP. The amendment request should include proposed revisions to the approved plan to make it consistent with the SMP and the recreation plan.

The licensee states in its proposal that, as part of the amendment to the CLMP, it also would request revision of the Exhibit G (project boundary) drawings for the project to include all licensee-owned lands within 200 feet of the Au Train impoundment, and downstream of the dam, within the project boundary.[9] Revised Exhibit G drawings for a licensed project must meet the requirements of sections 4.39 and 4.41 of the Commission's regulations, which specifies the Commission's current standards for such drawings. The revised drawings must be submitted for Commission approval. Therefore, we recommend the licensee file for Commission approval, in conjunction with its amendment application for the approved CLMP, revised Exhibit G drawings to conform to the Commission's current standards.

Use of Project Lands

Article 410 of the project license contains the standard land use article which allows licensees to establish a program for issuing permits for specified types of use and occupancy of project lands and waters provided uses are not inconsistent with project purposes. Activities not covered under Article 410 require prior FERC approval. Such uses may include the installation of private boat docks, pedestrian pathways, wooden walkways and stairs, and development of public trail systems. While an SMP is typically more comprehensive than the standard land use article, the article can be considered a subpart or underlying component of the SMP. The SMP, in and of itself, does not supercede or change the standard land use article. Implementation of the SMP can help the licensee carry out the intent of the standard land use article and other license requirements in the following ways: (1) the SMP would help the licensee, the Commission, and the stakeholders to view individual shoreline development proposals in a project-wide or even regional perspective, rather than as individual, isolated actions; (2) the SMP would help track trends of developmental activities; and (3) the SMP would allow for consistent review and approval of the various developmental proposals. It is important to note that dock facilities allowed pursuant to article 410 are for a single unit

[9] During a June 9, 2008 telephone conversation between Mr. Shawn Puzen of UPPCO and Mr. Jon Cofrancesco of Commission staff, Mr. Puzen stated that the proposed revision to the Exhibit G drawings is intended to bring the drawings into conformity with the Commission's current standards and does not involve any revisions to the project's current boundary.

of development and limited to a total capacity of 10 watercraft (i.e., 10 slips).[10] The licensee would be expected to file, for Commission approval, any dock proposals that involves more than 10 slips for a single unit of development.

The Resource Agencies, Common Loon Research and Conservation, Resource Agencies, the Northwoods Wilderness Recovery, executive director Douglas R. Cornett, Scott Hickman, Tom Wolfe, UPPAC, Tom Church, UPEC, FOLK, Northwood Alliance, Inc., Doug Welker, Nancy Warren, Merrill Horswill, Robert and Sarah Wagner, Barbara and Rick Querzi, and Nicole Pollack state in comments filed with the Commission that certain uses of project lands are inconsistent with the intent of the original license, and further environmental analysis is needed. Tom Church, and to some extent Nancy Warren and Merrill Horswill, further state the proposed exclusive use by the owners of the Non-Project Lands was intended to increase UPPCO and real estate developers' profit at the expense of natural resources and the other interested parties.

Article 410 allows licensees to establish a program for issuing permits for specified types of use and occupancy of project lands and waters; provided such uses are not inconsistent with project purposes, including resource protection. Activities not covered under Article 410 require prior FERC approval. Licensees may charge a reasonable fee to cover the costs of administering the permit program. Such specific types of uses may include the installation of private or commercial boat docks that have 10 slips or less, pedestrian pathways, wooden walkways and stairs, and development of public trail systems. These uses are not outside the intent of the original license. This EA does utilize an environmental analysis to consider the environmental impacts of the proposed SMP.

Regarding the effect of implementing the SMP on other land uses, the classification system identifies areas where a full spectrum of uses can and cannot occur, based on the suitability of the area for the allowable use. Of particular note, 78.4 percent of the shoreline is classified is areas with restrictive uses to protect environmental resources on a case by case basis and an additional 8.9 percent is set aside for public use. This system results in a balance of reduced environmental impacts and orderly development that reduces conflicting shoreline uses. Further, because shoreline development applications are subject to review and approval, the Commission, UPPCO, and the consulted agencies are able to take account of the type, quantity, and quality of associated facilities and activities being proposed and their potential impacts.

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[10] A single unit of development may include, but is not limited to, a single, planned, residential subdivision. In thi s regard, the licensee would not be allowed to approve the construction of multiple docks, containing 1 to 10 slips each, for this single subdivision, under Article 410.

It should also be noted that while shoreline areas are classified for a certain use, an area may never be developed to its full potential. One common example of why a shoreline area may not be developed as classified is economic and market constraints (e.g., supply and demand). Another common reason is that adjoining local zoning restrictions may preclude a certain use in a given area. The SMP classifications do not extend beyond the project boundary.

The SMP's shoreline management guidelines contain design criteria for developing facilities and conducting ground-disturbing activities associated with various land uses, including restrictions on the size and location of facilities, design standards, and construction methods to minimize impacts on project resources and values in the surrounding area.

In the event that the shoreline, over time, is developed to the full extent as allowed by the SMP and its classifications, recreational opportunities at the project would notably increase, particularly water-based recreational activities. Some displacement of certain types of recreational uses may occur where one use conflicts with another, such as canoeing and kayaking versus motor boating. Short-term effects of construction activity would occur such as water access restrictions due to traffic, temporary road closures, and parking restrictions and availability. Long-term effects would be both positive and negative. The types of recreational uses would become more diverse; the character of the shoreline would change to a more residential, developed environment; and the lake and surrounding area may become less attractive to recreationists who prefer more serene, natural recreation activities.

SMPs are evolving documents that need to be flexible. The SMP should be monitored and reviewed on a regular basis to determine how effective it is in accomplishing the licensee's goals, and to respond to new or evolving situations or conditions. The licensee has stated that at a minimum, consultation with the agencies would occur annually to discuss the progress of the implementation of the SMP. However, the licensee does not provide for updates of the SMP. We recommend the licensee update and refile the plan every 5 years, for Commission approval, after consultation with the appropriate agencies, beginning 5 years from the issuance of any order approving the SMP. The filing should also include documentation of the licensee's consultation with the agencies on the updated plans, including responses to any agency comments and recommendations.

John Novak, Merrill Horswill, and Barbara and Rick Querzi have stated the pre-filing environmental studies were inadequate because they failed to address the potential negative impacts on the segments of the river designated under the Wild and Scenic Rivers Act. Review of the Wild and Scenic Rivers Act and National Wild and Scenic Rivers System does not indicate the presence of any segment of river involved in this proceeding as designated within the Wild and Scenic Rivers system (NWSRS, 2008).

9. Socioeconomics

a. Affected Environment.

The socioeconomic environment for the Au Train Project includes Au Train and Limestone Townships and Alger County. Compared to the state of Michigan as a whole, these areas are considerably more rural, the residents are older, median incomes are lower, and average home values are lower (UPPCO, 2007). Citing U.S. Bureau of the Census data, UPPCO reports that between 1970 and 2005, the population of Alger County rose by 13 percent to 9,662, while the population of Michigan as a whole increased by 14 percent. During the same 35-year period, the Limestone Township population rose by 35 percent to 409, while the Au Train Township population more than doubled, reaching 1,153 in 2005 (UPPCO, 2007). While three-quarters of the Michigan population is classified as living in urban areas, 100 percent of the residents of Alger County are classified as living in rural areas.

According to the 2000 U.S. Census, Alger County had 5,964 housing units. While Michigan as a whole had a vacancy rate of 11 percent, vacancy rates were significantly higher in Alger County (37 percent), which had a large number of homes (31 percent of the entire housing stock) in seasonal, recreational, or occasional use. Vacancy rates were highest in Au Train Township, with half of the housing units unoccupied in 2000. In that township, 90 percent of the vacant housing (45 percent of the total housing) were designated for seasonal use (UPPCO, 2007).

Alger County lags behind Michigan and the United States in measures of income. In 1999, residents earned 80 percent of the median household income and 82 percent of the per capita income for Michigan residents as a whole. However, the percentage of people living below the poverty level in Alger County (10 percent) was lower than in the state as a whole (12 percent) (UPPCO, 2007).

Alger County had a labor force of 4,396 in October 2006. Unemployment in the county was 5.8 percent, lower than the state's average of 6.1 percent, but 41 percent higher than the U.S. average of 4.1 percent. Annual 2005 unemployment in Alger County was 7.3 percent, exceeding both the state (6.7 percent) and national (5.1 percent) levels (UPPCO, 2007). As might be expected for a rural area with a significant number of seasonal homes and an abundance of public land and outdoor recreational opportunities, the employment mix is different from the state as a whole. In 2000, a higher percentage of people in Alger County were employed in the following industries compared to the state as a whole: agriculture, forestry, fishing and hunting, and mining; construction; arts, entertainment, recreation, accommodation, and food service; and public administration. At the same time, a lower percentage of people were employed in industries such as manufacturing; wholesale trade; retail trade; and professional, scientific, management, administrative, and waste management services (UPPCO, 2007).

In its comments filed with the Commission, the organization SaveOurSchools/SaveOurShorelines (SOS) states that the economies of Upper Peninsula communities are struggling because mining and logging jobs have been declining and because the abundance of government-owned land limits the amount of private land available for development. Others commented that the lack of economic development options has led to an outflow of the area's younger residents, who leave for areas with more employment opportunities.

b. Environmental Impacts and Recommendations.

In its SMP, UPPCO states that allowing people listed on property deeds immediately adjacent to UPPCO-owned land within the project boundary of the Au Train impoundment to construct pedestrian paths and install seasonal docks on project lands would have a beneficial effect on local socioeconomic conditions. UPPCO states that the presence of boat docks and the proposed recreational enhancements could increase the real estate value of the houses within the area, new residents would contribute to an expansion of the local economy and tax base, and additional income could be generated for businesses that cater to these homeowners.

Many commenters made similar points. In their comments filed with the Commission, SOS, the Alger County Board of Commissioners, Representative Tom Casperson, the Upper Peninsula Construction Council, and several individuals (some represented by SOS), wrote that the proposed SMP would have a positive effect on the local economy because it would allow private docks and other amenities that would enhance the area's attractiveness to new homeowners and raise the value of homes abutting the project boundary, which in turn would bring new jobs and revenue to the area. In their comments, these SMP supporters wrote that such development would increase the tax base, which would benefit the school districts as well as the township and county government units that provide needed services such as transportation, fire and ambulance protection, road maintenance, and senior citizen programs.

Other commenters expect a different economic outcome, indicating that the additional tax revenue associated with higher land and home values would not be enough to offset the increased cost of developing and maintaining the infrastructure needed to support such development in a rural area. In its comments, UPEC states that so much of the private shoreline property in the Upper Peninsula has already been developed that the long-term economies of local communities would be best served by leaving the UPPCO project basins (including Au Train) in the natural condition that first attracted visitors and residents to the area. In their comments, the Resource Agencies state that the SMP does not fully disclose the economic effects of implementing the proposed SMP and connected actions, including the costs of development and road construction.

The amenities associated with UPPCO's proposed SMP (paths, docks, and view enhancements for adjacent property owners) would no doubt increase the appeal of those properties to buyers, which in turn would likely lead to the increased construction activity, jobs, and tax revenues anticipated by UPPCO, SOS, and others. However, no project-specific economic analysis has been prepared to conclusively demonstrate whether the increased tax revenue would more than offset the additional costs to the communities for providing services to those properties and residents. That would depend in large measure on the nature of the development, the types of residents that are attracted, the level of services provided by local governments, and of course the tax structure.

D. No-action Alternative

Under the no-action alternative, there would be no SMP to provide shoreline classifications or an integrated, comprehensive approach to management of the Au Train impoundment shoreline. Without the SMP, UPPCO would continue to manage the shoreline through its existing license conditions and Commission-approved plans filed pursuant to license requirements. In addition, any future shoreline development proposals would be subject to applicable Federal, state, and local agency approvals, permits, and regulations.

Under the no-action alternative, UPPCO's management of the river shoreline would not receive the benefits of the proposed SMP, including its shoreline classifications. Thus future shoreline development at the project would occur in a less orderly manner and without full consideration of the effects of such development on the impoundment's environmental resources from a comprehensive perspective. As such, the no-action alternative would likely have greater overall adverse impacts on the environmental resources of the impoundment shoreline.

VII. CONCLUSIONS

Water-based recreational activity and waterfront and water access properties are growing in demand and value throughout the project area. Local counties and municipalities also benefit economically from the existence of the impoundment. These factors, along with input of local, state, and Federal agencies, private and non-governmental entities, and the general public, have shaped the proposed SMP. As previously noted, this document analyzes the effects of implementing the proposed SMP (proposed action) and the no-action alternative on the affected environment during the remainder of the license term. The current project license is due to expire in 2037.

As future shoreline development occurs around the impoundment, commensurate with increases in residential development adjacent to the project, it is anticipated that there would be an increased demand for boat dock facilities and other shoreline

development. Implementation of the proposed SMP would allow such facilities pursuant to the various provisions of the plan, and such development would have some impacts on the Au Train impoundment's shoreline and impoundment resources. The SMP would ensure an orderly and appropriate level of development and protection of project purposes and resources.

Future shoreline development would result in some sedimentation and erosion along the shoreline; temporary impacts on water quality; some losses in habitat for fish; and changes in the aesthetics character of the lake from a rural, wilderness nature to a more developed landscape, consisting of some residential boating facilities that serve adjoining single- and multi-family dwellings. While these impacts are expected to occur during the license term, the proposed SMP has specific requirements, measures, and programs to minimize such impacts, as noted throughout this document. In addition, the environmental effects of any specific development proposals filed with the Commission, for approval, in the future would be evaluated in the context of the requirements of the proposed SMP and, if appropriate, additional measures to minimize or mitigate for site-specific impacts would be required. Any such measures would further protect the impoundment's resources.

In addition, there is a possibility of disturbing cultural resources at the locations of future ground-disturbing activities along the impoundment shoreline. The executed PA and HRMP contain specific provisions to avoid and minimize potential impacts on historic properties. Implementation of the PA and HRMP in conjunction with proposed SMP would provide for adequate protection of historic properties.

As proposed, the SMP would permit the removal of vegetation for the creation of trails, paths, and enhanced view areas. To protect natural resources, UPPCO placed limits in the SMP on the type of vegetation landowners could remove and areas within which removal could occur. Resource Agencies commented that these restrictions would not promote the development of a diverse forest and would result in the reduction of the forest understory canopy. The agencies also commented that the removal of vegetation for paths and view enhancement areas was not considered in the development of the CLMP and request that this plan be rewritten to address the proposed activities. Cumulative effects on vegetation would depend on the number of paths and enhanced view areas that are eventually permitted by UPPCO. These effects would depend on the number of parcels developed adjacent to the project.

- We recommend that UPPCO restrict the size of enhanced view areas to 40 feet or 30 percent of the length of the parcel boundary adjacent to project lands, whichever is smaller. With these additional restrictions, forest structure and connectivity would be maintained independent of future plans.

As proposed, the SMP has the potential to affect wetland resources. Wetlands are present in areas zoned for potential clearing of vegetation for future trails, paths, and

enhanced view areas. UPPCO states that it will work to minimize effects on wetlands wherever possible, but that in some cases the construction of trails, paths, or docks could affect small areas of wetlands. Resource Agencies commented that wetlands are important to overall ecological health and as such they do not support any non-project uses in these areas.

- We recommend that UPPCO prohibit the removal of any trees or shrubs in PSS1 wetlands, and require permit applicants consult with the U.S. Army Corps of Engineers to evaluate any unavoidable effects on wetlands as required under section 404 of the Clean Water Act.

Disturbance associated with the removal of vegetation would create microsites where the introduction of terrestrial noxious weeds, including garlic mustard and orange hawkweed, could establish. Resource Agencies requested that UPPCO rewrite the approved noxious plant control plan to address effects from terrestrial disturbance and increased human use. UPPCO has agreed to implement an education program and to monitor and control additional noxious species not included in the current plan, as long as the species are identified by the Resource Agencies and the agencies can provide proven control measures. Because the existing noxious plant control plan is targeted at purple loosestrife and Eurasian water milfoil, both aquatic species, and the majority of the effects of the proposed SMP on vegetation would be in terrestrial areas.

- We recommend UPPCO work with Resource Agencies to develop an appropriate monitoring and control plan targeted at terrestrial noxious species and areas where vegetation removal and ground disturbance would be permitted by the SMP.

The proposed SMP's effects on wildlife would depend on the quantity of overall reductions in vegetation permitted by UPPCO and increases in human disturbance. To minimize potential effects on wildlife, UPPCO's proposed SMP would place limits on the types and quantities of vegetation that landowners could remove; thereby limiting effects on wildlife habitat. The SMP specifies that all other areas be left in a natural state and prohibits any non-project activities in these areas. The Resource Agencies state that vegetation removal and increases in human presence may result in disturbance to local wildlife. Because these impacts were not considered during the development of the wildlife management plan, the agencies request that UPPCO rewrite the plan to address the new proposed activities. Objectives of the approved wildlife management plan include the maintenance of the forest with a diversity of vegetation types and age classes and increasing the overall number of waterfowl that utilize the project. The extent to which the proposed SMP would affect these objectives would depend on final development plans for lands surrounding the 200-foot buffer.

- We recommend that UPPCO evaluate the cumulative effects of such development on wildlife and, in consultation with Resource Agencies, rewrite or amend the existing wildlife management plan, as appropriate.

The proposed SMP includes provisions for minimizing effects on the bald eagle. These provisions include prohibiting the cutting of most trees suitable for bald eagle use, public education, and continued implementation of the approved bald eagle management plan. Resource Agencies commented that these provisions are insufficient because the SMP was developed while relying on incomplete survey data that failed to identify all potential bald eagle habitat. The Resource Agencies also commented that increases in human presence associated increased development and recreation activities could disturb eagles.

- We recommend that UPPCO extend limitations on tree trimming to include all super canopy trees. This would prevent the loss of suitable bald eagle habitat, regardless of whether the specific trees were previously identified. Additionally, we recommend that UPPCO, in coordination with Resource Agencies, monitor bald eagle behavior and nesting success for signs of disturbance related to effects of the SMP, and appropriately adapt management strategies based on the results of such monitoring.

The proposed SMP identifies potential habitat for common loon and incorporates most of these areas within the Conservation – Limited Public Trail Area. To mitigate effects on the common loon, UPPCO also proposes to construct one loon nesting platform, to be located with consultation with Resource Agencies. Resource Agencies commented that the proposed SMP does not go far enough to protect loon habitat. They add that the survey conducted as part of the environmental report was of insufficient duration to adequately determine loon activity in the project. The agencies also note that the approximate 50-foot wide Conservation – Limited Public Trail buffer between loon habitat and Conservation – Limited Public Path and Limited Enhanced View Areas would be insufficient to protect this species from disturbance. The agencies recommend that UPPCO produce a loon management plan for the Au Train impoundment. We agree with the Resource Agencies that common loon habitat is present at Au Train impoundment and that potential effects on the common loon resulting from activities associated with the SMP warrant the development of a loon management plan that would monitor loon reproductive success and evaluate the benefit of additional nesting structures.

- We recommend that UPPCO develop a loon management plan in coordination with Resource Agencies. Additionally, we recommend that all identified loon habitat be surrounded by a 175-foot buffer where no trails, paths, or enhanced view areas are permitted. We also recommend that signs be placed around loon nesting areas to request boaters restrict their activities in these areas

during the breeding season. These provisions would minimize disturbance to the common loon while still permitting landowners with lots near identified loon habitat access to less sensitive shore areas.

The Resource Agencies commented the SMP lacks a formal framework for monitoring and updating in order to incorporate new information and changed conditions. The Resource Agencies commented that, at a minimum, UPPCO should regularly monitor key parameters such as amount of undisturbed shoreline and changes in wildlife use of project lands and waters. The Resource Agencies further comment that monitoring and enforcement plans should be developed concurrently with the SMP with input from the Resource Agencies.

UPPCO stated in its proposed plan it is committed to providing the resources needed to conduct regular inspections and manage the Au Train Project in accordance with the terms of the SMP, its license, and applicable FERC rules and regulations. UPPCO states it is responsible for ensuring that the uses and occupancies for which it grants permission are safe, maintained in good repair, and comply with applicable safety and health requirements. This responsibility includes public recreation access and protecting important natural, environmental, and scenic resources. In addition, Article 410 of the project license, the standard land use article, states that the licensee:

> "shall have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation."

The SMP's shoreline management guidelines contain design criteria for developing facilities and conducting ground-disturbing activities associated with various land uses, including restrictions on the size and location of facilities, design standards, and construction methods to minimize impacts on project resources and values in the surrounding area. However, without a site visit prior to vegetation removal; it would be difficult to determine whether violations to permitting terms and conditions occurred.

- We recommend the licensee, as part of its permitting program; visit a permitted site prior to vegetation removal to flag the area to ensure compliance with the terms and conditions of its permit.

The licensee has stated that, at a minimum, consultation with the agencies would occur annually to discuss the progress of the implementation of the SMP. However, the licensee does not provide for updates of the SMP.

- We recommend the licensee update and refile the plan every 5 years, for Commission approval, after consultation with the appropriate agencies, beginning 5 years from the issuance of any order approving an SMP. The filing should also include documentation of the licensee's consultation with the agencies on the updated plans, including responses to any agency comments and recommendations

The SMP's shoreline classifications, as described in section IV.1 of this EA, were developed with extensive input by the interested Federal and state Resource Agencies and others with the intention of protecting the environmental resource values of the project's shoreline. These classifications have also been publicly noticed for the purpose of obtaining further public consideration. Therefore, any proposed changes to these classifications or proposals to alter shoreline uses that are not consistent with the SMP should be filed for Commission approval in advance of any inconsistent activities. The licensee should prepare such proposals in consultation with appropriate agencies.

Common Loon Research and Conservation and the Resource Agencies state there are inconsistencies with approved plans. It is important that all approved plans be consistent with one another and implemented in a cooperative manner; however, Commission staff has not been provided with enough details to include the specific placement of the recreational enhancements.

- We recommend the licensee develop, in consultation with appropriate agencies, an application to amend the project's recreation plan that would include, at a minimum, provisions for all 12 recreational enhancements listed in the SMP. We recommend the amendment request be filed for Commission approval and include specific design drawings of the four construction-related recreation measures, a cost estimate for each facility or production cost for the map and brochure production, identification of the entity responsible for the operation and maintenance of the facilities, and an implementation schedule.

A review of the project license indicates the CLMP was intended to be a comprehensive document dealing with multiple resources and pressures on project resources. The proposed SMP focuses on non-project use of project lands and public enhancements. However, the SMP is narrow in scope and needs to be consistent with the project's recreation plan and CLMP.

- We recommend the licensee file for Commission approval, after consultation with the appropriate agencies; a request to amend the approved CLMP. The request would include, at a minimum:

(1) To prohibit all timber harvesting and eliminate timber management activity on project lands;

(2) Replace Appendix B of the approved comprehensive land management plan with the revised project buffer zone map from the SMP that illustrate the entirety of lands that would be subject to the comprehensive land management plan;

(3) Clarification that the uses and prohibitions specified in the SMP and recreation plan are consistent with the objectives of the CLMP; and

(4) Components to address the new recreational enhancements once specific locations have been chosen for all facilities and design drawings have been made.

- We also recommend the licensee file, for Commission approval, revised Exhibit G drawings for the project, as proposed, in conformity with sections 4.39 and 4.41 of the Commission's regulations

VIII. FINDING OF NO SIGNIFICANT IMPACT

Based on information, analysis, and evaluations contained in this EA, we find that implementation of the proposed SMP, with our recommended measures, would not constitute a major Federal action significantly affecting the quality of the human environment.

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X. LIST OF PREPARERS

Jon Cofrancesco (FERC Task Monitor), Environmental Protection Specialist

Jean Potvin, Deputy Project Manager, Outdoor Recreation Planner

Pat Weslowski, Project Manager

Peter Foote, Senior Fisheries Biologist

Ellen Hall, Socioeconomist

Ken Hodge, Principal Engineer

Tyler Rychener, Environmental Scientist

Denise Short, Technical Editor

Lynn Skaves, Graphics Illustrator

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