

Private Stewardship Grant Program



Endangered Great Lakes Piping Plover Protection and Monitoring in Northern Michigan

Objectives:

These objectives support recovery actions in the federal *Great Lakes Piping Plover Recovery Plan*.

- Increase the reproductive success of piping plover (*Charadrius melodus*) nesting on private land by protecting and monitoring piping plover nests and chicks. (Supports Task # 1.2 in Great Lakes Piping Plover Recovery Plan)
- Decrease human disturbance to piping plover adults and chicks by conducting on and off beach outreach activities with beach users and landowners. (Task # 1.2 in Plan).
- Increase landowner support for and awareness of piping plover recovery efforts by providing piping plover information which is specific to the current plover activities on their shoreline. (Task #5)

Duration: All work funded by the Private Stewardship Grant Program (PSGP) grant will be completed by September 30, 2008, which will allow for two full piping plover breeding seasons.

Summary of costs:

PSGP funding needed: \$69,373

Cost sharing: \$12,500

Applicant contact information:

Jackie Kosey or
Central Lake Superior Land Conservancy
P.O. Box 7135, Marquette, MI 49855
Phone: 906-226-2461
Fax: 906-228-4484
Email:

Christie Deloria-Sheffield
U.S. Fish & Wildlife Service
U.P. Sub-office
1924 Industrial Parkway, Marquette, MI 49855
Phone: 906-226-1240
E-mail: christie_deloria@fws.gov

Project Description:

The Great Lakes population of the piping plover (PIPLs) was listed as federally endangered under the U.S. Endangered Species Act in 1986. Despite modest increases to 58 breeding pairs since listing, the PIPL population remains extremely vulnerable to extinction. The Great Lakes piping plover population continues to be threatened by predation, demographic and environmental stochasticity, continued shoreline development, and human disturbances. At the current Great Lakes piping plover population level, the reproductive success of each breeding pair is critically important to the recovery of the species. This proposal, if funded, will help protect piping plovers from predation and will alleviate disturbance of nesting plovers on privately owned land in Northern Michigan. Actions undertaken over the next several years will be critical for population growth toward recovery and delisting.

Approximately 1/3 of the Great Lakes piping plover population nests on privately owned shoreline areas. Unlike publicly owned lands, where large expanses of beach are closed to human entry during piping plover breeding season, closure of privately owned beaches is not possible. This continuous human presence provides additional challenges to piping plover recovery on private lands. Efforts to protect nests from disturbance on private lands rely mainly on outreach efforts, voluntary landowner permission for nest protection, and continuous staff presence on beaches to inform landowners and beach users of plover presence.

The statement of work below, describes monitoring, protection, and outreach efforts, which have been identified as priority 1 (actions needed to prevent extinction) or priority 2 (actions necessary to prevent a decline in population number or habitat quality and quantity), in the Recovery Plan for the Great Lakes Piping Plover (Plan). In addition, the Upper Mississippi/Great Lakes Shorebird Conservation Plan identifies the Great Lakes piping plover as the region's only highly imperiled species. The piping plover is also a Region 3 Resource Conservation Priority species. Activities to be supported by the grant would be part of an ongoing, multi-agency partnership involving the National Park Service (Sleeping Bear Dunes, Indiana Dunes and Apostle Islands National Lakeshore), the U.S. Fish and Wildlife Service, the U.S. Forest Service, and the states of Michigan and Wisconsin. The current recovery effort also receives support from non-governmental organizations and has successfully recruited the participation of a number of volunteers who donate several hundred hours each year to aid in nest monitoring and public education on piping plover conservation. In 2005 volunteers donated over 3,200 hours.

The locations of our proposed monitoring, outreach, and protection efforts will be at Grand Marais, Vermilion, and Gulliver, Michigan (Figure 1). Currently, these are the three privately owned sites utilized by piping plover in the Upper Peninsula of Michigan.

Grand Marais:

Approximately, ninety percent of the shoreline in Grand Marais is held in private ownership with more than 70 private landowners holding title to properties. Few of these landowners are present all year, most visit Grand Marais sporadically in the summer months. Also, the shoreline at Grand Marais, approximately 3 miles, is contained in the MI-1 piping plover critical habitat unit, which extends from Grand Marais east to Whitefish Point (Figure 2). The Lake Superior shoreline at Grand Marais has consistently provided nesting areas for the endangered Great Lakes piping plover, even during the population lows in the early 1990s.

Nesting success of piping plover at Grand Marais has varied over the last 10 years. Recently, piping plovers at Grand Marais have been plagued by various threats including predation, human and domestic animal disturbance, ATV use on the beach, and others. All of these factors have likely played a role in unsuccessful nesting attempts at Grand Marais.

Although 90% of the shoreline at Grand Marais is privately owned, there are several public access points. Once beach users enter the beach, they likely will transverse many private properties while they stroll the Lake Superior shoreline. So, not only educating the landowners is important, but also educating all beach users is equally important. Many times beach users bring their dogs to the beach to run off leash without realizing that their dog could disturb, chase, or even kill a piping plover. Having a piping plover “monitor” on the beach has shown to be an effective way to educate beach users and decrease human/pet disturbance to nesting piping plovers.

This Grant Program is also a good fit at Grand Marais since several private landowners have consistently been involved in piping plover monitoring and protection efforts. Evelyn Wood, a resort owner, has been watching and monitoring piping plovers in Grand Marais since an adult plover was banded on her property in the early 1980’s, prior to listing. She continues to be a strong advocate for piping plovers, and has for many years been the only person monitoring plover activity. Bill and Kathy Davis, also summer residents of Grand Marais, have been involved in plover monitoring for over 10 years. Many other landowners have given their permission over the years to protect and monitor plovers on their property. We expect private landowners will continue to be supportive of piping plover recovery efforts.

Grand Marias Stewardship Grant Update

In 2004, we were successful at obtaining a Private Stewardship Grant for piping plover recovery efforts at Grand Marais. The grant provided funding for piping plover monitoring and outreach efforts in the summers of 2005 and 2006. In 2005 a piping plover monitor, Jean Carpenter, was hired to conduct piping plover monitoring and protection as well as alert beach users and landowners. One pair of piping plovers nested at Grand Marias in 2005 and all three chicks that hatched survived to fledgling stage. This was a very successful year considering that from 1999 to 2004 a total of 7 chicks had fledged from Grand Marais. This success is due to the efforts of Jean and the landowner volunteers who closely monitored the chicks from sunrise to sunset. They also removed several stray dogs, discouraged predators from occupying plover areas, and advised hundreds of beach users and landowners of areas to avoid. Jean was also able to expand volunteer efforts by involving two new landowners Pat Grasser and Sharon Cashin. In addition, in 2005 535 volunteer hours were logged (we had predicted only 300 volunteer hours in 2005 and 2006 combined). Similar monitoring and protection efforts are expected to continue into 2006.

Through grant funds Central Lake Superior Land Conservancy was able to create and distribute new outreach materials including piping plover doorknob flyers and new “chicks in the area” signs. Between the extra outreach resources and the efforts of the piping plover monitor and the volunteers, a positive piping plover message was conveyed in Grand Marais and the overall awareness within the community was increased.

Vermilion

Vermilion is a privately owned property containing 2 miles of Lake Superior shoreline. This area is 40 miles east of Grand Marais and approximately 11 miles west of Whitefish Point. Vermilion is part of the MI-1 piping plover critical habitat unit, which extends from Grand Marais to Whitefish Point (Figure 3). This portion of shoreline, in the Eastern Upper Peninsula of Michigan, has consistently provided nesting areas for endangered Great Lakes piping plovers since the mid-80's. Nesting success of piping plover at Vermilion has varied, due to historical and present threats such as predators, human and domestic animal disturbance, and ATV use on the beach. There has been a single pair nesting at Vermilion since 2002 with only two chicks having successfully fledged during that time. Historically, seven pairs were documented using this stretch of shoreline as a nesting site and it has been estimated that it could support upwards of 11 pairs. Predator, ATV, and human disturbances likely have played a major role in decline of nesting pairs at Vermilion.

Unlike Grand Marais, Vermilion is much more isolated. It is about 30 minutes to Paradise, the nearest village, and there is very little as far as businesses and developments in between. There are some other private parcels close to Vermilion, but primarily the surrounding area is state owned lands. The threats to the site and piping plover, therefore, are somewhat different than Grand Marais. Vermilion, unlike Grand Marais, is not only hard to get to, but is also primarily closed to entry to the general public. The east and west property boundaries are clearly demarcated on the shoreline, however, that does not typically stop ATV's from entering the area. Illegal ATV use starts on adjacent State lands and continues through Vermilion property. This has been and continues to be a threat to piping plover productivity at this site. Occasionally humans find there way to Vermilion as well and proceed onto the property, taking no heed of the signs. Having a piping plover monitor on site who is able to talk with ATV users, follow up with law enforcement, and deal with potential beach users has proven to be a successful approach in the past.

The Private Stewardship Grant Program is an appropriate source of funding for Vermilion, since the landowner has participated in research efforts since the 80's. Wild Shores Foundation, the owner of Vermilion Point, has been an integral part of research at Vermilion. Wild Shores has provided lodging for researchers and donated funds to support student research and banding of neo-tropical migrants. Currently, the land at Vermilion is being transferred to the Little Traverse Conservancy, another private entity that supports ongoing research efforts at Vermilion. The coordination between Lake Superior State University, Wild Shores Foundation, and the Little Traverse Conservancy is key to the success of this project.

In past years Lake Superior State University has been able to obtain funding to conduct the piping plover protection and monitoring at Vermilion through section 6 grants from the Michigan Department of Natural Resources (MDNR). Due to new section 6 funding distribution guidelines, MDNR will be receiving less section 6 funding in the foreseeable future. Private sites, such as Vermilion, are unlikely to receive funding for piping plover protection. It is likely that thorough piping plover monitoring and protection efforts will not be performed at Vermilion without outside funding.

Gulliver Lake Outlet

Gulliver Lake Outlet is a Lake Michigan tributary which is approximately 15 miles east of Manistique in Schoolcraft County, Michigan (Figure 1, Figure 4). Gulliver Lake Outlet is a portion of about a 10 mile stretch of shoreline that contains habitat suitable for piping plovers. This 10 mile stretch of shoreline is the focus of piping plover protection and monitoring for this grant proposal. The area starts at approximately Dutch John's Point and extends east to Goudreau's Harbor. Nesting of plovers east of Manistique in this general area had been documented from 1935 until around 1979. Sporadic sightings of single plovers were noted in the 80's and early 90's, but no nesting was observed. From the early 1990's to 2004 this area was not surveyed for piping plovers. In 2004, the Gulliver Lake Outlet area was identified as a potential piping plover breeding area by a fisheries biologist. Subsequent visits by U.S. Fish and Wildlife Service staff identified a pair of piping plovers in the area; however, no nest was found. In 2005 the site was visited again and a nesting pair was observed. This nest fledged 2 young. Our limited observations at this site suggests that threats experienced at Grand Marais are also experienced here and that beach user and landowner outreach will be an essential part of piping plover restoration at this site.

Also within this 10 miles of shoreline there are several other federal and state listed species. The Great Lakes endemic plants pitcher's thistle, dwarf lake iris, and Houghton's goldenrod, all federally listed species, are found here. Lake Huron tansy, Lake Huron locust, pine drops, stitchwort, veiny meadow rue, and fir clubmoss are all also documented within this area and are either state listed or state species of concern. The area also contains a wooded dune and swale community. This community type is classified as G3 by NatureServe and is considered globally rare. Although this proposal is focused on protection and recovery of piping plover, we intend to also raise awareness and help protect these other rare species.

The Schoolcraft County plat book shows this area as being mostly (95%) privately owned. Gulliver Lake Outlet and surrounding area contains at least two subdivisions and areas outside of these subdivisions are small lakefront lots. Some summer homes have been developed on these lots, while other lots remain vacant at this time. It appears, based on our observations over the last two years, that lot development is occurring at a rapid pace.

As this is a newly discovered piping plover nesting area we have had limited contact with landowners. However, in 2005 we spoke with James Poinsette and another individual landowner who were both supportive of piping plover protection efforts. Based on our experience with landowners at Grand Marais, we expect landowners in the area will be supportive of piping plover recovery efforts. Through this grant we hope to develop more contact and interest with private landowners. Ultimately we hope to find several local piping plover "stewards" similar to what has occurred at Grand Marais.

Statement of Work:

This proposal consists of piping plover monitoring and protection and piping plover outreach at Grand Marais, Vermilion and Gulliver, Michigan.

Piping plover monitoring/protection (Grand Marais, Vermilion, and Gulliver Lake Outlet):

Efforts to protect nests and chicks have demonstrated that intensive management improves piping plover reproductive success. Nest protection and monitoring efforts are listed under Task 1 in the Recovery Plan and are considered Priority 1 actions.

We propose to hire 1 staff person (monitor) each at Grand Marais, Vermilion, and Gulliver Lake Outlet. These people would monitor and protect piping plover nests in Grand Marais from approximately May 15 to August 15 for 2 nesting seasons. The U.S. Fish & Wildlife Service will provide training via an annual training workshop in early May and general on-site guidance to necessary monitoring efforts.

These individuals will provide daily observations of all piping plovers at Grand Marais, Vermilion, and Gulliver Lake Outlet to determine their status and help alleviate human, ATV, predator, or pet disturbance. Staff would be involved with erecting piping plover nest enclosures, with assistance from U.S. Fish & Wildlife Service or University of Minnesota staff, and contacting private landowners and beach users.

At Grand Marais, private landowners, Evelyn Wood, Bill Davis, and Kathy Davis, will provide in-kind contributions by helping erect nest enclosures, signage, and provide plover observations during the monitors days off. Because of their extensive knowledge of piping plover beach use at Grand Marais, they will also provide key information to the monitor regarding local landowner contacts and possible piping plover nesting locations.

At Vermilion, Wild Shores Foundation, will provide housing for the plover monitor and pay for additional researchers which will help erect nest enclosures, signage, and provide plover observations during the monitors days off.

At Gulliver Lake Outlet, Central Lake Superior Land Conservancy, will donate staff or board member volunteer time to develop private landowner contacts and follow up with outreach efforts.

Piping plover outreach (Grand Marais, Gulliver Lake Outlet, Vermilion)

Effective management to protect the piping plover depends on the public abiding by protective regulations. Intense human activity on piping plover breeding areas each year create a great need and opportunity for public education (Task #5 in Recovery Plan).

We propose to

- Purchase and Erect “piping plover chicks in the area” signage.

Through previous Stewardship Grant Funds we were able to develop signs that alerted beach users of piping plover chicks. Previously, the only signs that were available were geared toward beach closures on public lands. The new signs alert beach users that chicks could be present anywhere on the shoreline and that the birds are not confined into the small, signed nest site areas. These small signs (8.5” X 11 in) will be mounted to metal posts and placed at strategic locations on private lands. As they are small and portable, they are designed for use during the breeding season only and will be taken down after chicks have fledged.

These signs proved to be effective outreach tools to decrease human disturbance. Signs purchased in 2005 were shared between Grand Marais and Cross Village (a private site in the Northern Lower Peninsula of Michigan). With the addition of Gulliver Lake Outlet, more signs will be necessary. We anticipate that these signs will likely last 10 years beyond the project timeline.

Central Lake Superior Land Conservancy will purchase the signs in Year 1. The monitors and volunteers will help install signage in Year 1 and Year 2 of the project. Signs will be available for use after Year 2.

- Continue distribution of piping plover door knob flyers (Grand Marais, Gulliver Lake Outlet)

The cooperation of private landowners in piping plover protection is vital to the success of recovery efforts in the Great Lakes. The Recovery Plan suggests that a contact program is needed to promote awareness of piping plover status for private owners of habitat (Task #5.2). Typical landowner contact techniques such as door-to-door communication or a newspaper release does not always reach all land owners at sites like Grand Marais or Gulliver Lake due to their sporadic presence.

With previous grant funding we were able to develop 1,000 doorknob flyers to help contact shoreline owners. These flyers were provided to landowners, or hung on the doorknob of vacant residences, to inform them of plovers in the area and specific nesting chronology of that particular pair of plovers (i.e. nest incubation will be between May 15 – June 15, flightless chicks will be on the beach between June 15 – July 15). The flyers provided general guidance on piping plover friendly beach use. Flyers will also provide the name and phone number of the local plover monitor for follow up information.

We anticipate that production of more flyers will not be necessary for this grant period. The plover monitors will distribute the flyers in Year 1 and Year 2.

- Develop landowner database (Gulliver Lake Outlet)

Based on the Schoolcraft County plat book, it appears that this 10 mile stretch of shoreline has hundreds to potentially thousands of landowners. In order to contact appropriate landowners for permission to enter their property and put up piping plover nest exclosures you must first know who to contact and how to contact them. The plat book is not useful as it lists the area as “small parcels” and does not show lot lines or provide landowner names. We propose to develop a map showing the parcels in this area and compile a list of all the landowners with their current contact information. Since Schoolcraft county plat is not yet available digitally, this means that the local courthouse will be the source of information. We expect many hours will need to be spent in the courthouse to compile the records that are necessary to create this database.

A similar database was created for Grand Marais in the 90's. This database has been extremely useful in determining who and how to contact landowners when plover begin breeding.

Central Lake Superior Land Conservancy will develop the database in Year 1. The database will be utilized in Year 1 and beyond to help identify landowners for permission to enter land and protect plovers. The completed database will be provided to the U.S. Fish and Wildlife Service for use into the future.

➤ **Develop and distribute brochure (Gulliver Lake Outlet)**

In order to inform landowners about the rare species found in the area we propose to develop a brochure that identifies some of the rare species and provides ways to best protect and manage them. We anticipate that the brochure will focus on piping plover, Pitcher's thistle, Houghton's goldenrod, Lake Huron tansy, and dwarf lake iris. A similar brochure has already been developed by Little Traverse Conservancy in conjunction with U.S. Fish and Wildlife Service. This brochure will be revised, edited and used for this project.

Central Lake Superior Land Conservancy will edit and purchase the brochures in Year 1. Brochures will be distributed to private landowners in the Gulliver Lake area in Year 1 and Year 2 during other outreach efforts.

➤ **Build private landowner volunteer network (Gulliver Lake Outlet)**

Utilizing the private landowner database and the brochure, we will contact landowners via mail to raise their awareness regarding rare species (piping plover and others that could be on their property). We will make follow up visits to landowners who are interested. If appropriate we will speak at homeowner's association meetings or other venues to raise awareness and look for volunteers.

The piping plover monitor will also be instrumental in building this volunteer base. During the daily activities of monitoring piping plovers and talking with beach users, the monitor will interact with various private landowners. If landowners are interested, the monitor could show them piping plover on the beach, distribute brochures and other information, and potentially get landowners interested in helping with monitoring efforts.

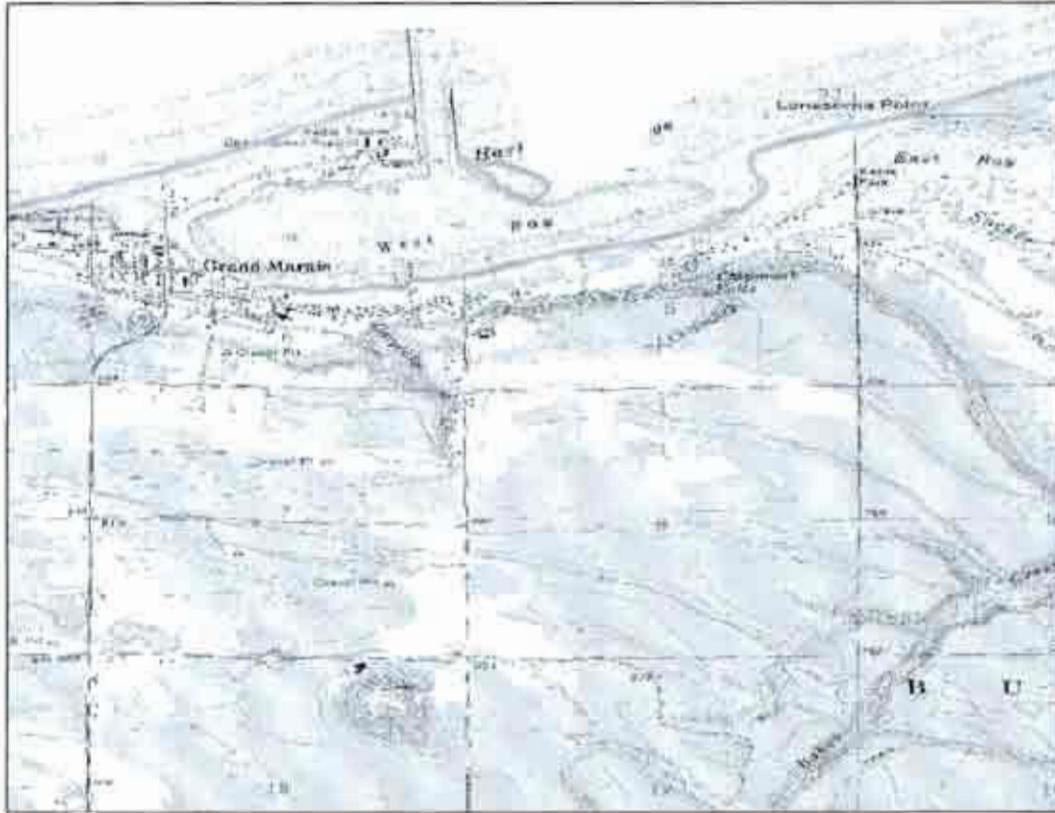
Central Lake Superior Land Conservancy will send letters, make phone calls, and do follow up site visits in Year 1 and Year 2. The monitor will perform further follow up and updates to landowners in Year 1 and Year 2 of the project.

Central Lake Superior Land Conservancy, a non-profit land trust that holds conservation easements is applying for this grant, in cooperation with Lake Superior State University and the U.S. Fish and Wildlife Service's ecological service office in Michigan. Central Lake Superior Land Conservancy will act as the administrator for this grant. The Conservancy will also hire and supervise the piping plover monitor and outreach coordinator, purchase and distribute outreach materials, and purchase and erect signage at Grand Marais and Gulliver Lake Outlet. Lake Superior State University will hire and supervise the piping plover monitor and purchase needed supplies for Vermilion. Volunteer landowners will provide in-kind contributions through housing, installation of signs, plover protection and monitoring, and private landowner outreach. Data collected by volunteers and plover monitors, from previous years and future years, will be used to evaluate the relative success or failure of the project to achieve its objectives.

Figure 1. Proposed Areas for
Piping Plover Protection and Monitoring
In Northern Michigan



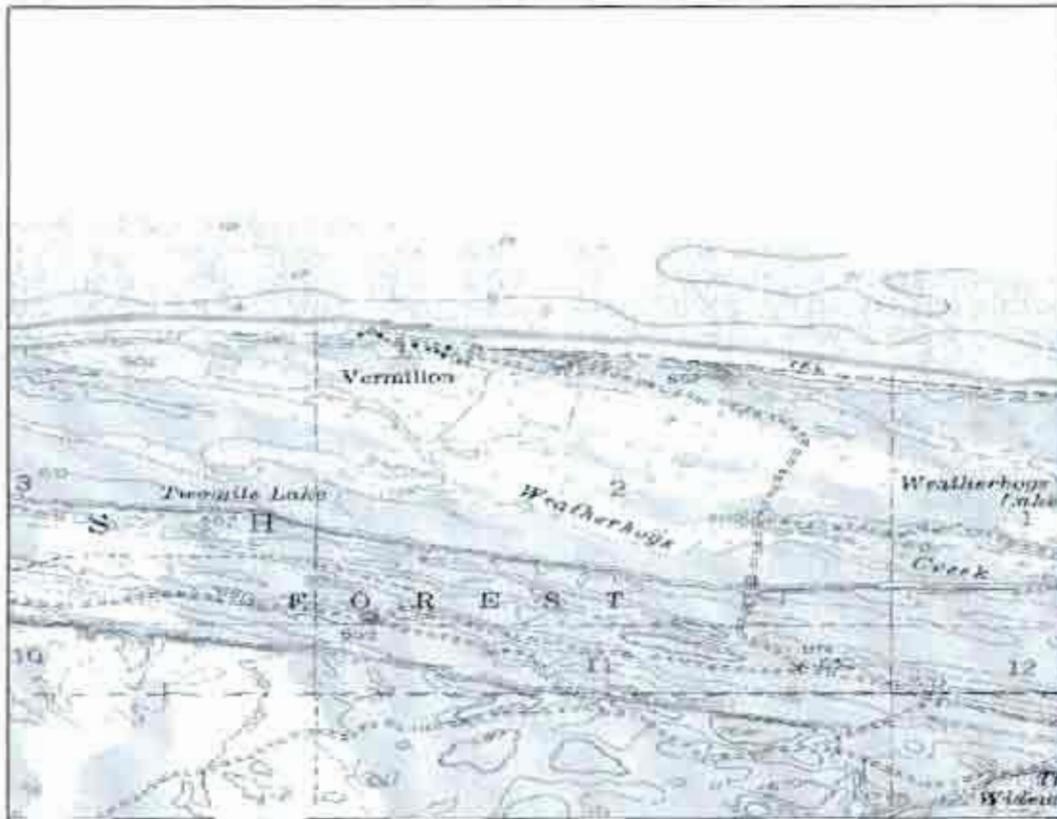
Figure 2. Location of Grand Marais portion of the proposed project.



Piping Plover Critical Habitat Boundary



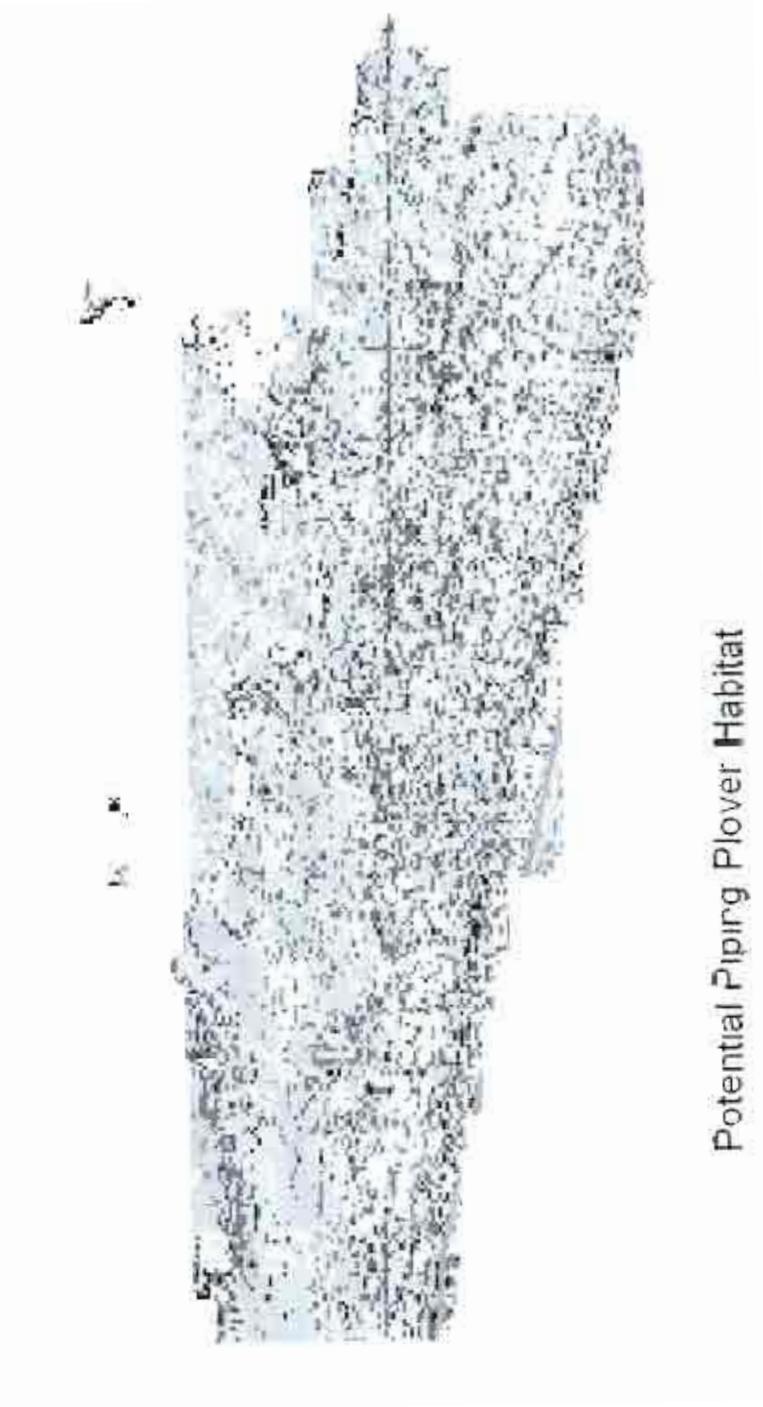
Figure 3 Location of Vermilion Michigan



Piping Plover Critical Habitat Boundary



Figure location Sulliver Outlet Potential plover habitat extends and from this location



Potential Piping Plover Habitat

