



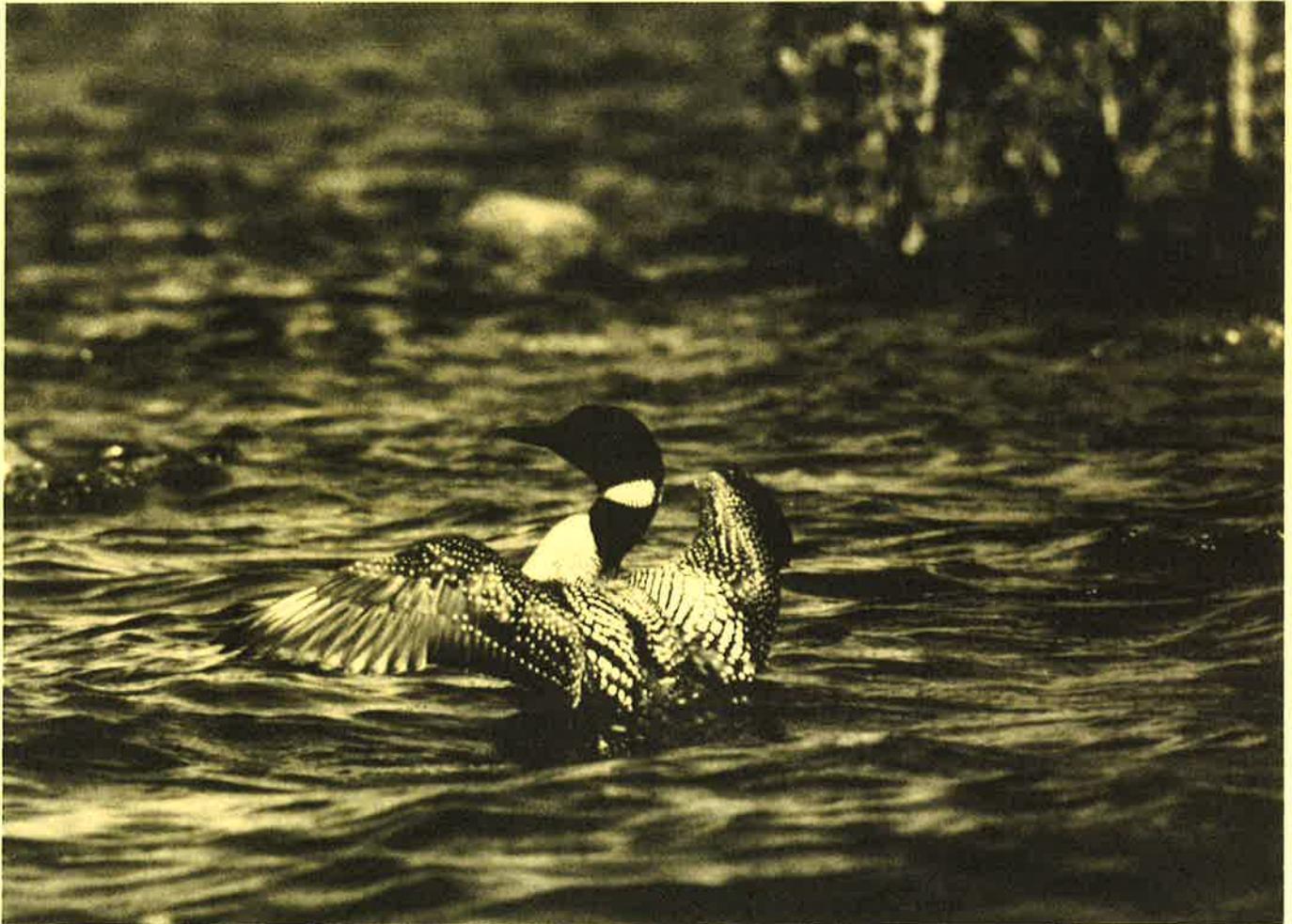
U.S. Department of the Interior
Bureau of Land Management

Eastern States
Milwaukee District Office

September 1993



Lake Vermilion Public Islands
Coordinated Resource Management Plan





United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Milwaukee District Office

P.O. Box 631

Milwaukee, Wisconsin 53201-0631



IN REPLY REFER TO

030: SJ

8300

September 14, 1993

Dear Reader:

Enclosed is the final Lake Vermilion Public Islands Coordinated Resource Management Plan (CRMP), Environmental Assessment, and Decision Record. This is a long term management plan for 87 small public islands administered by the Bureau of Land Management. These islands are located in Lake Vermilion and seven smaller lakes in St. Louis County, Minnesota. The CRMP provides specific direction for managing the public islands as a component of the Lake Vermilion ecosystem.

We appreciate your participation in the development of a management plan, attendance at the public meetings, and comments on the draft document. Copies of all written comments and responses to these comments are found in Appendix 1 of the CRMP.

If you have any questions about the management plan, please contact Sylvia Jordan or myself at 414-297-4400 or at the address shown on this letterhead.

Sincerely,

Jaime T. Provencio
Assistant District Manager,
Lands and Renewable Resources

Enclosure

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SECTION 1

Decision Record/Finding of No Significant Impact

**Decision Record/Finding of No Significant Impact
(DR/FONSI)**

DECISION

It is my decision to select the Preferred Management Alternative (Alternative 2) as outlined in the Draft Lake Vermilion Public Islands Coordinated Resource Management Plan/Environmental Assessment with one modification. This modification incorporates Action 2 of Issue 5 in Alternative 3 (universal access at a minimum of two sites on the mainland) into the Preferred Management Alternative. The final plan with related decisions follows the DR/FONSI. The implementation schedule for the management of the public islands within the Lake Vermilion ecosystem is outlined in Table 1 of Section 2. The Lake Vermilion Public Islands Coordinated Resource Management Plan (CRMP) fulfills our planning responsibilities within the context of the Shipstead-Newton-Nolan Act of 1930, which addresses conservation of the natural beauty of the shorelines for scenic and recreational purposes.

ALTERNATIVES CONSIDERED

Three management alternatives were considered to address the issues identified in the draft plan. These were identified as Alternative 1: Present Management, Alternative 2: Preferred Management, and Alternative 3: Intensive Management. Alternative 1 continues current management direction. Resources are managed on a case-by-case basis. Alternative 2 involves a low level management presence. Actions are driven by long-range objectives designed to manage visitor use and public island resources as a component of the Lake Vermilion ecosystem. The majority of the management actions and visitor contact occur on the mainland and not on the public islands. Visitor use is mostly self-regulated through off-site visitor information and interpretation. Alternative 3 differs from Alternative 2 with more intensive management actions which include on-site presence and rustic facilities on some of the larger public islands.

PUBLIC INVOLVEMENT

The public was invited to participate in the planning process during scoping and issue identification. A public meeting was held in Tower, Minnesota to receive comments. During the review period, a second public meeting was held. News releases and newspaper notices announcing the availability of the draft plan were published. Many of the comments received, both verbal and written, indicated that local residents did not want the location of these islands to become public knowledge. Their concern focused on the

possibility of increased public use which would result in resource damage. A desire for low level management was stressed with an emphasis on information and interpretation. Public comments were used to identify issues and opportunities and create the Lake Vermilion Public Island CRMP. The comments are reprinted in full with BLM's responses in appendix 1.

RATIONALE FOR THE DECISION

There is a need for some type of management presence for the public islands in the Lake Vermilion ecosystem. If present management continues as is, resource values would degrade on islands currently receiving moderate to heavy recreational use. Issues and opportunities identified during the planning process were addressed under the three alternatives outlined in the draft plan. Although all three alternatives met the goals and objectives of the plan, Alternative 2, as modified, was selected as the best management plan for the public islands. Management actions under this alternative maintain the natural scenic beauty of the shorelines for recreational use as required under the Shipstead-Newton-Nolan Act of 1930. On-site management actions are low key and will not degrade the visual quality of the islands. Public awareness and recreational opportunities will increase, but wise use through information and interpretation will be encouraged. An information/interpretative plan will be developed to increase awareness of the public island resources and recreational opportunities, while at the same time promoting use ethics to protect sensitive island resources. Universally accessible docks would be provided at two sites on the shore of Lake Vermilion. By constructing two sites, needed access to both the east and west shore would be provided.

FONSI

Section 3 includes the environmental assessment (EA) which analyzes the effects of the alternatives proposed in the Lake Vermilion Public Islands CRMP. This analysis indicates that overall impacts to the Lake Vermilion ecosystem will be negligible. Anticipated use of the islands can be expected to increase due to the increased awareness and knowledge of the island resources, but the development of an island information/interpretative plan will encourage wise use of these islands, thus protecting resource values. In the consolidation of Alternative 2 and a portion of Alternative 3 to form the final plan, the environmental impacts of the proposed management actions are similar to those analyzed under the three alternatives outlined in the draft plan. Therefore, additional analysis is not required. Based on the EA cited above,

I conclude that the proposed management actions, together with other past, present and reasonably foreseeable future actions will not have a significant impact on the Lake Vermilion ecosystem and an environmental impact statement is not required.

Recommended by:

Jaime T. Provencio
Jaime T. Provencio
Assistant District Manager
Lands & Renewable Resources
Milwaukee District

09/10/93
Date

Approved by:

Mary D. Bauer
Gary D. Bauer
District Manager
Milwaukee District

9/10/93
Date

SECTION 2

Lake Vermilion Public Islands
Coordinated Resource Management Plan

LAKE VERMILION PUBLIC ISLANDS
COORDINATED RESOURCE MANAGEMENT PLAN

United States Department of the Interior
Bureau of Land Management
Eastern States
Milwaukee District

Prepared by:

Sylvia Jordan
Sylvia Jordan, Lead
Natural Resource Specialist

9/10/93
Date

Recommended by:

Jaime T. Provencio
Jaime T. Provencio
Assistant District Manager,
Lands and Renewable Resources

9/10/93
Date

LAKE VERMILION PUBLIC ISLANDS
COORDINATED RESOURCE MANAGEMENT PLAN

I. INTRODUCTION

The coordinated resource management plan (CRMP) identifies actions which will be implemented as a means of enhancing the BLM's management of public island resources in the Lake Vermilion ecosystem. These actions are the result of an indepth analysis to determine the best means to administer these public resources (see attached Environmental Assessment). The actions are designed to improve recreational opportunities and reduce use conflicts, while protecting the natural resource values of the public islands.

Overall BLM management presence would continue to be low level in this ecosystem. Management actions would strive to reach long-range objectives designed to manage visitor use and public island resources as a component of the Lake Vermilion ecosystem. Objectives would assist in sustaining the integrity, biological diversity, and productivity of the ecosystem. The majority of the management actions and visitor contact would occur on the mainland and not on public islands. Visitor uses of public lands would be mostly self-regulated through off-site visitor education and guidance. Rudimentary on-site facilities could be developed on islands 0.18 acre or larger in size, when monitoring determines that facilities are needed to protect the island resources or for visitor safety.

II. MANAGEMENT GOALS AND ASSUMPTIONS

The following goals will be accomplished through implementation of this management plan.

- 1) Manage public island resources as a component of the Lake Vermilion ecosystem.
- 2) Increase visitor awareness and understanding of public islands, public island resource values, and the associated recreational opportunities.
- 3) Maintain resource values important to wildlife habitat, recreational opportunities, and the Lake Vermilion ecosystem.

The following assumptions apply to the implementation of the CRMP.

All proposed actions will be consistent with state and Federal laws, executive orders, policy, regulations and the following guidance.

Effective implementation of the Lake Vermilion Public Islands CRMP will be dependent upon partnerships. Opportunities for partnerships are enhanced by: (1) the remoteness of the BLM's Milwaukee District Office from the Lake Vermilion ecosystem, (2) the development and implementation of a Challenge Cost Share Agreement with the Minnesota Department of Natural Resources (DNR), (3) the presence of other land management agencies in the Lake Vermilion area, and (4) the presence of organizations interested in the health of the Lake Vermilion ecosystem. Cooperative management will stress use of state-of-the-art technology, research, and educational efforts to encourage stewardship and responsible use of public resources. Opportunities will be explored to involve adjacent Federal, state and local land management agencies, the Chippewa Tribe, private landowners, academic institutions, and interest groups.

Decisions made in this plan will apply to both known surveyed islands within the Lake Vermilion ecosystem and any additional islands within the ecosystem which are surveyed and identified as public land after completion of this plan.

Resolution of all unauthorized use of public islands in the Lake Vermilion ecosystem will continue as determined in the MFP. Claimants will be contacted and informed of the requirements specified under the Color-of-Title Act of 1928. A valid claim of ownership must be based on a continuous claim of title predating the Shipstead-Newton-Nolan (SNN) Act of 1930. It is not likely that any claimant can meet that requirement. Owners of property on invalid claims will be given a period of time to remove personal property prior to initiation of formal trespass proceedings. Unauthorized use of public lands occurs on about 14 percent of the islands through the construction of the following facilities: pit toilets, small buildings, picnic tables, cabins, shacks, outhouses, storage buildings, docks, tables, and benches. Unauthorized facilities on those public islands where claims of ownership have not been submitted will be removed.

Recreational opportunities for the public islands will be identified using the Recreation Opportunity Spectrum (ROS). The ROS is subdivided into six classes which cover the full range of experience and experience opportunities from pristine to highly developed environments (appendix 3). The classification process provides the basis for developing and describing management objectives. Because of the small size and scattered distribution of the public islands, surrounding non-BLM land will have a major influence on the assessment of the experience opportunity that a visitor would have on or adjacent to public islands. ROS classification of public islands is limited to Semi-Primitive Motorized and Modified Natural classes due to the terms of the SNN Act.

Public island size will be used as a criteria to decide whether an island can sustain facility development. For development to occur, an island must at least 0.18 acre in size. This was determined by using the St. Louis County minimum shoreline setback requirement of 50 feet for a sanitary development. The minimum-sized island would have to be circular in shape and have a diameter of 100 feet. There are 20 public islands equal to or greater than 0.18 acre in size.

BLM will continue to work in conjunction with DNR to complete the preliminary assessment of the cultural resource potential on public islands in the Lake Vermilion ecosystem. Information gathered to date on 49 islands established a priority for formal survey of the islands in the future. The survey priority will also be based on potential resource damage as related to the current level of visitor use.

III. MANAGEMENT PROGRAM

Management actions are addressed by issue category and are numbered to correspond to the issue.

ISSUE 1

What is the most effective way to manage public island resources to meet the intent of the SNN Act?

Objective: On public islands, retain the existing natural beauty of the shorelines for recreational purposes.

Action 1-1

1-1.1 Designate and manage all public islands to meet the BLM Visual Resource Management (VRM) Class II requirements (appendix 2). This prescription allows for low level modifications on public islands for visitor safety and protection of resource values.

ISSUE 2

What is the most effective way to manage public island resources in the context of the Lake Vermilion ecosystem while meeting the intent of the Federal Land Policy and Management Act of 1976 (FLPMA)?

Objective: Manage public island resources to help sustain the integrity, biological diversity, and productivity of the Lake Vermilion ecosystem.

Action 2-1

- 2-1.1 Sustain ecosystem resources by using existing local, state, and Federal regulations and allowing only low level modifications of the landscape.
- 2-1.2 Protect resource values by managing for visitor contact mostly off-site on the mainland via printed material, information kiosks, and naturalist programs.
- 2-1.3 Guide visitors to the public islands suitable for on-site recreational activities through the use of maps and posting of unobtrusive signs identifying the islands as public land managed cooperatively with the DNR and other organizations.
- 2-1.4 Guide visitors away from islands with loon nest sites, potential bald eagle nest sites, rookeries, significant vegetation types, and small or low elevation islands through off-site education.

Action 2-2

- 2-2.1 Complete a resource inventory for public islands not inventoried during 1992.
- 2-2.2 Develop and implement a Limits of Acceptable Change (LAC) monitoring procedure designed to meet management goals and objectives. Monitoring intensity would be determined during development of LAC standards and guidelines.

Action 2-3

- 2-3.1 Encourage use of portable stoves or existing fire rings and wood brought from the mainland.

Action 2-4

- 2-4.1 When a bald eagle nest site is established on a public island, implement protective measures consistent with adjacent state and Federal land management standards and Federal regulations.
- 2-4.2 Manage two islands to maintain suitability as bald eagle nesting, feeding and roosting habitat.
- 2-4.3 Direct visitor use away from these two public islands.

Action 2-5

- 2-5.1 Continue coordination with the United States Department of Agriculture - Forest Service (FS) and DNR to develop a

walleye spawning reef on the vicinity of a public island in Elbow Lake.

Action 2-6

- 2-6.1 Manage two public islands to maintain existing cormorant and gull rookeries.
- 2-6.2 Manage for off-site visitor use by informing visitors of the suitable viewing required to prevent disturbances to nesting birds.

Action 2-7

- 2-7.1 Determine the significance to the ecosystem of the hardwood community occurring on at least two of the larger public islands. These islands support a denser, more mesic type than is typical on the majority of the public islands.
- 2-7.2 Direct visitor use away from these islands.

ISSUE 3

What recreational opportunities can be provided by the public island resources in the Lake Vermilion ecosystem?

Objective: Identify ROS classes for all public islands and manage public island resources consistent with the ROS delineations.

Action 3-1

- 3-1.1 Delineate ROS "Semi-Primitive Motorized" and "Modified Natural" classes as shown on Maps 3, 4, and 5. Manage recreational opportunities consistent with these classes and the VRM Class II designation.

Action 3-2

- 3-2.1 Provide opportunities for dispersed recreational activities such as fishing, boating, swimming, picnicking, camping, hunting, watching wildlife, sightseeing, and photography.
- 3-2.2 Provide opportunities for on-site use by groups ranging from 1 to 10 people, with an average group size of 2 to 4 visitors.
- 3-2.3 Encourage day use of islands and of existing FS and DNR designated primitive campsites for overnight use.

Action 3-3

- 3-3.1 Provide sanitary facilities consistent with the ROS "Semi-Primitive Motorized" setting and VRM Class II delineation on up to 18 public islands which are 0.18 acre or larger when LAC monitoring determines that such a facility is necessary for visitor safety or to protect island resources.
- 3-3.2 Provide primitive boat mooring stakes on up to 18 public islands that are 0.18 acre or larger as needed to direct visitors to suitable access points and to protect shoreline vegetation.

ISSUE 4

How should BLM increase public awareness of the public islands and their resource values?

Objective: Through a combination of existing and new information sources, increase visitor awareness and appreciation of public island resources, thereby enhancing the recreational experience and reducing visitor impacts.

Action 4-1

- 4-1.1 Develop and implement an off-site Lake Vermilion ecosystem information/interpretive plan identifying specific themes and appropriate media for at least the following topics:
- 1) Public island resource values
 - 2) Recreational use ethics especially as related to litter, sanitation, vegetation and wildlife protection, and respect of other visitors and local residents
 - 3) Recreational opportunities
 - 4) Safety
 - 5) Historic and pre-historic resources
 - 6) Regional geology
 - 7) Watchable wildlife
 - 8) Fishing

Action 4-2

- 4-2.1 Develop and publicize a waterway interpretive trail. The trail would be delineated on a map and accompanied by a fact sheet identifying boating stops. Boating stops would not be physically identified on the mainland or islands.

ISSUE 5

How can universal public access to BLM-administered islands resources best be provided?

Objective: Provide universal access to public island resources consistent with the determined ROS Class designations (see Issue 3).

Action 5-1

5-1.1 Continue to provide naturally occurring access onto public islands. Based on a graduated level of expected difficulty from easy to most difficult, existing access onto public islands varies from moderate to most difficult.

Action 5-2

5-2.1 Provide at least two universally accessible docks on the mainland of Lake Vermilion. These facilities would provide access to watercraft for the purpose of viewing public islands and fishing in waters adjacent to the islands.

ISSUE 6

What fire suppression actions are needed to prevent adjacent landowner property damage from wildfires starting on public islands?

Objective: Suppress wildfires on public islands when adjacent landowner property is threatened.

Action 6-1

6-1.1 Develop an agreement with a Federal, state, local or interagency fire suppression organization to implement appropriate fire suppression actions.

TABLE 1 - IMPLEMENTATION SCHEDULE

<u>Action</u>	<u>FY94</u>	<u>FY95</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>
2-1.1 Sustain ecosystem resources using existing local, state and Federal regulations; allow low level modifications; resolve trespass cases	-----				
2-1.2 Emphasize off-site visitor contact to protect resources [Note: includes actions relative to loon nests, potential bald eagle nest sites, rookeries, and significant plant communities (2-1.4); use of portable stoves 2-3.1); and day use of islands (3-2.3)]	-----	Existing brochure		Information\ interpretive plan	
2-1.3 Guide visitors to public islands-existing maps; post signs as needed to identify public islands	-----				
2-2.1 Complete resource inventory of public islands	----				
2-2.2 Develop/implement Limits of Acceptable Change (LAC) program [Note:includes actions relative to bald eagle nest sites (2-4.1); recreational opportunities (3-2.1 and 3-2.2)]	-----				
2-5.1 Coordinate with FS/DNR to develop a fish spawning reef in Elbow Lake	----				
2-7.1 Determine the significance of hardwood communities on public islands	----				

TABLE 1 - IMPLEMENTATION SCHEDULE AND COST ESTIMATES

Action	FY94	FY95	FY96	FY97	FY98
3-3.1 Install sanitary facilities where need is identified by LAC monitoring			-----		
3-3.2 Install boat mooring stakes where need is identified by LAC monitoring			-----		
4-1.1a Develop an off-site Lake Vermilion ecosystem information/interpretive plan		-----			
4-1.1b Implement the information/interpretive plan				-----	
4-2.1 Develop and publicize a waterway interpretive trail					
5-2.1 Provide a minimum of two Universal access docks on the mainland shoreline of Lake Vermilion			-----	plan/design/implement	
6-1.1 Develop and implement an agreement with state, Federal, and/or local entities for fire suppression on public islands		-----			

NOTE: Cost estimates will be made during the Bureau of Land Management's budgetary process. The implementation schedule is dependent upon available funding.

APPENDIX 1 - COMMENT LETTERS AND RESPONSES

The draft plan was available to the general public for review and comment from June 7, 1993 to July 7, 1993. During this period, BLM received three letters from private citizens, and one letter each from the Minnesota DNR, Township of Breitung, Vermilion Community College, and Minnesota State Historic Preservation office. It is our policy to formally respond to all substantive comments, dealing with such issues as data and statistics cited in the plan, corrections to our assumptions, and the analysis of impacts. Non-substantive comments, including votes and opinions on alternatives, were considered during finalization of the plan, but are not formally responded to in this document.

Four central themes dominated the contents of the comment letters and are addressed here in general terms. First, there is a concern that some public islands are too close to private residences to support significant recreational activity, as noise and other impacts associated with increased visitation may decrease landowners' enjoyment of their property. However, under the Federal Land Policy and Management Act (FLPMA) of 1976, BLM is mandated to manage public lands according to the principle of multiple use. These islands have historically been open to the public and several parcels, including islands close to private residences, are already being used for recreational activities. Therefore, it is not in the public's best interest to close these islands to all on-site activities at this time. BLM will take steps during the implementation of this plan, including recommending "day use only" of specific islands, to mitigate problems associated with visitor use.

Several people also disagreed with BLM's strategy to publicize the existence of these islands through on-site signage and off-site literature. They feel that increasing public awareness of the islands will result in excessive visitation to the islands and damage to the Lake Vermilion ecosystem. Since Section 201 of FLPMA requires the inventory of all public lands and a means to identify these parcels, BLM has a responsibility to inform the public of the existence of these islands. In addition, BLM islands are just one segment of the ecosystem, where increased recreational use of these islands could relieve pressure on other state and Federal recreation areas. Visitor use will be monitored to ensure adequate protection of the islands' natural resources.

Enforcement was the third major issue discussed in the comment letters. Although the plan outlined general limits of recreational opportunities under each alternative, little attention was given to how these limits would be enforced. BLM is unable to maintain a full-time physical enforcement presence in the Lake Vermilion ecosystem at this time due to budget constraints. As a result, we will investigate the use of seasonal hires from a local college, partnerships with other governmental agencies, and periodic visits

by a BLM ranger to monitor ongoing use. Specific details of the enforcement strategy will be finalized during implementation of the proposed plan.

Finally, questions were raised regarding the availability and location of "Island Ethics" brochures. The following places received the brochures for free distribution to the public:

- Cook Visitor Center
- Ely Chamber of Commerce
- Soudan State Park
- Tower Chamber of Commerce
- U.S.D.A. Forest Service office in Cook
- Wayside Cafe
- Y Store Information Booth in Tower

Comments which did not address these subjects areas have been replied to individually. We have printed all of the letters in full with the relevant statements underlined. The statements were then numbered to correspond with the responses.

June 18, 1993

Lake Vermilion CRMP, Coordinator
Bureau of Land Management
P.O. Box 631
Milwaukee, WI 53201

Dear Coordinator,

The draft for the Coordinated Resource Management Plan in regards to the Lake Vermilion public islands is thorough and pointedly directed toward conserving the natural beauty of the shoreline. We ere pleased to receive this document as we have been concerned, for many years, about the environmental conditions of the lake, particularly island number 124, which is referred to in the draft as "camp island", that is approximately 150 yards from our home.

For several years, we researched information on to whom the island belonged because we wanted to attempt to prevent house boats from tying-up to the island, camper disturbances, and the distruction of the natural beauty of the island by campers and picnickers. We felt that this island was too close to private residences to accommodate recreational activities. Thanks to correspondence with Robert B. Burton, G. Curtis Jones, Jr., Jay R. Sullivan, Leon R. Kabot, Manuel Lujan, Jr., and Larry Johnson, we were able to initiate an investigation of the public islands on Lake Vermilion.

We appreciate the opportunity to read, study and evaluate the draft, and to extend to you our comments in regards to the plan. It is obvious that a plan for the preservation of the natural resources on the Lake Vermilion public islands would be beneficial. Involving all groups and agencies, along with interested citizens, in the planning process is a good strategy to create responsible use of these public resources to preserve the quality of the lake.

The immediate implementation of a management plan in the form of an island ethics brochure and island signs was a beginning to the more comprehensive planning which was agreed upon by DNR and BLM. We are not aware of how or where these brochures are being distributed. The brochure is attractive, easy to read, and informative. As former school teachers, we question how much of the brochure will be read and adhered to by prospective visitors and local residents. The cooperative management signs recently placed on the public islands, in non-conspicuous places, are informative as to ownership. However, these signs alone may serve to encourage more use of some islands than desired. 1

Lake Vermilion is listed in the top ten most beautiful lakes in the world. We feel fortunate to have owned a summer home on the shores of this beautiful lake since 1974. We have been vacationing each year at this lake since 1961. During these more than thirty years of visiting this lake, we have observed that on the northern and eastern shores of the lake, where there are fewer inhabitants, the vegetation is more pristine, we see more wildlife, and the recreational activities of boating, fishing, picnicing, sightseeing, etc. are more enjoyable. We believe that keeping the public islands primitive would foster the maintenance of wildlife and vegetation on Lake Vermilion by providing natural habitats of nature for all of us to enjoy. 2

The past and present management of the Lake Vermilion public islands has been on a case-by-case basis in which the federal officials were too far away to respond, and the local government would not accept responsibility for managing property that was not in their jurisdiction. A preferred management plan would be to encourage visitor contact with the public islands in the form of sightseeing, fishing, observing wildlife, boating, and other off-shore recreational activities. The public islands, particularly those close to private residences should not be used for on-shore recreational activities. We propose that an additional sign be designed and placed on any public island that is close to private residences to inform the public that on-shore activities are not permitted. There are many suitable places around the shores of Lake Vermilion to accommodate on-shore recreation without using islands, or even mainland, that is in close proximity to private residences.

In summary, we, as summer, property owning residents wish to stress our desire for a cooperative management plan to keep Lake Vermilion beautiful. In our opinion, the existing management (Alternative 1) is inadequate. Preferred management (Alternative 2) still provides a low-key, monitored type of management with hands-on control which will protect the environment and the rights of the homeowner. The intensive management plan (Alternative 3) is not suitable for the population of this lake and the amount of use of this lake. We desire to keep the lake semi-primitive. There in lies the beauty here, plus the fact that it is a motorized lake to allow for ease in viewing the beautiful surroundings. We do not wish to take away from it's primitive nature by providing sanitary facilities, boat mooring stakes, boat docks, picnic tables, camp pads and conspicuous signs. People visit this lake because of it's primitive nature. We hope your ultimate management plan will help to keep Lake Vermilion beautiful.

Sincerely,

Buddy & Atha Wallin

Buddy and Atha Wallin

June 25, 1993

Lake Vermilion CRMP, Coordinator
Bureau of Land Management
P. O. Box 631
Milwaukee, WI 53201

Attention: Gary D. Bauer
District Manager

Dear Mr. Bauer:

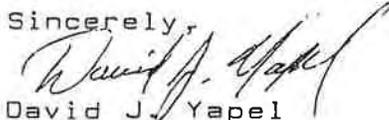
I have taken the time to thoroughly read the draft of the Lake Vermilion Public Islands Coordinated Resource Management Plan. I truly possess a great concern for the Lake Vermilion area, having resided there all my life.

After studying the 3 alternatives, I came to the conclusion that Alternative I was the best. I do not want to see any development taking place on any of those islands.

My only problem with Alternative I is the distribution of the island ethics brochure. I have not seen this brochure. I do not think that the general public should be informed of the existence of these islands. In some cases, I wouldn't even inform them of the existence of the lakes. Of particular concern to me is Ban Lake, northwest of Lake Vermilion. At this time there are only a few cabins on the lake, most of which are used as hunting shacks. It is my belief through observation of other lakes that public awareness has a cascading effect. Public awareness soon leads to public curiosity, then public exploration, and so on. If the public is informed of the existence of these islands and/or lakes, they will be much more inclined to visit them. From there they may decide to buy or lease land nearby. Construction of cabins will detract from scenic beauty. It is also possible that on the more primitive lakes such as Ban, electricity and phone lines would be constructed and also roads. All of these possibilities would detract from the beauty of the lake and the root cause would be public awareness.

I suggest that you choose Alternative I, or a variation of Alternative I, so that the islands and lakes can retain their beauty without the intervention of the public.

Sincerely,


David J. Yapel

TOWNSHIP OF BREITUNG

SAINT LOUIS COUNTY
SOUDAN, MINNESOTA 55782

June 28, 1993

Lake Vermilion CRMP, Coordinator
Bureau of Land Management
P.O. Box 631
Milwaukee, WI 53201

Dear Coordinator:

Thank you for allowing the public to input their comments on managing public islands on Lake Vermilion. Our township has reviewed the document dated June 2, 1993 and offer the following:

We agree with alternative 2 in managing the public islands on Lake Vermilion with the exception on issue 5 on universal public access. Universal public access points should be provided at a minimum of two sites on the mainland rather than one as recommended alternate 2. As your report states, Lake Vermilion is 40 miles long, and has over 40,000 surface acres of water. It would be prudent and practical to provide at least one universal access point at the eastern and western ends of the lake. Our township would be interested in working with you in developing such a site at our McKinley Park campground.

3

Our fire department has services available for fire suppression as outlined in issue 6 in case of wildfire on these islands. We would be interested in reviewing these services and the agreement with you.

4

Finally, as your report states, "Increased awareness and use of public lands could lead to increased noise disturbances to adjacent landowners and trespass onto private land." Our concern on this is who will be providing the enforcement on these islands, and if it will fall on local government authorities, will they be reimbursed for the cost of providing this enforcement?

Sincerely,

Timothy S. Tomsich

Timothy S. Tomsich
Chairman

V E R M I L I O N
C O M M U N I T Y C O I L I G

July 7, 1993

Bureau of Land Management
P.O. Box 631
Milwaukee, Wisconsin 53201

Comments in response to Draft Lake Vermilion Public Islands
Coordinated Resource Management Plan

The purpose as stated in the draft is to address a problem: What is the best management of the public island resources as a component of the Lake Vermilion ecosystem? This problem must be solved within the constraints of "SNN" and "FLPMA". It is my impression that all alternatives developed to resolve this question allow for recreational use to a level that consistent with protecting public island resources.

Six issues were addressed in relation to each of the management alternatives. I am concerned about some aspects of this problem that I do not see clearly addressed in these issues.

1) A concern in past recreational use of these islands that continues to need attention in the future is the development of rules and regulations defining appropriate uses. Lack of definition and control in this area in the past has resulted in conflicts with adjoining land owners and an absence of authority to deal with user problems. I feel that in evaluating the impact of the various management alternative this may need to be addressed in Issue 3: What recreational opportunities can be provided by public island resources in the Lakes Vermilion ecosystem?

Recreational opportunity selection should be very carefully considered with an eye to potential problems that may result choosing and designing opportunities that create or maintain problems that the BLM can not deal with adequately.

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2) I know of almost no public recreational lands that provide recreational opportunities without developing some controls over appropriate and inappropriate uses. This has been a problem on these islands in the past and will likely be a problem under any of the management alternatives unless it is adequately addressed. When I raised questions about rules, regulations and laws and enforcement of those, I was informed that those are questions for implementation of the plan. However, the plan places considerable dependence on information and education in dealing with existing problems.

6



I believe the seventh issue to be addressed is: How can the BLM provide the needed human resources to manage for the preferred alternative? Some presence is needed to oversee these public islands that can (a) enforce established rules and regulations, (b) educate and inform users to accomplish Issue 4, (c) maintain safe, healthy use areas, (d) protect the physical resources and (e) monitor uses and impacts to evaluate the plan. A plan is essentially a problem solving tool that needs to address the expected impacts in decision-making of alternative selection. To accept an alternative that encourages recreational use and all that results from recreational use without resolving questions of law enforcement, site maintenance, resource assessment may create a negative image of BLM management ability.

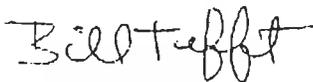
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3) I believe recreational opportunities should be defined as part of the plan, so that discussion and brain-storming can occur to determine if management needs can be put into place. This may determine whether camping is an acceptable or an unacceptable use. For with out controls, these areas which BLM has identified to the public as sensitive environments will suffer from inappropriate use. Where to get firewood, how to prevent wildlife disturbance, who will deal with problems between users and adjoining landholders, where can the public gain access to public awareness materials are all questions that need to be answered in determining a preferred alternative.

8

I believe that the BLM is on the right track in creating partnerships in the area. The creation of interagency cooperation in managing special resources like islands has the potential to create a model that could be used in other areas. However, I feel the specific needs and the cooperative handling of them need to be addressed in this plan. Your agency should answer some of the necessary questions before the implementation stage.

sincerely,



Bill Tefft
Park Management Instructor

Mr. Gary D. Bauer, District Manager
Lake Vermillion CRMP, Coordinator
Bureau of Land Management
P. O. Box 631
Milwaukee, Wisconsin 53201

Dear Mr. Bauer

My wife and I own land on Elbow Lake in St. Louis County of Minnesota. Our property includes a mainland piece (Sec. 21, T64N-R18W, Lot 8) and an island (Sec. 21, T64N-R18W, Lot 10) which along with another private island is located within 200 yards of a Government owned island in Sec. 21, T64N-R18W that is being considered in your Public Island Resource Management Plan.

We write to express our concerns toward opening this island to use by the public. We feel that this use would not be compatible with private property in such close proximity without direct supervision. Our concerns are as follows:

1. Danger of uncontrolled fires
2. Late night beer parties
3. Noisy overnight camping
4. Excessive litter
5. Disturbance of the wildlife habitat

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These are concerns we have because we have experienced each of these problems on Lot 8 prior to our buying it.

We are not opposed to the proposed DNR and LaCroix Ranger District fish spawning project in the vicinity of this island.

We appreciate your allowing us to express our concerns toward your Public Island Resource Management Plan. As you proceed with this plan we would appreciate being kept informed of your plans for this island. Thank you.

Sincerely,



David and Barbara Dahl
4148 Chowen Avenue South
Minneapolis, Minnesota 55410



July 6, 1993

MINNESOTA HISTORICAL SOCIETY

Mr. Jaime T. Provencio
Bureau of Land Management
P. O. Box 631
Milwaukee, Wisconsin 53201-0631

Dear Mr. Provencio:

Re: Draft Lake Vermilion Public Islands Coordinated Resource Management Plan
for 87 small islands located in St. Louis County
MHS Referral File Number: 93-2624

Thank you for the opportunity to review and comment on the above project. It has been reviewed pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and the Procedures of the Advisory Council on Historic Preservation (36CFR800).

Generally, the islands in Lake Vermilion have a high probability of containing archaeological sites, and it is important that adequate means of identifying, evaluating, and protecting cultural resources be made a part of this plan. Our specific comments are as follows:

1. The description of cultural resources on page 31 indicates that a probability profile has been developed for the islands. We would appreciate the opportunity to review this profile. 10
2. Survey priorities for probability areas are to be based on potential resource damage from current visitor use. A specific strategy to measure potential resource damage from current visitor use and to monitor ongoing use needs to be developed.
3. Consideration should be given as to whether there are additional sources of damage to sites (other than visitor use) that need to be factored into the survey priorities. 11
4. A specific timetable needs to be developed to insure that the survey efforts of all probability areas are completed within a reasonable amount of time.
5. It is important that any sites which are identified in surveys are promptly evaluated in order to determine whether they meet National Register criteria. If they do, appropriate treatment strategies need to be promptly implemented.

We appreciate the opportunity to comment on the plan. If you have any questions, please contact our Review and Compliance Section at 612-296-5462.

Sincerely,

Dennis A. Gimmestad
Government Programs and Compliance Officer

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DAG:dmb

STATE OF MINNESOTA
OFFICE MEMORANDUM

DEPARTMENT: DNR FORESTRY

DATE: August 17, 1993

TO: Sylvia Jordan
Lake Vermilion Public Island Planner

FROM: Ra Tarchinski
MN DNR Review Coordinator

PHONE: 218-757-3274
FAX 218-757-3276

SUBJECT: Plan Review:

Lake Vermilion is considered to be one of the most beautiful lakes in the world. The islands of Lake Vermilion, numbering over 300, play a vital role in its resource value, not the least of which is it's scenic beauty.

COMMENTS & CONCERNS:

1. Title

Lake Vermilion Public Island Coordinated Resource Management Plan. This plan applies to only BLM islands. The "Public Island" title and references are misleading. Recommend changing the term to BLM islands.

12

2. Fire Protection

The State of Minnesota has been providing fire protection on the BLM islands. A formal agreement with the DNR should be pursued.

13

3. Universal Public Access

Since the DNR provides public accesses on Lake Vermilion, the proposed universally accessible dock should be at one of the existing sites. Plans should be coordinated with the DNR Area Trails and Waterways Supervisor at Tower.

14

4. Law Enforcement Concerns

Without some local enforcement presence the very "island abuse" as mentioned in your plan which precipitated this plan, will continue. Use and abuse may even become more

common as people become aware that the BLM administered islands are public lands. Some of the "actions" listed in the draft plan such as the publication of maps and rookery locations are indeed important public educational pursuits, but if we initiate a response we must monitor and protect the resource or we may be opening the door for the loss of these resources.

The Lake Vermilion Islands are very fragile and beautiful natural resources and our best avenue for securing and enhancing these island resources for future generations will require protection and this will not be possible without some local enforcement authority.

5. Promoting Use

Placing signs on the islands may actually increase public use as they indicate that the land is in public ownership. Does signing fit into the BLM VRM Class II requirements? If we sign the islands they will be noticeable to the casual observer. Once noticed, camping pressure and other uses will likely increase.

RECOMMENDATIONS:

Alternative 2, Preferred Management, is recommended by the DNR reviewers. As a point, the reviewers feel that successful implementation of this alternative would be dependent on having BLM staff in the Lake Vermilion area.

The reviews also point out that a management agreement between the BLM and an in-place Resource Management agency to implement Alternative 2 would be efficient and effective.

Responses to Comments

1. While the "Island Ethics" brochure, by itself, may not cause dramatic changes in people's behaviors, it is a good vehicle to educate visitors on responsible use of these natural resources. Under the proposed plan, continued distribution of this brochure is only one segment of the information/interpretive strategy that also includes occasional personal contact with visitors. This strategy will allow BLM to explain any restrictions on use and the consequences of inappropriate behavior, thus facilitating higher visitor compliance than would occur if regulations were issued without an education plan.
2. Development on the public islands will be kept at a minimum under the proposed plan, and only allowed when necessary to protect the natural resources. Specifically, the proposed plan would allow such items as mooring stakes to redirect visitation use away from sensitive areas and sanitary facilities to mitigate visitor impact.
3. We agree with your suggestion to provide two universal access points on Lake Vermilion and have incorporated it into the proposed plan. Analysis of the feasibility of this suggestion and the location of the two points will be conducted during the implementation phase. BLM will consider both retrofitting existing docks and constructing new access points during the analysis.
4. BLM will pursue a formal agreement for fire suppression services on the islands during implementation of the proposed plan. We will consider all interested applicants at that time.
5. The range of recreation opportunities available under each alternative was based on the natural resource values of the islands, existing use, proximity to private residences and feasibility of implementing the alternatives. The potential problems that may result from creating these recreational opportunities have been considered during the planning process. Visitor use will be monitored through partnerships with local colleges and government agencies, and a seasonal hire to ensure that implementation of the proposed plan adequately protects the ecosystem's natural resources and mitigates problems associated with increased visitor use.
6. Due to the scope of the Lake Vermilion Public Islands CRMP, only the availability of recreational opportunities was evaluated in the document. Specific mechanisms to control visitor use were not formally analyzed in the document to allow for flexibility in determining implementation strategy,

based on monitoring results. As mentioned in the introduction to this section, BLM will have an enforcement presence in the Lake Vermilion ecosystem through site visits, hire of a seasonal employee, and formation of partnerships. These measures will limit inappropriate use of the public islands.

7. Provisions for site maintenance and resource assessment have been made in the proposed plan. BLM will use its own personnel, and the help of cooperating agencies, to monitor changes in recreational use resulting from the proposed plan's implementation. Mitigation steps will be taken when necessary to protect the islands' natural resources. Our strategy for enforcement has already been detailed in the general introduction and the previous response. BLM will strive to maintain a positive relationship with the permanent and seasonal residents by providing suitable recreational activities in conjunction with protecting these scenic islands.
8. The use of firewood, effect of visitation on wildlife and landowners, and public access to information were addressed in general terms in the analysis of alternatives. Specific details were not included to avoid committing management actions before sufficient monitoring information is gathered and contact made with local institutions. These topics will be covered in much greater depth during the implementation phase through the information/interpretive strategy.
9. The concern that some public islands are too close to private residences to support recreational activity was addressed in the introduction to this section. Specifically, the danger of uncontrolled fires will be minimized by the creation of a formal agreement for fire protection of the islands (see Response #4 & #13). In addition, late night parties and overnight camping will be reduced by recommending "day use only" of the islands. Visitors will be guided away from islands with sensitive natural resources to prevent significant disturbance to wildlife habitat. BLM will explore the possibility of reaching agreements with local organizations to clean up litter and assess resource conditions on the islands.
10. In response to your interest, a probability profile developed for the islands will be sent to your office for review.
11. BLM will undertake a cultural resource survey of the islands during the implementation phase. A timetable will be formulated to ensure survey completion within a reasonable period of time. Effort will be made to give survey priority to islands where possible sites would be negatively effected by current high visitor use, flooding/erosion, or other

significant factors. Any identified sites will be evaluated according to BLM policies and regulations to guarantee compliance with all Federal legislation, including National Register listing.

12. We apologize for any confusion that results over the title of this document. However, it is BLM policy to refer to our national holdings as "public lands". For this reason, the title will remain Lake Vermilion Public Island Coordinated Resource Management Plan.
13. BLM recognizes that the Minnesota DNR has been providing fire protection for the public islands without any formal agreement between BLM and the DNR. We will to develop a formal arrangement for fire protection and will consider all interested parties during implementation of the proposed plan (see Response #4).
14. The location of the proposed universal access dock(s) will be finalized during the implementation phase in concert with the DNR and other involved agencies. BLM will consider requests from all interested parties (see Response #3).

APPENDIX 2 - LIST OF PREPARERS AND REVIEWERS

Sylvia Jordan, Natural Resource Specialist, Milwaukee District
Terry Saarela, Planning and Environmental Coordinator, Milwaukee District

Larry Johnson, Realty Specialist, Milwaukee District

Duane Marti, Archaeologist, Milwaukee District

Jeff Nolder, Geologist, Milwaukee District

Mary Jane Marusek, Natural Resource Specialist, Milwaukee District

Deborah Rawhouser, Outdoor Recreation Planner, Eastern States

Sheryl McKenzie, Wildlife Biologist, Eastern States

Bea Wade, Planning and Environmental Coordinator, Eastern States

Ed Ruda, Realty Specialist, Eastern States

Andrea Nygren, Fire Management Specialist

Debra Kolkman, Public Affairs Specialist

SECTION 3

Analysis

ANALYSIS

I. INTRODUCTION

Location And Setting

The Bureau of Land Management (BLM) has administrative authority for 70 islands in Lake Vermilion and 17 islands in seven small lakes located within a 25-mile radius north of Lake Vermilion, St. Louis County, Minnesota (maps 1 and 2). Hereafter, these islands will be referred to as public islands. While some of the public islands are unsurveyed and some have not been recently inventoried, criteria developed for making management decisions will be applied to all public islands. The Lake Vermilion public islands (map 3) have been surveyed and the majority of the islands have been inventoried. Thus Lake Vermilion has been the focal point for plan development and the entire plan area is referred to as the Lake Vermilion ecosystem (map 2).

Three communities are located near the shores of Lake Vermilion. Tower and Soudan lie within one mile of the southeast shoreline of the lake; and Cook is located about six miles south of the west end of the lake. Another community, Ely, is located 22 miles east of Soudan. Duluth, Minnesota is located about 90 miles to the south of Lake Vermilion.

Lake Vermilion (map 3) has approximately 40,000 surface acres of water and over 1,200 miles of shoreline. The lake is 40 miles long and has approximately 365 islands. Pine Island is the largest island with 3,800 acres and contains privately-owned, Forest Service (FS), county, and state lands. Ely Island, the second largest with 800 acres, contains state and privately-owned lands. Hinsdale Island, third largest (600 acres), is comprised of state and privately-owned lands. The other islands range from 120 acres in size to less than 0.01 acre. The majority of the larger islands, as well as many of the smaller ones, are privately owned. The 70 public islands range in size from 0.01 to 0.54 acre, with an accumulative surface acreage of seven acres.

The remaining 17 islands (maps 4 and 5) are located in Susan Lake (2 public islands/total of 7 islands), Elbow Lake (4 public/15 total), Ban Lake (2 public/4 total), Kjostad Lake (1 public/4 total), Black Duck Lake (4 public/5 total), Chub Lake (2 public/2 total), and Long Lake (2 public/2 total). Land ownership around the seven lakes includes private, state, FS, and county lands. These smaller lakes range in size from 120 acres to 1,300 acres. The public islands range in size from 0.01 acre to 2 acres, with an accumulative acreage of five acres.

Map 1- Regional Location



SCALE



LEGEND

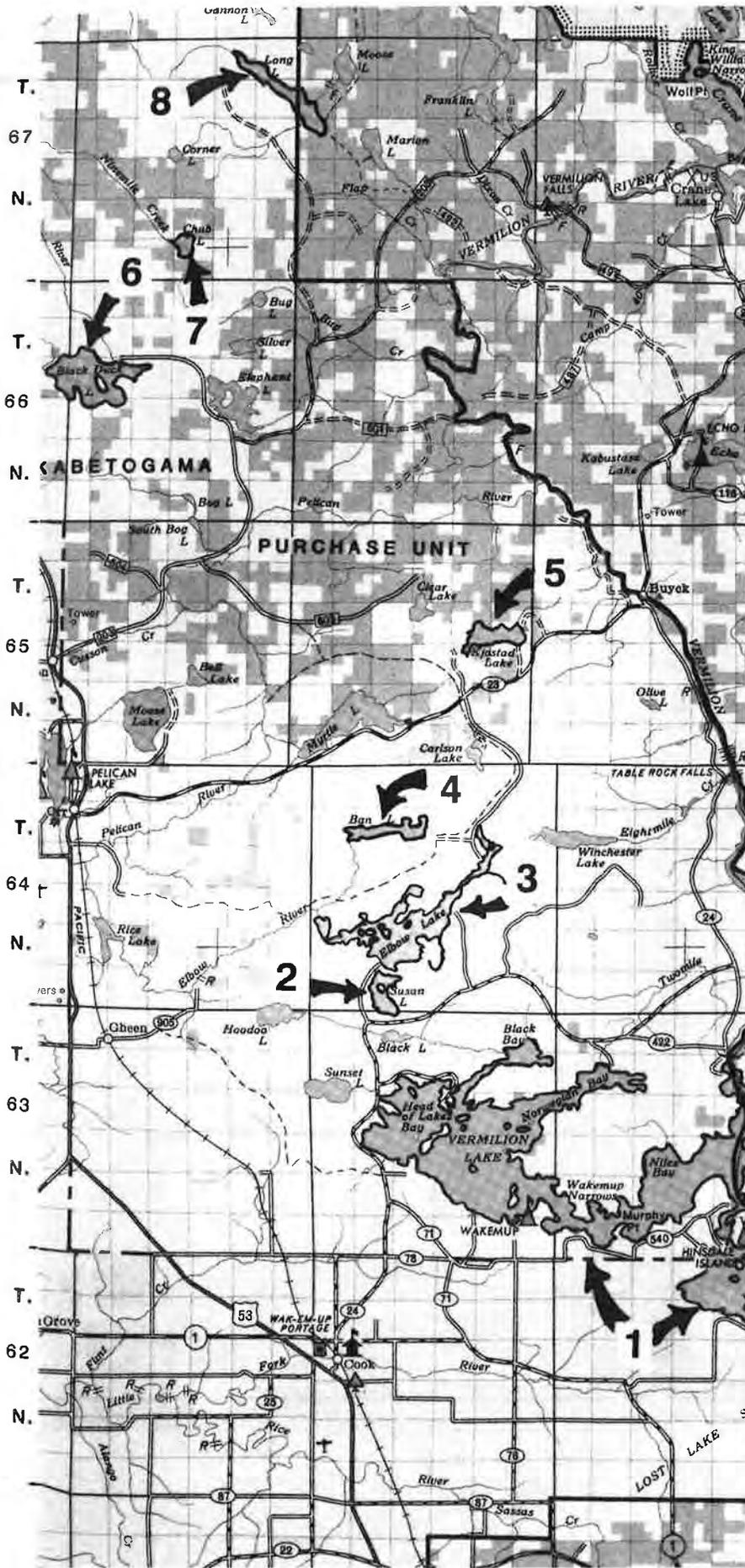


Regional Location Area

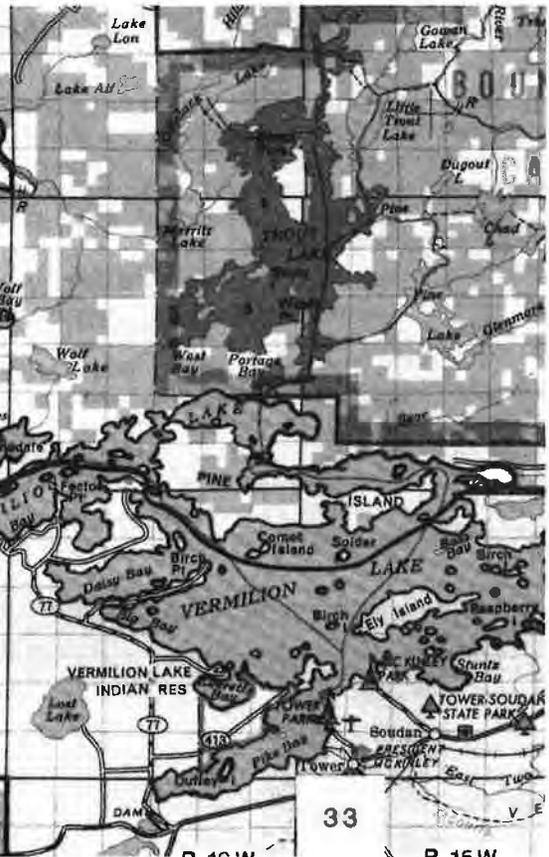
Map 2- Lake Vermilion Ecosystem

Lakes with Public Islands

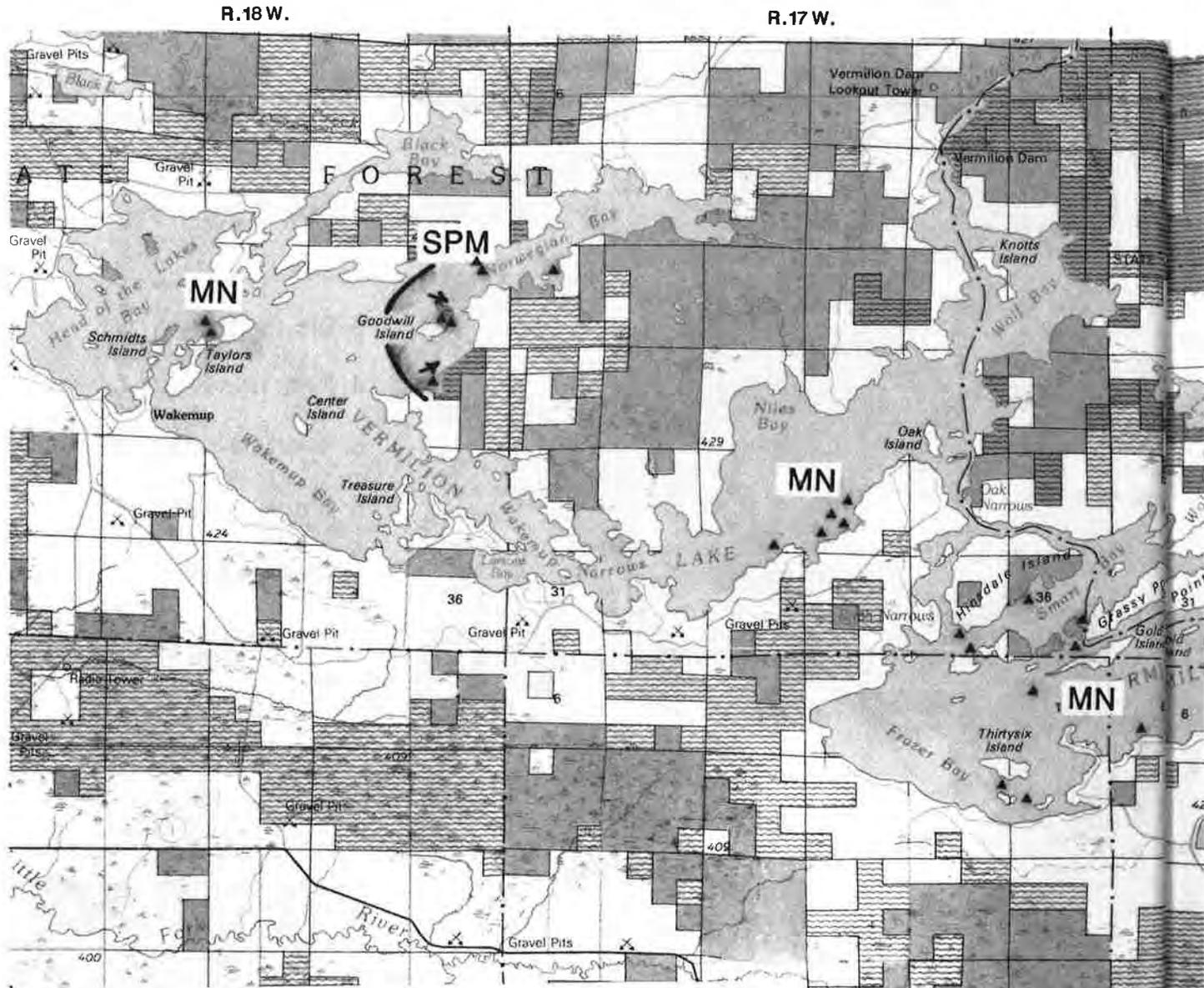
- 1 Lake Vermilion
- 2 Susan Lake
- 3 Elbow lake
- 4 Ban Lake
- 5 Kjostad Lake
- 6 Black Duck
- 7 Chub Lake
- 8 Long Lake



Scale: 1/4 Inch=1 Mile



Map 3- Public Islands in Lake Vermilion



LEGEND

-  Public Island
-  SPM Semi-Primitive Motorized Recreation Opportunity
-  MN Modified Natural Recreation Opportunity



SCALE



R.17 W.

R.16W.

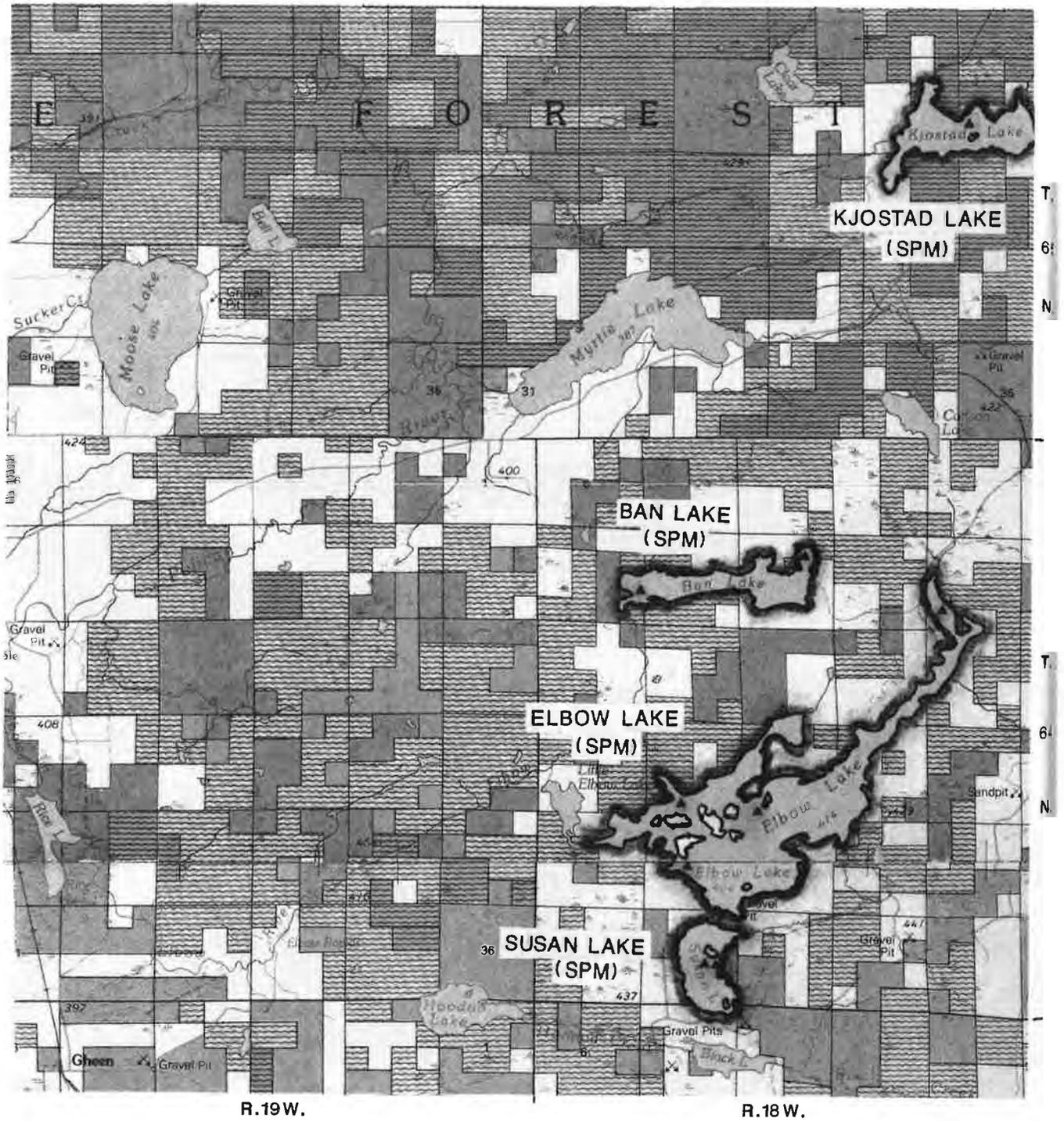
R.15W.



R.16W.

R.15W.

Map 4- Public Islands in Kjostad, Ban, Elbow and Susan Lakes



LEGEND

- ▲ Public Island
- (SPM) Semi-Primitive Motorized Recreation Opportunity

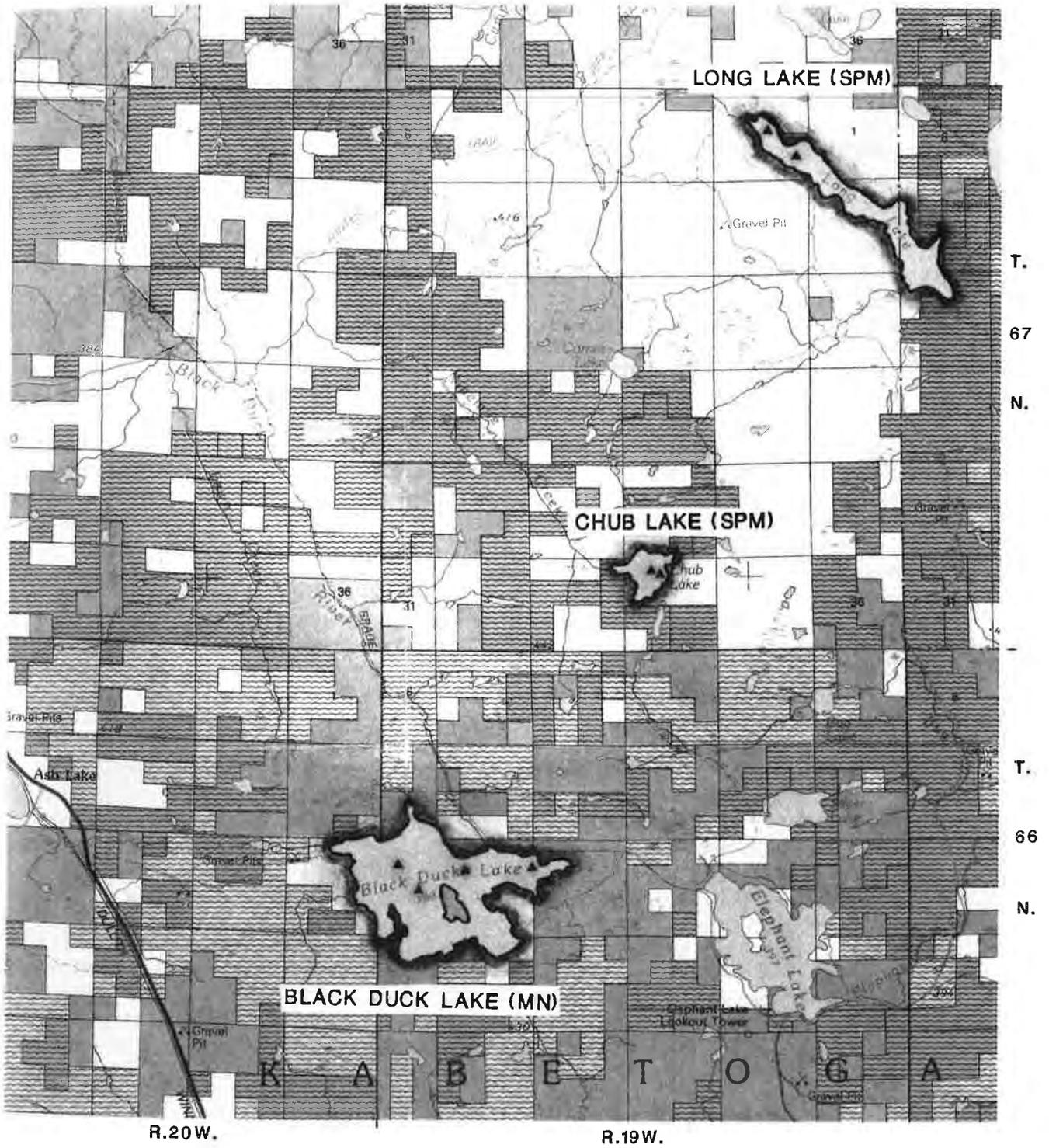


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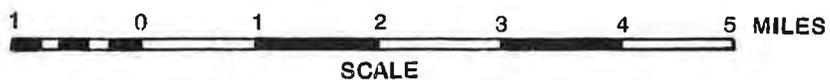
SCALE

Map 5- Public Islands in Long, Chub and Black Duck Lakes



LEGEND

- ▲ Public Island
- (SPM) Semi-Primitive Motorized Recreation Opportunity
- (MN) Modified Natural Recreation Opportunity



Purpose and Need for the Plan

The public islands, along with other Federal lands in northeastern Minnesota, were withdrawn by the Shipstead-Newton-Nolan (SNN) Act of 1930 to conserve the natural beauty of shorelines for recreational purposes. The extensive area withdrawn by the SNN Act includes the Superior National Forest, Boundary Waters Canoe Area Wilderness (BWCAW) and the Voyageurs National Park. The SNN Act prohibits the logging of Federal lands within 400 feet of shorelines along lakes and streams used for canoe or boat travel. The intent of Congress was to preserve the natural scenic beauty of shorelines as viewed from the water's surface.

In addition to the SNN Act, the BLM is required to administer public land resources according to the Federal Land Policy and Management Act of 1976 (FLPMA). FLPMA established a national policy that public lands will be retained in Federal ownership and managed for the public interest under principles of multiple use and sustained yield. FLPMA requires the BLM to inventory public lands and their resources, and to prepare land use plans for management of current and projected future use. In addition, the BLM Eastern States' mission is to manage public lands "to protect the environment and provide a diverse array of products and outdoor experiences".

The Minnesota Management Framework Plan (MFP), a land use plan, was completed by BLM in 1982. The MFP documented management direction for all public uplands and islands in Minnesota under BLM jurisdiction. One of the resulting plan decisions was to transfer the majority of public land, including public islands, to the Minnesota Department of Natural Resources (DNR) under the Recreation and Public Purposes Act (R&PP) for management as wildlife management areas. In April of 1982, the DNR applied for an R&PP patent to the islands. Public islands not withdrawn by the Act were transferred to the DNR by R&PP patents or special legislation. Because of their withdrawal by the Act, public islands in the Lake Vermilion ecosystem were not transferred to the State.

The MFP did not directly address management of recreational opportunities on the public islands in the Lake Vermilion ecosystem as required by SNN Act and FLPMA. Therefore, management of recreational resources needs to be addressed. The Coordinated Resource Management Plan (CRMP) will determine the best management of the public island resources as a component of the Lake Vermilion ecosystem. The CRMP is needed to identify public island uses which are consistent with the intent of the SNN Act and FLPMA while maintaining or enhancing island resource values.

Background

The public islands were first inventoried during 1969 and 1970. The data sheets and photographs are on file at the BLM Milwaukee District Office in Wisconsin. The public islands in Lake Vermilion and three of the smaller lakes were surveyed in 1981. In 1990 BLM visited Lake Vermilion to: (1) meet with a property owner concerning reports of island abuse, (2) inspect islands receiving unauthorized use, and (3) meet with DNR to conduct an overview of island resources. Field inspection of the Lake Vermilion and Elbow Lake public islands in 1990 revealed that the public islands were providing wildlife and fish habitat, as well as recreational opportunities. It appeared that while some of the islands were capable of supporting on-site recreational use, some were not suitable for on-site use because of their small size or presence of sensitive resource values.

Based on the preliminary inventory of the public islands, Milwaukee District personnel determined that management was required to ensure that resource values were maintained. During 1991 BLM and DNR developed and signed a Challenge Cost Share Agreement to provide an immediate management influence on the public islands until a management plan could be developed. Implementation of the Agreement during 1992 involved the design, printing and distribution of an island ethics brochure, and the design and fabrication of island signs. In addition to the Challenge Cost Share Agreement, DNR and BLM agreed to work in partnership toward the long-term goal of developing a more comprehensive island management strategy.

DNR and BLM inventoried 49 public islands located in the east half of Lake Vermilion in May 1991. On-site inspections were not made on a total of 19 public islands which were: (1) occupied by nesting loons, (2) occupied by nesting gulls and cormorants, or (3) extremely small or low in elevation. Of significance to the DNR was an inventory of the islands to determine the importance of the island habitats to breeding bald eagles, loons, red-necked grebes, terns, and gulls. Red-necked grebes and terns were not observed during the inventory.

Table 2 identifies the resource values and day/overnight recreational uses for each of the 49 public islands. The remaining 38 public islands will be inventoried in 1994.

Planning Process

This planning process involved the following steps:

- Field overview of island resources in July 1990.

- Preliminary coordination with DNR concerning development of a management plan for public islands in December 1990 and April 1991.
- Project scoping with the DNR at Grand Rapids, Minnesota in January 1991.
- Gather additional resource information in May 1992.
- Public meeting held at Tower, Minnesota in June 1992.
- Prepare draft plan in October 1992 through March 1993.
- Prepare impact analysis, select Preferred Alternative in May 1993.
- Send plan out for public review during May and June 1993.
- Public meeting held at Tower, Minnesota on June 30, 1993.
- Revise plan based on comments and print final after July 1993.

Public Involvement

An informal public meeting was held at the Tower Civic Center on June 23, 1992. The DNR and four BLM representatives were present to explain and discuss island resource values, existing uses and potential management options for the public islands. Maps identifying the public islands were available to the public for review and discussion. A table top display of photographs depicted typical island sizes and resources.

Twenty-eight people attended the meeting and 13 provided comments. Attendees included private land owners, resort owners, the president and members of The Sportsmen's Club of Lake Vermilion, several members of Conservation with Common Sense, a representative from St. Louis County Environmental Services, a planner with the Laurentian North Fire Fighting Water Supply Association, and a representative from Vermilion Community College. Several common themes can be observed in reviewing the public comments. There is a general suspicion of the presence of yet another government agency in the area. Management of island resources appears to be more acceptable if: (1) it is kept low level and emphasis is placed on an educational approach, (2) it involves assistance from local groups or organizations, and (3) regulation of use, and thus enforcement, are kept at a minimum. Comments regarding specific island uses included identifying suitable shore lunch sites and closing islands within 200 yards of developed shoreline to visitor use. Comments also included (1) not notifying the public of the existence of the islands, (2) keeping them open for unrestricted recreational use and, (3) focusing on

resource values instead of recreational uses. Public comments were used to help identify issues and opportunities.

II. PLANNING AREA

Other Land Ownership

Minnesota Department of Natural Resources

The DNR administers thousands of acres of state forest in the Lake Vermilion area, including acreage on the three largest islands in Lake Vermilion. Soudan Underground Mine State Park is located on the south shore in the vicinity of Stuntz Bay.

Other state-administered lands in the vicinity of Lake Vermilion include the following. The Vermilion River State Canoe Route connects Lake Vermilion with Voyageurs National Park to the north. Two Rivers West and Two Rivers East are state trout streams which empty into Lake Vermilion from the south. The Arrowhead and Taconite state trails parallel the south shore of Lake Vermilion at a distance of one to three miles. Bear Head Lake State Park lies about 16 miles west of Lake Vermilion. Two state natural and scientific areas are located in lakes east of Lake Vermilion.

United States Department of Agriculture - Forest Service

The southern boundary of the Superior National Forest extends into the western portion of Lake Vermilion and runs eastward below the northern shore of the lake. The FS administers acreage on Pine Island, along the north shore of the lake, and on several small islands. The southern boundary of the FS-administered BWCAW lies within one-half mile of the north shoreline of Lake Vermilion.

The limited amount of FS-administered acreage at the western end of the lake is in an area designated for disposal through land exchanges. FS-administered land within the eastern portion of the lake and along the north shore lies within a retention area.

St. Louis County

The majority of lands administered by St. Louis County lie to the east and south of Lake Vermilion and do not include the lake shoreline. There are county lands on the largest island, Pine Island.

City of Tower

The city of Tower administers Tower Campground, located on the shoreline of Lake Vermilion.

Soudan (Breitung Township)

Breitung Township administers McKinley Park, located along the lake shoreline north of Tower.

Individuals and Organizations

The majority of the Lake Vermilion shoreline and the lake islands are privately owned. There are approximately 6,000 property owners on Lake Vermilion. Resort owners have formed the Lake Vermilion Resort Owners Association.

The Sportsmen's Club of Lake Vermilion is very active in the Lake Vermilion area and publishes an informative monthly newsletter. The organization participates in cooperative projects with the DNR.

Conservationist With Common Sense is a non-profit organization which promotes the yearlong multiple use of Federal and state lands and waters "with a concern for proper use by all".

Lake Vermilion Indian Reservation

The Lake Vermilion Indian Reservation is located on the south side of Lake Vermilion and includes lake shoreline along the southeast portion of Everetts Bay and along the west side of Pike Bay.

National Park Service (NPS)

The southern tip of Voyageurs National Park is located 50 miles north of the west end of Lake Vermilion. The Vermilion River, a state designated canoe route, links Voyageurs with Lake Vermilion.

Resources of the Planning Area

Climate

The Lake Vermilion ecosystem is located within the moist, northern Great Lakes storm belt. The climate is characterized by cold winters, cool summers, with precipitation distributed throughout the year. The mean summer temperature is 64 degrees Fahrenheit and the average winter temperature is below 32 degrees five months out of the year. The mean annual precipitation for the area is 27 inches. Snow can be expected from October to May, with an average snowfall of nearly 70 inches.

Physiographic Region

The Lake Vermilion ecosystem lies within the Border Lakes physiographic region of Minnesota. Glacial activity carved the landscape of this region through erosion, rather than depositing

physical features in the landscape. The characteristic pattern of lakes and ridges resulted from the differential erosion of the bedrock. Soil development is generally poor and bedrock outcrops are common.

Minerals

Public lands in Minnesota were exempted from the terms of the Mining Law of 1872 when Minnesota entered the Union in 1873. For this reason the public islands in the Lake Vermilion ecosystem are not subject to mineral entry for locatable minerals. Minerals classified as leasable (e.g., oil and gas, coal, potassium, and sodium) under the Minerals Leasing Act of 1920 are not known to exist on the public islands in commercial quantities.

Socioeconomic Values

The 12 acres of public land in the Lake Vermilion ecosystem constitute a fraction of the land ownership in northeastern Minnesota. Thousands of acres of state managed lands are located within the Lake Vermilion ecosystem. These occur within State Forests, State Parks, and State Trails and Waterways. FS managed lands in the immediate vicinity of Lake Vermilion include the Superior National Forest and the BWCAW. County, city, township, and private ownership is also scattered throughout the area. Although management actions resulting from the Lake Vermilion Public Island CRMP may result in a limited amount of increased use on some of the public islands, these actions will not increase overall number of visitors to the Lake Vermilion area. Socioeconomic values in this ecosystem are dictated by actions occurring on properties managed by other agencies or landowners.

Water Resources

The Lake Vermilion ecosystem is located in the Rainy River watershed, one of the seven main watersheds in Minnesota. Historically, these lakes and streams in northeastern Minnesota provided the necessities of food and water, as well as travel routes. Today the emphasis has shifted toward providing opportunities for recreational experiences.

Scenic Values

The visual resources of the public islands in Lake Vermilion are similar to those of the other islands, as well as the lake shore. The main differences are the small size of the public islands and their pristine nature due to lack of development. Homes, cabins and resorts are numerous along the southern and western shorelines of Lake Vermilion but occur much less frequently along the northern and eastern shorelines. Private residences dot the shorelines of the largest islands and occur on many of the smaller islands.

Unauthorized use of some public islands consists of docks, sheds, cabins and latrines.

Cultural Resources

Human occupation and exploitation of northeast Minnesota dates back to 7000 B.C., beginning after the retreat of the last glaciation. Inhabitants evolved into hunters and gathers well adapted to the region by 1000 B.C. The period after 1000 B.C. saw the introduction of burial mounds and ceramics (Woolworth and Woolworth 1977).

The Lakota dominated most of Minnesota and adjacent western Wisconsin for hundreds of years until the mid-1700s. During that period, the Ojibway began pushing the Lakota out of their traditional territory towards the south and west. By 1745, the Ojibway controlled northeast Minnesota.

The lifestyle of the Ojibway was characterized by a seasonal subsistence cycle based on the gathering of wild plants and maple sugar, fishing, hunting and trapping. By the late 1800s, the Ojibway population in northeast Minnesota was concentrated in small villages near Beaver Bay, Grand Marais, Grand Portage, the Boundary Lakes, and some of the larger interior lakes like Lake Vermilion.

French fur traders and explorers became the first Euro-Americans to visit the Lake Vermilion area during the 1680s, but were displaced by British fur traders after 1763. The Indians, French, and British all traveled the Lake Vermilion Trail between Lake Vermilion and Rainy Lake.

Although the region has a rich history, little evidence of these past cultures has been found on the public islands.

Vegetation

Vegetation in the Lake Vermilion area is dominated by communities characteristic of the boreal forest. Trees and shrubs that occur in this forest community, and on the islands, include balsam fir, white pine, red pine, white spruce, white cedar, quaking aspen, birch, mountain ash, willow, alder, and dogwood.

Special Status Species

There are no known Federally or state-listed threatened or endangered plant species, or state plant species of special concern on any of the public islands in Lake Vermilion. Special status of concern which inhabit the general Lake Vermilion ecosystem include two birds and one mammal. The bald eagle and eastern timber wolf are Federally and state-listed threatened species in Minnesota. The osprey is a state species of special concern. There are no known active bald eagle or osprey nest sites located on the public

islands. Although the public islands border extensive timber wolf habitat, the islands are too small and scattered to provide significant wolf habitat.

Wildlife and Fisheries Habitat

Due to the small size of the public islands, habitat is of greatest value as bird and fisheries habitats. The islands provide a total of 12 acres of habitat for songbirds, raptors, waterfowl, and wading birds. Public islands are providing nesting habitat for the common loon, Minnesota's state bird. A checklist of birds inhabiting the Superior National Forest is available at regional FS offices. Also available is a checklist published by the Great Lakes Interpretive Association. The Region II office of the Minnesota DNR maintains a St. Louis County species list which identifies habitats occupied by each species.

Lake Vermilion supports a diverse fish community because of the variety of habitat types created by its large size (40,000 surface acres) and twisted shoreline of 1,200 miles. The submerged island structure and adjacent fringes of aquatic vegetation enhance the fisheries of Lake Vermilion and smaller lakes by providing feeding habitat and protective cover.

Recreational Opportunities

The public islands provide opportunities for dispersed recreational activities. Visitor activities that occur adjacent to and on public islands include boating, fishing, wildlife observation, swimming, picnicking, sightseeing, photography, camping, and hunting.

Boating is a prerequisite to accessing and viewing the public islands. Lake Vermilion is one of the largest motorized boating lakes in northeastern Minnesota. Because use of motorized boats is not allowed in many lakes and streams in the region, Lake Vermilion plays an important role in providing motorized boating experiences. Nonmotorized boating opportunities also occur because of the presence of numerous small bays and narrow channels.

III. MAJOR ISSUES

Public comments are in appendix 1. A full range of issues were identified through legislation, BLM policy, BLM and DNR specialists, and public input from public meetings, letters and phone calls. These issues were consolidated and finalized during an internal scoping meeting held July 1993.

Issue 1: What is the most effective way to manage public island resources to meet the intent of the SNN Act?

The SNN Act states that the public islands in the withdrawal area will be managed to conserve the natural beauty of the shorelines for recreational purposes. ~~The concern is that on-site recreational use of public island resources could impact visual resources existing along the island shorelines through the reduction of vegetation resources and unauthorized on-site recreational facilities.~~

Issue 2: What is the most effective way to manage public island resources in the context of the Lake Vermilion ecosystem while meeting the intent of FLPMA?

BLM is concerned that on-site and off-site recreational uses may impact loon and bald eagle nesting habitats, island soil and vegetation resources, cultural resources, and water quality adjacent to and on the public islands.

FLPMA declares that BLM "will manage public land resources on the basis of multiple use and sustained yield unless otherwise specified by law". Within this framework the BLM must also systematically inventory and determine acceptable future use of these public land resources through planning decisions which will identify, analyze and determine the best way to manage public island resources "in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use".

Issue 3: What recreational opportunities can be provided by public island resources in the Lake Vermilion ecosystem?

Until very recently, neither the local residents, or visitors to the area have known that BLM-administered islands were available for public use. A number of the islands have been visited for recreational purposes. Some islands have been used for day-use activities such as picnicking, fishing and hunting; some for overnight camping; and some for sightseeing and wildlife observation. A variety of recreational opportunities occur around the lake at DNR and FS sites, at the Lake Vermilion Indian Reservation, and on private land. These public island resources compliment the opportunities provided by other Federal, state and local resource management agencies, tribal lands and private landowners because of the size and scattered location of the public islands throughout the lake.

Issue 4: How should BLM increase public awareness of the public islands and their resource values?

Through a Challenge Cost Share Agreement the DNR and BLM developed

and distributed a brochure on island use ethics and posted six of the public islands in Lake Vermilion as cooperative management areas. Information concerning location of the public islands, resources and responsible use ethics could be improved. In addition, minimal materials and programs are available on the cultural heritage of the area. Existing materials and programs could be modified and new materials could be developed to interpret the natural resources of the public islands and cultural heritage of the Lake Vermilion ecosystem.

Issue 5: How can universal public access to BLM-administered island resources best be provided?

There are nine public boat launching facilities scattered around the Lake Vermilion shoreline and two facilities at two of the smaller Lakes. These facilities currently do not meet accessibility standards set by the Americans With Disabilities Act of 1990. Therefore, universal access to public island resources is not available.

Issue 6: What fire suppression actions are needed to prevent adjacent landowner property damage from wildfires starting on public islands?

A policy with Federal, state or local agencies regarding fire management on public islands in the Lake Vermilion ecosystem does not exist. Most of the islands are so small that a fire would spread over the entire island before any kind of suppression could occur. There is a potential danger of fire spreading from a public island to the adjacent mainland or an adjacent island from sparks or burning embers.

IV. MANAGEMENT GOALS

The following goals would be accomplished through implementation of this management plan.

1. Public island resources would be managed as a component of the Lake Vermilion ecosystem.
2. Visitor awareness and understanding of the public islands, their resource values, and the associated recreational opportunities would be increased.
3. Resource values important to wildlife habitat, recreational opportunities, and the Lake Vermilion ecosystem would be maintained.

Assumptions

All proposed actions will be consistent with state and Federal laws, executive orders, policy, regulations and the following guidance.

Effective implementation of the Lake Vermilion Public Islands Coordinated Resource Management Plan will be dependent upon partnerships. Opportunities for partnerships are enhanced by: (1) the remoteness of the BLM's Milwaukee District Office from the Lake Vermilion ecosystem, (2) the development and implementation of a Challenge Cost Share Agreement with the DNR, (3) the presence of other land management agencies in the Lake Vermilion area, and (4) the presence of organizations interested in the health of the Lake Vermilion ecosystem. Cooperative management agreements will stress the use of state-of-the-art technology, research and educational efforts which will encourage stewardship and responsible use of public resources. Opportunities will be explored to involve adjacent Federal, state and local land management agencies, the Chippewa Tribe, private landowners, academic institutions, and special interest groups.

Decisions made in this plan will apply to both known surveyed public islands within the Lake Vermilion ecosystem and any additional islands within the ecosystem which are surveyed and identified as public land after completion of this plan.

Resolution of all unauthorized use of public islands in the Lake Vermilion ecosystem will continue as determined in the MFP. Claimants will be contacted and informed of the requirements specified under the Color-of-Title Act of 1928. A valid claim of ownership must be based on a continuous claim of title predating the SNN Act of 1930. Owners of property on invalid claims will be given a period of time to remove personal property prior to initiation of formal trespass proceedings. Facilities constituting unauthorized use of public lands occur on about 14 percent of the islands: pit toilets, small buildings, picnic tables, cabins, shacks, outhouses, storage buildings, docks, tables, and benches. Unauthorized facilities on the public islands where claims of ownership have not been submitted will be removed.

Recreational opportunities for the public islands will be identified using the Recreation Opportunity Spectrum (ROS) (see appendix 3). The ROS is subdivided into six classes which cover the full range of recreational opportunities and experiences from pristine to highly developed environments. The classification process provides the basis for developing and describing management objectives. Because of the small size and scattered distribution of the public islands, surrounding non-BLM land will have a major influence on the assessment of the recreation experience a visitor would have on or adjacent to the public islands. ROS classification of the public islands is limited to Semi-Primitive Motorized and Modified Natural classes due to the terms of the SNN Act.

public island size would be used as a criterion to decide whether or not an island can sustain facility development. For development to occur, an island must be a minimum of 0.18 acre in size. This was determined by using the St. Louis County's minimum shoreline setback requirement of 50 feet for a sanitary development. The minimum-sized island would have to be circular in shape and have a diameter of 100 feet. Twenty public islands are 0.18 acre or greater in size.

BLM would continue to work in conjunction with DNR to complete the preliminary assessment of the cultural resource potential on public islands in the Lake Vermilion ecosystem. Information gathered on 49 islands establishes a priority for formal survey of the islands at a later date. The survey priority would also be based on potential resource damage as related to the current level of visitor use.

V. DESCRIPTION OF ALTERNATIVES

Alternatives

Alternative 1: Present Management

Alternative 1 would continue current management for the public island resources administered by BLM in the Lake Vermilion ecosystem. Resources would be managed on a case-by-case basis as opportunities for cooperative partnerships would arise or actions would be needed to maintain the natural beauty of the shoreline for recreational purposes as required by SNN. This alternative is considered the "No Action Alternative".

Alternative 2: Preferred Management

While management presence would continue to be low level, actions would be driven by long-range objectives designed to manage visitor use and public island resources as a component of the Lake Vermilion ecosystem. Objectives would assist BLM in sustaining the integrity, biological diversity and productivity of the ecosystem. The majority of the management actions and visitor contact would occur on the mainland and not on the public islands. Visitor use of public lands would be mostly self-regulated through off-site visitor education and guidance. Rudimentary on-site facilities could be developed on islands 0.18 acre or larger in size.

Alternative 3: Intensive Management

Management actions would be the same as Alternative 2, except more management presence would be visible through on-site visits and in rustic facilities on some of the larger public islands. Additional use restrictions would be applied to protect public island resources. Increased boat patrols would be required to monitor visitor use of the public islands.

The highlighted actions below were selected as the Lake Vermilion Public Islands Coordinated Resource Management Plan and carried forward to Section 2 of this document.

ISSUE 1: What is the most effective way to manage the public island resources to meet the intent of the SNN Act?

OBJECTIVE: On public islands retain the existing natural beauty of the shorelines for recreational purposes.

ISSUE 1		
<p>ALTERNATIVE 1 PRESENT MANAGEMENT</p>	<p>ALTERNATIVE 2 PREFERRED MANAGEMENT</p>	<p>ALTERNATIVE 3 INTENSIVE MANAGEMENT</p>
<p><u>ACTION 1</u> --Public island visual resource management prescriptions would remain unclassified. Present management would continue. As required by the SNN Act, management activities would not detract from the beauty of the shorelines.</p>	<p><u>ACTION 1</u> --Designate and manage all public islands to meet the BLM Visual Resource Management (VRM) Class II requirements (appendix 2). This would allow for low level modifications on public islands for visitor safety and to protect resource values (see Issue 3, Alternative 2, Actions 1 and 3).</p>	<p><u>ACTION 1</u> --Designate and manage five public islands 0.18 acre or larger to meet the BLM VRM Class III requirements (appendix 2). The remaining public islands would be designated VRM Class II as in Alternative 2. This would allow for moderate modification of the existing character of up to five islands (see Issue 3, Alternative 3, Actions 1 and 3). This would also allow for low level modifications on the remaining public islands for visitor safety and to protect resource values (see Issue 3, Alternative 2, Actions 1 and 3).</p>

NOTE: In the area covered by this plan, 20 public islands meet the facilities development size criteria (see section IV - Assumptions). Thirteen of these islands are located in the Semi-primitive motorized (SPM) ROS Class and seven are in the Modified Natural (MN) ROS Class. Of the seven large islands in the MN portion of the lake, only five are being considered for facility development according to the criteria identified under Issue 3, Alternative 3, Action 2. One of the seven islands does not meet the criteria due to potential bald eagle nesting habitat and another does not due to the proximity of the mainland shore. Therefore there is a maximum total of 18 islands suitable for some kind of development.

ISSUE 2: What is the most effective way to manage the public island resources in the context of the Lake Vermilion ecosystem while meeting the intent of FLPMA?

OBJECTIVE: Manage public island resources to help sustain the integrity, biological diversity and productivity of the Lake Vermilion ecosystem.

ISSUE 2	ALTERNATIVE 2 PREFERRED MANAGEMENT	ALTERNATIVE 3 INTENSIVE MANAGEMENT
ALTERNATIVE 1 PRESENT MANAGEMENT	ALTERNATIVE 2 PREFERRED MANAGEMENT	ALTERNATIVE 3 INTENSIVE MANAGEMENT
<p><u>ACTION 1</u> --Continue existing management of public island resources by addressing resources on a case-by-case basis as a need arises or an opportunity presents itself.</p>	<p><u>ACTION 1</u> --Sustain ecosystem resources by using existing local, state and Federal regulations, and allowing only low level modifications of the landscape. --Protect resource values by managing for visitor contact mostly off-site on the mainland via printed material, information kiosks and naturalist programs. --Guide visitors to the public islands suitable for on-site recreational activities through the use of maps and the posting of unobtrusive signs identifying the islands as public land managed in cooperation with the DNR and other organizations. --Guide visitors away from islands with loon nest sites, potential bald eagle nest sites, rookeries, significant vegetation types, and small or low elevation islands through off-site education.</p>	<p><u>ACTION 1</u> --Same as Alternative 2, except additional on-site moderate modifications of the landscape would occur on up to five public islands which are 0.18 acre or larger. --Management presence would increase by contacting visitors on the islands or boating adjacent to the islands via increased visitor services boat patrols. --Where beneficial, interpretive signs would be used on up to five public islands to increase visitor awareness of ecosystem resources. --Guide visitors to these larger islands by the development of recreational use facilities that harmonize with the natural environment and meet the VRM III objective (see Alternative 3, Action 3).</p>
<p><u>ACTION 2</u> --Complete inventory of resource values (wildlife, vegetation, cultural, recreational opportunities) on public islands not inspected during 1992. --Monitor island resources at least once every 20 years.</p>	<p><u>ACTION 2</u> --Same as Alternative 1.</p> <p>--Develop and implement a Limits of Acceptable Change (LAC) monitoring procedure designed to meet management goals and objectives. Monitoring intensity would be determined during development of LAC standards and guidelines.</p>	<p><u>ACTION 2</u> --Same as Alternative 2.</p>

ISSUE 2 (cont.)

**ALTERNATIVE 1
PRESENT
MANAGEMENT**

ACTION 3

--Continue to inform the public of proper use guidelines via existing ethics brochure; use firerings in heavy-use areas; do not chop or damage live trees; gather only dead and down wood; and make sure fire is dead out.

ACTION 4

--If a bald eagle nest is established on a public island, implement protective measures consistent with adjacent land management agency standards and Federal regulations.

ACTION 5

--Continue coordination with FS and DNR to develop a walleye spawning reef near a public island in Elbow Lake.

ACTION 6

--Continue to use existing ethics brochure to inform visitors of general guidelines for watching and photographing nesting gulls and cormorants.

ACTION 7

--The significance of public islands supporting a northern hardwood community would not be determined.

**ALTERNATIVE 2
PREFERRED
MANAGEMENT**

ACTION 3

--Encourage use of portable stove or existing firerings and wood brought from the mainland.

ACTION 4

--In addition to Alternative 1, manage two islands to maintain suitability as bald eagle nesting, feeding and roosting habitat. Through education, direct visitor use away from the two public islands (existing visitor use is light).

ACTION 5

--Same as Alternative 1

ACTION 6

--Manage two public islands to maintain existing cormorant and gull rookeries.
--Manage for off-site visitor use by informing visitors of suitable viewing distance to prevent disturbances to nesting birds.

ACTION 7

--Determine the significance to the ecosystem of the hardwood community occurring on at least two of the larger public islands. These islands support a denser, more mesic type than is typical on the majority of the public islands.
--Direct visitor use away from these islands (existing visitor use is light).

**ALTERNATIVE 3
INTENSIVE
MANAGEMENT**

ACTION 3

--Encourage the use of portable stoves only.

ACTION 4

--Same as Alternative 2

ACTION 5

--Same as Alternative 1

ACTION 6

--Same as Alternative 2

ACTION 7

--Same as Alternative 2

ISSUE 3: What recreational opportunities can be provided by the public island resources in the Lake Vermilion ecosystem?

OBJECTIVE: Identify ROS classes for all public islands and manage public island resources consistent with the ROS delineations.

ISSUE 3		
ALTERNATIVE 1 PRESENT MANAGEMENT	ALTERNATIVE 2 PREFERRED MANAGEMENT	ALTERNATIVE 3 INTENSIVE MANAGEMENT
<u>ACTION 1</u> --ROS would not be used to classify the public islands.	<u>ACTION 1</u> --Delineate ROS "Semi-Primitive Motorized" and "Modified Natural" classes as shown on Maps 3, 4, and 5. Manage recreational opportunities consistent with these classes and the VRM Class II designation as identified in Issue 1, Alternative 2, Action 1.	<u>ACTION 1</u> --Delineate ROS "Semi-Primitive Motorized" and "Modified Natural" classes as shown on Maps 3, 4, and 5. Manage recreational opportunities consistent with these classes and the VRM Class II and III designation as identified in Issue 1, Alternative 3, Action 1.
<u>ACTION 2</u> --Continue to provide dispersed opportunities for current recreational activities: fishing, boating, swimming, picnicking, camping, hunting, wildlife observation, sightseeing, and photography. --Continue to provide opportunities for on-site day and overnight use by visitors in groups ranging from one to ten people. Group size would continue to average two to four visitors.	<u>ACTION 2</u> --Same as Alternative 1. --Same as Alternative 1, except overnight visitors would be encouraged to use existing designated primitive campsites on DNR- and FS-administered lands.	<u>ACTION 2</u> --Same as Alternative 1. --Same as Alternative 1, except overnight visitors would be encouraged to use up to 18 public islands which are 0.18 or larger and are capable of sustaining continuous overnight use without negatively impacting island resources, and are not located within 200 yards of developed shorelines (mainland or island).
<u>ACTION 3</u> --Continue existing management by not providing recreational facilities on public islands.	<u>ACTION 3</u> --Provide rudimentary recreational facilities to subtly direct use for protection of island vegetation, wildlife, visual resources and to reduce noise conflicts between public island visitors and adjacent island or mainland visitors or private land owners. Facilities could include: fire rings, boat mooring stakes, clearings for picnics or camping, sanitary facilities and public island signs. Need for facilities would be identified through LAC monitoring and would be consistent with delineated VRM and ROS classes and acreage requirements.	<u>ACTION 3</u> --Same as Alternative 2, except on up to five islands in the Modified Natural portion of the Lake, rustic facilities would be provided as needed to supply visitor comfort for single groups and protect resources: sanitary facility, boat mooring stakes, boat docks or piers, firegrates, picnic tables, camp-pad and interpretive signs. --Development would be limited to up to five public islands which are 0.18 acre or larger. The island must be classified as "Modified Natural," and not located within 200 yards of a developed shoreline.

ISSUE 4: How should BLM increase public awareness of the public islands and their resource values?

OBJECTIVE: Through a combination of existing and new information sources, increase visitor awareness and appreciation of public island resources, thereby enhancing the recreational experience and reducing visitor impacts.

ISSUE 4		
<p>ALTERNATIVE 1 PRESENT MANAGEMENT</p>	<p>ALTERNATIVE 2 PREFERRED MANAGEMENT</p>	<p>ALTERNATIVE 3 INTENSIVE MANAGEMENT</p>
<p><u>ACTION 1</u> --Continue to encourage responsible visitor use through distribution of the existing island ethics brochure.</p>	<p><u>ACTION 1</u> --Develop and implement an off-site Lake Vermilion ecosystem information/interpretive plan identifying specific themes and appropriate media for at least the following topics:</p> <ol style="list-style-type: none"> 1) Public island resource values 2) recreational use ethics especially related to litter, sanitation, vegetation and wildlife protection, and respect of other visitors and local residents 3) recreational opportunities 4) safety 5) historic and pre-historic resources 6) regional geology 7) watchable wildlife 8) fishing 	<p><u>ACTION 1</u> --Same as Alternative 2, except additional on-site interpretive materials and programs would be provided as identified (see Issue 3, Alternative 3, Action 3).</p>
<p><u>ACTION 2</u> --There would be no delineation of a waterway interpretive trail.</p>	<p><u>ACTION 2</u> --Develop and publicize a waterway interpretive trail. The trail would be delineated on a map and accompanied by a fact sheet identifying boating stops. Boating stops would not be physically identified on the mainland or islands.</p>	<p><u>ACTION 2</u> --Same as Alternative 2 except boat stops would be identified in a brochure and on the mainland or on the public islands. Numbered posts would be placed on public islands classified as Semi-Primitive Motorized and interpretive signs would be placed on public islands classified as Modified Natural.</p>

ISSUE 5: How can universal public access to BLM-administered islands resources best be provided?

OBJECTIVE: Provide universal access to public island resources consistent with the determined ROS Class designations (see Issue 3).

<p>ISSUE 5</p> <p>ALTERNATIVE 1 PRESENT MANAGEMENT</p> <p><u>ACTION 1</u> --Continue to provide naturally occurring access onto the public islands. Based on a graduated level of expected difficulty from easy to most difficult, existing access onto the public islands varies from moderate to most difficult.</p> <p><u>ACTION 2</u> --Provide at least one universally accessible dock on the mainland of Lake Vermilion. Such a facility would provide universal access to watercraft for the purpose of viewing public islands and fishing adjacent to the islands.</p>	<p>ALTERNATIVE 2 PREFERRED MANAGEMENT</p> <p><u>ACTION 1</u> --Same as Alternative 1.</p> <p><u>ACTION 2</u> --Same as Alternative 1.</p>	<p>ALTERNATIVE 3 INTENSIVE MANAGEMENT</p> <p><u>ACTION 1</u> --Construct universally accessible docks on a minimum of two public islands located in the "Modified Natural" portions of the Lake Vermilion ecosystem. --Development would be limited to those public islands 0.18 acre or larger and which receive moderate to heavy use.</p> <p><u>ACTION 2</u> --Same as Alternative 1, however would provide universal access at a minimum of two sites on the mainland.</p>
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ISSUE 6: What fire suppression actions are needed to prevent adjacent landowner property damage from wildfires starting on public islands?

OBJECTIVE: Suppress wildfires on public islands when adjacent landowner property is threatened.

<p>ISSUE 6</p> <p>ALTERNATIVE 1 PRESENT MANAGEMENT</p> <p><u>ACTION 1</u> --Continue existing management of not providing fire suppression on public islands.</p>	<p>ALTERNATIVE 2 PREFERRED MANAGEMENT</p> <p><u>ACTION 1</u> --Develop an agreement with a Federal, state, local or interagency fire suppression organization to implement appropriate fire suppression actions.</p>	<p>ALTERNATIVE 3 INTENSIVE MANAGEMENT</p> <p><u>ACTION 1</u> --Same as Alternative 2.</p>
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VI. AFFECTED ENVIRONMENT

Critical Elements

The following table indicates which of the critical elements of the environment (as outlined in BLM NEPA Manual H-1790-1) are present in the Lake Vermilion ecosystem, and if they are present, whether or not they will be affected. Effects may be either positive or negative.

Table 1

Critical Elements	Present			Affected		
	Yes	No	Maybe	Yes	No	Maybe
Air Quality	X				X	
ACECs		X			X	
Coastal Zones		X			X	
Cultural Resources	X			X		
Native American Religious Concerns		X			X	
Prime/Unique Farmlands		X			X	
Floodplain		X			X	
T or E Species	X			X		
Hazardous/Solid Waste Materials		X			X	
Water Quality	X			X		
Wetlands/Riparian Areas		X			X	
Wild & Scenic Rivers		X			X	
Wilderness		X			X	

The following critical elements identified above as possibly being affected by the CRMP are explained in detail.

Cultural Resources

A preliminary assessment of the cultural resources on 27 islands was completed by a State Park Archaeologist on May 27, 1992. This assessment made possible the development of criteria for the purpose of identifying the cultural resource potential of the islands. The criteria used included island size, slope, amount of rock outcrop, and degree of soil development. The combinations of these features indicate the potential of the islands as having been used for habitation and/or resource exploitation. One lithic site and one possible historic site were identified during the preliminary assessment.

Table 2: Resource Values and Uses - Public Islands in the Lake Vermilion Ecosystem

Island Number	Size (Acres)	Forest Type	Wildlife Habitat				Recreational Use				On-site Visitor Use	Comments	
			LN	PLN	EN	PEN	OT	ED	EN	PD			PN
77	0.02	lowland brush									N	low elevation	
78	0.05	absent					X				N	cormorant rookery	
79	0.02	lowland brush					X				N	herring gull rookery mallards, migrating ruddy turnstones, cormorants	
80	0.01	white pine		X						X	N		
81	0.38	white pine					X	X	X	X	X	M	deer pellets, loon offshore
82	0.37	white pine					X	X	X	X	X	M	deer pellets, loon offshore
83	0.01	cedar		X						X		N	west end rocky/high elevation,
85	0.15	white pine						X		X		L	3 fern species, deer pellets
86	0.05	lowland brush	X					X		X		L	low elevation, duck hunting
87	0.14	white pine					X	X	X	X	X	H	active mallard nest
88	0.23	white pine					X	X	X	X	X	H	recently hatched/depredated gull egg on rock ledge
89	0.09	cedar		X				X		X		L	narrow island/steep slopes dense tree/shrub cover deer pellets
90	0.1	white pine		X				X		X	X	M	good shore lunch site
91	0.42	white pine						X	X	X	X	M	

Table 2: Resource Values and Uses - Public Islands in the Lake Vermilion Ecosystem ¹

Island Number	Size (Acres)	2 Forest Type	LN	3 Wildlife Habitat				4 Recreational Use				5 On-site Visitor Use	Comments
				PLN	EN	PEN	OT	ED	EN	PD	PN		
92	0.03	white pine		X				X				L	gulls in water near island
93	0.12	cedar					X	X	X	X	X	L	active ant mounds island center, deer pellets, gulls/mallards/mergansers offshore
94	0.05	cedar		X				X		X		M	low elevation, duck hunting
95	0.06	white pine						X	X	X	X	H	
96	0.01	cedar		X								N	
97	0.02	lowland brush		X						X		N	mallards in water, good shore lunch site
110	0.02	lowland brush		X								N	low elevation
111	0.01	lowland brush		X								N	low elevation
120	0.01	white pine					X	X		X		M	sign on ground-"discovery island", otter sign
121	0.11	birch					X	X		X	X	M	active ant mounds
122	0.02	spruce		X				X				L	low elevation
123	0.15	white pine		X			X	X	X	X	X	M	pair loons nearby in water
124	0.54	white pine					X	X	X	X	X	H	known as "camp island", red squirrel

Table 2: Resource Values and Uses - Public Islands in the Lake Vermilion Ecosystem ¹

Island Number	Size (Acres)	2 Forest Type	3 Wildlife Habitat				4 Recreational Use				5 On-site Visitor Use	Comments	
			LN	PLN	EN	PEN	OT	ED	EN	PD			PN
125	0.02	white pine		X		X	X		X			L	low elevation, active ant mounds
126	0.06	white pine		X					X			L	
127	0.32	lowland hardwood		X			X		X			L	loon offshore, great blue heron stalking offshore
128	0.03	red pine		X			X			X		M	otter sign, pair loons nearby
129	0.08	cedar		X			X	X	X	X		M	deer pellets, otter sign
130	0.06	lowland hardwood	X						X			L	
131	0.01	cedar	X				X		X			L	loon offshore (pair in water with young in 1991)
132	0.17	upland hardwood							X		X	L	mesic site-northern hardwood, pair mergansers offshore
133	0.04	cedar		X			X		X			L	mallards and gulls on rocks
135	0.09	white pine		X		X			X		X	L	gulls and mallards nearby
136	0.19	white pine		X		X			X		X	L	old bald eagle nest in white pine-no activity
138	0.11	white pine				X	X		X	X	X	H	merlin in tree, wood duck nest box

Table 2: Resource Values and Uses - Public Islands in the Lake Vermilion Ecosystem ¹

Island Number	Size (Acres)	Forest Type ²	LN	Wildlife Habitat ³				Recreational Use ⁴				On-site Visitor Use ⁵	Comments
				PLN	EN	PEN	OT	ED	EN	PD	PN		
139	0.10	elm	X									N	low elevation
140	0.10	white pine		X				X		X		L	center of island-domed rock. good shore lunch site
141	0.10	lowland hardwood						X		X		M	
142	0.10	cedar										N	mostly rock. pair mallards
143	0.10	balsam fir		X				X				L	otter sign
152	0.18	white pine		X		X	X	X	X	X	X	L	mallards/mergansers/gulls on rocks and in water
155	0.01	white pine	X									N	
156	0.07	birch						X		X		L	dense tree cover
313	0.06	lowland brush										N	low elevation
314	0.02	cedar						X		X		M	wood duck nest box used by grackles

Footnotes for Table 2

1
Information gathered during May, 1991 field DNR/BLM inventory unless otherwise noted.

2
Forest type identified during 1969/70 BLM inventory.

3
Wildlife Habitat: LN - active loon nest
 PLN - potential loon nest site
 EN - active bald eagle nest
 PEN - potential bald eagle nest site
 OT - other wildlife noted

4
Recreational Use: ED - existing day use
 EN - existing overnight use
 PD - potential day use
 PN - potential overnight use

5
Relative scale of known/suspected recent on-site use based on the following factors:
 amount of woodcutting
 presence, distribution and use of firerings
 amount and distribution of litter
 amount and pattern vegetation loss due to trampling
 combination of uses
 total number of signs of on-site use

N = no use observ M = moderate use
L = light use H = heavy use

Special Status Species

EASTERN TIMBER WOLF - The habitat of the eastern timber wolf, a Federally and state-listed threatened species in Minnesota, extends from the Lake Vermilion area north and eastward to the Canadian border. The eastern portion of Lake Vermilion lies along the southern boundary of Zone 1, which is primary wolf range. Zone 1 includes most of the Superior National Forest and the BWCAW. Zone 2 ranges southward from Tower and Ely. The United States Fish and Wildlife Service has designated Zones 1 and 2 as Critical Habitat under the Endangered Species Act of 1973.

Two factors essential to maintaining viable wolf populations are: (1) large tracts of wild land with low human densities and minimal accessibility by humans, and (2) availability of adequate wild prey. The public islands in Lake Vermilion border an extensive area of wolf habitat. A possibility exists that wolves could venture out onto the frozen lake during winter months and travel to one of the public islands while in pursuit of prey. However, the scattered and widely distributed public islands do not provide significant timber wolf habitat.

BALD EAGLE - The bald eagle, a Federally and state-listed threatened species, nests in the Lake Vermilion area. The public islands were viewed during July 1990 and inventoried during May 1992. The public islands do not contain any of the current bald eagle nest sites. A white pine on one of the public islands supports an old nest but there have been no signs of recent use. FS personnel conduct annual nesting bald eagle surveys at Lake Vermilion. There has been no documentation of an active nest on this public island. There is an active nest site, however, within one mile of the public island. Five public islands have potential bald eagle nesting habitat (table 2).

Bald eagle tolerance of human presence varies seasonally as well as among different individuals and pairs. The Land and Resource Management Plan for the Superior National Forest considers important nesting bald eagle habitat to include the nest site and adjacent fishing and hunting areas within 1.5 miles of the nest site. FS has developed standards and guidelines for protecting active nests by identifying three management zones which become less restrictive to human activity as the distance from the nest increases. Some activity restrictions apply only during the breeding season.

Currently bald eagle nesting habitat exists adjacent to two public islands. While bald eagles often use the same nest site for many years, they frequently move to a different site. A nest site may be relocated as a result of wind damage, other natural factors, or preference for another site. The Northern States Bald Eagle

Recovery Plan (1983) states that conserving and managing nesting habitat is more important than identifying and preserving individual nest sites.

Water Quality

The DNR collects and analyzes the water quality samples from five stations in Lake Vermilion. Water quality is considered from the standpoint of nationally-related problems as well as the local watershed. Chemical analyses are completed for various elements (SO₄, total phosphorus, Ph, total alkalinity, total dissolved solids, and chlorophyll a). The water quality of Lake Vermilion overall is good. There have been site specific water quality problems in the past which were related to septic systems on privately developed shorelines.

Other Affected Resources

The following resources have been identified as having the potential of being affected by the management actions outlined in the three alternatives (these resources are not critical elements according to BLM NEPA Manual H-1790-1).

Soils

Soils on the public islands are light in texture and shallow. The parent material is granite outcrop. Bedrock is visible on many of the islands.

Vegetation

The Lake Vermilion ecosystem lies within a transition area between major biomes. The northern boreal forest is the dominant biome which extends downward from the north. The temperate deciduous forest comes in from the south and east. Table 2 lists the dominant forest type of each island. The majority of the islands support a boreal forest community, however, a minimum of four islands support a northern hardwood community. At least six of the islands support a lowland brush community.

Dominant tree species include white pine, red pine, cedar, and birch. Other tree species present include spruce, balsam fir, elm, ash, and basswood. Most of the islands support an understory of shrubs and ground cover of non-woody plants. Some of the more common species include willow, alder, dogwood, juniper, blueberry, rose, sweet gale, starflower, ferns, dandelion, and native grasses.

Visual Resources

Scenic vistas created by the combination of water, vegetation and rock, abound throughout the length and width of Lake Vermilion ecosystem. Intermingled with private islands, the public islands

dot the waterscape and appear to be small "floating" forests or shrublands. The shape, form, color and pattern of vegetation, along with the presence of rock material, are highlighted by the surrounding dark water of the lakes.

The public islands were analyzed as to their visual appeal, level of public concern, and visibility from travel routes. An inventory of the public islands determined that these islands meet the VRM Class II descriptions (appendix 2). Inventory classes range from Class I to Class IV, are informational in nature and provide a basis for considering visual values in plan development.

Wildlife and Fisheries

COMMON LOON - A 1989 survey by the DNR and Sigurd Olson Institute determined that Minnesota supports a population of approximately 12,000 adult loons. Loon populations in Minnesota appear to be stable at the present time. The largest concentrations of loons probably occur in the BWCAW. Members of The Sportsmen's Club of Lake Vermilion have been conducting a yearly loon survey since 1983. Their data indicate that the Lake Vermilion loon population is healthy and increasing.

DNR and BLM inventoried 49 public islands for nesting loons and the potential for nesting loons. Neither DNR nor BLM have loon nesting data for the remaining islands or the mainland. Loons exhibit a preference for nesting on islands, especially small islands with low lying vegetation. Their nests are usually located close to the edge of the shore. Loons will return to the same nest site year after year. Loons were observed nesting on four public islands (table 2). One site was identified during 1990. Twenty-three additional public islands were identified as potential loon nesting habitat sites (table 2).

Factors affecting loon populations include the quality of water and lakeshore/island vegetation for feeding and nesting; human activities such as boating, canoeing, fishing and sightseeing; predation of nests and young; and loss of habitat. Recreational disturbances, intentional or unintentional, can be a major threat to loon population stability.

In many states with loon populations, there has been a concentrated effort to educate the public about the impacts of disturbing nesting loons. Reviews of studies conducted in Minnesota, Maine and Alaska reveal that human activity coupled with the length of disturbance time affects loon productivity (Klein 1989). Christenson (1981) concluded that the "presence of people, cabins and human activity does not by itself appear to influence loon reproduction". He noted that disturbances were likely to cause nest abandonment if the birds were kept off the nest for more than

one hour. According to the Land and Resource Management Plan for the Superior National Forest, the loon nesting period extends from May 15 to July 15.

WATERFOWL - Public islands provide a limited amount of feeding, resting and nesting habitat for waterfowl because of their small size and accumulative acreage of 12 acres. Mallards and common mergansers were observed on and adjacent to some of the islands (table 2). One active mallard nest was observed. Smaller islands with low vegetation, exposed rock, or both, provide good loafing areas for waterfowl.

YEARLONG RESIDENT BIRDS AND NONGAME MIGRATORY BIRDS - The public islands provide an accumulative acreage of 12 acres of habitat for yearlong resident species and breeding habitat for birds which migrate to the southern states and into Central and South America. The majority of the islands are forested but only four public islands are more than one-half acre in size. At least two larger public islands (0.17 acre and 0.32 acre respectively) support a dense northern hardwood community.

The public islands provide resting habitat for transient species. Twelve migrating ruddy turnstones were observed in 1991 on the island supporting the herring gull rookery. Ruddy turnstones breed in Arctic and sub-Arctic habitats. The merlin, a migratory species which winters in the southern tier of the United States and into South America, was also observed on a public island.

ROOKERIES - One of the public islands supports a herring gull rookery and one adjacent island supports a double-crested cormorant rookery. Both herring gulls and cormorants were observed around some of the other public islands, in the water and perched on rocks. The southern portion of the herring gull's breeding range extends into the United States along the Great Lakes. The double-crested cormorant's breeding range includes most of Minnesota.

FISHERIES - Lake Vermilion's open waters, protected bays, narrow channels, and numerous islands provide habitat for a diversity of fish species. The submerged structure of the public islands, along with the adjacent fringe of aquatic vegetation, enhance the fisheries of the lake by providing feeding habitat and protective cover.

Fish species found in Lake Vermilion include cisco (tullibee), whitefish, northern pike, muskellunge, white sucker, bullhead, burbot, rock bass, pumpkinseed, bluegill, smallmouth bass, largemouth bass, black crappie, yellow perch, and walleye.

DNR stocks walleye fry and muskie fingerlings in Lake Vermilion. According to DNR there is substantial natural walleye reproduction in the lake. DNR operates a small northern pike spawning area in coordination with The Sportsmen's Club of Lake Vermilion.

Recreational Opportunities

Recreational opportunities can be expressed in terms of three main components: (1) activities, (2) settings, and (3) experiences. For management and conceptual convenience, possible mixes of these components have been arranged along a spectrum, or continuum. This ROS (appendix 3) provides a framework for stratifying and defining classes of outdoor recreational opportunity environments. The public islands are providing Semi-Primitive Motorized and Modified Natural recreational activities, experiences and settings. Maps 3, 4, and 5 delineate the ROS classes for the public islands in the Lake Vermilion ecosystem. These classes only apply to the public islands located within the delineated areas. The classifications are not meant to apply to other land ownership in the lakes.

Recreational opportunities on the public islands have been grouped into two categories: day use and overnight use. Table 1 identifies existing and potential recreational on-site day use and overnight use for each public island. Also shown in the table is the relative amount of on-site visitor use of the public islands. The presence of clearings, fire rings, cut tree stumps, litter, fishing tackle, trampled areas, signs, shotgun shells, duck blinds, tents, chairs, outhouses, docks, mooring stakes, and tables provided evidence of human use on public islands. The use determination was based on the type, amount and degree of signs of human use observed on the islands during the 1992 island inventory. Use of the public islands cannot be expressed as visitor days because of the lack of visitor use data. The light, moderate, and heavy on-site use categories were developed to give an indication of the relative degree of suspected use of the public islands.

Yearlong and seasonal residents of the Lake Vermilion area are believed to be the predominant on-site users of the public islands. This does not hold true of uses occurring adjacent to the islands, such as fishing, boating, and sightseeing. This user group would be composed of local residents, Minnesota residents, and out-of-state visitors. FS visitor use data for the BWCAW to the north of Lake Vermilion indicate that 65 percent of the wilderness use is by Minnesota residents, largely from the Twin Cities area. As in the BWCAW, the months of highest use are July and August.

The public islands are providing dispersed on-site and off-site recreational opportunities. While group size can vary from one to ten visitors, the average is two to four visitors.

DNR administers a group of small islands located near Soudan Underground Mine State Park. The DNR has posted these islands closed to camping, but allows day use of the islands.

BOATING - There are seven free public boat access locations on the shoreline of Lake Vermilion: (1) Norwegian Bay, (2) Wakemup Bay, (3) Oak Narrows, (4) Frazer Bay, (5) Everetts Point, (6) Hoodoo

Point, and (7) Soudan Underground Mine State Park. In addition, at least two public access locations are managed by private concessions which charge a small fee for launching. None of these are known to provide barrier free universal access. Numerous access points exist on private land. Public boat access exists at Elbow and Black Duck Lakes. A carry-in boat access site is located at Kjostad Lake. Public boat or carry-in access is absent from the other four lakes.

In past years, docks were constructed in trespass on several of the islands. Otherwise, shoreline access points range from bedrock to well vegetated. Boat size and type, as well as pilot skill will determine shoreline accessibility. All of the islands have at least one point which provides access to smaller-sized boats. Boaters must exercise caution as rocks often lie near the surface, hidden by the dark water.

FISHING - Lake Vermilion provides yearlong fishing opportunities and is known for its walleye fishing. Because the public islands contribute to the varied structure of the fisheries habitat, anglers can be found fishing the waters adjacent to the public islands. At least two public islands receive heavy fishing related day and overnight use.

Fishing piers are located at McKinley and Tower parks. Barrier free universal access is not provided at these facilities. An unknown number of fishing piers are located at resorts and other privately-owned property.

PICNICKING - A number of the public islands provide good sites for recreationists to go ashore to picnic, relax, and enjoy the scenery in an undeveloped setting (table 1). Blueberry bushes grow on some of the islands and provide a sweet treat to those who go ashore during July and August.

Developed picnic areas are located at the three developed campgrounds located on the shoreline of Lake Vermilion (see "Overnight Use" in this chapter) and at the Soudan Underground Mine State Park.

SIGHTSEEING AND PHOTOGRAPHY (WILDLIFE AND SCENERY) - Opportunities to enjoy and photograph scenic landscapes abound throughout the Lake Vermilion ecosystem and are in the eye of the beholder. Opportunities to view and photograph wildlife exist throughout the ecosystem at various places during various times of the day, month and year. Except for the cormorant and gull rookeries and swarming mayflies, significant numbers of wildlife usually do not appear in any one place. A good pair of binoculars or a powerful telephoto lens is crucial to viewing and photographing nesting loons, eagles, waterfowl, gulls, and cormorants without disturbing the birds. Opportunities exist to observe waterfowl, loons, eagles, cormorants, gulls, and great blue herons.

HUNTING - Public islands are used during the fall waterfowl hunting season. Duck blinds and shotgun shells were observed on four public islands.

OVERNIGHT USE - During on-site inspections of the public islands in 1991 and 1992, BLM personnel determined that camping had illegally occurred on these islands based on the presence of at least one of the following signs: (1) fire rings, (2) litter, (3) areas that had been cleared, (4) wood that had been cut, (5) outhouses, and (6) tents.

Table 1 identifies those public islands where overnight use is believed to have occurred, as well as those islands that have potential for camping. Criteria used to determine camping potential included accessibility, elevation, desirability (i.e., seclusion, view, vegetation), and site appeal (i.e., level, existing opening in shrub/tree cover, shelter from elements, and rock free). The suitability of the site for installation of some kind of sanitary facility was not included in this determination of camping potential during the inventory. Latrines are located on five public islands. The facilities were constructed in trespass and were improperly located adjacent to the island shoreline.

In addition to camping on the public islands, tying up houseboats, or any boat, to an island overnight is considered to be overnight use of the island. Though recreationists may not actually camp on the island, they may make use of the island during the nighttime hours for activities such as campfires.

One public island is unique because of its location and visitor use. The island is located in a large, highly developed bay, within 150 yards of mainland residences. The island is known locally to be suitable for camping and tying up of houseboats. Reports of disturbances have been turned in to the Sheriff's Department.

All three developed campgrounds in the Lake Vermilion ecosystem are located on the mainland of Lake Vermilion. Facilities provided include campsites, drinking water, picnic areas, and boat access. The campgrounds are located at Wakemup Bay, operated by DNR; McKinley Park, operated by Breitung Township; and Tower Park, operated by the City of Tower.

Primitive backcountry campsites accessible by water are located on the mainland of Lake Vermilion and on several of the islands. Primitive sites administered by DNR are located on Hinsdale Island and Muskrat Channel Islands. FS-administered sites are located on Pine Island and the north shore of the lake. These primitive campsites are being used, and except for one site, appear to be satisfying the demand for primitive camping experiences. The FS site at the west end of the lake receives continuous use and use patterns indicate the need for additional sites.

While the FS (LaCroix Ranger District) encourages use of the designated backcountry campsites, camping elsewhere on National Forest land outside of the BWCAW is allowed if FS guidelines are followed.

WINTER RECREATIONAL USES - Recreational opportunities that occur in the Lake Vermilion area during the winter months include ice fishing, skating, cross country skiing, snowmobiling, and dog sledding. Although recreationists may visit public islands while engaging in some of these activities, use probably ranges from none to very light.

VII. ENVIRONMENTAL CONSEQUENCES

Introduction

Chapter VII analyzes the environmental impacts that would occur if any of the three proposed alternatives were implemented. Discussion of impacts will be the same for both short-term (up to five years after approval of this plan) or long-term use (beyond five years) unless stated otherwise.

Impacts will be expressed in relative terms because of the lack of numerical or statistical information available regarding the public island resources in the Lake Vermilion ecosystem. For the purpose of this analysis the meanings of these terms are as follows.

- Negligible impact. The degree of anticipated environmental impact is considered to be unnoticeable.
- Minor impact. A relatively small change from present condition. In terms of the area's vegetation or wildlife resources, a minor impact affects a specific group of individuals of a population in a localized area for one generation or less. The integrity of the regional population is not likely to be affected.
- Moderate impact. An effect sufficient enough to cause a change in the abundance, distribution, or quality of a resource. In terms of the area's vegetation and wildlife, the abundance or distribution of a portion of the regional or local population would change over more than one generation, but would not affect the integrity of the regional population as a whole.
- Major impact. An effect sufficient enough to cause a major change in the abundance, distribution, or quality of the resource. In terms of the area's vegetation and wildlife, the abundance or distribution of the regional or local population of a species would decline beyond which natural recruitment would not likely return that population to its former level within several generations.

Impacts may be either positive or negative, and are measured in relationship to the current resource situation or condition. Actions which maintain the current conditions are considered to have negligible impact. It is important to recognize that although the impact of a management action may prevent deterioration of current resource values, it is not called a positive impact because it maintains the current values. Only actions which improve resource conditions in relationship to the current situation are considered to have a positive impact. Those actions which result in the deterioration of the current resource condition will be considered to have a negative impact. Table 3 shows the overall effects by resource of implementing the alternatives.

Impacts Common To All Alternatives

Proposed management actions would not adversely affect the Eastern timber wolf.

Overall, management actions would have negligible impacts to fisheries habitat adjacent to the public islands. The submerged island structures would continue to enhance fisheries habitat of the ecosystem. Development of a spawning reef in Elbow Lake would have a minor positive impact to fisheries in Elbow Lake.

Impacts to the gull and cormorant rookeries on two islands would be negligible. The two islands are not located in a developed portion of the lake and are not located along major travel routes. The current pattern of watercraft operation has not appeared to disrupt the nesting colonies. Gulls and cormorants have colonized the surface area of both islands and made the islands unsuitable for on-site recreational activities. While visitor awareness of the public islands would increase in Alternatives 2 and 3, visitors would be directed away from the two rookeries on public islands.

Overall, the proposed management actions in all alternatives would have negligible cumulative impacts to cultural resources on public islands. Physical disturbances to cultural resources would be incidental to visitor use of the public islands and would be caused by trampling of the ground surface. Existing visitor related impacts and potential impacts related to increased visitor use of facility use would be eliminated or mitigated. Development and implementation of an information/interpretive services plan would lead to an overall increased visitor awareness of cultural values unique to the Lake Vermilion ecosystem, and how the public islands relate to prehistoric and historic uses in the area. This would have a negligible impact on the public island resources.

TABLE 3 - ENVIRONMENTAL CONSEQUENCES
OVERALL IMPACTS ON RESOURCES

	Alternative 1	Alternative 2	Alternative 3
Soils	Negligible	Negligible	Negligible
Water Quality	Negligible	Negligible	Negligible
Vegetation	Negligible	Negligible	Negligible
Visual Resources	Negligible	Negligible	Negligible
Special Status Species	Negligible	Negligible	Negligible
Wildlife Habitat	Negligible	Negligible	Negligible
Recreational Opportunities	Negligible	Moderate Positive	Moderate Positive

Alternative 1: Present Management

The following assumptions were made prior to analyzing the impacts related to the implementation of Alternative 1.

Visitor use of the Lake Vermilion ecosystem would be expected to increase, corresponding to increased visitor use in the northern lakes region of Minnesota. Visitor use of the public islands in the Lake Vermilion ecosystem would not be expected to increase because public awareness of the public islands is low to non-existent. The public islands visited and the amount of visitor use would not be expected to change. Group size would remain at an average of two to four visitors. The moderate to heavy visitor use occurring on a limited number of islands would be expected to continue. Local residents would be expected to be the predominant visitors to the public islands.

The relative scale of low to high use levels developed for the 49 islands inventoried in Lake Vermilion will be applied to the total of 87 public islands in the Lake Vermilion ecosystem. Use is absent to low on approximately 56 (65 percent) of the public islands. Moderate use occurs on approximately 22 (25 percent) of the public islands, and high use occurs on approximately nine (ten percent) of the public islands.

Soils

Overall, the management actions proposed in Alternative 1 would have negligible impacts to the soil condition on the public islands. On-site trampling of specific use areas has caused increased soil compaction and lead to minor negative impacts on islands receiving heavy use. Less than one-half of these public islands have small areas of moderately impacted soils due to trampling.

Water Quality

Overall, the management actions proposed in Alternative 1 would have negligible impacts on the quality of the water adjacent to the public islands. Continuation of the current level of day and overnight use would not increase the amount of sediment and nutrients that enter the lakes from runoff.

Vegetation

Overall, the management actions proposed in Alternative 1 would have negligible impacts to vegetation on the public islands. On some of the islands receiving heavy use, minor negative impacts would occur to site specific use areas due to trampling and cutting. Continued distribution of the DNR-BLM "Island Ethics" brochure would have a negligible impact on maintaining vegetative quantity and quality on the public islands.

Visual Resources

Overall, the proposed management actions in Alternative 1 would have negligible impacts to the visual resources on the public islands. The undeveloped public islands continue to provide an element of naturalness as contrasted to highly-developed portions of the Lake Vermilion ecosystem. Signs of human use as viewed from the water, would include tents pitched near shorelines, boats on or close to the shoreline and the presence of visitors on the shorelines.

Impacts caused by visitor use of the public islands are visible on-site; however, the impacts are negligible. On the majority of the public islands impacts would be site specific and include small tent clearings, localized trampled areas, limited tree cutting, fire rings, and litter. Minor negative impacts to on-site visual resources occur on the islands which receive heavy use. The impacts are caused by larger quantities of scattered/concentrated litter and more trampled areas.

Continued distribution of the DNR-BLM "Island Ethics" brochure would have a negligible impact on the visual resources of the public islands.

Special Status Species - Bald Eagle

Proposed management actions in Alternative 1 would have no effect on the bald eagle or nesting habitat in the Lake Vermilion ecosystem. There are no known active bald eagle nest sites on any of the 49 public islands inventoried, nor are existing visitor use patterns on these islands known to be causing avoidance of public islands by bald eagles. Alternative 1 would not adversely affect bald eagles in the Lake Vermilion ecosystem.

Wildlife Habitat

Overall, the proposed management actions in Alternative 1 would have negligible impacts to nesting loons and loon habitat on public islands. The five known nest sites would remain suitable for nesting loons. The public islands that provide potential nesting sites would maintain their suitability. Factors contributing to the negligible impact level are: (1) the preference of loons for small, low elevation islands, (2) the preference of visitors for larger, higher elevation islands, (3) highest visitor use occurs at near the end of, and following the May-June nesting season, (4) public islands are not the only source of nesting habitat, (5) the lack of disturbances to low-lying shoreline vegetation providing nest sites, and (6) local interest and concern for loons.

Overall, boating related and on-site use of the public islands would have negligible impacts to waterfowl's use of public islands. The operation of watercraft adjacent to the public islands and on-

site human disturbances would cause minor disruptions to feeding, resting, and nesting behaviors on those public islands receiving heavy use.

The public islands would continue to provide feeding, resting and nesting habitat for yearlong resident, and nongame migratory birds. Negligible impacts have occurred due to the loss of vegetation on small, site specific visitor use areas.

Continued distribution of the DNR-BLM "Island Ethics" brochure would have negligible impacts on wildlife habitat on public lands.

Recreational Opportunities

Overall, management actions proposed in Alternative 1 would have negligible impacts on recreational opportunities on the public islands. The public islands would continue to provide opportunities for dispersed day and overnight recreational uses. Boating, fishing, camping, sightseeing, wildlife observation, picnicking, photography, and waterfowl hunting would continue adjacent to and on the majority of the public islands.

Access onto the public islands would remain natural and the level of difficulty would vary from moderate to most difficult. The lack of universal access onto public islands would continue to deny some physically challenged visitors access to the public islands. The absence of universal access from the mainland onto watercraft would continue to deny physically challenged visitors access onto watercraft for the purpose of viewing the public islands and fishing adjacent to the islands.

The majority of the public islands would continue to provide recreationists opportunities for solitude. Visitors to islands in the less developed portions of the lakes would have few encounters with other groups. Visitors to islands in more highly developed portions of the lakes are more likely to encounter other visitors in watercraft, than on the islands. Islands close to developed shorelines provide a sense of remoteness because the islands are spatially separated from the shoreline and vegetation screens the view.

As viewed from watercraft, the public islands would maintain their scenic beauty and appear free from human intrusions. Shorelines would remain unmarred. The islands would provide the on-site visitor a natural setting with few signs of previous use. Minor negative impacts to the setting occur on those islands receiving moderate visitor use. Fire rings, tent clearings, tree stumps, and litter create minor impacts to the setting on the moderately used islands.

The amount and extent of these features becomes more apparent on some of the heavily used islands and cause site specific moderate negative impacts to the setting.

Minor impacts, such as toilet paper in the bushes, occur on less than half of the islands receiving heavy use. The majority of the public islands receiving visitor use are located a sufficient distance from each other that precludes island to island noise disturbances. The majority of islands are small, and therefore, unsuitable for use by more than one group at any one time. Noise disturbance between user groups on the same island would not a problem. Use of the larger islands is expected to continue by single groups. Visitor day and overnight use of one public island would continue to be a source of occasional noise disturbance to shoreline residents in a well developed bay in Lake Vermilion. The island is located 150 yards from the shoreline.

Continued distribution of the DNR-BLM "Island Ethics" brochure would have a negligible effect on recreational experiences by informing visitors of the public island resource values and recreational opportunities available.

Alternative 2: Preferred Management

The following assumptions were made prior to analyzing the impacts related to the implementation of Alternative 2.

Visitor use of the Lake Vermilion ecosystem would be expected to increase, which corresponds to increased visitor use in the northern lakes region of Minnesota. Visitor use is expected to increase on approximately one-half of the 87 public islands as a result of increased public awareness of the islands' availability for recreational uses. Low use will continue on 57 (65 percent) of the public islands. Moderate and high use would continue on 30 (35 percent) of the public islands. The moderate and heavy use levels would change from those in Alternative 1 due to management actions proposed for 18 of the 20 larger islands which are 0.18 acre or larger. (Use is not expected to increase on two of the 20 public islands because of actions proposed under Alternative 2.) Moderate use would occur on 13 (15 percent) of the public islands. Heavy use would occur on 17 (20 percent) of the public islands. Because of the small size of the majority of the islands, the average group size would be expected to remain at two to four visitors.

Use of the public islands by permanent and seasonal residents would be expected to increase more significantly than use by other Minnesota residents and out-of-state visitors. The public islands are not expected to be the ultimate destination of visitors who

travel long distances to reach the Lake Vermilion ecosystem. The use would be expected to be incidental with other activities (e.g., fishing and boating) relative to specific lakes.

Soils

Overall, the management actions proposed in Alternative 2 would have negligible impacts to soils on the public islands. Alternative 2 would have minor negative impacts on soil condition on those public islands receiving moderate to heavy visitor use. Impacts would be specific to use areas such as picnic sites, campsites, trails, and boat landings. The presence of bedrock on many island shorelines would allow boat access without impacts to soils. The use of mooring stakes would be beneficial to maintaining soil condition by directing visitors to specific access points less susceptible to erosion. Moderate impacts to soil due to trampling would occur on site-specific use areas on some of the islands receiving heavy use.

Visitor use would be directed away from specific islands because of their resource values maintain the existing soil condition on the public islands. Impacts will remain negligible on these islands.

Water Quality

Overall, management actions proposed in Alternative 2 would have negligible impacts to water quality adjacent to public islands. Alternative 2 would have minor negative impacts to water quality adjacent to some of the public islands receiving heavy visitor use. Increased trampling of the ground surface would lead to increased sediment laden runoff entering the lakes. The presence of bedrock on many shorelines, and the installation of mooring stakes at desirable access points would prevent or reduce shoreline impacts and associated water quality impacts. Impacts to water quality would remain negligible on the islands receiving low to moderate visitor use.

Several management actions would be beneficial in maintaining the existing water quality. Resource condition standards would be developed and used to identify the need for sanitary facilities to protect visitor health and resources values on up to 18 of the larger islands. Visitors would be informed of the availability of existing DNR and FS campsites. Information would be provided on sanitary procedures appropriate for island use.

Vegetation

Overall, management actions proposed in Alternative 2 would have negligible impacts to the vegetation on public islands. Alternative 2 will have minor negative impacts to vegetation on islands receiving moderate to heavy visitor use. Visitors will use existing picnic sites, campsites, trails and boat landings;

however, additional understory vegetation will be trampled and lost due to enlargement of existing use areas and establishment of new sites. Moderate site-specific impacts would occur to vegetation on some of the public islands receiving heavy visitor use.

The development and implementation of an information/interpretive plan relative to island resources would help maintain the existing vegetation by informing visitors of the functions of vegetative resources as well as methods to reduce recreational-related impacts to vegetation. Directing visitors away from the lowland hardwood communities would maintain the islands in a near natural condition until their resource values and significance to the Lake Vermilion ecosystem can be fully evaluated. Directing visitors away from other islands because of their resource values would maintain the existing vegetation on the public islands.

Loss of vegetation would be limited by monitoring impacts and taking corrective action when resource condition standards are exceeded. Installation of boat mooring stakes would reduce damage to shoreline vegetation by directing users to specific access points. Encouraging visitors to use existing FS and DNR designated primitive campsites would prevent damage and loss of vegetation caused by establishing new campsites. Encouraging the use of portable stoves or existing firerings, and encouraging visitors to bring wood from the mainland would prevent the cutting of trees for firewood.

Development and implementation of fire suppression actions would have a minor positive impact in preventing wildfires from spreading to the vegetation of adjacent landowners. The small size and remote location of the public islands reduce the probability that fires would be suppressed before the vegetation burned on the public islands.

Visual Resources

Overall, management actions proposed in Alternative 2 would have negligible impacts on the visual resources of the public islands as viewed from watercraft on the lakes. Minor negative on-site impacts to visual resources would occur on those islands receiving moderate to heavy visitor use. Negative impacts could become moderate both on-site and from the lakes on some of the more heavily used islands. These impacts would be evidenced by increased trampled areas, litter, and the increased visibility of watercraft and recreationists adjacent to the public islands and on-site.

Designating the islands as VRM Class II would have minor positive impacts by allowing only those modifications which would retain the natural character of the islands. The facilities proposed in Alternative 2 would have negative minor impacts on scenic values. Mooring stakes, and signs identifying the islands as public

islands, would be visible only at close range and would not draw the attention of the casual observer. Sanitary facilities would be constructed to blend with the characteristic landscape, and would only be visible on-site.

Designating the islands' ROS classes as "Semi-Primitive Motorized" and "Modified Natural" have negligible impacts on scenic values. Under Alternative 2, all modifications to islands would have to be consistent with the VRM Class II designation, thereby retaining the existing character of the landscape.

Several management actions would function to retain the character of the islands, even on the more heavily used islands. Development of an information/interpretive plan would enhance visitor appreciation of resource values and provide recreational use ethics important to maintaining these resources. While all visual impacts caused by on-site use cannot be eliminated, losses to scenic values can be limited and corrective actions taken when the resource condition standards are exceeded.

Special Status Species - Bald Eagle

Management actions proposed in Alternative 2 would have a negligible impact on the bald eagle by maintaining the suitability of two public islands as alternate nest sites for nearby active sites. Although visitor awareness of all public islands would increase, visitors would be informed of the public island resource values and the need to maintain or enhance certain values. Actions identified under the information/interpretive plan would be used to guide visitors away from the two islands. Management actions proposed in Alternative 2 would not adversely affect bald eagles in the Lake Vermilion ecosystem.

Wildlife Habitat

Overall, management actions proposed in Alternative 2 would have negligible impacts to loon nesting habitat on public islands. Impacts to the five known loon nest sites on public islands would remain negligible in Alternative 2 since visitor use of these public islands would not be encouraged. Impacts to potential loon nesting habitat would be negligible overall, as visitor use would not be encouraged on public islands which are very small or low in elevation, and on those islands where current visitor use is low to none. Minor negative impacts would occur to potential habitat on the public islands receiving increased visitor use if this use causes damage to shoreline vegetation or if human presence disrupts nesting behavior.

Overall, boating-related and on-site use would result in negligible impacts to waterfowl use of the public islands. Alternative 3 would cause minor negative disturbances to feeding and resting waterfowl on those islands receiving heavy visitor use. On those

islands used for nesting, waterfowl nesting would be disrupted if heavy visitor use occurs during the spring months. Heavy visitor use during the nesting season could occur on a few islands but this is not likely to occur until July or August. Waterfowl habitat would be maintained by directing visitors away from some of the public islands because of the importance of the overall resource values.

Overall, impacts to yearlong resident and nongame migratory birds would be negligible. Minor negative impacts would occur during July and August on islands receiving heavy visitor use. Visitor activities on the islands would cause localized disturbances of feeding, resting, or nesting behavior of some individual birds and lead to the displacement of these individual birds from the public island habitat. Indirect impacts related to loss of vegetation would remain negligible.

Development and implementation of an information/interpretive plan would maintain wildlife habitat by informing visitors of habitat requirements of various species, how to interpret certain animal behaviors, and how to enjoy watching wildlife without disrupting or disturbing behavior patterns.

Recreational Opportunities

Overall, management actions in Alternative 2 would have moderate positive impacts on recreational opportunities. Designation of the public islands as VRM Class II would result in minor positive impacts to recreational opportunities. This designation would allow low level modifications to be made for the purpose of enhancing recreational experiences, and it would also retain the existing character of the landscape. Modifications would be seen, but would not attract the attention of the casual viewer. The islands would continue to provide scenic beauty to recreationists.

Delineation of the ROS "Semi-Primitive Motorized" and "Modified Natural" classes would have moderate positive impacts on recreational opportunities. Identifying the existing environments would provide a framework for managing recreational opportunities. Public islands would be managed to maintain specific settings by identifying suitable activities, providing facilities compatible with the setting, and monitoring use levels.

Development and implementation of an information/interpretive plan would have moderate positive impacts on recreational opportunities. Such a plan will contribute to existing DNR, FS, and other information/interpretive sources that enhance the visitor's experience by increasing awareness and appreciation of resource values. The public islands would be recognized as complimenting the existing opportunities available in the Lake Vermilion ecosystem.

Moderate positive impacts would result from visitors using maps and on-site signs that identify public islands suitable for on-site recreational activities. Having been informed of the existence of public islands through the information/interpretive plan, visitors would be able to locate the public islands.

Delineation of an interpretive waterway trail would have minor positive impacts on recreational opportunities by providing an additional recreational opportunity. While the appearances of public islands or adjacent shorelines do not differ substantially throughout the lake, such a waterway trail would establish a route(s) to guide visitors on a general scenic-interpretive tour of Lake Vermilion. Information on wildlife that could be encountered along the trail would enhance the viewing experience, as would information relative to the lake area, such as history, vegetative communities, and geology.

Providing mooring stakes on up to 18 islands would have minor positive impacts to recreational activities such as boating, fishing, and picnicking. The presence of mooring stakes would facilitate on-site use by directing visitors to suitable access points and providing stable mooring sites.

Sanitary facilities would be developed on public islands when resource condition standards are exceeded and the facility would be required to protect visitor health. The facilities would have site-specific moderate positive impacts to visitor use.

Providing at least one source of universal access to watercraft from the mainland would have moderate positive impacts by providing access to physically challenged visitors so they could view the public islands and fish in water adjacent to the public islands.

Encouraging visitors to use existing FS and DNR designated campsites would have negligible impacts on recreational opportunities. Overnight use of islands would not be prohibited; therefore, visitors could experience camping in an island setting. Encouraging the use of the existing designated DNR and FS campsites would have potential minor beneficial impacts to the natural landscape by preventing or reducing impacts associated with overnight use (e. g., litter, tent clearings, human waste).

Minor negative impacts would occur by encouraging visitors to use portable stoves or existing fire rings and to bring wood from the mainland. Portable stoves are functional while wood fires are aesthetically pleasing. Wood brought from the mainland would be viewed by some as an inconvenience. Minor positive impacts would include maintaining tree cover, scenic quality, and solitude for recreationists.

Minor negative impacts would occur to visitor opportunities for solitude on the public islands receiving heavy visitor use.

Visitors to these islands would have a greater chance of encountering other visitor groups both on-site as well as adjacent to the islands, especially in the more highly developed portions of the lakes. Noise disturbances between user groups would occur if more than one user group occupies an island at the same time. While it is expected that most of the larger islands would continue to be occupied by one group at a time, minor negative impacts to the visitor experience would occur if several small groups occupy the same island. The information/interpretive plan would encourage visitors to prevent or minimize noise disturbances that would impact other visitors and local residents.

As viewed from watercraft, the majority of public islands would maintain their scenic beauty. Islands receiving heavy use could have a boat tied up to the shoreline and recreationists could be visible on the shorelines. The presence of bedrock on many shorelines, and the use of mooring stakes at suitable access points would keep shoreline impacts to a minor level.

Alternative 3: Intensive Management

The following assumptions were made prior to analyzing the impacts related to the implementation of Alternative 3.

The same visitor use patterns and trends identified under Alternative 2 would be applied to Alternative 3. In addition, facility development on up to five of the larger islands would result in continuous heavy use of these islands throughout the peak visitor months of July and August.

Soils

Overall, management actions proposed in Alternative 3 would have negligible impacts to soils on public islands. Alternative 3 would have moderate negative impacts to the soils on up to five public islands. Continuous visitor use associated with facility development would result in localized areas of soil compaction on these islands. Changes to visitor use patterns would be made when resource condition standards are exceeded and soil impacts would not increase above the moderate level. Soil impacts on the remaining islands would be the same as identified in Alternative 2.

Water Quality

Overall, management actions proposed in Alternative 3 would have negligible impacts to water quality adjacent to the public islands. Alternative 3 would have minor negative impacts to water quality adjacent to the islands receiving heavy visitor use. Sediment and human wastes carried into the lakes by water runoff is not expected to increase above the level occurring under Alternative 2. Changes to the visitor use pattern would be made if resource condition and

standards are exceeded. Overnight use of the larger islands would only be encouraged on those larger islands where a sanitary facility could be developed and resource values would not be significantly impacted.

Vegetation

Overall, management actions proposed in Alternative 3 would have negligible impacts to vegetation on public islands. Alternative 3 would have moderate negative impacts to the vegetation on up to 18 islands receiving heavy visitor use. Visitor use of these public islands will increase because of increased awareness of the public islands. Continuous heavy visitor use would occur on up to five islands as a result of facility development (e.g., camp-pad, boat docks or piers, picnic sites, interpretive signs). Use of existing trampled and cleared areas would continue. However, understory vegetation would be damaged or destroyed due to enlargement of existing use areas and creation of new ones.

As decided in Alternative 2, vegetation would be monitored and corrective action would be taken when resource condition and standards are exceeded.

Visual Resources

Overall, management actions proposed in Alternative 3 would have negligible impacts to visual resources on public islands. Alternative 3 would have moderate negative impacts on the visual resources of up to five public islands delineated as ROS Class "Modified Natural", VRM Management Class III. These delineations would allow a moderate level of change to these public islands; therefore, the existing character of the landscape would be partially retained. Under this classification management facilities would attract attention, but would not dominate the view of the casual observer. This alternative proposes the development of facilities to provide visitor comfort and safety, as well as protecting resources. The presence of docks and fishing piers on the shorelines would attract the attention of the casual observer, and such facilities would have a moderate negative impact on the scenic values of on up to five public islands.

Impacts related to visitor use of other public islands receiving moderate to heavy use would be the same as those identified in Alternative 2.

Special Status Species - Bald Eagle

Management actions proposed in Alternative 3 would be the same as those identified under Alternative 2. Management actions proposed in Alternative 3 would not adversely affect bald eagles in the Lake Vermilion ecosystem.

Wildlife Habitat

Management actions proposed in Alternative 3 would have the same impacts to loon nesting habitat and potential loon nesting habitat as identified in Alternative 2. Facility development on up to five of the larger islands would not impact known loon nesting sites.

Impacts to resident and nongame migratory birds, as well as waterfowl would not differ significantly from those identified in Alternative 2.

As identified in Alternative 2, directing visitors away from the public islands because of certain resource values would maintain wildlife habitat.

Recreational Opportunities

Overall, management actions proposed in Alternative 3 would have moderate positive impacts by increasing recreational opportunities on the public islands. Increased visitor use of islands would result from facility development on up to five islands, overnight camping on up to 18 islands, and signing for boat stops associated with the waterway trail. The five islands identified for facility development are included in a total of 18 islands considered for potential overnight use. Positive impacts would be as the same identified under Alternative 2 for: (1) the use of maps and signs to direct visitors to public islands, and (2) development and implementation of an information/interpretive plan.

In Alternative 3, recreational experiences would be enhanced by the presence of facilities provided for visitor comfort, such as boat docks or piers, sanitary facilities, camp pads, and interpretive signs, on up to five public islands.

Alternative 3 would have moderate positive impacts to recreational opportunities by identifying overnight use on up to 18 public islands. Visitors would benefit from the installment of sanitary facilities and by the designation of only those sites which could maintain the condition of the natural setting. Encouraging the use of portable stoves would have moderate negative impacts on the visitor experience. The functional use of fire would remain available for cooking purposes. However, the aesthetically pleasing aspects related to the campfire would be absent for those choosing to use only portable stoves. The use of portable stoves would have moderate positive benefits to the setting and the recreation experience by maintaining the tree cover and by eliminating fire-rings associated garbage and charcoal.

Opportunities for association with other user groups would increase under this alternative as related to both day and overnight use of the 18 larger islands. The public islands could be occupied by several small groups at the same time, thereby increasing the

potential for noise disturbances between user groups. Visitors would be drawn to some of the public islands by boating stops associated with the waterway trail.

Opportunities for solitude would decrease on up to 18 public islands that receive heavy use as a result of day and overnight use of the islands. Opportunities for solitude would continue on the low to moderately used islands.

Providing a dock or pier facility on the shoreline of up to five islands would have a negligible impact on the islands' settings. Under ROS "Modified Natural" classification, rustic facilities could be provided for visitor convenience. The majority of the public island shorelines would appear natural and unmodified under Alternative 3.

Impacts to recreational opportunities by providing an interpretive waterway trail are the same as identified under Alternative 2, with one addition. Placing interpretive signs on up to five of the island boating stops would have minor positive impacts by providing visitors additional site specific resource and historical information.

Providing a minimum of two universal access docks or piers on the mainland and two on island shorelines would have moderate positive impacts. Physically challenged visitors would the opportunity to view public islands, fish in waters adjacent to public islands, access 2 public islands, and enjoy the lake area.

Cumulative Impacts Common to All Alternatives

Regulations implementing the National Environmental Policy Act define cumulative impacts as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions". Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

The purpose of this portion of the proposed management plan is to determine if any of the management actions proposed in this plan could contribute to cumulative impacts, that are either adverse or beneficial. The following is a discussion of the most likely cumulative impacts believed to be relevant to the key issues addressed in this environmental assessment.

- Maintenance of the scenic beauty of the majority of the public islands will benefit the overall scenic quality of the Lake

Vermilion ecosystem. The significance of the public islands increases as adjacent islands and shorelines become more developed and lose their natural character.

- Maintenance of resource values on numerous small public islands provides wildlife habitat relatively free from human intrusions. While the acreage is not a significant amount, it is beneficial in an ecosystem where visitor use and landowner development is increasing.
- Proposed management actions that provide beneficial effects to the recreation experience on public islands are expected to increase recreation use of public islands as well as the demand for public island resources. The accumulative acreage of the public islands is 12 acres, and only a portion of this provides suitable on-site recreational opportunities. The public islands have a limited capacity to fulfill the growing recreation demand for on-site recreational use in the area.
- Increased public awareness of public islands could lead to increased visitor day use of islands and shorelines administered by DNR and FS.
- Increased awareness and use of public lands could also lead to increased noise disturbances to adjacent landowners and trespass onto private land.
- Due to the limited accumulative acreage of the public islands, proposed management actions in the alternatives would have negligible impacts on the Lake Vermilion ecosystem.

VIII. GLOSSARY

Access - The ability of recreationists to reach areas in which they wish to recreate.

Alternative - A comprehensive management strategy; when a Federal agency is considering an action, the National Environmental Policy Act of 1969 requires the agency to develop and analyze a range of reasonable alternatives, including a "no change" alternative. The alternatives must respond to the issues.

Biological Diversity - The full spectrum of living organisms and communities, ecosystems and landscapes in which they occur; and the variety of functions and processes through which all living things interact with their environment.

Biome - A major portion of the living environment of a particular region (such as a fir forest or grassland), characterized by its distinctive vegetation and maintained by local climate conditions.

Ecosystem - The system formed by the interaction of groups of organisms and their environment.

Endangered Species - A plant or animal whose prospects for survival and reproduction are in immediate jeopardy, and as further defined by the Endangered Species Act of 1973, as amended.

Environmental Assessment - A concise public document that serves to: (1) briefly provide supplemental evidence and analysis for determining whether to prepare for an environmental impact statement or Finding of No Significant Impact; and (2) aid in an agency's compliance with the National Environmental Policy Act, when no environmental impact statement is necessary.

Federal Land Policy and Management Act of 1976 (FLPMA) - Public Law 94-579, which gives BLM legal authority to establish public land policy, to establish guidelines for administering such policy and to provide for the management, protection, development, and enhancement of the public land.

Impact - A change in the environment caused by the activities of humans.

Limits of Acceptable Change (LAC) - A process for establishing acceptable and appropriate conditions based on the premise that change to the ecological and social conditions of an area will occur as a result of natural and human factors. The goal of management is to keep the character and rate of change due to human factors within acceptable limits.

- Multiple Use** - The harmonious use of land or water resources for more than one purpose.
- Nongame Migratory Birds** - Species which are not considered to be game birds, and which breed in North America and winter in Mexico, Central America, the Caribbean, and South America.
- Off-Site** - Not taking place on a public island.
- On-Site** - Taking place on a public island.
- Public Island** - An island managed by the United States Government and administered by the Secretary of the Interior through the Bureau of Land Management.
- Recreation Opportunity Spectrum (ROS)** - A framework for understanding and defining various classes of recreational environments, activities, and experiences. The classes are defined in terms of the opportunities to have different kinds of experiences.
- Scoping** - The process by which significant issues relating to a proposal are identified. It includes eliciting public comments, evaluating concerns and developing issues and alternatives for consideration.
- Special Status Species** - A threatened, endangered or state-listed species.
- State-Listed Species** - A species listed by the State of Minnesota as being endangered, threatened, or of special concern.
- Threatened Species** - A plant or animal species that is likely to become an endangered species throughout all or a significant portion of its range, as defined by the United States Fish and Wildlife Service under authority of the Endangered Species Act of 1973.
- Transient Bird** - A species which is not a seasonal or yearlong resident, but which occupies habitat on a temporary basis while migrating.
- Universal Access** - Providing the highest practicable level of access to all persons, including those with disabilities; and considering the experience level of the person, and the capabilities of the area. Facilities should offer persons with disabilities opportunities to achieve experiences similar to those offered other recreationists.

Visual Resource Management (VRM) - VRM has dual program purposes: (1) to manage the quality of the visual environment, and (2) to reduce the visual impact of development activities while maintaining the effectiveness of the management plan objectives. It is a specific process that can be mapped and incorporated into design planning for projects.

IX. References

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APPENDIX 1 - SHIPSTEAD-NEWTON-NOLAN ACT of 1930

SEVENTY-FIRST CONGRESS. SESS. II. CH. 881. 1930.

July 10, 1930.
[S. 2498]

[Public, No. 539.]

CHAP. 881.—An Act To promote the better protection and highest public use of lands of the United States and adjacent lands and waters in northern Minnesota for the production of forest products, and for other purposes.

Minnesota.
Lands in, withdrawn
from entry, etc.
Description.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all public lands of the United States situated north of township 60 north in the Counties of Cook and Lake, State of Minnesota, including the natural shore lines of Lake Superior within such area; all public lands of the United States situated in that part of St. Louis County, State of Minnesota, lying north of a line beginning at the northeast corner of Township 63 north, Range 12 west, 4th P. M., thence westerly along the township line to the southwest corner of Township 64 north, Range 18 west, 4th P. M., thence northerly to the northwest corner of Township 65 north, Range 18 west, 4th P. M., thence westerly to the southwest corner, Township 66 north, Range 21 west, 4th P. M., thence northerly along the Township line to its intersection with the international boundary between the United States and the Dominion of Canada; all public lands of the United States on the shore lines of the lakes and streams forming the international boundary, so far as such lands lie within the areas heretofore described in this Act; all public lands of the United States in that part of the Superior National Forest located in Townships 61 and 62, Ranges 12 and 13 west, 4th P. M.; and all public lands of the United States on the shore lines of Burntside Lake and Lake Vermilion, State of Minnesota, are hereby withdrawn from all forms of entry or appropriation under the public land laws of the United States, subject to prior existing legal rights initiated under the public land laws, so long as such claims are maintained as required by the applicable law or laws and subject to such permits and licenses as may be granted or issued by the Department of Agriculture under laws or regulations generally applicable to national forests.

SEC. 2. That the principle of conserving the natural beauty of shore lines for recreational use shall apply to all Federal lands which border upon any boundary lake or stream contiguous to this area, or any other lake or stream within this area which is now or eventually to be in general use for boat or canoe travel, and that for the purpose of carrying out this principle logging of all such shores to a depth of four hundred feet from the natural water line is hereby forbidden, except as the Forest Service of the Department of Agriculture may see fit in particular instances to vary the distance for practical reasons: *Provided*, That in no case shall logging of any timber other than diseased, insect infested, dying, or dead be permitted closer to the natural shore line than two hundred feet, except where necessary to open areas for banking grounds, landings, and other uses connected with logging operations.

Conservation of natural beauty of shore lines.

Logging prohibited.

Exception.

proviso.
Logging within 200 feet of shore line.

APPENDIX 1 - SHIPSTEAD-NEWTON-NOLAN ACT of 1930

SEVENTY-FIRST CONGRESS. Sess. II. CH. 881. 1930.

Sec. 3. That in order to preserve the shore lines, rapids, waterfalls, beaches, and other natural features of the region in an unmodified state of nature, no further alteration of the natural water level of any lake or stream within or bordering upon the designated area shall be authorized by any permit, license, lease, or other authorization granted by any official or commission of the United States, which will result in flooding lands of the United States within or immediately adjacent to the Superior National Forest, unless and until specific authority for granting such permit, license, lease, or other authorization shall have first been obtained by special Act from the Congress of the United States covering each such project: *Provided*, That nothing in this section shall be construed as interfering with the duties of the International Joint Commission created pursuant to the convention concerning the boundary waters between the United States and Canada and concluded between the United States and Great Britain on January 11, 1909, and action taken or to be taken in accordance with provisions of the convention protocol and agreement between the United States and Canada, which were signed at Washington on February 24, 1925, for the purpose of regulating the levels of the Lake of the Woods: *Provided*, That with the written approval and consent of the Forest Service of the Department of Agriculture, reservoirs not exceeding one hundred acres in area may be constructed and maintained for the transportation of logs or in connection with authorized recreational uses of national-forest lands, and maximum water levels not higher than the normal high water mark may be maintained temporarily where essential strictly for logging purposes, in the streams between lakes by the construction and operation of small temporary dams: *Provided, however*, That nothing herein shall be construed to prevent the Secretary of Agriculture from listing for homestead entry under the provisions of the Act of June 11, 1906 (34 Stat. 233), any of the above-described lands found by him to be chiefly valuable for agriculture and not needed for public purposes: *Provided further*, That the provisions of this section shall not apply to any proposed development for water-power purposes for which an application for license was pending under the terms of the Federal Water Power Act on or before January 1, 1928.

Approved, July 10, 1930.

Alteration of natural water level to flood lands near Superior National Forest, prohibited.

Exception only by Act of Congress

Provided, Duties, etc., of International Joint Commission, not interfered with.

Vol. 36, p. 2448.

Vol. 44, p. 2168.

Reservoirs for transportation of logs, etc., authorized.

Homestead entries, may be authorized.

Vol. 34, p. 233.
U. S. C., p. 423.

Application for development of water-power unaffected.

Vol. 41, p. 1055.

APPENDIX 2 - VISUAL RESOURCE MANAGEMENT CLASS OBJECTIVES

* Class I Objective: To preserve the existing character of the landscape.

- provides for natural ecological changes
- does not preclude very limited management activity
- level of change should be very low and must not attract attention

* Class II Objective: To retain the existing character of the landscape.

- level of change to the landscape should be low
- management activities may be seen, but should not attract the attention of the casual observer
- changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape

Class III Objective: To partially retain the existing character of the landscape.

- level of change to the landscape should be moderate
- management activities may attract attention but should not dominate the view of the casual observer
- changes should repeat the basic elements found in the predominant natural features of the landscape

Class IV Objective: To provide for management activities which require major modification of the existing landscape.

- level of change to the landscape can be high
- management activities may dominate the view and be the major focus of viewer attention
- every attempt should be made to minimize the impact of the these activities through careful location, minimal disturbance, and repeating the basic elements

* Note: The Plan only uses VRM Classes II and III.

Source: U.S. Department of the Interior. Bureau of Land Management. Washington, D.C. 1986. Visual Resource Inventory Manual Handbook H-8410-1.

APPENDIX 3 - RECREATION OPPORTUNITY SPECTRUM
CLASS DESCRIPTIONS

Primitive - Class I

Experience Opportunity - There are opportunities for isolation from the sights and sounds of man, to feel a part of the natural environment, to have a high degree of challenge and risk, and to use outdoor skills.

Setting - The area is characterized by an essentially unmodified natural environment of fairly large size. Concentration of users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls. Only facilities essential for resource protection are used. No facilities for comfort or convenience of the user are provided. Spacing of groups is informal and dispersed to minimize contacts between groups. Motorized use within the area is not permitted.

Activities: *

Viewing scenery	Hunting	Swimming
Hiking and walking	Canoeing	Fishing
Tent camping	Other watercraft	Cross-country skiing
Nature study	(non-motorized)	Snowshoeing

Semi-Primitive Non-Motorized - Class II

Experience Opportunity - There are some opportunities for isolation from the sights and sounds of man, but this is not as important as for primitive opportunities. There are opportunities to have a high degree of interaction with the natural environment, to have moderate challenge and risk, and use outdoor skills.

Setting - The area is characterized by a predominantly unmodified natural environment of moderate to large size. Concentration of users is low, but there is evidence of other area users. On-site controls and restrictions may be present, but are subtle. Facilities are provided only for the protection of resource values and the safety of users. Spacing of groups may be formalized to disperse use and limit contacts between groups. Motorized use is not permitted.

Activities: *

Viewing scenery	Nature study	Cross country skiing
Hiking and walking	Sailing/canoeing	Snowshoeing
Camping	Swimming	Dog sledding
Hunting	Fishing	

* Semi-Primitive Motorized - Class III

Experience Opportunity - There are some opportunities for isolation from sights and sounds of man, but this is not as important as for primitive opportunities. There are opportunities to have a high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills. There is an explicit opportunity to use motorized equipment while in the area.

Setting - The area is characterized by a predominantly unmodified natural environment of moderate to large size. The concentration of users is low, but there is evidence of other area users. On-site controls and restrictions may be present, but are subtle. Facilities are provided only for the protection of resource values and safety of users. Spacing of groups may be formalized to disperse use and limit contact between groups. Motorized use is permitted.

Activities: *

Viewing scenery	Nature study	Fishing
Hiking and walking	Interpretive services	Snowshoeing
Camping	Motorized boating	Cross country skiing
Picnicking	Canoeing/sailing	Dog sledding
Hunting	Swimming	

*** Modified Natural - Class IV

Experience Opportunity - There are opportunities for affiliation with other user groups and for isolation from the sights and sounds of man. There are opportunities to have a high degree of interaction with the natural environment. Challenge and risk opportunities are not very important except in specific challenging activities. Opportunities for both motorized and nonmotorized recreation are present.

Setting - The area is characterized by a generally natural environment with moderate evidence of sights and sounds of man. Resource modification and utilization practices and restrictions offer a sense of security. Rustic facilities are provided for user convenience and safety, and for resource protection. Conventional motorized use is provided for construction standards and design of facilities.

Activities: **

Viewing scenery	Nature study	Fishing
Hiking and walking	Interpretive services	Snowshoeing
Camping	Motorized boating	Cross country skiing
Picnicking	Canoeing/sailing	Dog sledding
Hunting	Swimming	

Rural - Class V

Experience Opportunities - Opportunities to experience affiliation with individuals and groups are prevalent as is the convenience of the sites and opportunities. These factors are generally more important than the natural setting. Opportunities for wildland challenges, risk taking, and testing of outdoor skills are unimportant, except in those activities involving challenge and risk.

Setting - The area is characterized by a substantially modified natural environment. Resource modification and utilization practices are obvious. Sights and sounds of man are readily evident, and the concentration of users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for specific activities. Developed sites, roads, and trails are designed for moderate to high use. Facilities for intensive motorized use are available.

Activities: **

Viewing scenery	Nature study	Fishing
Hiking and walking	Interpretive services	Snowshoeing
Camping	Motorized boating	Cross country skiing
Picnicking	Canoeing/sailing	Dog sledding
Hunting	Swimming	

Urban - Class VI

Experience Opportunities - Opportunities to experience affiliation with individuals and groups are prevalent as is the convenience of sites and opportunities. Experiencing the natural environment and the use of outdoor skills are largely unimportant.

Setting - The area is characterized by a highly modified environment, although the background may have natural elements. Vegetation is often exotic and manicured. Soil may be protected by surfacing. Sights and sounds of man, on-site, predominate. Large numbers of users can be expected. Modern facilities are provided for the use and convenience of large numbers of people. Controls and restrictions are obvious and numerous. Facilities for high intensity motorized use and parking are present with forms of mass transit often nearby.

Activities: **

Viewing scenery	Nature study	Fishing
Hiking and walking	Interpretive services	Snowshoeing
Camping	Motorized boating	Cross country skiing
Picnicking	Canoeing/sailing	Dog sledding
Hunting	Swimming	

- * Note: The only ROS Classes used in the Plan are Semi-Primitive Motorized and Modified Natural.
- ** These activities are illustrative only.
- *** Due to the absence of road access but presence of motorized water access, this class is being referred to as "Modified Natural" instead of the manual class of "Roaded Natural."

Source: U.S. Department of the Interior. Bureau of Land Management. Washington D.C. Recreation Inventory Draft Manual Handbook H-8310-1.

