

# STEVENS AND ORIANA LAKE LAKE MANAGEMENT PLAN



ADOPTED  
April 2007

Matanuska-Susitna Borough  
Department of Planning and Land Use

**Stevens & Oriana Lake**

**LAKE MANAGEMENT PLAN**

**April, 2007**

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## 1.0 Introduction

### 1.1 Purpose

This lake management plan presents goals and objectives to balance the physical and social demands of those that live near or recreate on Stevens Lake and Oriana Lake with the need to maintain a healthy and productive lake ecosystem. The lake management plan process was established by the Matanuska-Susitna Borough to provide a means to reduce user conflicts, balance various environmental and recreational demands placed upon a lake, and protect the health, safety and welfare of its property owners and lake users.

### 1.2 Scope

Lake management plans provide guidance for how the surface of the lake is used and makes recommendations concerning public access and education of lake users to meet the goals of the plan. Certain aspects of the plan can be implemented as enforceable regulations through MSB Title 17.59. The borough assembly adopted guidelines for appropriate regulations for different sizes of lakes as follows:

#### LAKES HAVING A SURFACE OF 75 ACRES OR LESS

May recommend the following guidelines:

- ✓ No wake zone - 100 feet from shoreline
- ✓ Quiet hours - 10 p.m. to 8 a.m.
- ✓ Personal watercraft restriction
- ✓ 10 horse power limit\*
- ✓ No wake speed zone on lake\*

\* These options *may* be recommended on a daily time share basis.

#### LAKES MORE THAN 75 SURFACE ACRES TO 200 SURFACE ACRES

May recommend the following guidelines:

- ✓ No wake zone - 100 feet from shoreline
- ✓ Quiet hours - 10 p.m. to 8 a.m.
- ✓ Personal watercraft restriction
- ✓ 10 horse power limit\*\*
- ✓ No wake speed zone on lake\*\*

\*\*These options *must* be on a daily time share basis.

#### LAKES MORE THAN 200 SURFACE ACRES

May recommend the following options:

- ✓ No wake zone - 150 feet from shoreline
- ✓ Quiet hours - 11 p.m. to 8 a.m.

## FOR ALL LAKES

- ✓ Access recommendations will be consistent with traditional use and current level of access development.
- ✓ Quiet hours apply to repetitive recreational activities such as water skiing and racing or high speed activities NOT to moderate speed point to point transportation.
- ✓ No wake is defined as the slowest speed a boat or personal water craft can go and still maintain safe operation and maneuverability.
- ✓ Time share means restrictions do not apply on Thursday, Friday, Saturday, and all three day weekends mandated by federal holiday (Memorial Day, Fourth of July, and Labor Day).
- ✓ Ice house means a structure utilized for ice fishing and left on the frozen surface of a lake for more than 24 hours.
- ✓ Motor vehicles means automotive vehicles with rubber tires for use on highways.
- ✓ Motorized watercraft use means the operation of watercraft powered or propelled by a force other than human muscle power, gravity, or wind. This definition does not include airplanes as motorized watercraft when landing, taking off, or taxiing on a water body.
- ✓ Personal watercraft includes vehicles such as jet skis, wave runners, and similar acrobatic or stunt equipment.
- ✓ A wake is the track in the water left after the passage of watercraft or other vehicle.
- ✓ A special permit is a permit approved by the planning director for a special purpose and is limited to a specific time to conduct an event that would otherwise involve activities in violation of MSB 17.59.

These guidelines may be varied due to lake configuration, lake depth, or other considerations through the adoption of individual lake management plans.

Stevens Lake is 95 surface acres in size, and therefore, falls within the guidelines for lakes more than 75 surface acres to 200 surfaces acres. Oriana Lake is 9.37 surface acres in size and therefore, falls within the guidelines for lakes less than 75 surface acres.

### 1.3 Process

Lake management plans are initiated by local property owners or property owners. The initiators circulate a petition to get the required number of signatures on the petition required by code.

Once a valid petition has been filed with the department, a ballot is mailed to all property owners within 600 upland feet of the affected lake. Initially, the ballots only

addressed Stevens Lake. However, at the first meeting, some property owners wanted to include the un-named lake to the east, which is locally referred to as Oriana Lake. Since the number of ballots would not change, and Oriana Lake affected the same property owners, it was decided to include Oriana Lake within this Lake Management Plan. The ballot served as notice of the receipt of a valid petition to begin the lake management process. The borough begins a lake management plan if the majority of property owners responding to the mailed ballot vote in favor of developing a lake management plan.

Borough planning staff collects background information on the lake and encourage adjacent property owners and users to participate in the planning process. Borough staff, lake users, lake property owners, and property owners identify issues and concerns and establish goals and objectives that are incorporated into the draft plan.

The draft plan is reviewed by the public and community council and by the borough Planning Commission. The Commission considers all oral and written comments received in a public hearing and either recommends to the Assembly adoption of the plan as is, or with modifications, or recommends Assembly disapproval of the plan. The Assembly either adopts the plan as is or with modifications, or votes down the plan.

#### 1.4 Enforceable Code Restrictions – Stevens Lake

Most of the lake property owners in attendance at the meetings expressed a preference for the following enforceable restrictions on Stevens Lake:

- Quiet hours - 10 p.m. to 8 a.m.
  - No wake zone - 100 feet from shoreline
  - Personal watercraft restriction
  - 10 horsepower (hp) limitation\*
- \*(must be done on a time share basis)

#### Enforceable Code Restrictions – Oriana Lake

Most of the lake property owners in attendance at the meetings expressed a preference for the following enforceable restrictions on Oriana Lake:

- No motorized watercraft

These restrictions will protect the quiet enjoyment of the properties and allow continued use of the lakes by property owners and visitors in keeping with traditional practices.

The plan will also help future lake users to fish, boat, or recreate in a manner that protects neighborhood values. It was the property owners desire to encourage the use of the borough's "*Voluntary Best Management Practices for Development Around Water Bodies*" by local property owners (See Appendix C).

## 2.0 Inventory of Existing Conditions

### 2.1 Historic Use

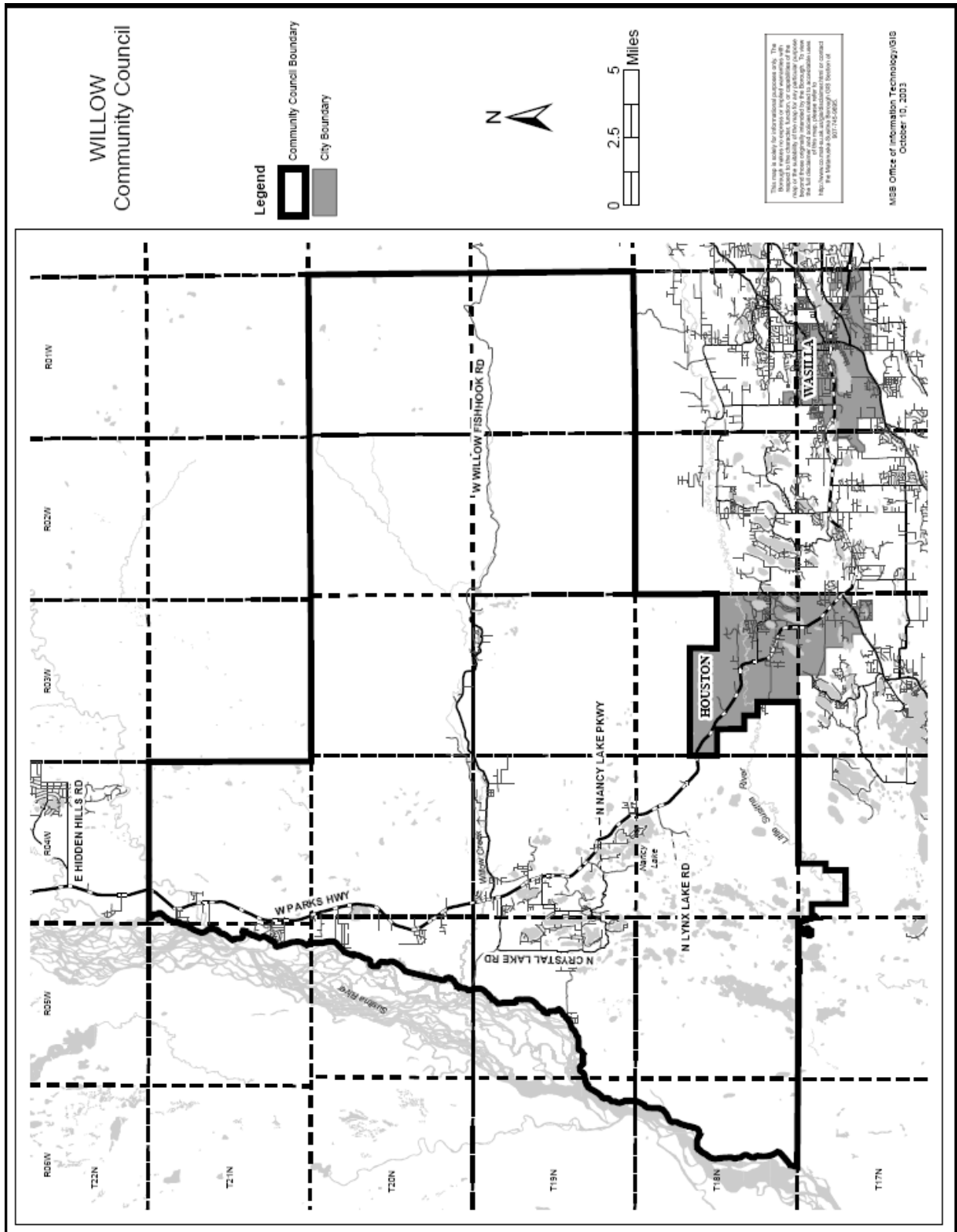
Both Stevens and Oriana Lake have historically been used by canoes. Stevens Lake supports resident populations of coho salmon, rainbow trout and longnosed suckers. It is not currently stocked by the Alaska Department of Fish and Game (ADF&G), but may be considered for future stocking.

Some property owners on Stevens Lake did not want to specifically limit the use of motorized watercraft, but others expressed concern with potential noise and water quality impacts from personal watercraft and watercraft with greater horsepower. Also, Stevens Lake unique configuration would tend to curb high speed activities. As a result, a 10 hp limitation was preferred. Equally, due to the small surface area of Oriana Lake and its current use, a prohibition on motorized watercraft was preferred by the meeting participants.

### 2.2 Location

Stevens Lake and Oriana Lake are located in the vicinity of Willow, Alaska, about 3 miles east from the Parks Highway and approximately ½ mile south of Willow-Fishhook Road. Stevens Lake is primarily accessed from West Tuxedo Avenue; at the terminus of West Tuxedo Avenue, a meandering pioneer road heads east toward Stevens Lake, providing access to properties. There is existing public access to the water along the section line at the northeastern shore of Stevens Lake. Individuals access Oriana Lake via a primitive, walk-in only trail located on the western section line between Stevens and Oriana Lake.

Figure 1 Community Council Map

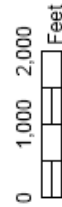




# Figure 2 Location Map

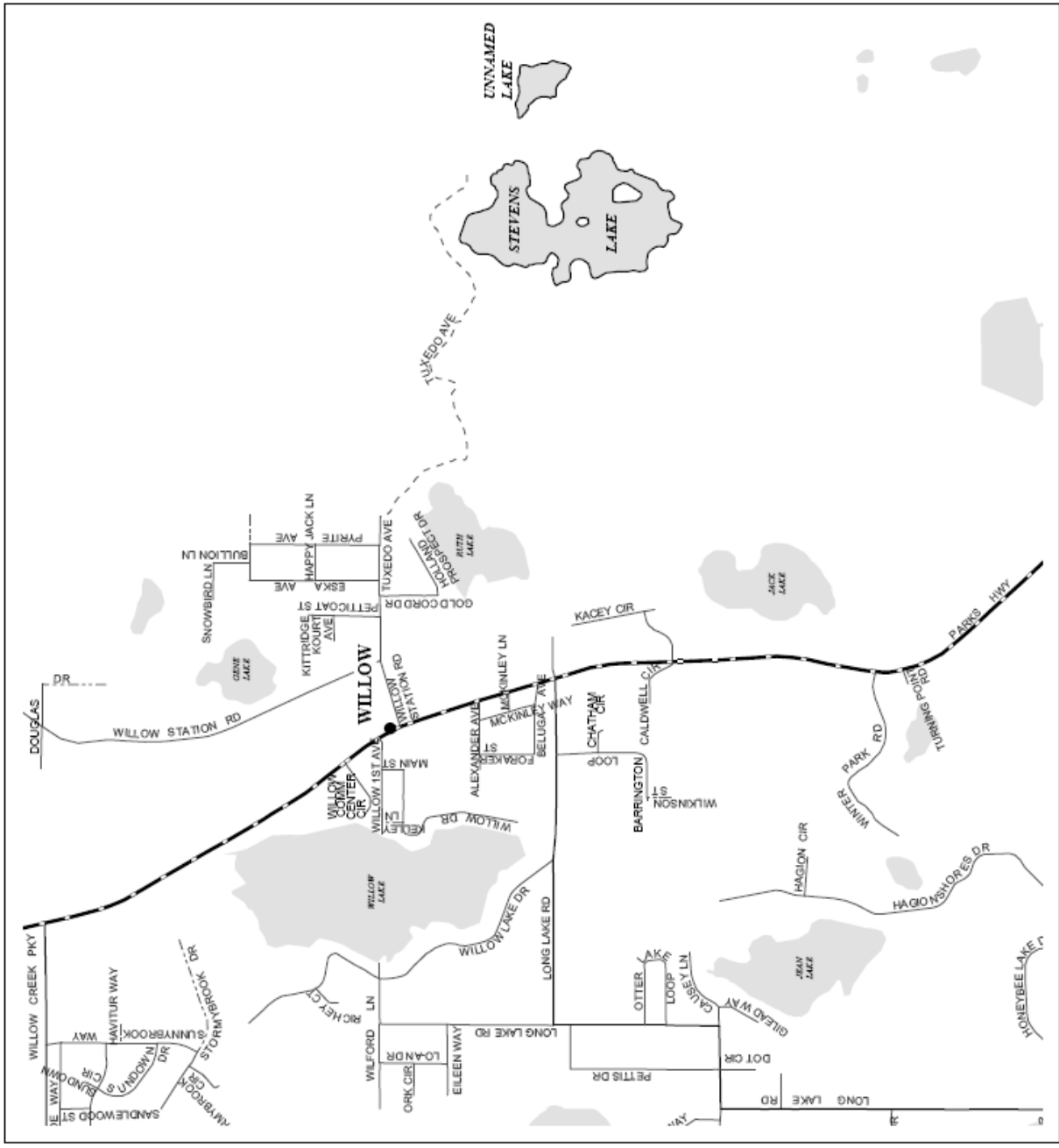
STEVENS LAKE  
Vicinity Map  
Figure 2

- Legend**
- Road Classifications**
- HIGHWAY
  - MAJOR
  - MEDIUM
  - MINOR
  - - - NOT CONSTD
  - - - PRIMITIVE



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MSB Office of Information Technology/GIS  
May 16, 2006



### 2.3 Physical Characteristics of the Lakes

These lakes are situated in mixed spruce/birch forest. The surrounding topography is rolling to the north, west, and east with elevation changes of 60 to 100 feet.

Overall, Stevens Lake appears relatively shallow along the shoreline (5-25 feet), with the center of the lake dropping to depths of over 30 feet. There is a seasonal stream serving Stevens Lake from Oriana Lake, and wetlands are found near the southeastern corner. According to the borough's GIS map information, Stevens Lake is approximately 1,500 feet wide, although the shoreline is not symmetrical, and approximately 3,000 feet in length. The lake depth is rather shallow in several locations where the lake is narrower, especially near the two islands which are located in the southeastern portion of the lake. These islands provide habitat for water fowl, such as nesting loons and other birds.

Oriana Lake is approximately 750 feet wide and about 900 feet in length. According to local property owners, it ranges from 5 to 25 feet in depth.

Both lakes have a substrate that is mixed cobble and gravels with fine sands and silts. Shorelines are mixed with established vegetation stabilizing undeveloped waterfronts. Aquatic vegetation is localized adjacent to wetlands. Much of the shoreline for Stevens and Oriana Lake is in its natural condition.

Water quality problems have not been reported for either water bodies.

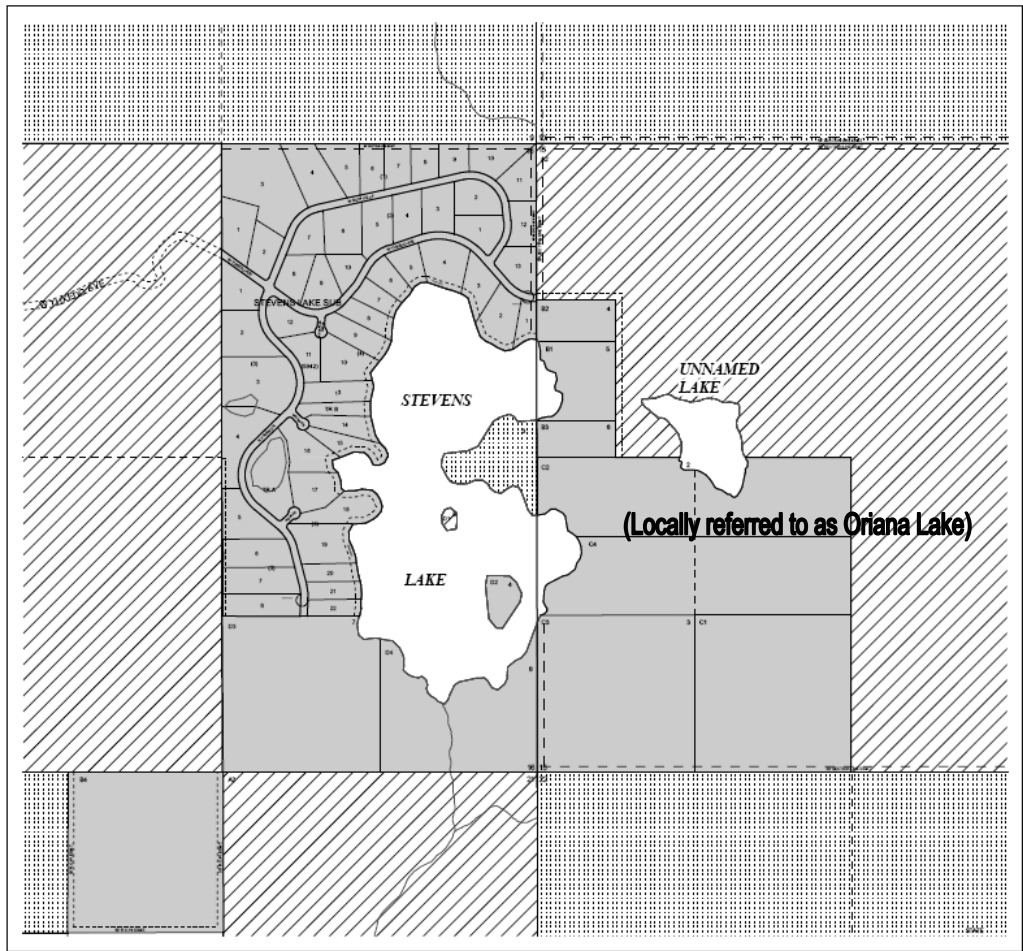
### 2.4 Land Use and Land Ownership

Stevens Lake was originally homesteaded by Myron Stevens, for whom the lake is named after. The remaining land around Stevens and Oriana Lake was transferred to borough or state. With later land sales, nearly all lots with frontage on Stevens Lake (Figure 4) are now privately owned with the exception of the state parcel located on the eastern shore (Parcel 3). The larger island to the south is privately held, while the smaller island to the north is owned by the borough. It is the property owners' desire that the borough retain this small island for habitat and wildlife preservation. On government lots 6, 7, and 8, the borough reserved "to and along" 50-foot easement(s) upland from the high water mark. Government lots 1, 2, 4 and 5 may be subject to public access easements along the lake shore. These parcels were all included in state patent 5470 and are subject to the settlement agreement that provides for public access, dated December 10, 1992, between the Matanuska-Susitna Borough (MSB) and the state. The northeastern shore of the lake provides the only public access to the lake via a pioneer trail along a section line. This section line runs south, crossing the state owned parcel and intersecting the south shore of the lake. The patent to the state of Alaska indicates that 50-foot wide easements along each side of the section line exist.

Borough assessment records show no residential structures in the immediate vicinity of Stevens or Oriana Lake. While some private property is adjacent to the

southwestern end of Oriana Lake, most of the property surrounding Oriana Lake is currently owned by the borough and is classified as general purpose lands.

### Figure 3 Land Use & Ownership



STEVENS LAKE  
Land Use/Ownership  
Figure 3

**Legend**

- Ownership**
- PRIVATE
  - BOROUGH
  - STATE



0 500 1,000  
Feet



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MSB Office of Information Technology/OIG  
January 24, 2007

## 2.5 Social/Demographic – Usage

The present human use of Stevens Lake may be characterized as being primarily recreational. Long-time property owners pioneered trails or primitive roads to reach their lake properties. Similarly, Oriana Lake has been used for low impact recreational purposes. Other property owners on Stevens Lake have recently bought property from borough land disbursements. In order to effectively manage lake usage, and protect water quality, future residential plans need to be identified.

Recently, the plat for Steven's Lake Subdivision was recorded. This subdivision totals 158 acres and has 55 lots, 21 of which front the lake. This subdivision develops a large portion of the northern and western shoreline. Tract A of the Steven's Lake Subdivision will be used for a private park and natural area; Tract B of this subdivision is owned by the Stevens Lake Lot Owners Association, Incorporated and this tract will be used for a private park and a private boat launch, which would not be available for general public use.

Potential concerns from residential development include safety, impacts to water quality, and motorized uses on Stevens Lake. The subdivision dedicated a portion of the Haessler- Norris trail system for continued winter use along Stevens Lake. Likewise, a floating easement for the trail is dedicated on Parcel D-4, at the southern end of Stevens Lake. The trail loops around the entire lake and is primarily a winter use trail for all-terrain vehicles, sled dog teams, snow machines, and other non-motorized users.

Several trails, which are a part of the Haessler-Norris Trail System have been identified and will be included in the borough Trails Plan. These trails surround the Stevens and Oriana Lake area. Existing public access to Stevens Lake is limited and can be characterized as a "walk-in only" trail.

Those in attendance at the meetings prefer to keep the existing access at its current location at the northeastern edge of Stevens Lake along the section line. While this is not a publicized public access point, this route was preferred by the property owners. At times, trash and trespass of private property occurs at this public access location. Property owners expressed the desire that this public access should be walk-in only and maintained in a primitive state to keep the area unspoiled and to protect the pristine nature of the lake.

No developed public access was identified on Oriana Lake; however, occasional canoeing or recreational activities occur at this lake. Access is likely via a primitive trail along a section line to the west of the lake.

Lake property owners and property owners enjoy the quiet, natural aspects of these lakes and are interested in protecting the water quality and limiting noise. Floatplanes occasionally use Stevens Lake. No floatplanes have been noted at Oriana Lake. Due to its very small surface size, property owners prefer that no commercial floatplane activity occur on Oriana Lake.

## 2.6 Existing Plans and Lake Monitoring Programs

### State

The State plan affecting the Stevens and Oriana Lake area is the Willow Sub-Basin Area Plan. The Willow Sub-Basin Area Plan, adopted in October 1982, contains management intent for State and Borough lands within the Willow Sub-Basin, an area of approximately 970,000 acres. Stevens and Oriana Lakes are within the Willow Management Unit, which recommends the following public land uses:

- Community Land Needs
- Parks Highway Scenic Areas
- Borough lands should be considered for possible agricultural uses, such as small farms and forestry (personal use).

Stevens Lake and Oriana Lake are not within the Matanuska-Susitna Borough Coastal Management Plan boundaries.

### Borough

Borough plans that address Stevens and Oriana Lake in some manner include the Borough-wide Comprehensive Plan, the Borough-wide Long Range Transportation Plan, Public Facilities Plan, and the MSB Recreational Trails Plan.

The Borough-wide comprehensive plan does not make specific recommendations for Stevens Lake. Rather, the plan makes a series of general recommendations for the Willow area.

The Borough Public Facilities Plan makes recommendations on a regional basis for the provisions of public services including the development of public facilities necessary to the provision of those services. Services included in the plan are public safety (fire protection, emergency medical services, and emergency preparedness); library; historical preservation; governmental administration; education; parks, recreation and open space; trails; and utilities. All of these elements affect the Stevens Lake area in some way, but the Parks, Recreation, and Open Space; and Trails elements have the most potential impact.

The 1997 Long Range Transportation Plan (LRTP) recommends future road improvements for the entire borough road network that will meet the stated goal and objective for the year 2015. The LRTP is currently being updated.

### Lake Monitoring Program

The borough coordinates a lake monitoring program to monitor water quality, identify problems that degrade water quality, monitor the biological and hydraulic functions of the lake, and establish baseline trends to assist planning. The program depends on local volunteers to gather information and take samples for further testing. In addition, lake monitors identify fish and wildlife habitat and report environmental impacts of natural or man-made origin. No volunteers from Stevens or

Oriana are currently participating in the lake monitoring program.

## 2.7 Existing Regulations

This section describes the principle regulations affecting use and development in the Stevens and Oriana Lake area.

### Federal

Any work which results in the dredging or placing of structures or fills in tidal (ocean) waters, streams, lakes or wetlands requires a 404 permit from the U.S. Army Corps of Engineers.

Migratory birds, which include loons and grebes, are protected by the Migratory Bird Treaty Act. The Act, among other things, prohibits the “taking” of migratory birds. Destruction of nest sites, eggs, or the birds themselves are a violation of the Act. Operation of aircraft, both private and commercial, is regulated by the Federal Aviation Administration.

### State

The Alaska Department of Environmental Conservation (DEC) provides regulations for wastewater disposal. DEC wastewater/septic regulations [18 AAC 72.015(f)] state that no holding tank, septic tank, soil absorption system, seepage pit, privy, or other waste water collection, treatment, or disposal system may be within 100 feet, measured horizontally, of the mean annual high water level of a lake, stream, spring, slough, or the mean higher high water level of coastal waters.

In addition to the U.S. Army Corps of Engineers 404 permit requirements; any activity within streams and certain work within lakes require a Title 41 permit from the Alaska Department of Natural Resources (DNR), Office of Habitat Management and Permitting (OHMP). Since 1994, the Alaska Department of Fish & Game, Habitat and Restoration Division issued a general permit, renewed annually, allowing vehicle movement on frozen water surfaces in south-central Alaska. DNR, OHMP currently issues these permits (Appendix A). Finally, the general ADF&G fishing regulations apply to Stevens and Oriana Lake.

A navigable or public waterbody includes water suitable for public use and utility including boating, landing and take-off of aircraft, hunting, fishing, and trapping, or other public recreational purposes. Stevens and Oriana Lake meets the definition of public waterbody.

Land that has been or is currently owned by the State of Alaska, and is adjacent to a navigable or public waterbody has special access requirements. Alaska Statute (AS 38.05.127) requires access to and along the surface waters of navigable and public waterways. An "along" easement, is generally reserved as a 50-foot wide public use easement along the ordinary high-water mark. These easements are created when the State conveys land to a Borough or a private individual and the easement stays with the property in perpetuity unless vacated through a public review process. State lands conveyed prior to the passage of AS 38.05.127 may not be subject to the "to" and "along" easements. A review of the conveyance document and in some cases, court

documents is required to determine the presence or absence of these easements. Lands patented by the federal government are not usually subject to "to and along" easements. On Stevens Lake, there are "to and along" access easements at government lots 6, 7, & 8.

### Borough

Several Borough-wide ordinances address the development and use of land adjacent to Stevens Lake. The regulations are contained within the Borough's planning (Title 15), subdivision (Title 16), zoning (Title 17), and real property management (Title 23) ordinances.

Title 15 establishes and describes the general functions of the Planning Commission (both planning and zoning functions) and the Board of Adjustment and Appeals. Title 15 also describes the comprehensive plan and purposes. Once adopted, the Stevens and Oriana Lake, Lake Management Plan will become an instrument of Borough policy similar to the other plans adopted by the Borough Assembly.

Title 16 provides the subdivision development standards within the Borough and establishes the Platting Board. Two of Title 16's requirements that are of special note to the development at Stevens Lake include a minimum lot size of 40,000 square feet, and a minimum lot width when measured at the lake's water line of one hundred twenty-five feet (Figure 4). If community septic system is provided, then the minimum lot size is 20,000 square feet and minimum width may be eighty-five feet.

Zoning regulations (Title 17) that are of special note to development activities at Stevens and Oriana Lake include setback requirements and a petition process to limit or eliminate motorized use of lakes and conditional use permits. Presently, all structures must be a minimum of twenty-five feet from the right-of-way and ten feet from side and rear lot lines. In addition, the voters of the borough approved, by initiative, a requirement that all habitable structures and garages must be located at least seventy-five feet from the ordinary high water mark of any waterbed or water course (Figure 4). The Borough also requires that any development which seeks to establish or operate certain uses that may impact surrounding properties must first obtain a conditional use permit.

### Private

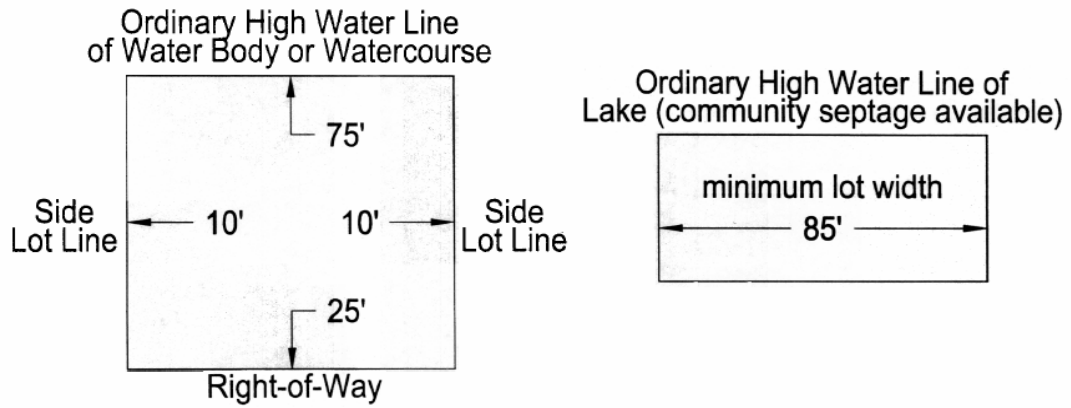
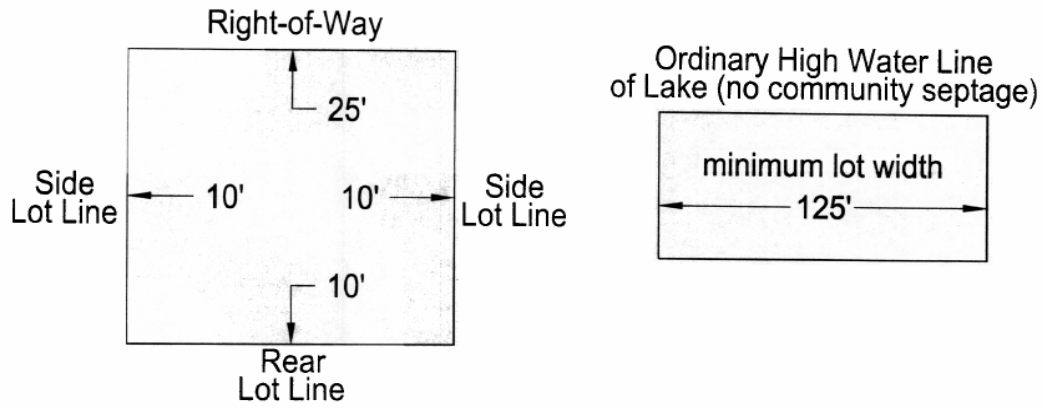
Private regulations which exist in the Stevens and Oriana Lake area would be in the form of subdivision covenants. The borough currently has on file a declaration of covenants, conditions, and restrictions for the Stevens Lake Subdivision. The Stevens Lake Subdivision has specific development standards and permitted uses. All lots are for residential use only which does not include multi-family dwellings, rooming houses, inns, lodges, motels, or hotels. The borough does not have any covenants, conditions, and restrictions listed for Oriana Lake. For current information about covenants, the reader is referred to the State of Alaska Records Office.

Stevens and Oriana Lake are within the Willow Area Community Organization (WACO) boundaries. Borough code requires that the Stevens and Oriana Lake Draft



Management Plan be submitted to WACO for review and comment prior to consideration by the Planning Commission.

**Figure 4 General Setback Requirements and Lot Size Requirements**



\*All lots must be a minimum of 40,000 sq. ft.

### 3.0 Issues and Concerns

The issues and concerns identified by property owners include:

- ✓ Protection of the quiet recreational character of the lakes.
- ✓ Trespass onto private property and refuse dumping by visitors.
- ✓ The potential for erosion and harm to waterfowl caused by wakes.
- ✓ Lack of signage/warnings about shallow areas, waterfowl habitat.
- ✓ Potential impacts from future development.

A majority of those attending the meetings said that the quiet, recreational character of these lakes should be protected. The present state of Stevens Lake may be characterized as a tranquil recreational area. Oriana Lake is primarily used for non-motorized recreational use, such as canoeing. The historical use of Stevens Lake has also primarily included canoes. It was the existing property owner(s) desire that new property owners be aware of the quiet nature of Stevens Lake; protect the shoreline from erosion and nesting birds by limiting wakes, establish horsepower limitations, and enforce quiet hours. Property owners also recommended that all docks be constructed from standard materials (no use of used oil barrels, metal barrels, and hazardous materials). The Stevens Lake Subdivision covenants, conditions, and restrictions also established criteria for docks, including material, width, and length.

### 4.0 Goals

Goals describe the future expectations of property owners, and users of a lake. The following goals reflect the aspirations of Stevens Lake property owners, property owners, and users and address their principle concerns: Quality of experience, recreational character of the area, wildlife and water quality. The goals are not shown in priority order as they are interdependent.

#### 4.1 Water Quality and Wildlife Protection

Stevens Lake and Oriana Lake are a significant natural resource. It is the desire of property owners, and users of Stevens Lake and Oriana Lake to maintain or improve the lake's water quality and to ensure that recreational uses of the lake are compatible with wildlife and habitat. The lack of an inlet or outlet on Oriana Lake increases the desire to ensure responsible use and good water quality.

#### 4.2 Preservation of Quiet Recreational Character

It is the desire of property owners, and users of Stevens and Oriana Lake to preserve the quiet and peaceful nature of the lakes, while allowing some recreational uses for both property owners and visitors.

#### 4.3 Maintain Current Access

It is the desire of property owners and property owners of Stevens and Oriana Lake to maintain the unimproved public access in its current state.

#### 4.4 Educate Property owners and Visitors

It is the desire of property owners of Stevens and Oriana Lake to utilize public education as a means by which to accomplish many of the other goals of the lake management plan, and to encourage responsible development on properties surrounding these lakes.

### 5.0 Recommendations

#### 5.1 Maintain Water Quality and Protect Wildlife

Certain uses, such as high powered motorized watercraft and personal watercraft (a.k.a. jet skis), can create wakes that contribute to shoreline erosion and disturb nesting waterfowl. Wake action may cause loon and grebe mortality by swamping nests or by separating parents from chicks. Noise caused by large motors may also disturb waterfowl. There was general agreement that on Stevens Lake a 10 hp limitation on a time share basis, prohibition of jet skis, and a 100-foot no-wake zone be established to reduce wakes and to manage noise generation.

The islands at Stevens Lake are known habitat and nesting areas for waterfowl. A number of techniques can be employed to provide the public with information about nesting loons and grebes, including providing signage at lake access points. Loon and grebe alert notices and general information about loons and grebes could be posted at a weather protected signboard at the lake's public access point to inform the public about proper "loon or grebe etiquette" (Appendix B).

Maintaining a natural shoreline habitat is one of the best ways to protect water quality. Natural shoreline vegetation provides erosion control, filtering of surface runoff, and habitat for fish and wildlife. It is recommended that lakeshore property owners follow Matanuska-Susitna Borough's "*Voluntary Best Management Practices for Development Around Water Bodies*" (See Appendix C). In order to determine baseline water quality conditions on Stevens and Oriana Lake, volunteers are encouraged to participate in the Borough's Lake Monitoring Program.

#### 5.2(a) Preserve Quiet Recreational Character – Stevens Lake

Property owners of the area initiated the lake management planning process to protect the quiet recreational use of Stevens Lake. Most of those attending the meeting did support a 10 horsepower (hp) limitation (time share basis) for watercraft motors as a means of reducing noise and promoting safety. Others also felt that responsible watercraft use on Stevens Lake would occur through public education.

The use of motorized watercraft is not a traditional use of Stevens Lake. The establishment of a 10 hp limitation on a time share basis and quiet hours, between 10 p.m. and 8 a.m., Sunday through Saturday, is recommended to maintain the existing quiet nature and recreational quality of the lake during all seasons. Commercial floatplane operations on Stevens Lake are discouraged.

5.2(b) Preserve Quiet Recreational Character – Oriana Lake

The majority of those attending the meetings recommended that motorized watercraft be prohibited on Oriana Lake.

The use of motorized watercraft is not a traditional use of Oriana Lake. It is incompatible with the quiet recreational uses of the lake and impractical due to the limited surface area of the lake. It is recommended that all motorized watercraft be prohibited on Oriana Lake. Commercial floatplane operations are discouraged on Oriana Lake.

5.3 Maintain Current Access

Public access to Stevens Lake is limited and can be characterized as a pioneer trail that is located along a section line easement. Those in attendance at the meetings prefer to maintain the rustic access, limit signage at both lakes, and not to provide improvements to the trail. It is recommended that public access remain and be maintained in its current state.

5.4 Educate Property owners and Visitors

It is recommended that the following methods be used to educate property owners and visitors to Stevens and Oriana Lakes about use restrictions and best management practices:

Mail or deliver notices to inform property owners and property owners about code restrictions, and enclose information about non-code recommendations.

Post lake restrictions along with any “Property for Sale” signs to inform potential buyers that lake restrictions are in place.

Inform property owners about the process for reporting violations to the Borough Code Compliance Division.

## **6.0 Implementation – Stevens Lake**

Lake management plans are implemented through a combination of regulations, public information, and best management practices. MSB 17.59 Lake Management Plan Implementation, implements adopted lake management plans, using the borough’s citation authority. Specific recommendations of the lake management plans that are implemented through MSB 17.59 are: quiet hours, no wake zones, motorized water craft use, and winter motor vehicles. When the Stevens Lake, Lake Management Plan is adopted, MSB 17.59 will be amended to include the recommendations of the plan. Those recommendations of the plan that are not included in MSB 17.59 will be implemented through public information and best management practices.

### **Personal Watercraft Ban**

To preserve the quiet residential and recreational uses of the lake, prevent shoreline

disturbance, and protect nesting waterfowl, personal watercraft are prohibited from Stevens Lake. Personal watercraft includes vehicles such as jet skis, wave runners, and similar acrobatic or stunt equipment.

### **10 Horsepower Limit (time share)**

Nesting loons and grebes and other migratory waterfowl are at an increased risk of disturbance from wakes caused by watercraft with large horsepower engines. Large wakes also contribute to shoreline erosion. Concurrent use of several large horsepower boats on the lake may also endanger public safety and create hazards to swimmers or other users. A ten horsepower limitation is established for Stevens Lake on a time share basis, Sunday through Wednesday [Time share means restrictions do not apply on Thursday, Friday, Saturday, and all three day weekends mandated by federal holiday (Memorial Day, Fourth of July, and Labor Day)].

### **Refuse Dumping, Campfires**

Illegal refuse and human waste dumping and camping on public property are prohibited, and are regulated under MSB Title 8: Health and Welfare.

### **Quiet Hours**

To maintain the existing quiet nature, recreational quality and low impact use of the Stevens Lake, quiet hours are established between the hours of 10 p.m. and 8 a.m. Sunday through Saturday. Quiet hours apply to repetitive recreational activities such as water skiing and racing or high speed activities (both in winter and summer) and NOT to moderate speed point to point transportation.

### **No Wake Zone 100 feet from Shore**

To prevent shoreline erosion, reduce noise, and protect waterfowl, a no wake zone is established 100 feet from the shoreline of Stevens Lake.

### **Commercial Aircraft Operations**

Local property owners point out that Stevens Lake occasionally sees personal floatplane usage. However, the lake is not conducive to accommodating airplane traffic, due to its configuration. Therefore, it is recommended that commercial floatplane operations be discouraged from operating at Stevens Lake.

### **Public Information**

Signs should be posted at the public access point of Stevens Lake informing lake users of the regulations on the lake. Mail or deliver notices to inform property owners and property owners about code restrictions, and enclose information about non-code recommendations. Inform property owners about the process for reporting violations to the Borough Code Compliance Division.

## **6.1 Implementation – Oriana Lake**

### **No Motorized Watercraft – Oriana Lake**

Nesting loons and grebes and other migratory waterfowl are at an increased risk of disturbance from wakes caused by watercraft with large horsepower engines. Large

wakes also contribute to shoreline erosion. The lake's limited surface area of 9.37 acres is not conducive to high horsepower activities. Motorized use on the lake may also endanger public safety and create hazards to swimmers and other users. A prohibition of motorized watercraft is established for Oriana Lake.

**Refuse Dumping, Campfires**

Illegal refuse and human waste dumping and camping on public property are prohibited, and are regulated under MSB Title 8: Health and Welfare.

**Commercial Aircraft Operations**

Due to its limited size, commercial floatplane operations are discouraged at Oriana Lake.

**Public Information**

Signs could be posted at the public access point of Oriana Lake informing lake users of the regulations on the lake. Inform property owners about the process for reporting violations to the Borough Code Compliance Division.

**Appendix A:  
Vehicle Movement on Frozen Water Surfaces within South Central Alaska**



# STATE OF ALASKA

## DEPARTMENT OF NATURAL RESOURCES

*Office of Habitat Management and Permitting*

**SARAH PALIN, GOVERNOR**

1800 GLENN HIGHWAY, SUITE 12  
PALMER, ALASKA 99645-6736

PHONE: (907) 745-7363

FAX: (907) 745-7369

### **FISH HABITAT PERMIT FH-07-IV-0002-GP**

**ISSUED:** January 1, 2007  
**EXPIRES:** December 31, 2007

General Public:

***Re: Vehicle Movement on Frozen Water Surfaces within the Matanuska-Susitna Borough***

Pursuant to AS 41.14.870(b), the Department of Natural Resources, Office of Habitat Management and Permitting (OHMP) has determined that both the public interest and the proper protection of fish and game would be served through the issuance of a general permit (GP) authorizing the use of motorized vehicles on frozen waters of various specified rivers, lakes, and streams within the Matanuska-Susitna Borough.

Categories of motorized vehicles covered by the GP include: any wheeled, tracked, or other ground affect motorized vehicle that is less than 12,000 pounds gross vehicle weight (GVW). This GP does not authorize cross-country movement of equipment on state land or other activities not generally authorized by the Alaska Department of Natural Resources.

The operation of wheeled or tracked equipment on frozen water bodies has been found consistent with the Alaska Coastal Management Program (ACMP) and the Matanuska-Susitna Coastal District Program, provided this activity is conducted in accordance with all Standard Alternative Measures set forth in Generally Consistent Determination-5 (attached).

Various rivers, lakes, or streams within the above described area have been specified as being important for the spawning, rearing and/or migration of anadromous fish pursuant to AS 41.14.870(a). These rivers, lakes, and streams are utilized by salmon and other anadromous fish for spawning, rearing, or migration. These systems also host a wide variety of resident fish species.

Pursuant to AS 41.14.870(d), access to, crossings of, and/or egress from any frozen specified anadromous fish bearing waterway within the Matanuska-Susitna Borough is hereby authorized provided such activities are conducted in strict accordance with the following stipulations:

- 1) The ice cover shall be of sufficient thickness to support the weight-bearing load of the authorized vehicles(s).
- 2) There shall be no vehicles or equipment operated in the open (un-frozen) water(s) of any specified lake, river, or stream under this authorization (GP).
- 3) The use of snow or ice bridges, access ramps, or cribbing to cross any specified river or stream is prohibited unless specifically approved, in writing, by the Department of Natural Resources, Office of Habitat Management and Permitting (OHMP).
- 4) Access to or egress from frozen waters shall occur only at locations with gently or gradually sloping banks. There shall be no access to or egress from frozen waters at locations with sheer or cut banks.
- 5) The bed or banks of any specified lake, river, or stream shall not be altered or disturbed in any way to facilitate access to, use of, or egress from their frozen surfaces.
- 6) No fuel shall be stored, nor vehicles fueled or serviced while located on the frozen surface or below the ordinary high water line (vegetation line) of any specified lake, river, or stream.

The vehicle owner and the operator, or the legal guardian of minor dependents is responsible for the actions of contractors, agents, or other persons who participate in the approved activity. For any activity that

***“Develop, Conserve, and Enhance Natural Resources for Present and Future Alaskans.”***

deviates from this approval, the responsible party shall notify OHMP and obtain written approval in the form of an individual permit before beginning the activity. Any action taken which increases the scope of the approved activity or that negates, alters, or minimizes the intent or effectiveness of any stipulation contained in this permit will be deemed a significant deviation from the approved activity. The final determination as to the significance of any deviation and the need for an individual permit is the responsibility of OHMP. Therefore, it is recommended that OHMP be consulted immediately when a deviation from the approved activity is being considered.

This letter constitutes a permit issued under the authority of AS 41.14.870. Please be advised that this approval does not relieve you of the responsibility for securing other permits: state, federal, or local.

Pursuant to 11 AAC 112.010, the conditions of this general permit are consistent with the Alaska Coastal Management Program and the Matanuska-Susitna Coastal District Program.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. The OHMP reserves the right to require mitigation measures to correct disruptions to fish and game created by the project that were a direct result of the failure to comply with this permit or any applicable law.

The recipient of this permit (the responsible party or permittee) shall indemnify, save harmless, and defend the OHMP, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or the permittee's performance under this permit. However, this provision has no effect if, and only if, the sole proximate cause of the injury is the OHMP's negligence.

This permit decision may be appealed in accordance with the provisions of AS 44.62.330--44.62.630.

Sincerely,

Edmund J. Fogels, Acting Deputy Commissioner



By: Michael L. Bethe, Habitat Biologist  
Office of Habitat Management and Permitting

Enclosure: Generally Consistent Determination GCD-5, Equipment Crossing of Streams

-tbn

- |                    |                  |                  |
|--------------------|------------------|------------------|
| cc: M. Agnew, ABWE | C. Godsey, EPA   | K. Krause, DMLW  |
| J. Hewitt, COE     | K. Hudson, MSB   | T. Oleck, ABWE   |
| S. Seaberg, OHMP   | M. Langdon, ADEC | L. Books, DMLW   |
| M. Fink, ADF&G     | D. Rutz, ADF&G   | A. Ott, DNR/OHMP |

## GENERALLY CONSISTENT DETERMINATION GCD-5

### EQUIPMENT CROSSING OF STREAMS

The following activity is consistent with the Alaska Coastal Management Program per 11 AAC 110.730 when conducted according to the standard alternative measures listed below. This approval does not relieve the applicant from obtaining required permits and approvals from local, State, and federal individual agencies.

### ACTIVITY DESCRIPTION

Winter ice crossings of resident fish streams in the North Slope Borough, Northwest Arctic Borough, and Bering Straits CRSA, and short term or transitory crossings of anadromous fish streams by wheeled or tracked vehicles or equipment statewide.

*Authority:* AS 41.14.840  
AS 41.14.870  
AS 16.20  
AS 38.05.850  
5 AAC 95

*Permits:* Fish Habitat Permit (OHMP)  
Special Area Permit (DFG)  
Land Use Permit (DNR)

*Region:* Statewide for crossing of anadromous fish streams; winter ice crossings of resident fish streams in the North Slope Borough, Northwest Arctic Borough, and Bering Straits CRSA.

### PROCEDURE

For activities subject to GCD-5, the applicant is not automatically required to complete a coastal project questionnaire (CPQ). For example, a CPQ may not be required for short-term or transitory crossings associated with timber harvest activities on state and federal lands. DFG may require a CPQ for project proposals where it is uncertain whether other state or federal authorizations are required. In all cases, a CPQ is not required for the activities described below on private lands and non-navigable waters reviewed in accordance with AS 41.17, the Alaska Forest Resources and Practices Act.

Prior to crossing any stream, river or lake specified as being important for the spawning,

rearing or migration of anadromous fish, the applicant shall obtain a Fish Habitat Permit pursuant to AS 41.14.840 and AS 41.14.870. In addition, construction of an ice bridge across such water bodies in the North Slope Borough, Northwest Arctic Borough, or Bering Straits CRSA coastal districts requires a Fish Habitat Permit pursuant to AS 41.14.840. OHMP will determine in advance of permit issuance if the activity can be accomplished in a manner that ensures protection of fish habitat.

The standard alternative measures listed under DNR Land Use Permits apply only when a DNR Land Use Permit is issued under this generally consistent determination. All other conditions apply when a OHMP Fish Habitat or DFG Special Areas Permit is issued.

## **STANDARD ALTERNATIVE MEASURES**

### **Summer In-water Crossings**

1. Stream crossings shall be made from bank to bank in a direction substantially perpendicular to the direction of stream flow.
2. Stream crossings shall be made only at locations with gradually sloping banks. There shall be no crossings at locations with sheer or cut banks.
3. Stream crossing activities shall be sited and timed to avoid spawning areas and sensitive fish life stages and habitats. OHMP may restrict or prohibit activities during certain sensitive time periods as necessary.
4. Streambanks and streambeds shall not be altered or disturbed in any way to facilitate crossings. DFG and DNR, or the applicable land manager, shall be notified within three working days of any disturbances. Corrective action may be stipulated as applicable and necessary.
5. Movement of equipment through willow (*Salix*) stands shall be avoided to the extent possible. (North Slope Borough, Northwest Arctic Borough, and Bering Straits CRSA)

### **Ice Bridge Construction or Crossing Frozen Waterbodies**

6. Equipment, other than vessels, must not enter open water areas of a watercourse during winter. Ice or snow bridges and approach ramps constructed at stream crossings must be substantially free of extraneous material (i.e., soil, rock, wood, or vegetation) and, if requested by OHMP, must be removed or breached before spring breakup. Alterations of the banks of a watercourse are prohibited.
7. To avoid additional freeze-down of deep-water pools harboring overwintering fish, watercourses shall be crossed at shallow riffle areas from point bar to point bar.

Compaction or removal of the insulating snowcover from the deep-water pool areas of rivers must be avoided. Exceptions to this stipulation may be authorized by OHMP on a case-by-case basis if it determines the pool is deep enough to prevent complete freeze-down.

### **DNR Land Use Permits**

8. Vehicle maintenance, refueling of equipment, campsites, or storage and stockpiling of hazardous substances on the surface ice of lakes, ponds, or rivers is prohibited. The storage of non-hazardous material on the surface ice of lakes, ponds, or rivers is allowed with consent from DNR or the applicable land manager.
9. Snow ramps or other mitigating measures will be used to avoid unsafe obstacles to snow machiners or others using the riverway for travel.
10. Equipment shall not operate in flowing water without written authorization from DNR, Division of Land.

### **Wildlife Avoidance**

11. Operations must avoid grizzly bear dens by one-half mile. Known bear den locations shall be obtained from OHMP at (907) 459-7289 prior to starting operations. Occupied dens encountered in the field must be reported to the above, and subsequently avoided. (North Slope Borough, Bering Straits CRSA, and Northwest Arctic Borough)
12. Operations shall avoid known polar bear dens by one mile. Known den locations shall be obtained from the U.S. Geological Survey at (907) 786-3424 prior to starting operations. New dens encountered in the field must be reported to the above, and subsequently avoided by one mile. (North Slope Borough, Bering Straits CRSA, and Northwest Arctic Borough)

### **Spill Notification**

13. The lessee or permittee shall immediately notify DEC by telephone, and immediately afterwards send DEC a written notice by facsimile, hand delivery, or first class mail, informing DEC of: any unauthorized discharges of oil to water; any discharge of hazardous substances other than oil; and any discharge or cumulative discharge of oil greater than 55 gallons solely to land and outside an impermeable containment area. If a discharge, including a cumulative discharge, of oil is greater than 10 gallons but less than 55 gallons, or a discharge of oil greater than 55 gallons is made to an impermeable secondary containment area, the lessee or permittee shall report the discharge within 48 hours and immediately afterwards send DEC a written notice by facsimile, hand delivery, or first class mail. Any discharge of oil, including a cumulative discharge, solely to land greater than one gallon up to 10 gallons must be reported in writing on a monthly basis.

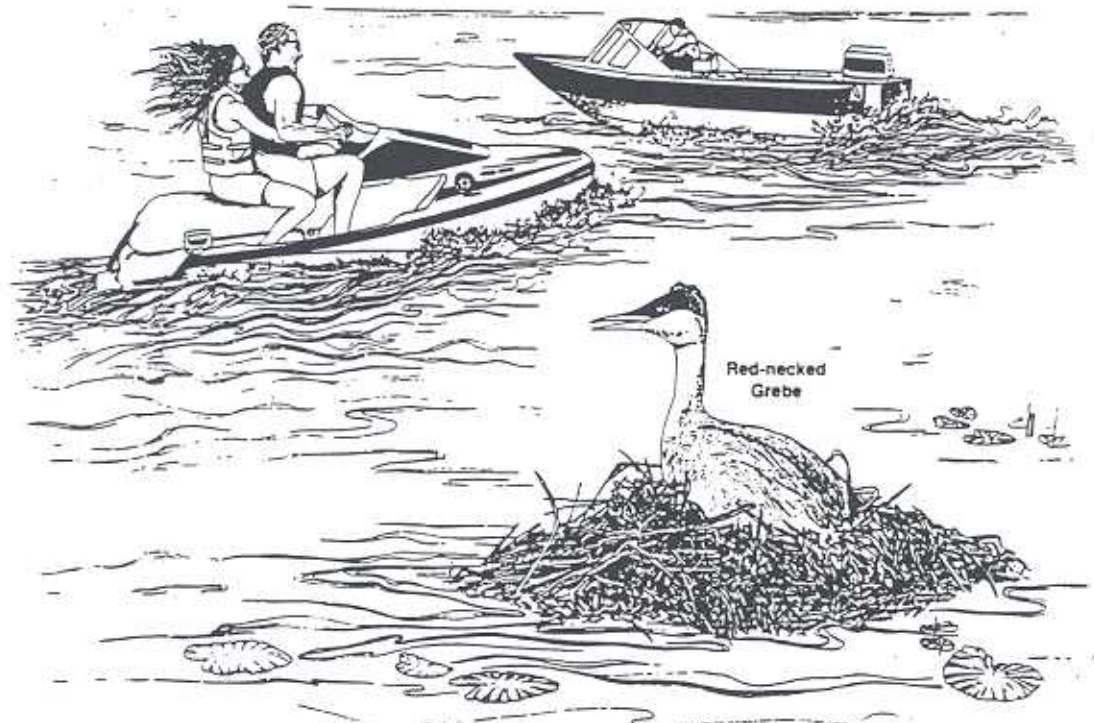
The posting of information requirements of 18 AAC 75.305 shall be met. The provisions of 18 AAC 75.310 (Scope and Duration of Initial Response Actions) and other reporting requirements of 18 AAC 75.300 - 18 AAC 75.396 also apply. The lessee or permittee shall supply DEC with all follow-up incident reports. Notification of a discharge must be made to the nearest DEC Area Response Team during working hours: Anchorage (907) 269-7500, fax (907) 269-7648; Fairbanks (907) 451-2121, fax (907) 451-2362; Juneau (907) 465-5340, fax (907) 465-2237. The DEC oil spill report number outside normal business hours is (800) 478-9300.

## **ADVISORIES**

1. The Alaska Historic Preservation Act (AS 41.35.200) prohibits the appropriation, excavation, removal, injury, or destruction of any state-owned historic, prehistoric, or archeological site without a permit from the commissioner. Should any sites be discovered during the course of field operations, activities that may damage the site shall cease and the Office of History and Archaeology in the DNR, Division of Parks and Outdoor Recreation at (907) 269-8721 and the appropriate coastal district shall be notified immediately.

**Appendix B:  
Bird Nesting Area Buoys, “Loon Alert!” and “Steer Clear!” Signs**

# STEER CLEAR!



**BOATERS – Stay at least 100 feet away  
from nesting Red-necked Grebes.**

Grebes are duck-sized birds that nest on floating vegetation and debris in shallow water.

Wakes from watercraft will destroy their nests and kill their eggs and chicks.

Go slowly along shorelines and avoid nesting areas.

**– HELP PROTECT ALASKA'S WILDLIFE –**

Wildlife harassment is illegal. Report violations to Fish and Wildlife Protection (State Troopers) or call (800) 478-3377.

This sign was produced by a grant to the Alaska Watchable Wildlife Trust Fund, c/o Alaska Conservation Foundation, 430 W. 7th Avenue #215, Anchorage AK 99501 (907) 276-1917.

POSTED BY ALASKA DEPT. FISH AND GAME





# LOON ALERT



**Help keep this lake safe  
for loons and other wildlife:**

1. Watch loons from a distance.
2. Pick up fishing line and other litter that may entangle loons.
3. Keep your dog on a leash.

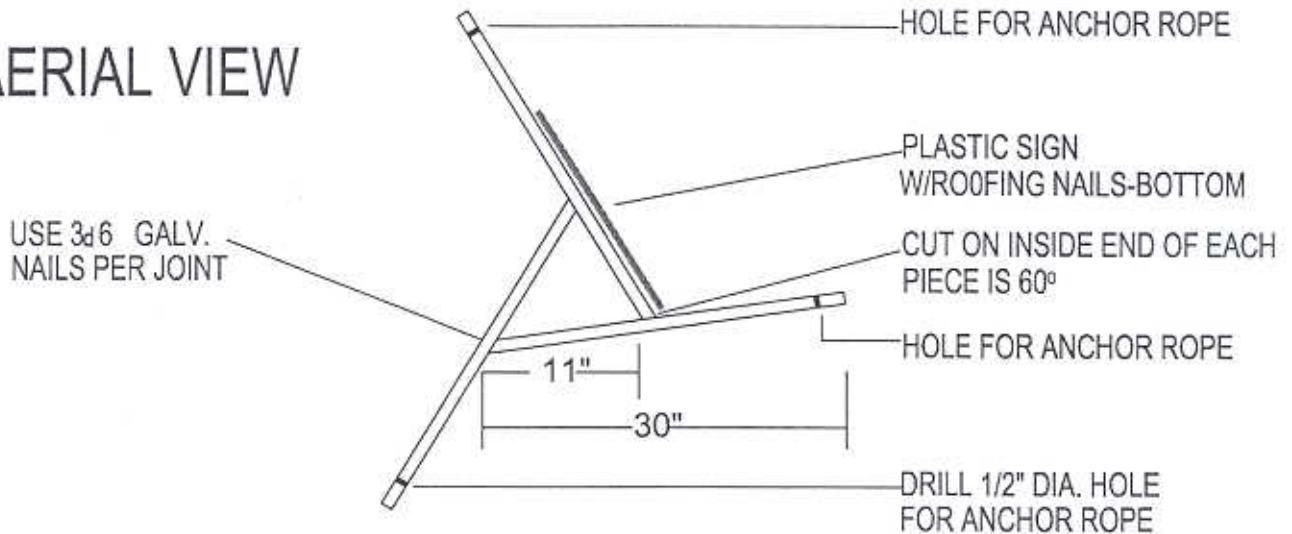
Breeding loons have declined or disappeared from other U.S. states due to human disturbance and habitat loss. Wildlife harassment is illegal. Please report violations to Fish and Wildlife Protection (State Troopers) or call (800) 478-3377. For loon information write: Alaska Department of Fish and Game, Division of Wildlife Conservation, 333 Raspberry Road, Anchorage, AK 99518.



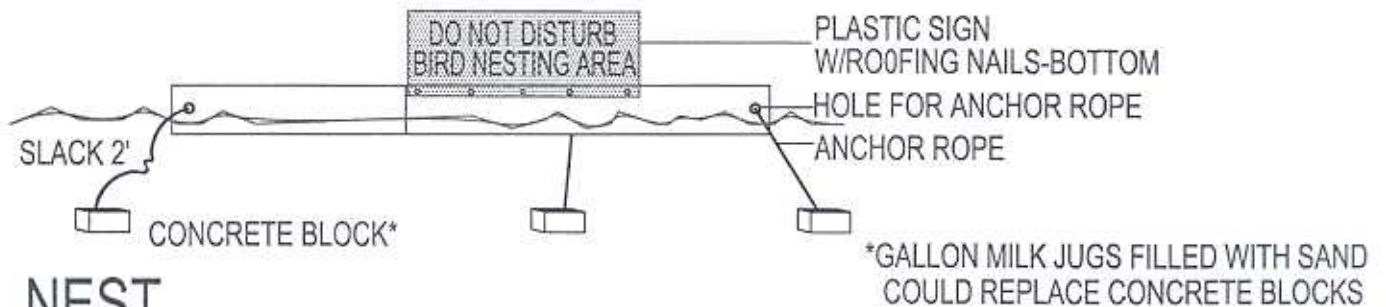
# SIGN FLOAT FOR LOON NESTS

(NOT LIKELY TO TURN OVER  
IN THE STRONGEST WIND)

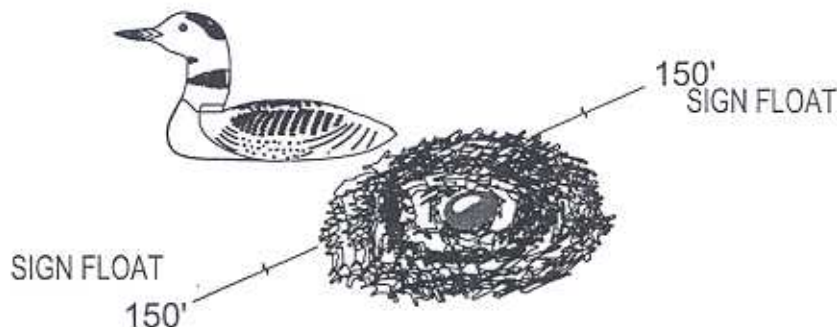
## AERIAL VIEW



## VIEW FROM WATER



## NEST



## MATERIALS LIST

3 - 1"x 4"x 30"  
WHITE PINE OR  
NO. WHITE CEDAR

9 - 6d. GALV BOX NAILS

5 - 1" ROOFING GALV. NAILS

1 - LOON SIGN

2 - 3 CONCRETE BLOCK \*  
FOR ANCHORS

ENOUGH 1/4" NYLON ROPE  
TO REACH BOTTOM OF LAKE  
FOR ANCHOR

DESIGNED BY:  
HERB CALLEY, PO BOX 348 TUPELO POINT, BOWLAKE, NORTHWOOD, N.H. 03261

ENHANCED BY:  
MATANUSKA-SUSITNA BOROUGH SUPPORT SERVICE 1995

The platforms should be attached with two anchors a minimum of 150 feet from the nest (more, if needed to avoid disturbing the loons) and be clearly visible, yet not be a boating hazard. Signs should be removed after nesting is completed (usually by mid-July) each year to preserve their use. Signs should be stored over the winter in a dry area.

**Appendix C:  
MSB Voluntary Best Management Practices for Development Around  
Water Bodies**



## HOW CAN YOU HELP PROTECT WATER QUALITY?

### Voluntary Best Management Practices For Development around Waterbodies

Best Management Practice	Rationale
<p>Maintain the natural shoreline or riparian habitat.</p> <ul style="list-style-type: none"> <li>• Preserve a minimum 75 foot wide buffer of continuous, undisturbed native vegetation along at least 50% of the parcel's shoreline or stream bank.</li> <li>• Along remaining 50% of shoreline, limit vegetation removal to what is necessary to accommodate paths, docks, or other limited development.</li> </ul>	<p>Protects water quality by reducing nutrient loading in lakes and minimizing temperature changes to stream environments.</p> <p>Provides flood control and reduces erosion and sedimentation.</p> <p>Protects fish and wildlife habitat by providing cover, nest sites and spawning areas.</p>
<p>Minimize impervious surfaces on shoreline lots.</p> <ul style="list-style-type: none"> <li>• Limit to maximum of 25% of lot area.</li> <li>• Minimize as much as possible within 75 feet of the water's edge.</li> </ul>	<p>Impervious surfaces such as pavement, roof tops, and compacted soil allow runoff to enter waterbodies more readily.</p> <p>Runoff in residential or commercial areas may contain phosphorus and other nutrients that lead to oxygen deficits and algal blooms.</p>
<p>Avoid adding sand beaches or adding fill material to lakeshore, stream banks or wetland areas.</p>	<p>Sand or fill reduces water clarity, is harmful to aquatic life and may contain phosphorus that enriches waterbodies.</p>
<p>Adhere to the state of Alaska's 100 foot waterbody separation for septic systems and outhouses, and keep septic systems in good working order.</p>	<p>Bacterial contamination from poorly maintained or leaking septic systems or outhouses is a human health concern.</p> <p>Nutrients from poorly functioning septic systems or outhouses are waterbody pollutants.</p>
<p>Use landscaping practices that will reduce degradation of waterbodies, including:</p> <ul style="list-style-type: none"> <li>• Test soils to see if fertilizers are needed and use sparingly.</li> <li>• Design a smaller lawn to reduce fertilizer use.</li> <li>• Use native species that grow well without fertilizer.</li> <li>• Avoid fertilizer use completely within 50 feet of the water's edge.</li> </ul>	<p>Lawns are often over-fertilized, which leads to harmful levels of nutrients in the water.</p> <p>Lawns are not as effective as natural vegetation for pollution filtration.</p> <p>Lawns do not provide protective cover for fish and wildlife populations that are part of the waterbody system.</p>
<p>Maintain at least a 75 foot distance from the water's edge for:</p> <ul style="list-style-type: none"> <li>• Additional permanent or accessory buildings.</li> <li>• Driveways, roads and other impervious surfaces.</li> <li>• Livestock or dog quarters or yards.</li> <li>• Manure or compost piles.</li> <li>• Long-term vehicle or equipment storage.</li> </ul> <p>Exceptions may include boathouses, floatplane hangers, marinas, piers and docks that need to be closer than 75 feet to serve their purposes.</p>	<p>Protects human health and water quality by reducing contamination from animal waste, compost, fuels, sediment and other substances that pollute waterbodies.</p>

Mat-Su Borough Ordinance 05-023 established voluntary measures that property owners can use to protect the quality of our lakes, streams and wetlands. For more information, contact the Matanuska-Susitna Borough, Department of Planning and Land Use at 745-9851.