

# **Carpenter Lake**

## **LAKE MANAGEMENT PLAN**

**May, 2006**

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# 1 Introduction

## 1.1 Purpose

This lake management plan presents goals and objectives to balance the physical and social demands of those that live or recreate on Carpenter 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 residents 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.

Carpenter Lake is 176 surface acres in size, and therefore, falls within the guidelines for lakes more than 75 surface acres to 200 surfaces acres.

### 1.3 Process

Lake management plans are initiated by local residents 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. This ballot serves as

notice of the receipt of a valid petition and requests a vote 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 collect background information on the lake and encourage adjacent property owners and users to participate in the planning process. Borough staff, lake users, lake residents, 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 Restriction

Most of the lake property owners and residents in attendance at the meetings expressed a preference for enforceable restrictions on:

- Quiet hours - 10 p.m. to 8 a.m.
- Winter Motor Vehicle Ban
- Horse Power Limit – 10 hp (time share basis)
- Personal watercraft restriction
- No wake zone - 100 feet from shoreline

These restrictions will protect the quiet enjoyment of the properties and allow continued use of the lake by residents 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.

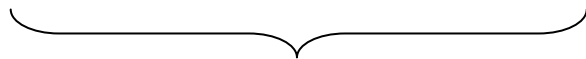
## **2. Inventory of Existing Conditions**

### 2.1 Location

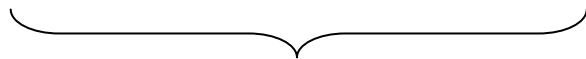
Carpenter Lake is located in the vicinity of Wasilla, Alaska, 17 miles south on the Knik-Goose Bay Road and approximately 9 miles from the Point Mackenzie Road.

Carpenter Lake is primarily accessed from Ayrshire Road and West Carpenter Lake Road, which serves the Carpenter Lake Subdivision. Public access is provided via Farmers Road, a pioneer road that is privately maintained.

## Figure 1 Community Council Map



## Figure 2 Location Map



## 2.2 Physical Characteristics of the Lake

Carpenter Lake is typical of glacial moraine formed lakes in the area. These lakes are situated in mixed gravels and sands with well defined shorelines in mixed spruce/birch forest habitats. The lake hydrology is dominated by subsurface flows of groundwater. Surface creek flows are a minor component in relation to the size of the lake. The surrounding topography is relatively flat, with most properties having about 2-4 feet elevation from the lake surface.



*Winter at Carpenter Lake as viewed to the east*

Overall, the lake is relatively shallow (5-25 feet), with the center of the lake only reaching a maximum depth of 30 feet (Figure3). There is no inlet or outlet serving Carpenter Lake, but wetlands are found near the southeastern corner. According to the borough's GIS map information, the lake is generally approximately 1000 feet wide, although the shoreline is not symmetrical, and approximately one mile in length. As indicated on the bathymetric map and confirmed by property owners and residents, the lake depth is rather shallow in several locations where the lake is narrower, which can make it difficult to accommodate a large number of high speed recreational activities simultaneously.

The lake substrate 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 is in its natural condition.

The lake ecology is fairly productive and supports rainbow trout, landlocked silver salmon, and arctic char stocked by the Alaska Department of Fish and Game. Carpenter Lake appears typical of glacial moraine lakes that are in successional stages from low nutrient (oligotrophic) from their formation as glaciers receded to high nutrient (eutrophic) systems with established marshes, aquatic plants and organic lake bottoms. Carpenter Lake can be placed toward the low nutrient end of the successional scale.

The Alaska Department of Fish and Game surveyed the lake in 1987 as part of the stocking program. Water quality problems have not been reported and casual observations by borough staff report no problems.



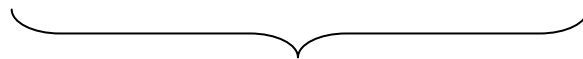
Table 1: Carpenter Lake Physical Characteristics

Surface Acres	176
Volume	1,426 acre feet
Mean Depth	8.1 feet
Maximum Depth	30 feet
Shoreline Length	3.8 miles

Source: Alaska Department of Fish and Game

### Figure 3 Lake Depth Profile and Access

Source: Alaska Department of Fish and Game

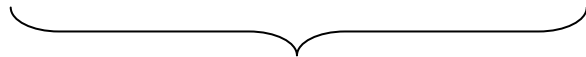


### 2.3 Land Use and Land Ownership

The property on the north shore of Carpenter Lake was originally homesteaded in 1951, and remains in its original configuration and ownership. Property on the south shore was subdivided by the state of Alaska in 1974, and subsequently selected by the borough. Nearly all lots with frontage on Carpenter Lake (Figure 4) are now privately owned with the exception of the borough parcel located at the southeastern corner (Carpenter Lake Subdivision, Lot 1). The plat notes and records state that the borough parcel contains approximately 19 acres and can not be sold. The western shore of the lake provides the only developed public access to the lake via a privately constructed and maintained dirt road, Farmers Road, located within the section line.

Approximately half of the lots immediately adjacent to the lake are developed for residential or recreational use.

## Figure 4 Land Use & Ownership



2.4 Social/Demographic – Usage

The present human use of Carpenter Lake may be characterized as being primarily quiet, recreational and residential. The original homesteaders came to the area in 1951 and pioneered trails or primitive roads to the lake properties. Other residents have recently bought property from borough land disbursements. Recorded covenants, issued on the property by the borough prior to sale to private owners, limit development to residential/recreational only. In order to effectively manage lake usage and protect water quality, future residential plans need to be identified. It is possible that the large, private parcel of the Carpenter homestead may be later subdivided into lots, but at the time of this plan, no subdivision plans have been identified.

Public access to the lake is limited and can be characterized as a pioneer road. Poor road conditions, such as mud, can require 4-wheel drive. The recorded access route goes north along a section line, via a privately constructed and maintained road (Farmers Road), then east through two parcels of land which were once borough owned, but have since been conveyed into private ownership. The undeveloped boat launch permits individuals and visitors with small boats and canoes to fish or recreate. Occasionally, camping occurs at the access area, but usually nearby residents inform the campers that it is a borough owned right-of-way and no camping is permitted. In spite of their efforts, the continuous resulting trash, human waste, trespass onto adjacent private property and vandalism is of much concern.

Those in attendance at the meetings prefer to keep the existing access at its current location. It is not anticipated that the road will be improved to borough standards in the near future, and as a result, road maintenance will remain in the hands of the property owners who use the road to access their private property.

A future “walk-in only” access could possibly be provided at the southeastern shoreline. The borough parcel would allow for such use. Only a minimal amount of land, not the entire 18+ acres of this parcel, would need developed for such a trail. At the time of the drafting of this plan, a request has been submitted to the borough from Matanuska Electric Association for a ten-foot wide utility easement, on the west lot line of that parcel. If a utility line were constructed within the easement, it could potentially provide a de-facto public access point to the lake. While limited public access through this parcel was considered reasonable, residents expressed the desire that this area should be kept primitive and unspoiled to protect nesting loons, migratory birds, and local fauna and flora. Continued stocking by ADF&G will likely draw visitors for fishing.

Lake residents and property owners enjoy the quiet, natural aspects of the lake and are interested in protecting the water quality. Float planes occasionally use the lake.

## 2.5 Existing Plans and Lake Monitoring Programs

### State

The State plan affecting the Carpenter 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. Carpenter Lake is within the Knik Management Unit, which recommends the following land uses:

- Small Farms
- Settlement
- Recreation
- Fish and Wildlife
- Forestry

ADFG lists Carpenter Lake for continued stocking of 17,600 rainbow trout fingerling, 15,000 landlocked silver salmon fingerling, and 1,625 arctic char through 2008.

Carpenter Lake is within the boundaries of the Matanuska-Susitna Borough Coastal District (District), as defined within the Matanuska-Susitna Borough Coastal Management Plan. The coastal management plan seeks to direct the course of local, state or federal development within the District in a manner that protects the important land and water resources of the District. The adopted policies of the plan are used to evaluate development proposals vis-à-vis resource values in an effort to ensure that the proposals are consistent with the plan's goals and objectives. Local development includes actions that trigger a borough subdivision, planning or zoning action. For examples, a variance application to build a habitable structure or garage closer than 75 feet from the ordinary high water mark of Carpenter Lake would be reviewed to determine whether or not it is consistent with the Coastal Management Plan. Construction within waterbodies is also reviewed for consistency with the plan. Uncovered floating or pile supported docks which do not extend more than 40 feet beyond the ordinary high water line and do not exceed 400 square feet in size may obtain a general concurrence. Metal drums, however, may not be used as flotation devices.

### Borough

Borough plans that address Carpenter Lake in some manner include the Borough-wide Comprehensive Plan, adopted in 1971, the 1996 Big Lake 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 Carpenter Lake. Rather, the 1971 plan makes a series of general recommendations for the Big Lake area, which do not reflect the current social, economic or development realities.

The 1997 Big Lake Comprehensive Plan makes no specific recommendation to Carpenter Lake.

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 Carpenter 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 a road network that will meet the stated goal and objective for the year 2015, and listed amongst those projects is to **Upgrade Big Lake Road/South Big Lake Road from Parks Highway to Burma Road Realignment**. The plan also talks about further development of the port, and identifies Point MacKenzie Road to Burma Road to South Big Lake road as the mid term access from the port to the Parks Highway. The LRTP is currently being updated. More recently, a study by Tryck, Nyman and Hayes recommends that route as the preferred road corridor between the port and Parks Highway, with an alternate route to the west as the preferred rail corridor.

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. Residents recently began participating in the Lake Monitoring Program.

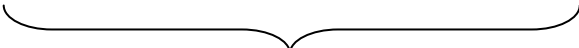
2.6 Existing Regulations

This section describes the principle regulations affecting use and development in the Carpenter 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). Since 1994, the Habitat and Restoration Division of the Alaska Department of Fish & Game issued a one-year general permit, renewed annually, and currently DNR issues such permits allowing vehicle movement on frozen water surfaces in south-central Alaska without a special permit (Appendix A). Finally, the general ADF&G fishing regulations apply to Carpenter Lake.

A navigable or public waterbody includes water suitable for commercial navigation, floating of logs, landing and take-off of aircraft, and public boating, trapping, hunting of waterfowl and aquatic animals, fishing, or other public recreational purposes. Carpenter 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 the surface waters of navigable and public waterways, typically through a "to" easement. Additionally, land adjacent to navigable or public waters may be subject to an "along" easement, which provides a 50-foot public use easement along the waterway adjacent to the ordinary high-water mark. These easements are created when the State or Borough obtains patents to their lands and stay with the property when the land is disposed of. State and Borough lands transferred prior to the adoption of AS 38.05.127 are not usually subject to the "to" and "along" easements. Also, lands patented by the federal government are not usually subject to the "to" and "along" easements.

Carpenter Lakes Subdivision was recorded in 1974; Carpenter Lakes Subdivision No.1 in 1998. There is no "to" and "along" access easement around the lake.

### Borough

Several Borough-wide ordinances address the development and use of land adjacent to Carpenter 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 Carpenter 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 Carpenter 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 Carpenter 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 a mobile home park, junkyard, refuse area or landfill, or dispense alcohol, must first obtain a conditional use permit.

#### Private

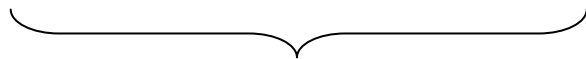
Private regulations which exist in the Carpenter Lake area would be in the form of subdivision covenants. Carpenter Lakes Subdivision No. 1 is located south of the lake, and the borough recorded subdivision covenants prior to selling the lots. The borough files do not contain a copy of any other recorded covenants for land adjacent to Carpenter Lake. However, this does not mean that they do not exist. For current information about covenants, the reader is referred to the State of Alaska Records Office.

Carpenter Lake is within the Big Lake Community Council (BLCC) area and is included in the Big Lake Comprehensive Plan prepared in 1996. In addition, borough code requires that the Carpenter Lake Draft Management Plan be submitted to BLCC for review and comment prior to consideration by the Planning Commission.

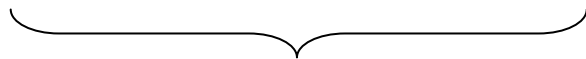
#### Point MacKenzie Access Road

The residents expressed interest in the potential route of the Point MacKenzie Road. Road improvements to the Point MacKenzie area may increase lake usage by the general public. At the time of drafting of this plan, the preferred route does not appear to directly impact Carpenter Lake, however, improvements to Big Lake Road and Burma Road, particularly in light of increased port activity and the potential for a Knik Arm ferry or bridge, could increase public usage of the lake. See Figure 6.

**Figure 5 General Setback Requirements and Lot Size Requirements**



## Figure 6 Potential Point MacKenzie Route



### 3. Issues and Concerns

The issues and concerns identified by residents include:

- ✓ Protection of the quiet residential/recreational character of the lake
- ✓ Protection of the water quality; drop of water levels
- ✓ Public lake users frequently block access to private property and homes
- ✓ Trespass onto private property, vandalism, campfires, unsanitary outhouses, and refuse dumping by visitors
- ✓ The potential for erosion and harm to waterfowl caused by wakes
- ✓ Permanent ice houses
- ✓ Motorized vehicles on the lake in the winter
- ✓ Lack of signage/warnings about shallow areas, waterfowl habitat
- ✓ Potential impacts from future development, such as subdivision of large parcels, easier access to the area (i.e. Knik-Arm Ferry)
- ✓ Limiting horsepower

A majority of those attending the meetings said that the quiet, residential character of the lake should be protected. The present state of the lake may be characterized as a residential development having a quiet quality. The historical use of Carpenter Lake has generally not included high powered motorized or personal watercraft, although some residents occasionally pull individuals behind their boat on a tube. Some property owners are concerned that if public access to the lake is improved, the lake will be used increasingly by watercraft with large motors and jetskis/wave runners. New subdivisions and homebuilding may also result in increased usage by residents, causing greater impacts of noise and wakes degrading the shoreline and impacting the quiet recreational residential quality of the lake.

Residents are also concerned about temporary winter fish houses, which occasionally have been abandoned and end up in the lake when the ice thaws, and ultimately wash up on someone's shore. One aspect of the plan could make a recommendation that ice houses be registered annually with the borough to facilitate identification of the structure should the ice house be abandoned. Another way to address the concern would be through signage at the public access point and education of property owners and other lake users.

#### 4.0 Goals

Goals describe the future expectations of residents, property owners, and users of a lake. The following goals reflect the aspirations of Carpenter Lake residents, 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

Carpenter Lake is a significant natural resource. It is the desire of property owners, residents, and users of Carpenter 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 the lake increases the desire to ensure responsible use and good water quality.

4.2 Preservation of Quiet Recreational and Residential Character

It is the desire of property owners, residents, and users of Carpenter Lake to preserve the quiet and peaceful residential character of the lake, while allowing some recreational uses for both residents and visitors.

4.3 Maintenance of Access

It is the desire of property owners and residents of Carpenter Lake to maintain the public access in its current state. Should the borough wish to develop any access through the borough owned parcel at the southeast shore of the lake, it is recommended that it be designated as walk-in only.

4.4 Educate Residents and Visitors

It is the desire of property owners and residents of Carpenter 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 the lake.

**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. While there was general agreement that personal watercraft be prohibited on Carpenter Lake to reduce wakes and manage noise generation, not all were in agreement with the 10 horsepower, time share, limitation as recommended in the assembly adopted guidelines. It is also recommend that a 100 foot no-wake zone be established.

Most individuals will not disturb wildlife or nesting fowl when or if they are informed of its location and the proper behavior when near it. 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. Residents and property owners agreed they support informational/educational signage at 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 voluntary best management practices for development around waterbodies (Appendix C).

In order to determine baseline water quality conditions on Carpenter Lake, volunteers are encouraged to continue participating in the Borough’s Lake Monitoring Program.

5.2 Preserve Quiet Recreational and Residential Character

Residents and property owners of the area initiated the lake management planning process to protect the quiet recreational and residential use of the lake. The majority of those attending the meetings support horsepower limitations for watercraft motors as a means of reducing noise and promoting safety. It is recommended that horsepower be limited on Carpenter Lake to 10 hp on a time share basis, consistent with the assembly adopted guidelines.

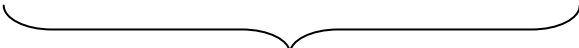
The use of personal watercraft, a.k.a. jetskis, is not a traditional use of Carpenter Lake. It is incompatible with the quiet recreational and residential uses of the lake. Furthermore, personal watercraft pose a safety hazard for swimmers and boaters. Most residents and property owners who have attended the public meetings support a ban of personal watercraft. It is recommended that personal watercraft be prohibited on Carpenter Lake. The horsepower limit and prohibition of jetskis is also supported by the unusual configuration of the lake.

The establishment of quiet hours, between 10 p.m. and 8 a.m., Sunday through Saturday, is recommended to maintain the existing quiet nature and residential quality of the lake during all seasons.

Residents attending meetings expressed concern about the permanent winter fish houses that detract from the natural aesthetics of the lake. Ice house education is recommended to address concerns that residents have about this use. Local residents also point out that Carpenter Lake is not conducive to accommodating airplane traffic, due to its unusual configuration and small size. It is recommended that commercial floatplane operations be discouraged at Carpenter Lake.

5.3 Maintain Current Access

Public access to the lake is limited can be characterized as a pioneer road. The recorded access route goes through two parcels of land which were once borough owned, but have since been conveyed into private ownership. Those in attendance at the meetings prefer to maintain the rustic access and not to provide improvements to the road. It is recommended that public access remain and be maintained in its current state. Additional “walk-in only” trail access could be provided at the borough parcel site.



5.4 Educate Residents and Visitors

It is recommended that the following methods be used to educate residents and visitors to Carpenter Lake about use restrictions and best management practices:

Post and maintain signs at the public access point that inform the public about code restrictions and non-code recommendations, including ice house recommendations.

Mail or deliver notices to inform property owners and residents 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 residents about the process for reporting violations to the Borough Code Compliance Division.

**6.0 Implementation**

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, special permits, winter motor vehicles, and ice house registration. When the Carpenter 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 Carpenter Lake. Personal watercraft includes vehicles such as jet skis, wave runners, and similar acrobatic or stunt equipment.

**Winter Motor Vehicle Ban**

To preserve the quiet residential and recreational uses of the lake during the winter, reduce noise, and enhance public safety, motor vehicles are prohibited from driving on the surface of Carpenter Lake when covered with ice, in accordance with MSB 17.59.060(F) *Winter motor vehicle control*.

**Vandalism, Refuse Dumping, Campfires, Outhouses**

MSB Title 8 specifically addresses Health and Welfare. In particular, Chapter 8.50 Trash and Junk, states, “Junk and trash that is improperly kept or disposed of, interferes with the rights of other people to enjoy their property, makes the borough less attractive to residents, visitors, and investors, and harms the quality of life in the borough. Due to the potential for harm to the public health, safety, and welfare, junk

and trash kept in a manner prohibited by this chapter are declared to be a public nuisance subject to regulation by the borough.” Also, *Chapter 8.25: Water Pollution Control* states, “A person may not pollute or add to the pollution of any lake, stream or other body of water.” “The purpose of this chapter is to prevent the pollution of the waters of the state within the borough.” Carpenter Lake residents expressed a desire to controlling illegal dumping of refuse and human waste near the lake. Illegal refuse and human waste dumping and camping on public property are prohibited at the lake.

### **Quiet Hours**

To maintain the existing quiet nature, residential quality and low impact use of the 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.

### **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. Although, some larger boats do occasionally use the lake without conflicts, the lake’s configuration is not conducive to high horsepower activities. Concurrent use of several large horsepower boats on the lake may also endanger public safety and create hazards to swimmers and sports fishers. A ten horsepower limitation is established for Carpenter 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)].

### **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.

### **Ice House Use Education**

To reduce the potential for trash (ice house debris) washing up on the shore from abandoned ice houses, the residents wish to use signage at the public access point and education of property owners and other lake users, informing them that only temporary ice houses (no longer than 24 hours) are permitted. Ice house registration will not be required.

### **Commercial Aircraft Operations**

Local residents point out that Carpenter Lake occasionally sees float plane 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 Carpenter Lake.



**Public Information**

Signs should be posted at the public access point of Carpenter Lake informing lake users of the regulations on the lake. Mail or deliver notices to inform property owners and residents about code restrictions, and enclose information about non-code recommendations. Inform residents 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*

**FRANK H. MURKOWSKI, GOVERNOR**

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

PHONE: (907) 745-7363

FAX: (907) 745-7369

### FISH HABITAT PERMIT FH-04-IV-0007-GP Revised

**ISSUED:** February 6, 2004

**EXPIRES:** December 31, 2004

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 any 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 effect motorized vehicles 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.

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

In accordance with AS 41.14.870(d), access to, use and crossings of, or egress from any specified waters, as described above, is hereby authorized provided the stipulations contained herein are adhered to:

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 water of any specified lake, river, or stream under this 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 on the frozen surface of below the ordinary high water line (vegetation line) of any specified lake, river, or stream. No vehicles leaking fuels, oils, hydraulic or cooling fluids shall be operated on the frozen surface or below the ordinary high water 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 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 6 AAC 80.010(b), the conditions of this general permit are consistent with the Alaska Coastal Management Program and the Matanuska-Susitna Borough.

The operation of wheeled or tracked equipment of frozen waters has been found consistent with the Alaska Coastal Management Program (ACMP) under the standard conditions contained in General Concurrence-5 (attached).

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,

Dick LeFebvre, Deputy Commissioner

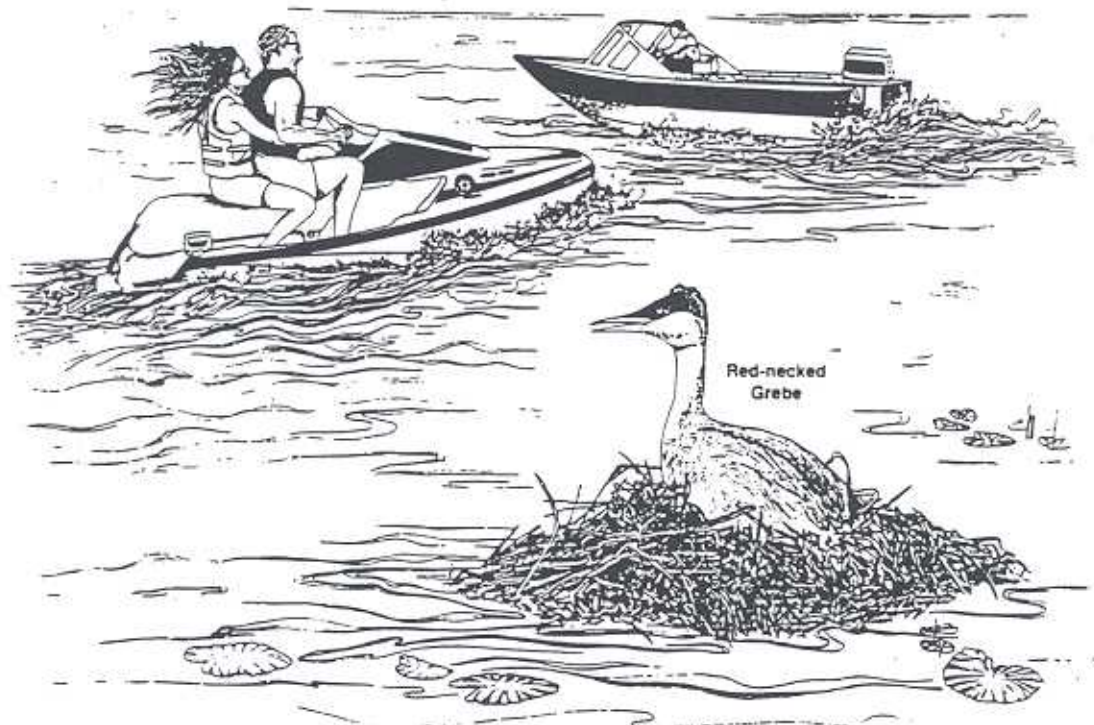
By: Jeffrey C. Davis, Habitat Biologist  
Office of Habitat Management and Permitting

Enclosure: General Concurrence GC-5

cc: M. Agnew, ABWE  
S. Duncan, EPA  
K. Hudson, MSB  
J. Jones, ATS  
S. Joy, USCOE  
K. Kruse, DNR/DML&W  
B. Lance, NMFS  
T. Oleck, ABWE  
A. Rappoport, USFWS  
T. Rumfelt, ADEC  
D. Rutz, ADF&G  
R. Thompson, DNR  
C. Yoder, ABWE  
C. Zuelow-Osborne, OPMP

**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.

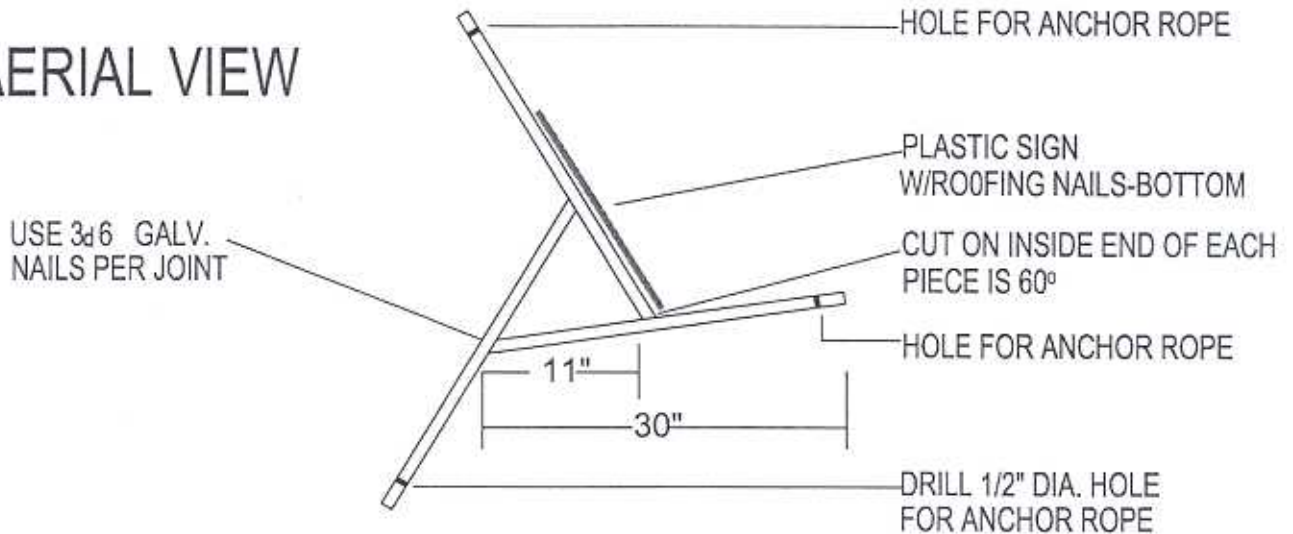




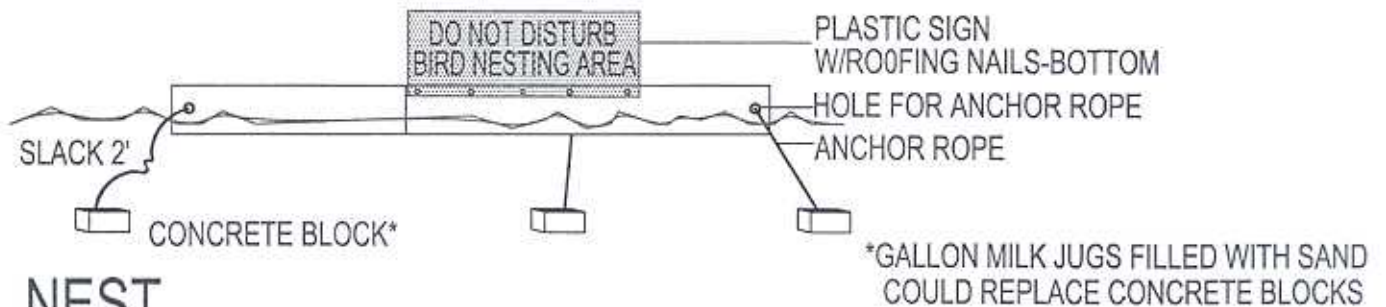
# SIGN FLOAT FOR LOON NESTS

(NOT LIKELY TO TURN OVER  
IN THE STRONGEST WIND)

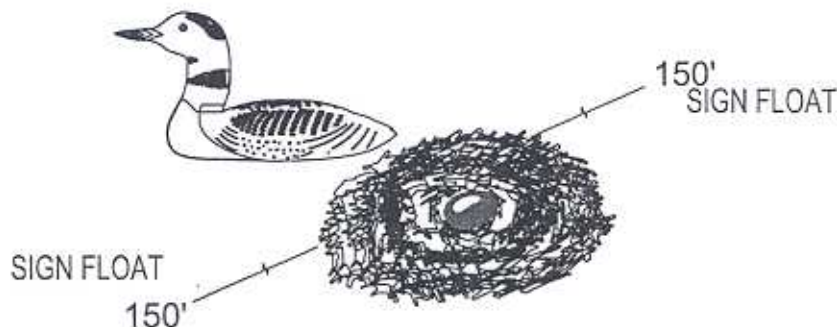
## AERIAL VIEW



## 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:  
Matanuska-Susitna Borough Voluntary Best Management Practices  
For Development Around Waterbodies**





## 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.