

The Property Owner's Resource Guide

A place in Lake County



A Reference Guide to the Lake County Land Use Ordinance

(See Official Ordinance for specific details on land use in Lake County)

Planning & Zoning Department,
Lake County Courthouse, Two Harbors, MN

Revised July 2007

* Developed and Funded by the Lake County
Local Water Management Plan

www.co.lake.mn.us

What You Need to Know as a Lake County Landowner

Information & Who to Contact (218 area code)

Driveway Access Permits

www.co.lake.mn.us

Permits are required before installing a culvert or constructing an access driveway off of township, county or state roads.

- Lake County Highway 834-8380
- MN DOT 723-4960 ext.3542
- Silver Creek TWSP 834-5255
- Beaver Bay TWSP 226-3669
- Crystal Bay TWSP 353-7563
- Fall Lake TWSP 365-4582
- Stony River TWSP 323-7743
- U.T.#1 & U.T.#2 834-8380

Land Use Permits

www.co.lake.mn.us

Before building a road or building on land in the county, contact the Lake County Planning & Zoning Department to obtain zoning requirements and information. If located within the city limits of Silver Bay, Two Harbors, or Beaver Bay, contact the City Clerk.

- Lake County Planning & Zoning Department 834-8327
- City of Silver Bay 226-4408
- City of Two Harbors 834-5631
- City of Beaver Bay 226-3251
- Silver Creek Township 834-5255

Sewage Treatment Systems

www.co.lake.mn.us

State law regulates sewage treatment system installation, including separation distance from wells, buildings, and property lines. Lake County has additional restrictions and/or recommendations.

- Lake County Planning & Zoning Department 834-8327

DNR Public Waters Permits/Stream and Lakeshore Projects

www.dnr.state.mn.us/permits/water/index.html

Permits are needed for docks, culverts, beach development, stream/lakeshore stabilization, and stream crossings when working in public waters and/or wetlands.

- Minnesota Department of Natural Resources 834-6623

Drinking Water Wells

www.healthstate.mn.us/divs/eh/wells

All wells must be registered with the State of Minnesota. Well driller should take care of registration.

- Water Quality—Lake County Health Department 834-8400
- Minnesota Department of Health, Well Management Unit 723-4653

Well Drillers

- Look under "Well Drilling and Services" in the Yellow Pages.

Solid Waste Management

www.co.lake.mn.us

Household garbage, demolition material, household hazardous waste, and recycling.

- Solid Waste Officer 834-8304

Surface Water Use

Public water work permits are required before diverting, withdrawing, impounding, or distributing any surface water.

- Minnesota Department of Natural Resources 834-6623

Water Information

Basic information on streams and lakes:

www.mnnesotawaters.org, wrc.umn.edu/outreach or www.lakesuperiorstreams.org

Water Quality Protection

Livestock manure, pesticides, sediment, and other pollutants should be prevented from reaching surface water or groundwater. Water quality testing services, pollutants, and spills.

- Lake County Health Department 834-8400
- Lake County SWCD 834-8370
- Minnesota Pollution Control Agency 723-4660

Wetlands

www.bwsr.state.mn.us/wetlands/index.html

www.dnr.state.mn.us/waters/forms.html

The Lake County Planning and Zoning Office regulates activities in wetlands and permits are required.

- Lake County Planning & Zoning Department 834-8327

Utilities

Coordinate utilities installation

- Cooperative Light and Power Association 834-2226 or 800-580-5881
- North Country Power (Fall Lake) 741-8137
- Local Phone Company
- Before digging call Gopher ONE 800-252-1166

or go to: www.gopherstateonecall.org

Fire Protection/Burning Permits

www.dnr.state.mn.us/forestry/fire/questions.html

- Minnesota Department of Natural Resources 834-6620

Property Assessments

Homestead classification, estimated values

- Lake County Assessor 834-8310

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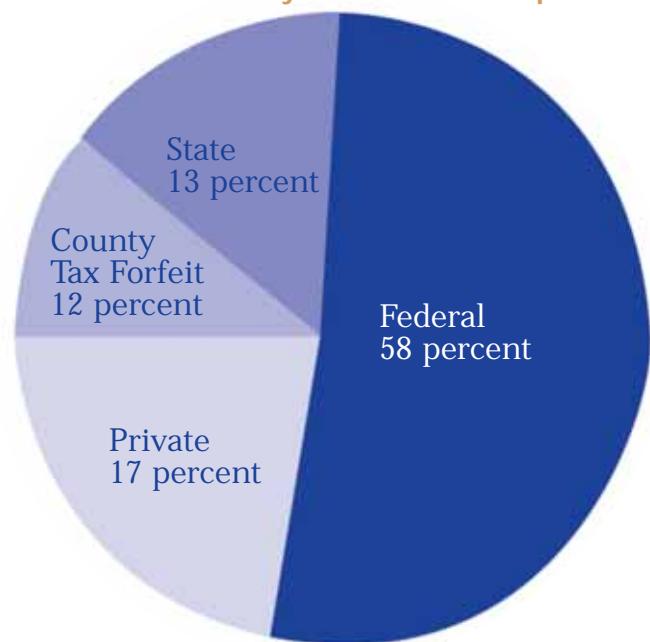
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Writing and production:
Kathleen Preece, Write it Right, Bemidji, MN

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Lake County Land Ownership



Lake County Land Use Ethic

in Lake County



Lake County is blessed with an abundance of natural resources. Within its boundary are beautiful lakes and streams, vast forest lands, and a wide variety of wildlife.

The county borders on Lake Superior, the largest freshwater lake in the world and includes part of the pristine Boundary Waters Canoe Area Wilderness.

The "Lake County Land Use Ordinance" and "Lake County Comprehensive Plan" were written to protect these resources and the lifestyle they provide. They are "tools" to sustain and enhance the resources of Lake County, so that its residents and visitors can enjoy the amenities they expect from this land.

Lake County honors its past, but looks to the future by accommodating a diversity of lifestyles and economic bases, sharing its beauty and accepting its responsibility for the stewardship of the area.

The Ordinance divides the county into land use districts, within which the county regulates the use of the land and placement of structures. It is expected that the land use regulations for these districts will foster appropriate use of the land with respect to economic and natural environmental values, and the rights and concerns of property owners.

We encourage you to read this Property Owners Resource Guide, and check out the 'Commonly Asked Questions' sections. If all of your questions are not answered (and we don't expect they will be), contact the Lake County

Why Lake County?

- Space, privacy, and quiet?
- Aesthetic beauty of the Arrowhead Region?
- Clean air and water?
- A healthy environment?
- Establish a location for a permanent home?
- Have space for garden, animals, and pets?
- Other reasons?

Planning & Zoning Department for more assistance and additional sources of information.

Knowing Your Responsibilities

in Lake County

Land Use Districts

Land use districts were established in Lake County in the mid 1970s through an elaborate public hearing process. These districts were established to guide the appropriate use of the land as it relates to the geology, soils, waters, vegetation and the people of Lake County.

Land use districts define how land may be used, such as: the minimum size of lots, height of structures, setbacks and other features. The purpose of land use planning is to provide for orderly development and to minimize conflicts between uses that are incompatible.

Although lots as small as one acre are allowed along the shores of many lakes and the edges of cities, the majority of land in Lake County is zoned for a minimum lot size of 10 acres and 300 feet in width.

The Land Use Ordinance permits certain land uses in each district, such as residential or commercial. Additional uses, called conditional uses, may be permitted if the use is approved by a public hearing process.

Note: Land use district maps are available in the Lake County Planning & Zoning Department located in the courthouse in Two Harbors.

Land Use Permits

Land use permits are issued for activities such as building a home or other structure, building an addition, constructing a road, and soil disturbing activities. Individual sewage treatment system permits are also required for installing a sewage treatment system.

Subdivision Concerns

A property within a platted subdivision may have rules that govern the use of the property that are additional to the county zoning laws. These are typically referred to as "covenants" and "restrictions," and have been developed and agreed upon by a property owner's association. Common examples of such covenants and/or restrictions are increased setbacks, architectural review, and mandatory contribution to road maintenance costs.

Note: Subdivision Ordinance Highlights

When subdividing land in Lake County, one should start by contacting the Planning and Zoning Department to determine what process and permits are required (see website www.co.lake.mn.us for information on splitting property). Lake County has an administrative process for smaller land divisions and platting is required for larger land divisions. It is imperative to work with the Planning and Zoning Department at the preliminary stages in the process to avoid costly errors and delays.

Each lot created for residential use must meet the minimum lot size and dimensions for the zone district it is located in; have an area for construction of a home-site that can be accessed and developed meeting all minimum setback requirements; avoid, minimize, or mitigate wetland impacts in accordance with county, state, and federal wetland rules and laws; and be capable of supporting two standard septic systems as defined by Minnesota 7080.

Are you considering buying/building?

A CHECK LIST

If you are considering buying land, use the Checklist in **TRACK I**. If you are buying land that has improvements on it (e.g. a house or other structures) use **TRACK II** also.

TRACK I Checklist for undeveloped land

Is your intended use permitted in the land use district?

(Hint: Check with the Planning & Zoning Department to find the district and requirements)

Yes No

Do you know where your property lines are?

(Hint: Check with the Planning & Zoning Department for a list of surveyors.)

Yes No

Is the site appropriate for your intended use?

(Hint: Check on such details as the availability of utilities, legal road access, proximity to the water table, and soil type. The basic soil type can be determined by a licensed sewage treatment system installer.)

Yes No

Are there activities present or allowed in the area that may be undesirable to you? (Consider gravel pits, dog kennels, dusty roads.)

Yes No

Have you acquired necessary permits before starting your project?* (Such as constructing an access road, building a structure, or any soil disturbing activities).

Yes No

Is your road maintained and plowed by a governmental agency?

Yes No

TRACK II Checklist for developed property

Do the improvements meet the minimum requirements of the zoning district?

Yes No

Does the property have a sewage treatment system Certificate of Compliance and evidence of regular cleaning?

(Hint: The seller should be able to provide a Certificate of Compliance and cleaning receipts.)

Yes No

Has the property had a Point of Sale sewage treatment system inspection and water quality test? (Hint: Although not required by Lake County, it is in the buyer's best interest to insist on these tests prior to closing.)

Yes No

Do you know the utilities and property tax costs for the prior two years?

Yes No

Have you met your potential neighbors?

Yes No

*Note: There can be serious consequences for wetland and other soil disturbances. (Hint: contact the Planning & Zoning Department before altering the property.)

Some commonly asked questions **Q & A**

Q If I have a land use question, what should I bring in to the Planning & Zoning Department to help get an answer?

A - Sketch of property
- Photos
- Legal description of property
- Sewage treatment system info
- Special features: topography, streams, drainageway, bluff, soils

Q Who handles land use disputes between neighbors?

A Generally, legal disputes are civil matters between individuals and need to be handled on this basis. However, the Planning & Zoning Department can provide assistance on setbacks and other zoning requirements. Property line disputes may require the use of a registered land surveyor.

Did you know?

- Land use is regulated throughout Lake County.
- A permit is required for the construction of a building, addition, or other structure, as well as any soil disturbing activities such as grading, filling or excavation.
- Each newly created lot must have adequate sites for two sewage treatment systems.
- A permit is required for sewage treatment system installations and repairs. All installation and repair work must be performed by a sewage treatment system contractor licensed in the State of Minnesota, and the permit must be obtained jointly by the contractor and property owner. Generally, the first step in lot development is to meet with a contractor and arrange for a site evaluation to determine where the sewage treatment system will be located. A land use permit will not be issued until after the site is determined to have acceptable soils.
- A Plan Review is required before new construction or extensive remodeling of any Food, Beverage, or Lodging establishment. Contact Lake County Public Health Department at 834-8356 for procedures and application.

Purchasing Property

in Lake County



Setbacks

- When buying property, it is important to be aware of required setback distances from roads, lakes, and streams to find a suitable place for the home, driveways and sewage treatment system. The buyer should contact the Planning & Zoning Department (834-8327) for assistance in this.

Wetlands

- Wetlands are a welcomed amenity to many properties and perform valuable functions. They are also protected from alteration or destruction. To help you determine the location of wetlands on your property and to minimize wetland impacts, contact the Planning & Zoning Department.

See Protecting Wetlands page 14

Utilities

- Find out if utilities are available at the site.

Boundaries

- Know your boundaries! Most of the property within the city limits of Two Harbors and Silver Bay has been surveyed. All property in Lake County has a legal description, but not all the property has been surveyed. Do not rely on the county plat book or USGS Quadrangle maps to show property lines. They are only a guide. The services of a private surveyor are highly recommended to find your property boundaries if you are buying a small lot or planning on building close to a property boundary. Be aware of laws

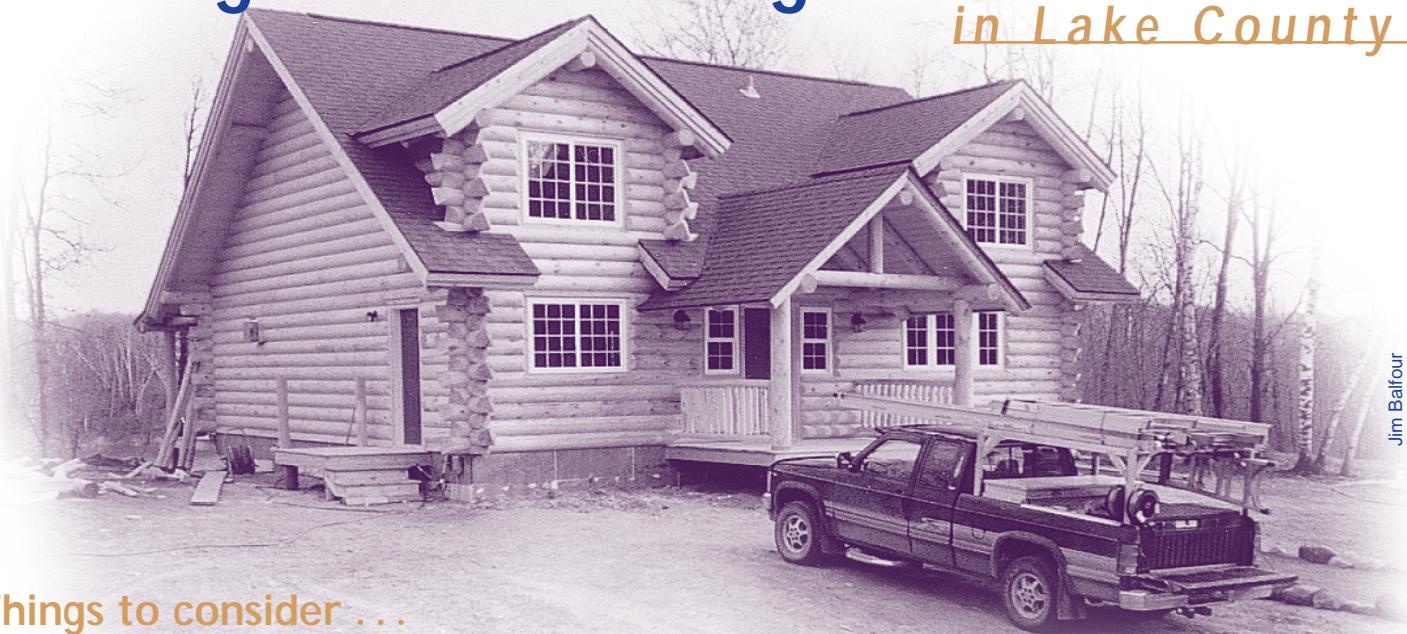
and rules if purchasing adjoining property. Call the Lake County Planning & Zoning Department for a list of local surveyors.

Hidden and 'Other' Costs

- Consider some of the "other" and sometimes "hidden" costs, such as snow removal services, the expense of getting electricity to your site, and distance to schools (bus service is not guaranteed). The soil type (or lack of soil) can affect the cost of building a home, as can the topography of the land. Expense may be incurred for grading, removing/adding soil, and leveling rock. Remember, if you are building on rock you probably won't have a basement.

Building or Remodeling a Home

in Lake County



Jim Balfour

Things to consider . . .

Choosing a location for your home

Whether you are landscaping your property, building a cabin, or designing a resort, each parcel of land has limitations for development. These may include the type of soil, steep slopes, wetlands, native vegetation, and other natural features.

The most important step in getting started is to draw a detailed map of your property. Using a topographic map will help. Note these important features:

- sewage treatment sites
- hills and sloping areas
- location of roads and driveways
- potential building sites
- drainage patterns
- existing vegetation
- wildlife habitat
- land features such as wetlands and rock outcrops
- water wells
- underground cables, pipelines, and overhead wires

Other than the building site, what about the rest of the land?

- Consider limiting the amount of lawn on your property. Native vegetation will lower maintenance while enhancing aesthetics and habitat value.
- Think about ways to landscape that can help maintain the quality and aesthetics of the waters on your land.
- Consider retaining and planting native trees and shrubs that provide food and shelter for wildlife, buffer harsh winter winds and provide shade

and screening.

- Plan roads and driveways to follow contours of the land.

Note: The Lake County Land Use

Ordinance requires that natural buffers be retained within fifty feet of the vegetation line along lakes and streams for water quality protection and wildlife habitat.

Some commonly asked questions



Q Do I need to "tell" anyone I am building a structure?

A Yes. You must obtain a land use permit from the Lake County Planning & Zoning Department.

Q How do I know if my land is "buildable?"

A This is determined by a number of factors, including how wet the site is, if your site is on rock, if the land can support a structure and sewage treatment system, and the minimum lot size. Structures and roads must also meet required setbacks.

Q Do I need a land use permit to change the size and shape of my house, including a deck?

A Yes.

Q How far away from a lake or river does my structure need to be?

A Required setback distances vary depending on the classification of the stream or lake. (See page 16).

Q Do I need a Land Use permit to re-side or re-roof my house?

A No, not unless you are changing the size or shape of the building.

Q Are there limits to the size of my home?

A The maximum height of structures is 35 ft. There are building limitations on the amount of the lot covered by impervious surfaces. Impervious surfaces include roofs, driveways, paved areas and gravel roads. The property must be able to support two on-site sewage treatment system sites and the use must be consistent with the uses permitted in your land use district.

Q Can a business be operated in my home?

A To establish a business in a residential zone, a conditional use permit may be required. Contact the Planning & Zoning Department for details.

Q Do I need to apply for homestead classification on the home I just purchased or built?

A If you are a Minnesota resident, own the property or are related to the owner, and occupy the property as your primary place of residence; you should apply for homestead classification. Minnesota state law provides for a reduction in the property tax for homestead property. Contact the County Assessor for an application.

Techniques for Better Lot Layout & Design in Lake County

Stormwater Management

Stormwater runoff can be a major source of pollutants of lakes, streams, and wetlands.

Naturally occurring landscapes, including forest, wetlands, and grass-land trap rainwater and snowmelt. This allows the water to slowly filter into the underlying soil.

When too much of the natural surface of a site is covered by non-absorbent (impervious) surfaces such as roads, parking lots, and buildings, runoff does not slowly infiltrate into the soil. This can lead to flooding, erosion, and the transport of pollutants into lakes and streams.

Listed below are some techniques and ideas on how to reduce impervious cover, conserve natural areas, and protect water quality during lot layout and design.

1. Preserve Natural Areas –

Natural areas generate less stormwater runoff, transport fewer pollutants, and they help to maximize infiltration of water.

- a. Protect natural stands of trees, shrubs and grasses.
- b. On disturbed areas, plant trees to re-establish forest cover. Trees help by intercepting rainfall, maximizing infiltration, and absorbing water.
- c. Leave a wide vegetative buffer along streams and lakes to filter stormwater runoff from disturbed upland areas.

2. Distribute Runoff – Use pervious (absorbent) areas such as grass swales to help direct and filter runoff from roads and buildings.

- a. Stockpile topsoil and re-distribute over site following construction. This will promote more vigorous plant growth and encourage more effective infiltration of runoff.
- b. Direct concentrated runoff into rain gardens or natural swales to naturally infiltrate surface water.
- c. Place roads and buildings away from steep slopes where excess stormwater runoff could lead to erosion problems.

3. Reduce Impervious Cover in Site Design – Reduce the total area of rooftops, driveways, and sidewalks on a site without compromising safety or violating local ordinances. Consider:

- a. Shorter driveways.
- b. Smaller parking areas.
- c. Slimmer sidewalks.
- d. Narrower streets.

Following these recommendations may result in greater cost savings initially, lower maintenance costs in the future, and will help protect water

quality by lessening the impacts of stormwater runoff.

4. Use Best Management Practices

Practices – Proven erosion and sediment control measures, called Best Management Practices (BMPs), should be an important component of your construction plans. BMPs include practices such as seeding and mulching disturbed areas, installing silt fence to trap eroded soil, and using rock check dams to slow water flow in ditches. Proper maintenance of these practices is critical to maintaining their performance.

TECHNICAL DEFINITION

Stormwater – surface water runoff from rain or snowmelt.

Installation of Erosion Control Blanket



Rebecca Wiinanen

Stormwater Management in Lake County

Lake County recognizes the importance of protecting surface and ground waters by managing storm water runoff. The Lake County Land Use Ordinance regulates storm water management by requiring an erosion and sediment control plan and storm water management plan for all construction projects that disturb more than one acre.

Projects that disturb land areas greater than one acre in size are also regulated by the federally mandated National Pollutant Discharge Elimination System (NPDES) and the Clean Water Act. In Minnesota, the Minnesota Pollution Control Agency (MPCA) administers this federal program as the Minnesota Stormwater Program for Construction Activity also known as the NPDES Stormwater Permit. Information is available on-line at: www.pca.mn.state.us/water/stormwater/index.html or by contacting the Lake County Planning & Zoning Office at 834-8327.

Online Resources:

Stormwater Pollution Prevention Plan Application
www.pca.state.mn.us/publications/wq-strm2-51.doc

Erosion and Sediment Control
www.pca.state.mn.us/water/pubs/swm-ch6.pdf

Stormwater Best Management Practices (BMPs)
www.pca.state.mn.us/water/pubs/sw-bmpmanual.html

Minnesota Stormwater Program for Construction Activity
www.pca.state.mn.us/water/stormwater/index.html

Lake County Land Use Ordinance – Article 8
www.co.lake.mn.us

Building a Driveway?

in Lake County

If you're planning on constructing a road or driveway or having one constructed for you, the following 12 recommendations will save you time and money in the long run. They will also lower your maintenance, improve safety, and protect water resources.

Recommendations:

1. Secure all necessary permits BEFORE you begin work.

Checklist:

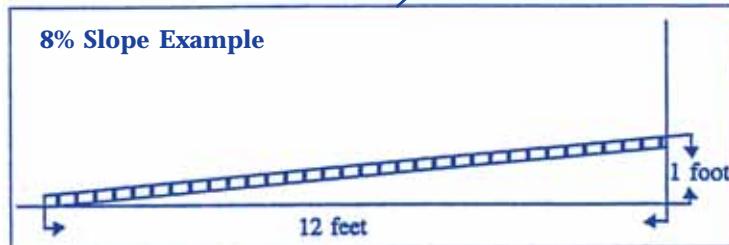
- ✓ Get a Land Use Permit from the Planning and Zoning Office and check on setback distances from streams and lakes.
- ✓ Get a Driveway Access Permit from the Lake County Highway Department if your driveway connects to a county road; township approval is needed on township roads.
- ✓ Get a Driveway Access Permit from the Minnesota Department of Transportation if your driveway connects to Highway 61.
- ✓ Check to see if you need a Wetland Permit from the Planning and Zoning Department.
- ✓ Contact the Minnesota DNR for a Water Permit application. (Permitted streams only.)
- ✓ Call GOPHER State One-Call at (800) 252-1166
- ✓ Complete a Physical Address Application (911 Address) from the Planning and Zoning Office.
- ✓ For con-

struction impacts of one acre or more, a stormwater permit must be secured from the MPCA.

$$\frac{\text{Rise}}{\text{Run}} \times 100 = \text{Percent Slope}$$

$$\frac{1}{12} \times 100 = 8 \text{ Percent Slope}$$

8% Slope Example



2. Locate roads and driveways away from steep slopes. If you must cross a hillside, follow the contour of the slope to keep the road as level as possible. Avoid constructing roads directly downhill towards a structure to minimize flooding potential.
3. Plan driveway finished grades of 8 percent or less for safety and ease of access. Driveways steeper than 8 percent will be more expensive to construct, maintain and will be more prone to erosion. They may also not be accessible year-round.

4. Locate roads the proper setback distance away from lakes, ponds, and streams (see Planning & Zoning Office). If crossing a stream, check with the DNR to see if you need a DNR Waters Permit before you begin work. If you must cross a waterway, cross at a right angle.

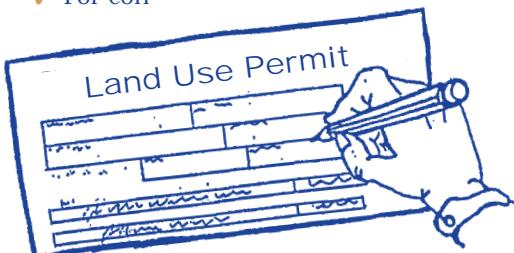
5. Avoid wetlands! Filling or draining wetlands is regulated by state and federal law and requires you to secure a permit if your project will disturb wetlands. If wetlands cannot be avoided, use geo-textile fabric under the gravel base to increase the strength of the underlying soils.

Note: Wetland mitigation is often

required if the primary use of a road includes activities other than forest management. Wetland replacement may also be required if a forestry road is later converted to another use after initially receiving a wetland exemption.

6. During road construction, remember to grub out stumps so they don't rot later and cause the road to collapse. In addition to a firm foundation, use good fill material, compact soils well, keep water away from the road, and design with room for winter snow banks.

7. Maintain all natural waterways by installing properly-sized culverts. Consult a registered Professional Engineer for guidance on properly sizing culverts and bridges for your site. Under-sizing either of these can result in an unsafe road surface or a complete washout. The County Highway Dept. is also familiar with installing culverts, tiling springs, crowning roads and minimizing problems from ice formation. Also, it is not a good idea to build roads to function as dams since the roadbed may become saturated and fail.





8. Crown roads and driveways to move water off the road surface and install water bars on sloping roadways. Water bars are small raised ridges that help to move water to the road ditches rather than allowing it to run the entire length of the slope.

9. Remember to build a wide enough road with an adequate turn around area near your home for emergency vehicle access. Excessively steep and narrow driveways will limit the ability of emergency vehicles to respond to your home and may also make the road unsafe during poor weather conditions.

10. Finished road shoulder slopes and back slopes should not be steeper than 2:1.

11. Seed and mulch all disturbed areas along new roads to minimize erosion. If you have moderate to steep slopes, remember to install rock check dams in ditches to slow down water runoff. You can also periodically route the water away from the road into "run-out" ditches to avoid severe gully erosion IF you have a safe, non-erodible outlet. Contact the Lake County Soil & Water Conservation District for erosion control advice.

12. Call "GOPHER State One-Call" at least 48 hours before you do any excavating. They will notify all underground utilities in the area and ensure that work can proceed safely.

Questions?

Zoning Regulations –
Planning and Zoning Office
834-8327

Erosion Control –
Soil & Water Conservation District
834-8370

Access Permit –
Highway Department
834-8380

Water Permit – Minnesota DNR
834-6623

Some commonly asked questions

Q & A

Q *Do I need a permit to improve a driveway on my property?*

A You will need a land use permit from Planning & Zoning if you are expanding an existing driveway, however, "topping off" or adding fill to an existing driveway is considered routine maintenance and a permit is not required.

Water Supply

in Lake County

Jim Balfour



The Water Well

While the water supplied by a private well is not regulated, the design, location, construction and abandonment of the well is regulated by the MN. Dept of Health. A private water well must be located and constructed to protect it from surface waters and from sources of contamination. (see map on page 12)

Water Quantity

The average person uses approximately 75 gallons of water per day. Water use does not occur evenly over the course of a day and water systems must often meet the needs of many uses during short periods of time. These times, called "peak use periods" usually last from 30 minutes to two hours and usually occur in the morning, near mealtimes, laundry periods, and before bedtime.

A water system must be able to meet the demand for both total gallons per day and peak use. The water system flow rate is the quantity of water delivered in gallons per minute. The flow rate should at least equal the peak use rate (the greatest water demand likely to occur at one time), and should be capable of maintaining this rate continuously for one to two hours.

Note that a bedrock aquifer, as found in many areas in Lake County, often yields low water flow and may not sustain high peak loads.

Water Quality

A safe source of water should meet U.S. Environmental Protection Agency (EPA) primary drinking water standards. Private well water should be tested regularly by a laboratory certified by the MN. Dept. of Health and results compared to EPA drinking water standards. Coliform bacteria and nitrate-nitrogen are used as indicators that the water is safe or unsafe.

Unfortunately, there are many areas along Lake Superior that have high levels of salt in their water. To safely use this water requires additional treatment.

A safe and adequate water supply is a valuable asset to your property and your family.

For additional information on the rules and regulations governing a private water well and for information on water treatment options, contact the Minnesota Department of Health at (218) 723-4653 or www.Health.state.mn.us

Check list



- Is your drinking water well located at least 100 feet from your sewage treatment system?
- Do water tests confirm there is no coliform bacteria or nitrate contamination?
- Is the well constructed by state licensed well driller?

Some commonly asked questions

Q Do I need to "tell" anyone I am constructing a well?

A Yes, Contact the Minnesota Department of Health, Well Management Unit at 723-4653 for a permit. Wells must be properly located (setbacks from sewage treatment systems and structures) and installed by licensed well drillers.

Q I want the water in my well tested. Who can do this for me?

A Contact Lake County Public Health Department at 834-8356 for information on drinking water and obtaining drinking water testing kits. For additional information on water quality, contact the Water Resources Center at the University of Minnesota: www.extension.umn.edu/water/index.html



Sewage Treatment Systems (STS)

in Lake County

Most town and city dwellers rely on a public waste water treatment system for sewage management. While public waste water treatment systems may be available to some rural dwellers, most rely on private individual sewage treatment systems (STS).

The design and installation of STS is regulated by State Rules and permitted through the Lake County Planning & Zoning Department. STS must be designed and installed by State licensed contractors. A list of contractors can be obtained at the Planning & Zoning Department.

Maintenance and Care

1. Good vegetative cover should be maintained over the soil treatment system, however, do not plant trees or shrubs because the roots may clog the distribution lines.
2. Do not drive over the soil treatment system and maintain snow cover in the winter to prevent the area from freezing.
3. Use water-conserving fixtures like low-flow showerheads and toilets.
4. Distribute wash loads evenly throughout the week to avoid overloading the system with large amounts of water.
5. Wash only full loads in the dishwasher and washing machine. Consider a front-loading washing machine because they use less water.
6. Use liquid detergents (powdered detergents add fine particles that may clog the soil treatment system).
7. Use the smallest amount possible of detergents, disinfectants, soaps, and cleaners to promote good bacterial activity in your septic tank and soil treatment system.



8. Do not use a garbage disposal or dispose of vegetables, meat, fat, oil, coffee grounds and other undigested food products in the sewage treatment system.
9. The septic tank MUST be cleaned (pumped) every 2-3 years to remove accumulated floating scum and sludge. If this material is allowed to enter the soil treatment system (mound or trench) it will cause expensive and often irreparable damage.
10. Route roof drains and drain tile away from the drain-field.
11. Do not dispose of solvents, paints, antifreeze, and chemicals down the drain.
12. DO NOT USE starters, feeders, cleaners and other additives. There is no quick fix or substitute for proper operation and regular maintenance.

For additional information on sewage treatment systems contact the University of Minnesota
<http://septic.umn.edu/homeowner/>

Do You Know . . .

Septic System Setback Requirements

Buildings

- 10 feet from septic tank
- 20 feet from treatment area

Shoreland

- 50, 75, 100, 150 feet from the vegetation line, depending upon DNR protected waters classification, from any component of the sewage treatment system. For Lake Superior - 50 feet.

Property Line

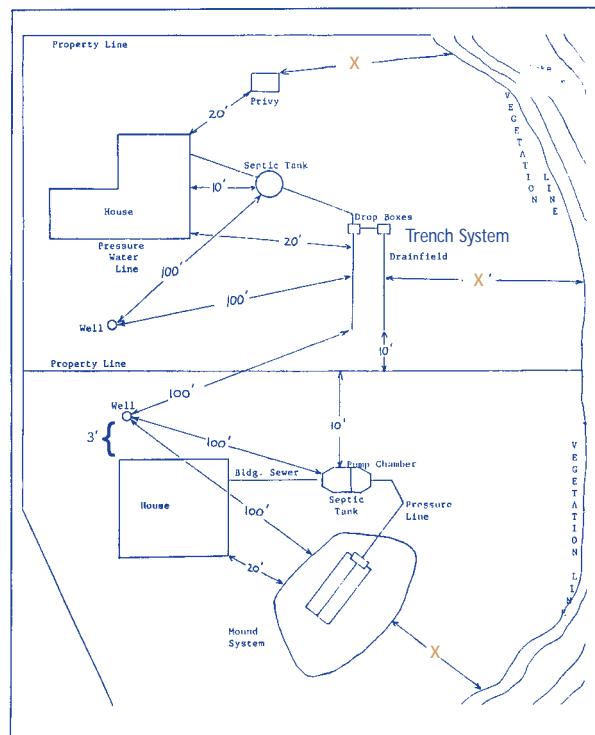
- 10 feet from any component of the septic system.

Road Right of Way

- 10 Feet from any component of the septic system.

Well

- 50 feet from the tank to any well.
- 100 feet from the treatment area if well has less than 50 feet of casing **and** does not encounter 10 feet of impervious material.
- 50 feet from the treatment area if well has more than 50 feet of casing **or** encounters 10 feet of impervious material.



X = setback from lake depends on classification of lake.

CLASSES OF PUBLIC WATERS	SETBACKS		CLASSES OF PUBLIC WATERS	SETBACKS	
	STRUCTURE	SEWAGE TREATMENT SYSTEM		STRUCTURE	SEWAGE TREATMENT SYSTEM
LAKES					
Natural Environment	150	150	Remote	200	150
Recreational Development	100	75	Forested and Transition	150	100
General Development	75	50	Tributary	100	75
Lake Superior	40/75*	50			

*40' from vegetation line; 75' from Ordinary High Water Level

Some commonly asked questions



Q *Can I install my own sewage treatment system? Do I even have to have a sewage treatment system?*

A You cannot install your own sewage treatment system. Only licensed installers may. You are required to have a sewage treatment system if any structure has plumbing. If your structure does not have plumbing, an outhouse is acceptable. (permit required)

Q *What permits are needed to install a sewage treatment system; who do I contact?*

A An application is jointly submitted by the licensed installer and the homeowner to the Planning & Zoning Department.

Q *What is a Certificate of Compliance?*

A A Certificate of Compliance shows that at the time of inspection, the sewage treatment system was installed properly. It is issued after a new system has been properly installed.

Q *Do I need a sewage treatment system certificate if I am just going to build a shed?*

A Yes, you must have a sewage treatment system Certificate of Compliance or complete a Certificate of Exemption to receive a land use permit.

Q *Who tells me what type of system I need?*

A The licensed STS designer can make this determination based on soil and site conditions, and specific needs of the owner.

Q *How come Lake County doesn't come out and tell me what system I need?*

A Licensed Designers have received extensive training on assessing soils and the design of STS. Lake County reviews the designs, issues a permit, and performs an inspection when the system is installed to verify the system meets state and local requirements. Lake County does not feel it is appropriate to tell licensed professionals how to conduct their work, as long as they meet all requirements.

Q *How is the type of system needed on my property determined?*

A The type of system is determined by soil texture, depth to water table, proximity to surface waters, and the number of people it is intended to serve. Because of high ground water table and heavy clay soils, 80 percent of Lake County's septic systems are mound systems.

Q *How do I know if the sewage treatment system now existing on my property works? Who is responsible for checking it?*

A Most systems in Lake County are mound systems. Signs of mound system failures include: unpleasant odors, wet areas around the edge of the mound; cattails or other wetland vegetation; and/or black areas around the edge of the mound. Trench systems in failure reveal ponding or leakage to a low spot. If buying property, even with a Certificate of Compliance, it is wise to hire a sewage treatment system inspector to conduct a compliance inspection. If a compliance inspection is performed and the system is found to be out of compliance, an upgrade may be required.

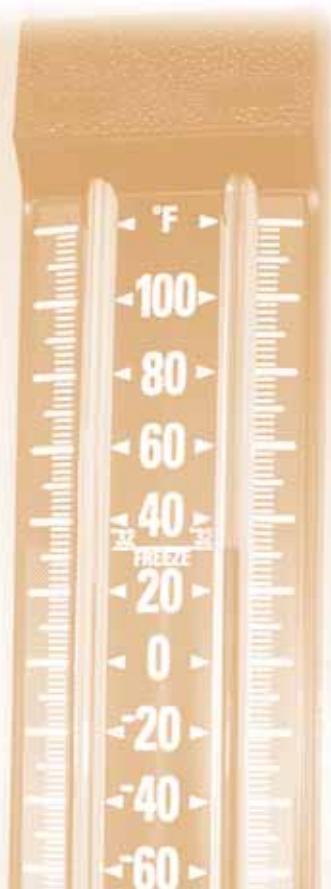
Q *I want to sell my home. The buyer wants a Point-of-Sale inspection of my sewage treatment system. Who do I contact to do this?*

A A state-licensed sewage treatment system Inspector or Designer I should be contacted. A list can be obtained from the Lake County Planning & Zoning Department, or downloaded from www.pca.state.mn.us/programs/lists/registration.html. The party requesting the Point of Sale inspection generally pays for it.

Protecting your sewage treatment system from freezing:

During winters with a lack of snow cover and cold temperatures, sewage treatment systems can freeze. This can be not only a tremendous inconvenience, but can result in expensive repairs. To help prevent your system from freezing, follow these general guidelines:

1. Add a layer of hay or straw mulch (8-12 inches) over the pipes, tank, and soil treatment area.
2. Use normal amounts of water, the warmer the better.
3. Fix any leaky plumbing and DO NOT add antifreeze to the system.
4. Keep all types of vehicles – including ATV's and snowmobiles – off of the septic system.
5. Make sure all risers, inspection pipes and manholes have covers. Adding insulation over pipes and over the septic tank is also a good idea.
6. Let the grass in your lawn grow higher in the late summer and early fall over the soil treatment area to act as a snow catch and provide better insulation.
7. If you'll be gone for an extended time, consider having someone visit and use water regularly.
8. Don't pump the tank in the fall and leave it empty over the winter.



Protecting Wetlands

in Lake County

Wetlands are very common in Lake County and most contractors are trained to recognize wetlands. Personnel from the Planning & Zoning Department or Soil and Water Conservation District can also assist in determining if a wetland exists on your property.

Wetlands are areas that are consistently wet enough to support water-loving plants. They are determined by the soil, vegetation, and water conditions. Some wetland types have open water; most do not. Wetland functions depend on the characteristics of the particular wetland. Wetlands can improve water quality, reduce stormwater runoff and erosion, and provide wildlife habitat.

Despite their benefits, wetlands have sometimes been considered a nuisance and have been drained or filled for development or agricultural production.

Wetland Management

When you submit a land use permit to Lake County, the application must address wetlands, waters, and vegetation management AND provide evidence that the activity you are proposing conforms to the standards of the Lake County Land Use Ordinance.

If you anticipate any wetland disturbance, contact the Lake County Planning & Zoning Department for specific regulations.

Road Building

Remember, if you and/or your contractor plan to construct an access or driveway, a permit from the Planning & Zoning Department or access permit from the appropriate road authority may also be required. The permitting process will also review any potential wetland impacts. (See Building a Driveway, page 9)

Following are a few suggestions that will save time, money, and avoid compliance problems.

- The absence of cattails, water lilies, or even standing water does not guarantee you won't be working in a wetland. In fact, some wetland types hold surface water only a few weeks a year.
- A common misconception is that seasonal rains increase and droughts reduce wetland size when, in fact, the true relationship is between the soil, the water table interacting with that soil, and those plants adapted to wet soil conditions.

• If the work site includes tag alder, black spruce, willow, tamarack, white cedar, or black ash, chances are the site is a wetland. If you are in doubt, contact the Planning & Zoning Department or the Soil and Water Conservation District (834-8370).

Lake County still has over 98 percent of its pre-settlement wetlands and supports their protection.

TECHNICAL DEFINITION

Wetlands are "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

For your information . . .

Wetlands perform important functions. These functions include:

- Fisheries Habitat
- Wildlife Habitat
- Shoreland Protection
- Groundwater Protection
- Stormwater Control
- Public Recreation
- Floral Diversity/Plant Habitats
- Groundwater Recharge
- Erosion Control

Some commonly asked questions & A

Q Are there different types of wetlands?

A Yes. Wetland classes described by the U.S. Fish and Wildlife Service are used to evaluate wetlands in Lake County. They are listed as “wetland types;” we classify eight different types. The differences between these types are the variations of water conditions, kinds of plants, and soil conditions.

Q When does a landowner need a permit to fill a wetland?

A Always. In some cases, the permitting process can take a long time if state and federal permits are needed. Plan ahead.

Q Is the county the only governmental entity regulating activities around wetlands?

A No, both federal and state agencies may require permits.

Q Do I need a permit to construct a driveway?

A Yes, from the Lake County Planning & Zoning Department. If access is obtained from a public road, an access permit from the township or county highway department is also required.

What can you do?

- Don't fill or alter wetlands even if they are only wet during the spring.
- Consider restoring previously drained or filled wetlands.
- Avoid contamination of the waters on your land by avoiding or minimizing the use of fertilizers and pesticides.
- Avoid, minimize, mitigate.

Check list



Plan ahead:

Begin planning well in advance of the anticipated construction starting date. If you suspect wetland disturbances will occur, contact the Lake County Planning & Zoning Department (834-8327) and the Army Corps of Engineers (834-6630) before you begin. In many cases, a site visit can be arranged and a determination made that will avoid unnecessary delays. Permitting can take up to 6 months in some instances. Wetland impacts are calculated in square feet and replacement may be required.

Road location and layout:

Use the natural topography as an aid in road layout and keep in mind a reasonable attempt to avoid and minimize the impact must be demonstrated. A “dogleg” design can often be used to avoid wet areas. A curved road also limits the line of site and promotes privacy.

Road size:

Choose a location for your road that will minimize the need for ditching, grading, or filling. This approach further minimizes impacts while accommodating snow removal.

Stream or waterway crossing:

If development requires crossing a stream or waterway, contact the Minnesota Department of Natural Resources-Division of Waters (834-6623) for the classification or status of the waterway. A permit is needed for building a bridge or placing a culvert, if not from the DNR then from Lake County.

Dams:

All dam construction is regulated. Contact the Lake County Planning & Zoning Department.

Shoreland on Lakes or Streams

in Lake County



The consequences of uncontrolled or unplanned shoreline development can be disastrous. Over-developed and poorly designed shoreland areas degrade the entire water body.

Increasing demand for shoreline building sites has led to skyrocketing land costs and intensive development. To protect the integrity of the shoreland and water body, Lake County has established minimum lot width of 200 feet and one acre in size.

"Shoreland" in Lake County is defined as all property within 1,000 feet of a lake, pond, or flowage, or 300 feet of a river or stream. It includes the North Shore Management Zone.

Things to Consider When Developing Shoreland

- leave a 50 foot wide buffer strip of natural vegetation along the water edge.
- limit amounts of impervious surfaces

- maintain natural vegetation and minimize lawn area
- retain trees and shrubs for natural screening
- do not disturb steep slopes
- retain aquatic and shoreline vegetation to protect shorelines from erosion
- minimize or eliminate the use of pesticides and fertilizers
- minimize the amount of clearing for a beach and dock

Some commonly asked questions

Q *What is the North Shore Management Zone?*

A The shoreland along Lake Superior has long been recognized for its distinctive characteristics and abundant natural resources. Because the North Shore will continue to experience significant development pressures in the future, the land along Lake Superior has been identified as a distinctive management unit.

Q *Where is the North Shore Management Zone Boundary?*

A The North Shore Management Plan area boundary is defined along the 40 acre subdivision lines of the rectangular coordinate system established in the U.S. Public Land Survey, nearest to the landward side of a line 1000 feet from the shoreline of Lake Superior or 300 feet landward from the center line of U.S. Highway 61, whichever is greater. However, the North Shore Management Zone boundary between Lakewood Township and the western corporate limits of Two Harbors is the center line of the U.S. Highway 61 Expressway.

Q *How are shorelines managed?*

A To provide better management and protection for shoreland development, a lakes classification plan was developed and adopted for the county's public waters. The public waters of Lake County are classified by the Department of Natural Resources as:

Lakes

- a) General Development
- b) Recreational Development
- c) Natural Environment

Rivers

- a) Remote
- b) Forested
- c) Transition
- d) Tributary

Q *What are the guidelines for shorelines?*

A Lake County has set standards for land activities on shoreland areas. For instance:

- No structures, except decks, piers, and docks, shall be placed at an elevation such that the lowest floor, including basement floor, is less than three feet above the ordinary high water level.
- Alteration of vegetation is regulated.

Selective removal is allowed to provide a view corridor to the water and also to accommodate placement of stairways, picnic areas, access paths, watercraft access, etc. However, that removal must leave sufficient cover to screen cars, dwellings, and other structures from view from the water.

- All roads in shoreland areas other than driveways serving a single residence, shall be constructed so that the right-of-way is no closer than 222 feet to the vegetation line. Other provisions relate to setbacks, excavations, water-oriented accessory buildings, and agricultural practices. Contact the Lake County Planning & Zoning Department for details and specifics.

For more information on appropriate shoreland management practices, visit: www.shorelandmanagement.org



Fire Safety



in Lake County

Helpful tips for wildfire protection

Each year hundreds of people build their dream homes tucked into the woods away from the city. Despite the beautiful setting, these homes may be vulnerable to wildfire. In fact, if your driveway and turnaround area do not meet minimum access requirements, the fire department or other emergency vehicles may not be able to enter your property. If your property is deemed unsafe to access, emergency personnel have the authority to not respond if the response puts their personnel in undue danger. Listed below are some things you can do to minimize your risk from wildfire and guarantee safe access. For more information on this topic contact:

www.dnr.state.mn.us/firewise or www.firewise.org

1. Many properties in Lake County are located a considerable distance from the nearest volunteer fire department.

2. Keep your firewood pile at least 30 feet from your home. Don't store wood under an attached deck.

3. An arrangement of vegetation (grass, leaves, branches, etc.) reaching from the ground to the crowns of trees around the house is called a "fuel ladder." It provides a means for fire to reach and climb to the top of a house. Eliminate this fuel by mowing tall grass, trimming shrubs and pruning the branches off the lower six to ten feet of trees, especially conifers, within 100 feet of the house.

4. Do not burn trash. It is against the law to burn trash in Lake County. Open fires can ignite wildfires and also create air pollution.

5. Keep a 30 foot zone around your home clear of trees and shrubs – a short green lawn will not carry fire.

6. To burn brush anytime except when there is 3 inches of snow on the ground, you must obtain a burning permit from a Fire Warden or the DNR. Always have a shovel on hand and a garden hose hooked up BEFORE you start the fire.

7. Driveways should be at least 12 feet wide with a 14 foot vertical clearance. Driveways longer than 150 feet should be 20 feet wide. Excessively steep and narrow driveways will limit the ability of emergency vehicles to respond to your home.

8. A turnaround near your home should be provided with at least a 30-foot radius. A "hammerhead – T" with a minimum of 60 feet across the top is a good alternative.

9. Have electric service lines to your home placed underground.

10. Thin and prune conifer trees in a 30 to 100 foot zone around your home.

11. Locate propane tanks to a cleared area at least 30 feet from your home.

12. Install fire extinguishes in the kitchen and in the garage.

13. Install a spark arrestor or heavy wire screen on wood burning fireplaces and chimneys.

14. Develop and discuss a fire escape plan for your family. Have a practice drill and include your pets.

15. Develop a FIRE PROTECTION ZONE LANDSCAPE PLAN (see circle diagram below).

16. Access additional information at: www.firewise.org

Firewise Landscaping Checklist

When designing and installing a firewise landscape, consider the following:

- Local area fire history.
- Site location and overall terrain.
- Prevailing winds and seasonal weather.
- Property contours and boundaries.
- Native vegetation.
- Plant characteristics and placement (duffage, water and salt retention ability, aromatic oils, fuel load per area, and size).
- Irrigation requirements

In Lake County

Zone 1:

This well-irrigated area encircles the house for at least 30 feet on all sides, providing space for fire suppression equipment in case of an emergency. Plantings should be limited to carefully spaced, low flammability species.

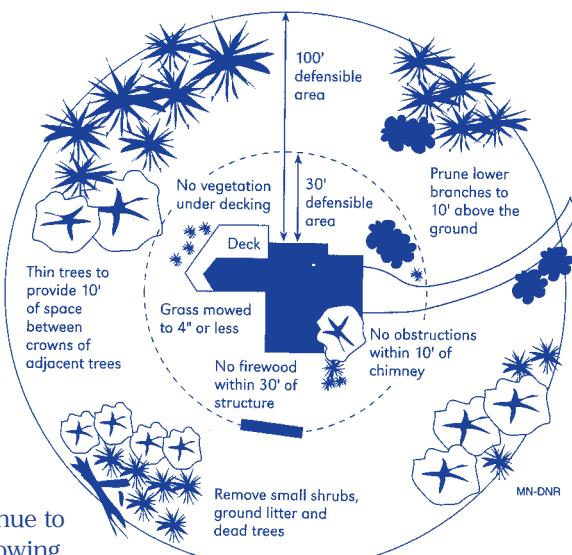
Zone 2:

In an area 100 feet from the house, plants should also be low growing, low flammability species that are well spaced and well groomed. If possible any irrigation system should extend into this zone.

Zone 3:

Beyond Zone 2. (100 feet from the house), continue to utilize low-growing plants and well spaced trees,

using these and other measures to keep the volume of flammable vegetation (fuel) to a minimum. Care should be taken to reduce or eliminate sites or pockets of fuel (e.g. refuse piles) that are up to several hundred feet from the house.



Lake County...Fun Facts to Know and Tell!

Was established in 1856 and is the fourth largest county in Minnesota.

Approximately 25 percent of Lake County is classified as "wetlands" and Lake County has at least 98 percent of our pre-settlement wetlands.

Has 841 lakes and 418 streams – many of them Designated Trout Streams.

The average annual precipitation is 28 inches in the Two Harbors area and about 26 inches in the Fall Lake area.

The first iron ore to be shipped from Minnesota left from Two Harbors in 1884.

The county seat was changed from Beaver Bay to Two Harbors in 1887.

The northern one-third of Lake County is part of the Boundary Waters Canoe Area Wilderness.

Is at the junction of two major watersheds – North of the Laurentian Divide the water flows to Hudson Bay and South of the Laurentian Divide, the water flows to the Atlantic Ocean through the Great Lakes.

The highest elevation in Lake County is north of Beaver Bay – 2,067 feet! For reference, the elevation of Lake Superior is 602 feet above sea level.

Is 83 percent publicly owned – 58 percent Federal, 13 percent State, and 12 percent County tax-forfeit.

Has approximately 55 miles of shoreline on Lake Superior – the largest freshwater lake in the world! Lake Superior Facts –

- a. Average temperature is 40 degrees F – only 8 degrees above freezing.
- b. The deepest spot in Lake Superior is 1333 feet – deep enough to submerge the Sears Building in Chicago with only the top two floors above the surface!
- c. Along the Lake County shoreline, the lake depths drop to 700 feet within three miles of shore!
- d. The lake contains three quadrillion gallons of water – 10% of the freshwater supply on earth AND enough to flood North and South America with one foot of water!
- e. Lake Superior is the cleanest and the clearest of the Great Lakes.
- f. It takes about 182 years for water in Lake Superior to be flushed out.
- g. The Ojibwe name for Lake Superior is "Gichii Gamii" which means "the greatest" or "the ultimate huge" water.

The average snowfall is 65 inches with 171 inches being recorded in the winter of 1995-96.

Is approximately 1,364,480 acres – about 2,132 square miles! Approximately 118,000 acres are covered by water and the remaining acres are primarily forested.

The average last frost in the spring is late May, with the first fall frost occurring in early September.

Temperatures vary from close to 100 degrees F in the summer to -50 degrees F in the winter. Due to the moderating influence of Lake Superior, temperatures are warmer by the lake in the winter and cooler by the lake during the summer.

Has approximately 11,058 year-round residents. This is down from 13,043 in 1980 but up from 10,415 in 1990.

Keeping Records

Legal Description of Your Property:

Parcel Code/Tax ID#: _____

Land Use District: _____

Your Property Address (911 system address):

Your Well Driller: _____

Date drilled: _____

Unique well number: _____

Type of well: _____

Depth of well: _____

Depth of casing: _____

Yield rate: _____

Well casing diameter: _____

Location of well: _____

Last date water tested:

Your Septic System Designer/Installer:

Date installed: _____

Type of system: _____

Location of system: _____

Last date system was cleaned:

Name of Property Owner When Installed:

Year of Certificate of Compliance: _____

Sewage Treatment System #: _____

County Commissioner and District:

Township or Unorganized Territory:

Electric Utility Emergency Phone Number:**Furnace Cleaned and Serviced (dates):**

Homeowners Insurance Policy # and Agent:

Lake/River Classification (setback distance):

Permit #'s issued for Buildings: _____

Police/Sheriff's Department: _____

Road Right-of-Way Distance: _____

School Phone Number: _____

Smoke Detectors Checked / Batteries Changed (dates):

Property Taxes Due May 15th and October 15th:

Other:

Emergency Phone Numbers (218 area code)

Fire Department – Emergency 911
Ely Fire Department (Emergency) 365-3000
Ely Fire Department (non-emergency) 365-3227
Two Harbors Fire Department (non-emergency) 834-8816
Silver Bay Fire Department (non-emergency) 226-0059
Finland Fire Department (non-emergency) 353-7503
Beaver Bay Fire Department (non-emergency) 226-3161

Police Department – Emergency 911
Ely Police Department 365-3222
Two Harbors Police (non-emergency) 834-5566
Silver Bay Police (non-emergency) 226-4486

Lake County Sheriff – Emergency 911
Toll-free for Fall Lake Township residents 800-450-8832
Toll free for Silver Bay, Little Marais & Finland 226-3609 (push 3)
Toll free for Isabella 323-7782
Lake County Sheriff (non-emergency) 834-8385

Rescue Squad – Emergency 911
Two Harbors Rescue Squad (non-emergency) 834-5264
Silver Bay Rescue Squad (non-emergency) 226-3888

Medical Services 911
Bay Area Health Center, Silver Bay 226-4431
Superior Health Medical Group, Two Harbors 834-7200
Ely Clinic 365-7900
Ely-Community Hospital 365-3271
Lake View Memorial Hospital 834-7300
MN Poison Control Center 800-222-1222
Ambulance 911

Social Services
Child Abuse/Child Protection 834-8400
Toll-free for Silver Bay, Little Marais & Finland 226-3609
Toll-free for Isabella 800-450-8832



Lake County

