



Water Access: Installing a Boat Ramp

What are the site considerations and requirements for public and private boat ramps?

Access to Minnesota waters is important because there are nearly 15,000 lakes and 90,000 miles of streams in the state. Almost 3,000 public access sites are available; about half of these are administered by the Department of Natural Resources (DNR) and the remainder by local and federal agencies.

The decision to install a private boat ramp should be made carefully because the site may be unsuitable and construction expenses and maintenance can be significant. Most private boat ramps serve resorts and campgrounds, and a smaller number are constructed for individual lots where no public access is available. Among the questions to consider for a boat ramp is the following: *Is the site suitable for a boat ramp?*



Public boat ramps are available on most public waters in Minnesota.

Site considerations

Before a boat ramp construction project begins, the potential impacts of destroying aquatic plants (i.e., fish and wildlife habitat) by construction and subsequent traffic should be considered. The bed of the lake or stream at the site should be capable of supporting the boat ramp without the use of pilings, dredging, or other special site preparations including minimal grading. A boat ramp should not be installed in bluff areas or where steep slopes would make the ramp hazardous



A private boat ramp may be needed if the lake has no public boat ramp.

or difficult to use. Steep slopes, wetlands, and shore impact zones are sensitive areas regulated by local units of government, which may preclude their use for a boat ramp site.

Areas adjacent to swimming beaches or areas used by water skiers should be avoided. Also, wave-prone areas may be subject to erosion or may be unusable during windy conditions. Areas where offshore depths are shallow may be difficult to use during low-water conditions. Finally, the ramp must not obstruct flowing water (rivers) or present a hazard to navigation.

If a private ramp is necessary, a highly desirable solution would be the construction of a single ramp by a group of riparian owners at a jointly agreed location for their common use.

Minnesota's requirements for boat ramps

In some cases, a DNR permit is needed to install a private or public ramp. An aquatic plant permit may be needed from DNR Fisheries if aquatic plants will be removed. However, a public waters permit is *not* required from DNR Waters for constructing a boat ramp that meets the criteria listed on the next page. Before initiating any project, contact your DNR Area Hydrologist; see contact information on the back of this sheet. Local units of government and other agencies may require their own permit or a separate permit, or they may not even allow construction of the ramp.

Water Access: Boat Ramps

Private ramps: site and construction criteria

- The site can support a ramp without pilings, dredging, or other special site preparations.
- The ramp will be constructed of gravel, natural rock, steel matting, or other durable inorganic material not exceeding 7 inches in thickness.
- The ramp will be no more than 12 feet wide along shore and 10 feet waterward of the shoreline or into a water depth of 4 feet, whichever is less.
- Excavation of no more than 5 cubic yards (to create a suitable slope and launching area) and placement of no more than 5 cubic yards of crushed rock, gravel, clean sand, or small stone are allowed to provide a stable base or maintain use of the ramp.
- The site is not a federally designated wild and scenic river.



(above) Using the motor to push a boat onto a trailer (known as power loading) damages boat ramp sites. The spinning propeller can erode sediment beyond the edge of the ramp surface, creating a hole just past the ramp, and the sediment can create a mound beyond the hole. Trailer wheels might suddenly drop into the hole, and boats might run aground against the mound. (Illustration from Design Handbook for Recreational Boating and Fishing Facilities, Second Edition, 2006, by States Organization for Boating Access)

Public ramps: site and construction criteria

- The requirements are the same as above, except the ramp can be up to 36 feet wide and 30 feet waterward of the shoreline or into a water depth of 4 feet, whichever is less.
- No more than 200 cubic yards of excavation is allowed, and placement of no more than 80 cubic yards of crushed rock, gravel, clean sand, or small stone is allowed to provide a stable base or maintain use of the ramp.

If the proposed ramp **cannot** meet **all** of the preceding criteria, a permit from the DNR is required. Contact your DNR Area Hydrologist for assistance.



Boat ramp construction requires erosion-control measures, such as a floating silt fence (pictured above) to limit the spread of sediment stirred up by construction. The removal or destruction of aquatic plants to install a boat ramp is an activity regulated by the DNR. If your plans affect aquatic vegetation, please contact a regional DNR Fisheries office because a permit may be required under the Aquatic Plant Management Program.

Construction specifications

Construction materials allowable for the installation of ramps include poured concrete, natural rock, precast concrete, gravel, and steel matting. All may require periodic maintenance from vehicle use and lake ice expanding and pushing against the ramp in winter.

The slope of the boat ramp should be steep enough to launch the boat without the vehicle entering the water. Generally, ramp slopes from 15 percent (1.5 feet of drop over a 10-foot length) to 12 percent ensure that boaters will have little trouble launching or pulling their boats from the water. If the slope is steeper than 15 percent, retrieving a boat and trailer is difficult. A slope of less than 12 percent will also cause a problem; the flatter the slope, the farther a vehicle must back into the water so that a boat can float free of its trailer.

DNR Contact Information



DNR Ecological and Water Resources
website and a listing of Area Hydrologists:
<http://mndnr.gov/waters>

DNR Ecological and Water Resources
500 Lafayette Road, Box 32
St. Paul, MN 55155
(651) 259-5100

Information is available on the Trails and Waterways web site: www.dnr.state.mn.us/contact/trails_waterways.html. Questions may also be directed to (651) 295-5666

DNR Information Center

This information is available in an alternative format on request.

Twin Cities: (651) 296-6157
Minnesota toll free: 1-888-646-6367
Telecommunication device for the deaf (TDD): (651) 296-5484
TDD toll free: 1-800-657-3929

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