

Accessible Loading Platform For Boaters



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United States
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**Accessible
Loading
Platforms For
Boaters**

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Introduction

Outdoor recreation opportunities abound on Federal, State, and private lands. More and more people with disabilities are venturing into the great outdoors. People with disabilities represent about 15 percent of the United States population. Most of us will experience at least a temporary disability at some point in our lives. Advances in technology and medical care and improvements in accessibility spurred by the Americans With Disabilities Act are helping people with limited mobility enjoy the outdoors.



As recreation sites become more accessible to people with disabilities, access to our lakes and waterways needs to improve. Recreation planners are encouraged to include accessible ramps and boarding platforms at sites offering boating access.

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Need for Safe Access

Safely getting into or out of a boat can pose problems for anyone. The boat may be moving and unstable. In cases where a floating dock is being used, both the boat and dock may be moving. Entering a boat that has been pulled to shore also poses problems, especially if the shoreline is steep or rugged.

For an individual with a mobility impairment, getting into or out of a boat poses additional hazards and risks. A boarding platform on the shore can help reduce the risks (Figure 1).



Figure 1-A boarding platform on the shore can reduce the risks of getting into and out of a boat.

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Project Assessment

Greg Marks, Forest Accessibility Coordinator for the Sierra National Forest, was injured in a helicopter accident in 1983. Although Greg now depends on a wheelchair for mobility, he remains an avid fisherman and boating

enthusiast (Figure 2). Greg asked the Missoula Technology and Development Center (MTDC) to evaluate and modify several ramps to assist resource and recreation planners in making our waterways more accessible.



Figure 2-Greg Marks, Sierra National Forest, shows how he gets into a boat from his wheelchair.

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Types of Ramps

MTDC evaluated, modified, and redesigned three ramps to meet accessibility standards. The types of ramps covered in this report include: the concrete ramp (Figure 3), the earth ramp with retaining wall, and the timber ramp (Figure 4).

The concrete ramp shown in this report is a split-level ramp to accommodate boats of different heights. All ramps may

be modified to single or split level, as long as accessibility codes are met (Appendix B).

[Construction plans](#) for these ramps are included in this document and are also available on the [Forest Service's internal network](#). Any modifications that affect accessibility standards should be documented along with the reason for the modifications and a risk and liability assessment.



Figure 3-Split-level concrete ramps allow easy access to boats of different heights.



Figure 4-A typical timber ramp.

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Costs

Costs associated with the construction of these ramps vary greatly depending on the location, site preparation, construction materials, and construction method (private contractor, agency employees, Job Corps, or volunteer groups).

Several of the sites MTDC visited were developed with the assistance of organizations such as the Lions Club and the Boy Scouts of America.



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Employee Safety

When agency employees, volunteers, or charitable organizations are helping to develop a site, you should conduct a site inspection and develop a job hazard analysis before construction. Use the job hazard analysis and safety meetings to inform workers of potential dangers. Post the job hazard analysis at the construction site and ensure that workers wear appropriate personal protective equipment.



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The Ramp and Boarding Platform

An accessible ramp and boarding platform allow boaters to get into the boat before it is placed in the water (Figure 5). The boat is pulled alongside the ramp so it is next to the boarding platform. With the boat in position, the passengers can board. A 1/4-inch-thick steel plate bolted to the end of the platform and

protruding up a minimum of 2 inches will prevent wheelchairs from rolling off (Figure 6). After passengers are on board, safely seated, and secured, the driver can proceed to the boat launch. When unloading, the process works in reverse.



Figure 5 - The boarding platform allows passengers to get into a boat while it is still on land, reducing the risks during loading and unloading.



Figure 6 - The 1/4 inch steel plate on the end of the platform allows boat trailers to get close to the platform while preventing wheelchairs from rolling off.

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Siting Ramps

Platforms are generally sited along the perimeter of a parking area near the water (Figure 7).

Ramps should be built on flat ground. This is especially important when building a split-level ramp. Otherwise, the boat will rise or fall as it is pulled alongside the ramp, preventing the split levels from working as intended. Straight access to the ramp will allow drivers to align the boat closer to the boarding platform. Drivers need a straight approach 40 feet before and 40 feet after the ramp for the vehicle and trailer to enter and exit. The area should be kept clear of brush and debris that can interfere with the line of sight.



Figure 7 - A timber boarding platform built alongside an existing restroom.



Figure 8 - A ramp recessed behind curbs makes loading and unloading difficult.

Rubber fenders or bumpers should be placed alongside the front of the ramp and the platform to prevent them from being damaged by boats or vehicles. Bumpers should not be very thick because the boat will not be able to get close enough to the platform for easy loading and unloading.

The platform should be even with the edge of the roadway or parking area. When modifying an existing site for an accessible ramp, be sure curbs do not interfere with access to the platform. For an individual with limited mobility, inches can make a big difference in gaining safe access from the platform to the boat (Figure 8).

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Signs

Stripe the pavement in front of the ramp, 40 feet before the ramp, and 40 feet after the ramp as a no-parking zone.

Ramps should be identified with the international symbol of accessibility (Figure 9). These boat ramp signs were not commercially available in early 2000. They must be custom made. A separate sign could explain how the ramp is to be used. Other signs could identify safety concerns like the ramp's abrupt edge,

or towing a boat with passengers to and from the water.

In areas of deep snow, poles can help snow plow operators identify the edges of the ramp. The snow poles could be removed each spring or left in place to help drivers line up with the ramp. Reflectors are recommended (Figure 10).

Rules for signs, ramps, handrails, and pathways are in Appendix B.



Figure 9 - The international wheelchair symbol identifies this loading platform as accessible



Figure 10 - Reflectors are recommended for loading platforms..

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Accessibility Standards

Information on accessibility standards is available from the following sources:

Access Board

1331 F Street NW, Suite 1000
Washington, DC 20004-1111
Phone: 202-272-5434
Fax: 202-272-5447
TDD: 202-272-5449

- Uniform Federal Accessibility Standard, Federal Standard-795. April 1988. Free.
- Americans With Disabilities Act Accessibility Guidelines, Federal Register-Vol. 56, No.144. July 1991. Free.

MIG Communications

1802 Fifth Street
Berkeley, CA 94710
Phone: 800-790-8444

- Universal Access to Outdoor Recreation. 1994. \$44.95
- A Pocket Guide to Universal Access to Outdoor Recreation. 1994. \$9.95

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About the Author

Bob Beckley received a bachelor's degree in political science from the University of Montana in 1982. He began his Forest Service career as a timber technician on the Nez Perce National Forest. Bob was a smokejumper when he came to the Missoula Technology and Development Center in 1990 to work as a videographer, photographer, and Project Leader.

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Drawings

[See List Below](#)

How to View Drawings

The Missoula Technology and Development Center's drawings have been converted to a format (.dwf) that can be displayed after special viewers (WHIP or Volo View Express 2) have been installed. Both viewers allow the bridge drawings to be viewed and printed using a menu that appears as you right-click on a drawing in Internet Explorer. The viewers also allow you to zoom into or pan across the drawing. You will not be able to edit the drawing.

The WHIP viewer (3.5 megabytes) is a plug-in for Internet Explorer. It is no longer supported, but still works fine with these .dwf files. Volo View Express 2 (25.3 megabytes) is an independent program and a plug-in for Internet Explorer. It will work with newer .dwf files that the WHIP viewer was not designed to open. If you are not using Internet Explorer, you will probably be given the choice to save a drawing to a file. If you do so, you will be able to open the file using Volo View Express 2. In summary, if you are using Internet Explorer, the WHIP viewer will be a quicker download that should meet your needs.

Forest Service employees using the newest IBM computers may need administrative rights to install either viewer. Your system administrator can help you if this is the case.

[Download WHIP \(3.5 megabytes\)](#)

[Download Volo View Express 2 \(25.3 megabytes\).](#)

If you would like us to send you a full-size copy of these drawings, please use the [e-mail link](#) below, specifying the number of the drawing you would like. Include your full mailing address and phone number. We normally send 11- by 17-inch prints, but can send full-sized drawings for fabrication if you request them.

The drawings listed below can be [downloaded as a single zipped file](#). You will need WinZip to uncompress the downloaded file

Appendix A-Plans for Concrete Ramp, Earth Ramp With Retaining Wall, and Timber Ramp

Concrete Ramp Drawing , Concrete Ramp Plans

Earth Ramp Drawing , Earth Ramp Plans

Timber Ramp Drawing , Timber Ramp Plans

Appendix B-Accessibility Rules, Definitions, and Handrail Diagrams

Rules, Handrails, and Definitions

Appendix C-Ramp Diagrams and Tables

Ramp Diagrams and Tables

To order single copies of MTDC drawings, contact:

wo_mtdc_pubs@fs.fed.us

These files are public property and are not for resale. Users of these files are presumed to be professional personnel adequately trained to interpret and adopt them according to local conditions and current and applicable State and local codes. The user assumes all liability for the suitability of their use.

Copies of these drawings have been distributed for review. Final approval and signature are pending.

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