

Repair and Rehabilitate Skagit District Docks and Marinas (50121)

The docks to be replaced on Ross and Diablo Lakes were originally installed over 30 years ago and are experiencing failure of major components including decking, gangways, flotation structures, cleats, bumpers and anchoring systems.

This project will replace these components at remote campgrounds and public marinas on Ross, Diablo, and Gorge Lakes. These locations are logistically challenging and costly to reach with large loads.

Summary of work at each site (see maps for locations):

- Gorge Lake
 - Gorge Campground Boat Ramp
 - Replace decking on the gangway and boat dock with yellow cedar lumber (untreated). There will be no work done on the boat ramp.
- Diablo Lake:
 - Stairs down to the NPS dock on the NPS Haul Road between Diablo and Ross Lake
 - Widen 36 inches
 - Buster Brown
 - Replace dock and gangway in kind*
 - Hidden Cove
 - Replace dock and gangway in kind*
 - Thunder Point
 - Replace dock and gangway in kind*
 - Colonial Creek Boat Launch
 - Replace dock and gangway in kind*
- Ross Lake
 - Hozomeen Public Boat Launch
 - Replace dock and gangway in kind*
 - Silver Creek
 - Replace dock and gangway in kind*
 - Little Beaver
 - Replace dock and gangway in kind*
 - Add cement and rocks to the base of the bulkhead (use local rocks)
 - Up to 1.5 cubic feet of cement
 - Desolation Trailhead (not on map, but is ~1 mile NW of Cat Island)
 - Add cement and rocks to the base of the bulkhead (use local rocks)
 - Up to 0.75 cubic feet of cement
 - Lightening Creek Boat-in
 - Re-anchor nearby erosion control logs by drilling into existing rock
 - Devil's Junction
 - Replace dock and gangway in kind*
 - Big Beaver
 - Replace dock and gangway in kind*
 - McMillan
 - Re-anchor nearby erosion control logs by drilling into existing rock
 - Green Point
 - Replace a metal bracket on the bulkhead

* Replace, in kind, 9 docks (see list above) - composed of 2-3 dock sections (8' feet wide by 20' feet long) including flotation (pontoons) - and attachment systems (using existing bulkheads), and 9 gangway ramps (30' feet long by 5' feet wide)

Dock Specifications

3.1 Each dock section shall measure 8' feet wide by 20' feet long. The gangway(s) shall measure 30' feet long by 5' feet wide and be ADA-accessible compliant with handrails. Adequate floatation shall be provided for coupled gangway and dock sections such that the dock sections float level while under dead load conditions. Dock floatation shall be polystyrene foam-filled virgin grade polyethylene or HDPE encasement. Floats shall be provided with protection from grounding on gravel/rock beach surface. All steel members shall be hot dip galvanized after fabrication or stainless steel. Dock decking shall be flow-through decking of either fiberglass-reinforced polypropylene or aluminum-reinforced polypropylene, or approved equal. All materials used shall be aquatic organism (fish) friendly i.e. no treated wood or harmful materials. There shall be a continuous handrail along both outside edges of the access bridge. The distance between the access bridge deck and the top of the handrail shall be 34" inches. All fasteners shall be Stainless Steel type 18-8 (Grade 304) or approved equal. Cleats shall be installed at 8' inch OC, securely attached and readily replaceable.

3.2 The freeboard of the float and gangway installation plus a live load of 30 lbs. per square foot shall be not less than 7½ inches.

3.3 The rub rail subsurface shall be attached as to prevent damage to boats. The rub rail shall be P style rub-rail with a sloped bottom half. Rub rail shall be flexible white PVC with UV inhibitors, minimum of 1.3 pounds per foot, attached with flat washers and deck screws. The face that rub rails attach to should be made out of plastic wood or rust-proof metal this will eliminate splinters from wood that could potentially injure swimmers and boaters.

3.4 The gangway and attachment to dock shall be designed to allow free movement on a vertical plane and accommodate changing water levels. The anchorage system between the gangway and the shore bulkhead and the connection system between the gangway and floating docks shall be of materials adequate to withstand all expected design loads. The Contractor shall provide all shore-end and wet-end gangway connection devices and dock-to-dock connectors. NPS bulkhead connections use approximately ¾" inch pipe, 6' feet long. NPS shall provide exact dimensions and template information at time of notice to proceed with fabrication.

3.4 The gangway shall be fabricated of aluminum. The gangway shall not exceed a deflection of 1/180. The decking for the access bridge shall be aluminum grating and shall have a slip-resistant aluminum *SlipNOT* surface, as manufactured and supplied by W.S. Molnar Company (www.slipnot.com or 800-SLIPNOT) or approved equal.

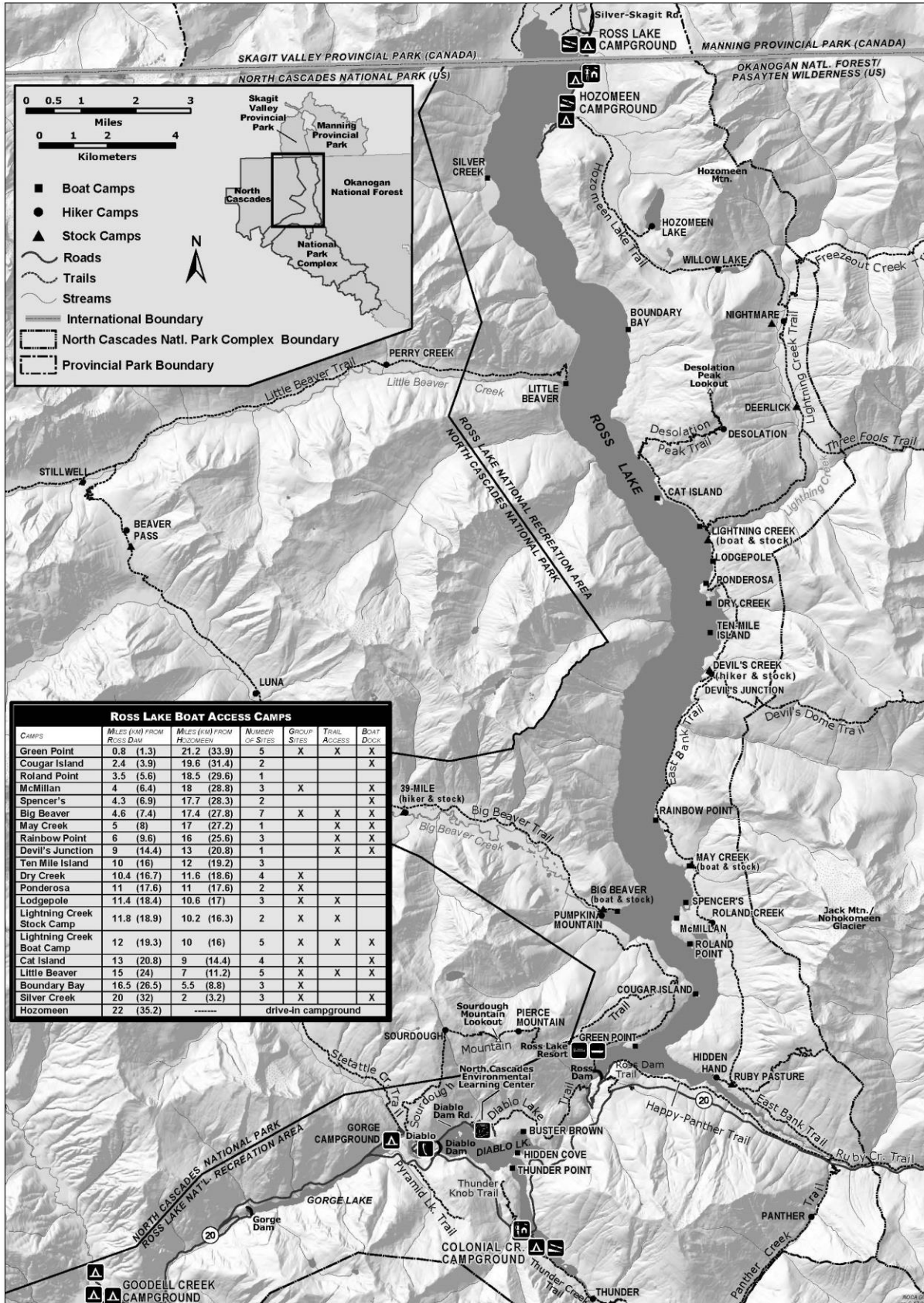
North Cascades

National Park Service
U.S. Department of the Interior

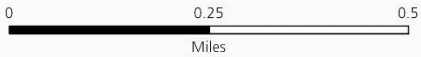
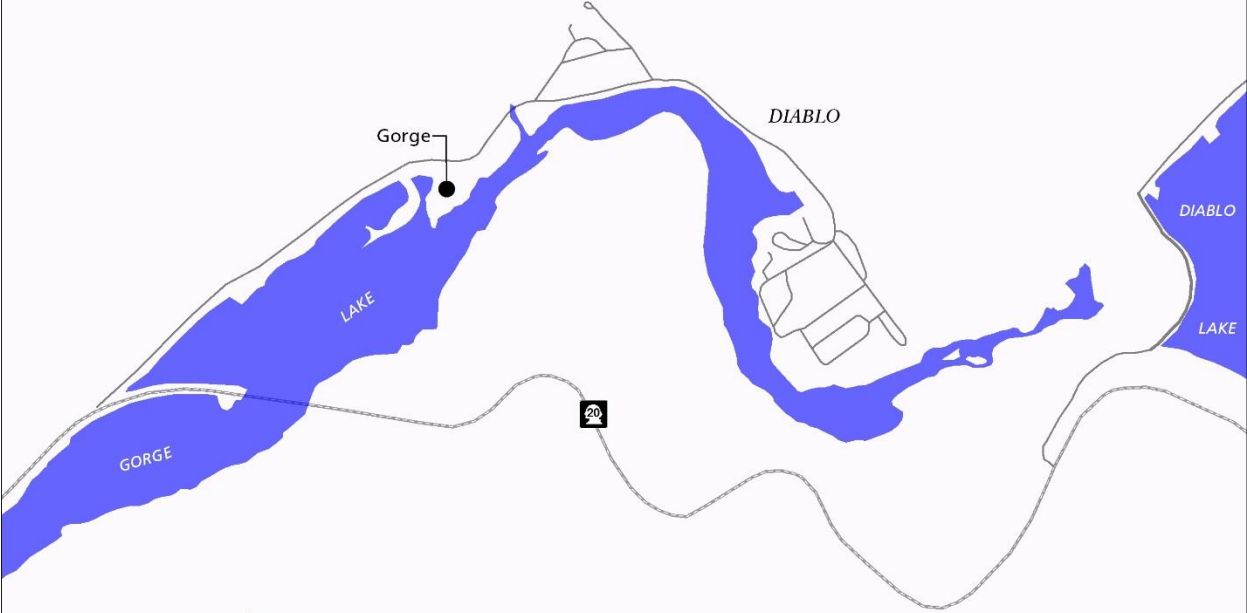
North Cascades National Park Service Complex
Ross Lake National Recreation Area



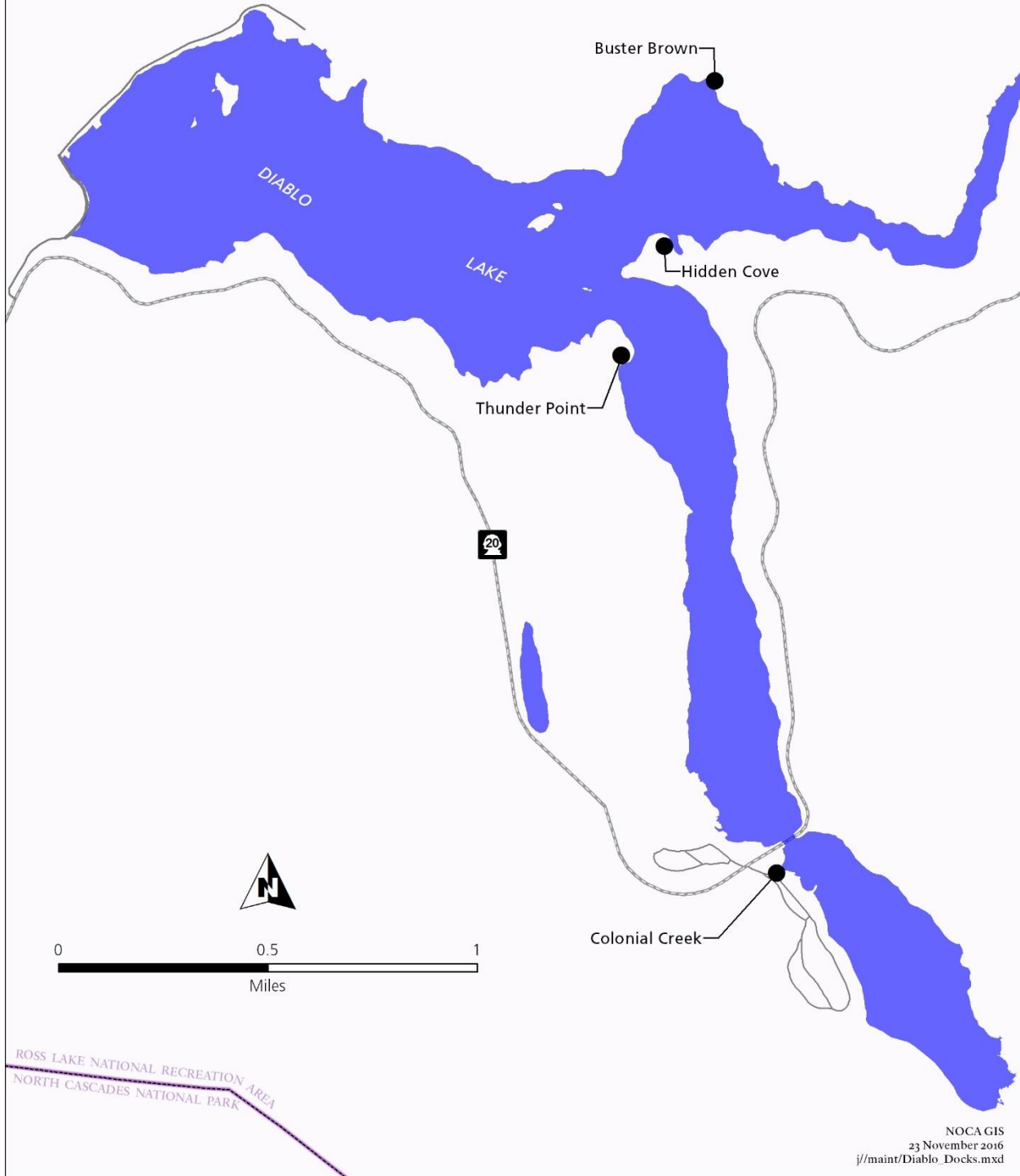
Ross Lake National Recreation Area



**Campground with dock
on Gorge Lake**



Campgrounds with docks on Diablo Lake



Campgrounds with docks on Ross Lake

