
DONNER LAKE BOAT LAUNCHING FACILITY FEASIBILITY REPORT



Donner Lake Boarding Float & Boat Ramp



Donner Lake Parking Area

Truckee Donner Recreation & Park District

\$1,702,400 Grant

SUMMARY

The Boating and Waterways Commission (Commission) is being asked to provide Advice and Comment on the Truckee Donner Recreation & Park District's (TDRPD) request for a \$1,702,400 planning and construction grant from the Harbors and Watercraft Revolving Fund (HWRF) to fund improvements at the existing boat launching facility.

The proposed grant would complete the design, acquire permits, and construct the Donner Lake BLF project improvements. Project improvements include extending the existing boat launching ramp with articulated block mats for low water use, adding slope protection, replacing the boarding floats, resurfacing and restriping the parking area, replacing the restroom and fish cleaning station, updating ADA-compliant access, and installing a new project credit sign at the Donner Lake Boat Launching Facility (BLF).

There are no expected problematic financial, engineering, permitting, stakeholder, or public access issues associated with this project.

The Department of Parks and Recreation, Division of Boating and Waterways (DBW) seeks Commission Advice and Comment on this proposed \$1,702,400 Harbors and Watercraft Revolving Fund planning and construction grant to the TDRPD for the Donner Lake BLF improvements described in this February 11, 2021 Feasibility Report.

GRANT APPLICANT AND PREVIOUS COMMISSION ACTION

Grant Applicant

The grant applicant for this project is the Truckee Donner Recreation & Park District (TDRPD), which operates and manages the Donner Lake Boat Launching Facility (BLF) through a 20-year lease with the California State Lands Commission (CSLC) which ends April 30, 2037. TDRPD will be responsible for operating and maintaining the BLF for 20 years after construction completion; and has applied for an extension of the lease agreement with CSLC.

Commission Site Visit

Due to the COVID-19 pandemic, a full commission tour was not possible, however, Boating and Waterways Commissioner Katie Hawkins conducted a tour of the site prior to the February 11, 2021 Commission meeting.

Previous Commission Action and DBW Grant Awards at Donner Lake

The Commission has approved the following grants to provide boating access at Donner Lake:

In FY 1967/68, the Commission approved a \$50,000 grant to fund construction of a single lane concrete ramp, boarding floats, parking, shore protection and a restroom.

In FY 1973/74, DBW approved a \$25,000 Ramp Repair grant to stabilize the site and repair damage to the parking lot caused by a shoreline slope failure.

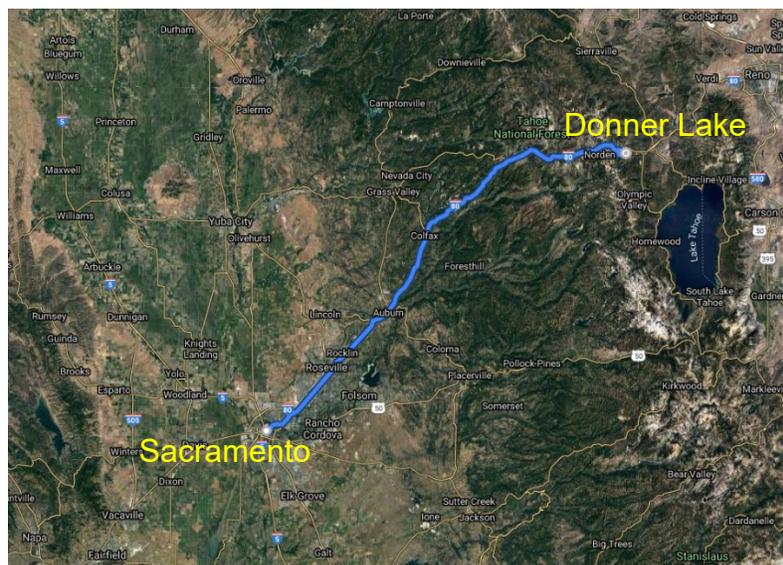
In FY 1991/92, the Commission approved a \$150,000 grant (phase I and II) to widen the launch ramp to two lanes, lengthen the existing boat ramp, and make the interior of the existing restroom facility accessible.

In FY 1995/96, the Commission approved a \$270,000 grant (phase III) to fund the construction of concrete walks and promenades, installation of an oil/water drainage intercept in the parking lot, partial landscaping and lighting, wheelchair-accessible boat boarding floats, wheelchair ramps between the boarding floats and restroom, and the partial construction of visitor overlooks and boardwalks.

In FY 1999/00, the Commission approved a \$308,000 grant (phase IV) to fund the construction of the parking lot, drainage for Clean Water Act compliance, repairs to the restroom roof, installation of a moveable kiosk and a fish cleaning station.

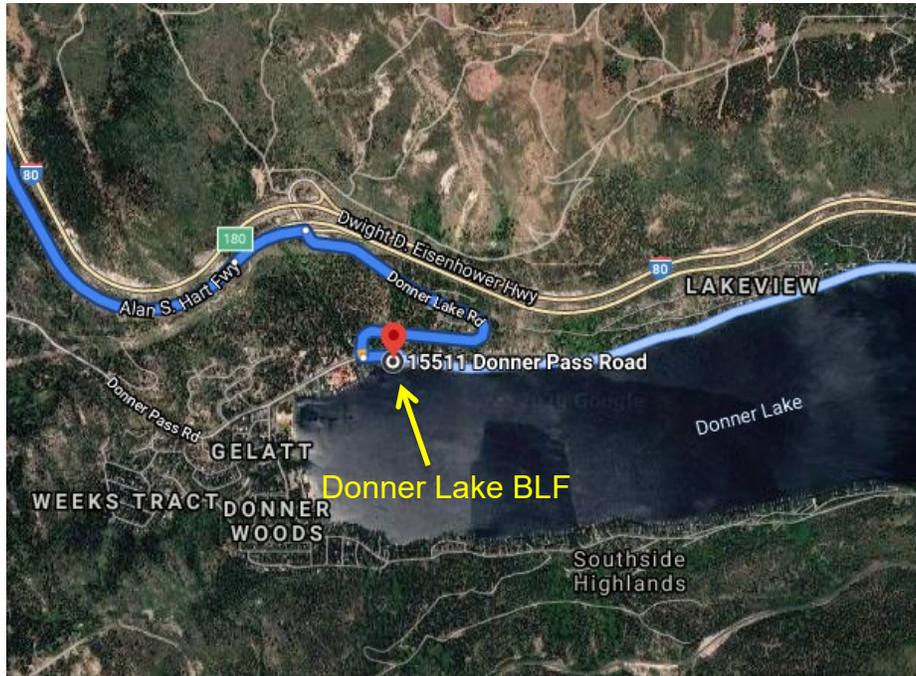
GENERAL LOCATION AND AREA

Donner Lake is located approximately 96 miles northeast of Sacramento in Nevada County.



Source: Google Maps

Access to the Donner Lake BLF is via I-80 E for 96 miles from Sacramento. Take Highway I-80 E toward Reno for 85 miles. Take exit 180 toward Donner Lake. Follow Donner Lake Road to Donner Pass Road for 1.2 miles. Turn left onto Donner Pass Road and continue for 0.1 mile. The Donner Lake BLF is on the right at 15511 Donner Pass Road, Truckee, CA 96161.



Source: Google Maps

Area

Donner Lake is a freshwater lake in Northeast California located in Nevada County on the eastern slope of the Sierra Nevada mountains. Nevada County is one of the most historic and scenic areas of California. It incorporates the City of Grass Valley, Nevada City, and the Town of Truckee. The County has a residential population of approximately 99,800. It is the site of the famous Donner Party tragedy and has a rich gold mining history.

Donner Lake is fed by snowmelt inflows and Nevada Energy and Truckee-Carson Irrigation System controls the water level. Water from the Lake is distributed throughout the Truckee River system. The lake is 238 feet at its deepest point, 2.7 miles long and 0.6 miles wide. It is a popular destination due to its easy access off Interstate 80, its location on the historic Lincoln Highway, and landmarked by the Donner Memorial State Park.

The Donner Memorial State Park preserves the site of the Donner Camp, where members of the ill-fated Donner Party were trapped by weather during the winter of 1846–1847. A major attraction at Donner Lake Memorial State Park is the Emigrant Trail Museum where stories of the Emigrant Trail and Donner Party are told through film, exhibits, displays, and park personnel.

Situated on the east end of the Donner Lake, the Donner Memorial State Park also offers 154 camp sites with miles of hiking trails in the park that attract visitors from all over the state.

Tourism is a mainstay of the local economy which has been increasing over the years in the Truckee area. The vast recreational opportunities of the lake draw visitors from all over the state to the area. The Donner Lake BLF is the only public boat launching facility that provides access to the lake. The Donner Lake BLF was originally constructed in 1969 and TDRPD took over

operation and maintenance of the facility in 1975 through a lease agreement with California State lands Commission.

There are two privately owned boat launches which are owned by local homeowners associations. They are not accessible to the public.

TDRPD owns and manages 37 public lake front piers along the north side of the lake which attract visitors to sit and enjoy the vistas. TDRPD also operates the TDRPD Aquatic Center on Donner Lake. It provides scholarships for the Junior Sailing and Kayaking for Campers program and purchases equipment with Aquatic Center grant funding. This equipment is stored in a shipping container off Shoreline Park on the north side of the lake.

Usage

Donner Lake is used by motorized boats, personal watercrafts, kayaks, and sailboats. Two-stroke engines built before 1999 are restricted from Donner Lake.

According to TDRPD, 84% of boaters at the lake are motorized and 16% are non-motorized. The Shoreline Park is dedicated for non-motorized sports and includes a sailing program.

According to the 2018 California Boating Facility Needs Assessment, people use the following boat type while recreating at Donner Lake:

Motorized		Non-Motorized	
75%	Powerboats	44%	Kayaks
10%	Inflatable Boats with Motor	39%	Stand up Paddleboards
10%	Bass Boats/ Jon Boats		

The lake is a popular fishing destination and offers some of the biggest lake trout in the state. Rainbow trout, brown trout, and Kokanee salmon are some of the popular trophy-size catches at the lake.

The Donner Lake BLF is open year around. The TDRPD recreation department staffs the BLF from Memorial Day to Labor Day, seven days a week. Summer activities at the lake include boating, fishing, water-skiing, windsurfing, personal watercraft, and kayaking. Winter fishing is very popular at the lake. When the roads are accessible during the winter months, boaters also access the lake for fishing. TDRPD incorporates a planned maintenance program which includes routine maintenance of the BLF such as painting, landscaping, and general repairs.

Existing Conditions

According to TDRPD, the Nevada Energy and Truckee-Carson Irrigation System allows the water levels at the lake to rise around Memorial Day even in drought years for the summer boating season and decrease after Labor Day. Low water levels normally last about seven months out of the year and boaters often find the boat ramp unusable for larger boats during most winter months due to the low water levels.

Launching during low water at the BLF has caused damage to vehicles with trailered vessels. Boaters have damaged their vehicles and trailers while driving over exposed sheet piles at the end of the boat launch ramp. Boaters also have difficulty loading and unloading trailered vessels during low water levels because trailer wheels can drop off the end of the boat launch ramp. Extending the boat launch ramp would allow boaters to launch during winter months without damaging their trailers or vehicles.

Per TDRP, the BLF does not experience issues with ice on the boat launch ramp, piles, or boarding floats as the lake freezes. The water levels at the piles are also deep enough to prevent icing issues.

TDRPD partners with the Town of Truckee Police Department, and nonprofit groups to address Aquatic Invasive Species at Donner Lake. Local nonprofit groups assist with fundraising and staffing for two local inspection stations. TDRPD staff are trained to watch for inspection tags and signs of invasive species on vessels. Private boat launching facilities on Donner Lake are also staffed with trained personnel.

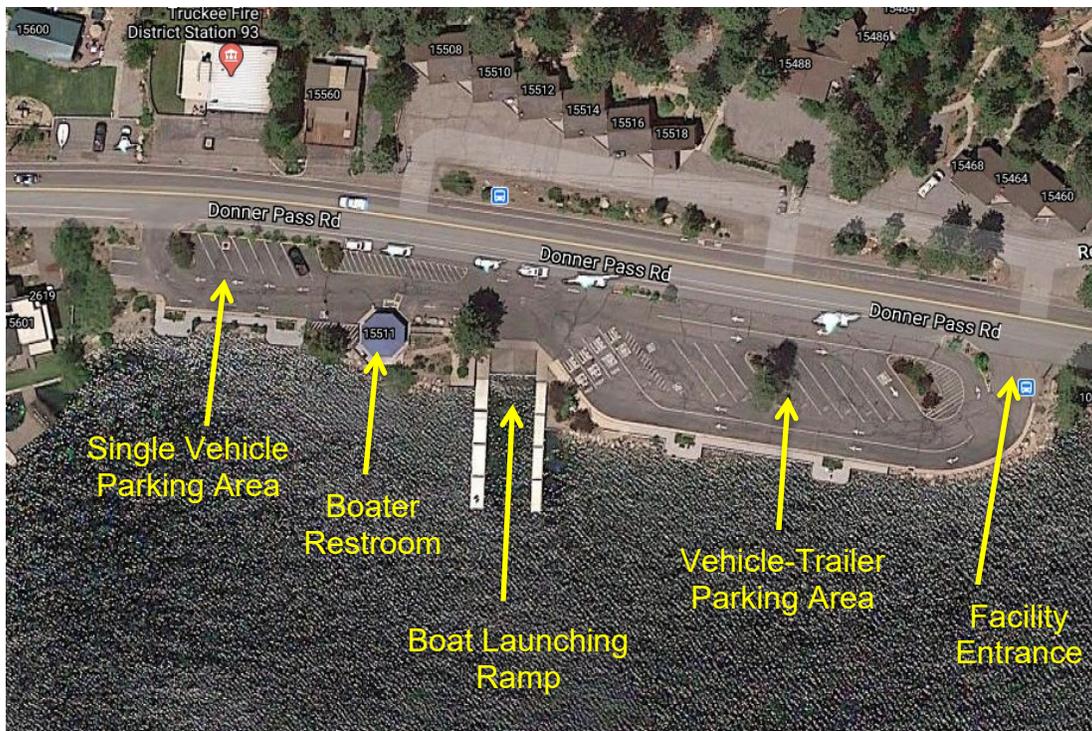
The existing small parking area includes 10 vehicle-trailer parking stalls and 15 single-vehicle parking stalls. Boaters may park on the street along the BLF. Many boaters launch at the BLF and then park their vehicle-trailers elsewhere. Overnight parking at the BLF is not allowed.

The existing parking area is damaged, cracked, and uneven. It has deteriorated beyond continuous maintenance. There is no ADA accessible pathway from the ADA-compliant parking stalls to the restroom.

The existing pile-guided boarding floats are worn and need replacing. Sections of the boarding floats are starting to pull apart from the hinges creating safety concerns. The existing piles are in good condition and only require a new coat of paint.

The restroom is worn and not compliant with current ADA requirements for accessibility. Retrofitting the building would cost more than replacing it. The fish cleaning station is old and requires continuous maintenance.

Donner Lake Boat Launching Facility



Source: Google Maps

PROJECT DESCRIPTION

The proposed grant would complete the design, permits, and construction to upgrade and improve the existing Donner Lake Boat Launching Facility.

Proposed Project Scope

If approved, this grant would contribute up to \$1,702,400 for the design, permits, and construction of the following improvements:

Articulated Block Mat

Install articulated block mats at the toe of the boat launch ramp to extend the ramp for a longer boating season and increased boater lake access during low-water.

Sheet Pile Modification

Pound the existing sheet piles below the ramp's surface.

Pile-Guided Boarding Float

Replace the existing pile-guided boarding floats with new 8-foot wide by 80-foot long, heavy-duty steel-framed boarding floats. The existing piles at the boat launch ramp will remain.

Slope Protection

Install slope protection to both sides of the ramp and at the edge of the articulated concrete block mat for erosion protection.

Parking Area

Explore space efficiencies to maximize vehicle-trailer parking. Resurface and restripe the parking lot.

Restroom

Replace the existing three-unit restroom with a two-unit unisex ADA compliant restroom.

Fish Cleaning Station

Replace the existing fish cleaning station.

Accessible Path of Travel

Construct an accessible path of travel between components to meet current accessibility requirements.

Project Signage

Replace the existing signage with a project credit sign giving credit to the Harbors and Watercraft Revolving Fund for funding the project.

Construction Variance

Due to recent escalation in construction costs in the region, it is difficult to establish an accurate estimate of construction costs. Therefore, DBW has added a line item (added to the non-construction section of Table 1) to mitigate this uncertainty. This funding will only be available upon concurrence by DBW of method, scope, and associated costs.

Cost Estimate

The total estimated project cost for engineering and construction is \$1,702,400. See Table 1: Donner Lake BLF Project Cost Estimate for the project cost breakdown. This estimate includes a 10% construction contingency allocation reserved for any unforeseen overages affecting the approved scope items that may occur during the construction process.

Table 1: Donner Lake BLF Project Cost Estimate	
CONSTRUCTION SCOPE	COST ESTIMATE
Mobilization/Demobilization	\$ 140,000
Low-Water Boat Launch Ramp Extension	80,000
Sheet Pile Modification	50,000
Pile-Guided Boarding Floats	170,000
Slope Protection	40,000
Parking Area	175,000
Restroom	300,000
Fish Cleaning Station	75,000
Accessible Path of Travel and Accessible Parking	75,000
Project Signage	15,000
*Construction Subtotal	\$ 1,120,000
NON-CONSTRUCTION SCOPE	
***Construction Variance 13%	\$ 145,600
*Escalation **9%	100,800
*DBW Contingency 10%	112,000
*Engineering 12%	134,400
*Inspection 5%	56,000
*Permits 3%	33,600
Non-Construction Subtotal	\$ 582,400
TOTAL ESTIMATED PROJECT COST	\$ 1,702,400
Source = Truckee Donner Recreation and Parks District Grant Application Dated January 31, 2020	
*Percentages are of the Construction Subtotal	
**3% per year for 3 years = 9% escalation	
***DBW option - due to recent escalation in construction cost in the region.	

Project Status

The proposed preliminary site plan is attached (see Proposed Preliminary Design of Donner Lake BLF) on page 10.

Timeline

TDRPD estimates that project construction will be completed approximately two years from execution of the proposed grant agreement.

Engineering Feasibility

There are no particularly difficult or unusual problems associated with the proposed project.

Environmental Impact and Permits

TDRPD plans to apply for permits at the 60% design level. Per TDRPD, the proposed improvements are eligible for a Categorical Exemption under Section 15301 of CEQA.

Required Permits:

- California Department of Fish and Wildlife Permit
 - California Regional Water Quality Control Board – Section 401 Water Quality Certification
 - US Army Corps of Engineers – Section 404 Permit
 - Town of Truckee Building Department
 - California State Lands Commission
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PROJECT METRICS

Annual Launches

Current: According to boat launching data provided by TDRPD, the annual number of motorized boat launches at the existing facility is 3,200. The number of non-motorized boat launches at the existing facility is 600.

Future: DBW estimates the annual number of motorized boats launches at the improved facility will have a substantial increase of 20 percent to 3,840 launches per year with the number of non-motorized launches also increasing by 20 percent to 720 launches per year.

Annual User Days

Current: Based on the California Boating Needs Assessment Study published in 2002, the average number of users per boat (motorized) at the Sacramento Basin is 3.35. Therefore, the current estimated annual number of user days at Donner Lake BLF is 10,720 motorized and 600 non-motorized for a combined total of 11,320 annual user days (annual launches x users per boat). The 2018 California Boating Needs Assessment Study does not establish the average number of users per boat.

Future: DBW estimates that the number of annual user days for this facility will increase by 20 percent for motorized to 12,864 and increase by 20 percent for non-motorized to 720 for a combined total of 13,584 annual user days.

Unit Day Value

Current: The 2018 Boating Needs Assessment Study established a unit day value in the Sierra region. The unit day value is an established way to measure recreational benefits boaters gain from the experience of boating on a particular body of water. The unit day value is \$40.38. The total current annual unit day value for the facility is \$457,102 (unit day value x annual user days).

Future: DBW estimates that the unit day value for the proposed facility would increase after the facility is improved to \$548,522 (unit day value x projected annual user days).

Benefit-Cost Ratio

A common method used in the analysis of investments is to establish net present value of the benefits and costs associated with a project. If the Benefit/Cost ratio exceeds “1” then the investment, weighed against available investment alternatives, is worthy of consideration from a financial perspective. The results of this analysis are as follows:

Benefit: The total benefits over the 20-year life of the project are estimated to be \$7,706,450.

Cost: Net costs over the 20-year grant period are estimated to be \$4,138,420.

Ratio: Assuming a total project cost of \$1,702,400 to complete designs, acquire permits, and complete construction, the Benefit-Cost Ratio is 1.86.

User Fees

TDRPD currently charges a \$13 fee to park and launch vessels at the BLF for California residence and an \$18 fee for out of state users. However, the grant does not permit residential discrimination. TDRPD will need to reduce the out of state user’s fee. They also offer a season pass for \$105.

TDRPD charges a \$21 commercial user fee. Commercial users accessing the lake by the Donner Lake BLF are not allowed to stage or store vessels or trailers at the BLF. They are also not allowed to set-up rental booth’s anywhere on the BLF, park commercial vessels at the boarding floats for any longer than it would take to retrieve or drop-off guests, or any such use that would get in the way, limit, or prohibit recreational use of the entire facility.

TDRPD employs personnel at the site to collect fees and assist with launching during summer months. Fees are collected via a drop box the rest of the year.

CONCLUSION

The Department’s analysis indicates that this project, as proposed, makes needed improvements, is feasible from an engineering perspective, is cost-effective, and increases public access.

COMMISSION ADVICE AND COMMENT

The Department of Parks and Recreation, Division of Boating and Waterways seeks Commission Advice and Comment on this proposed \$1,702,400 Harbors and Watercraft Revolving Fund planning and construction grant to the TDRPD for the Donner Lake Boat Launching Facility improvements described in this February 11, 2021 Feasibility Report.

CONDITION

- TDRPD shall acquire an extension of the lease agreement with California State Lands Commission to operate and manage the boat launching facility for at least 20 years after construction is complete.
- TDRPD will adjust the parking and boat launching fee for recreational out-of-state users from \$18 to \$13 as required for DBW-funded projects.

PROPOSED PRELIMINARY DESIGN OF DONNER LAKE BLF

