

**MISSOURI-MADISON RIVER FUND RECREATION PROJECT
FY2026 GRANT APPLICATION FORM**

Project Name: Hebgen Lake Bathymetric Map

Reservoir or River Segment: Hebgen Lake County(ies) Gallatin

Site Name (or project location): Hebgen Lake

Applicant Name: Kim McMahon for NorthWestern Energy

Position and Agency: Consultant to NorthWestern Energy

Telephone: 406-546-2447

Email: Kim.pinnacle.research@gmail.com

All projects are required to have a Project Sponsor to be considered for funding by the River Fund. Project sponsors serve as active members of Missouri-Madison Regional Working Groups and will consult with applicants on projects. Sponsorship denotes that the proposed project meets the basic criteria for consideration (below). A project that does not meet the basic criteria or does not have a project sponsor will not be scored by the Regional Working Group.

Project Sponsor Name: Brian Thompson

Position and Agency: Hebgen Lake Ranger District

Telephone: 660-359-7444

Email: brian.r.thompson@usda.gov

The Basic Project Criteria below must be met for a project to be considered for funding:

1. The project is consistent with the FERC Project 2188 License.
2. The project occurs in the Missouri-Madison Project Area.
3. The project must be consistent with or support management plans in the Project Area
4. The project provides a public recreation benefit.

Refer to the Grant Application Instructions for further clarification on these criteria.

Awarded River Fund grant funds or NorthWestern Energy matching funds may be used for the purchase of materials, supplies, and equipment, or to pay contractor services or other non-agency project components. Project funds may not be used to pay agency or applicant overhead expenses, such as agency staffing costs for design and engineering, project management, or administrative expenses. Funds may be used to pay costs for contracted design and engineering, as appropriate. Accounting of project expenses must be included in status reports provided for the annual River Fund Board meeting.

Requests for review of draft applications must be submitted two weeks prior to the submission deadline.

**MISSOURI-MADISON RIVER FUND RECREATION PROJECT
FY2026 GRANT APPLICATION FORM**

Project Cost Breakdown and Financial Request:

Complete the financial section below by providing total project cost (to the nearest dollar), contributions by applicant and cooperators, request for NorthWestern Energy match of agency funds (see detailed instructions), and River Fund Grant request. Document in-kind contributions by public agencies for determination of NorthWestern Energy match request. A description of funding sources and in-kind contributions should be included in the Project Description.

	<i><u>Nearest Whole Dollar</u></i>	
Total project cost:	<u>\$62,876</u>	
Applicant Contributions – cash	<u>\$</u>	
Applicant Contributions – value of in-kind:	<u>\$</u>	
Other Contributions – Please list by source:		
US Forest Service	<u>\$1,500</u>	
Yellowstone Holiday Resort/Marina	<u>\$1,000</u>	
Wolf and Grizzly Discovery Center	<u>\$ 750</u>	
Kirkwood Marina	<u>\$ 500</u>	
	<u>\$</u>	Percentage of Total Project Cost:
Total Applicant and Other Contributions:	<u>\$3,750</u>	<u>7%</u>
NorthWestern Energy Match Request:	<u>\$1,500</u>	<u>2%</u>
River Fund Grant Request:	<u>\$57,626</u>	<u>92%</u>
Proposed Project Implementation Period:	<u>2026</u>	

1. Has this project been previously submitted for funding consideration by the River Fund Board, either as a separate project or part of another project? ☒ Yes ☐ No

The River Fund provided partial funding for printing of the Hebgen Lake Bathymetric Map, alongside project partners, in 2007, 2010, and 2017 (NorthWestern Energy funded a gap in map availability in 2016). This will be the fourth round of printing the map over nearly 20 years.

2. **Project Description:** Provide a description of the proposed project. Be sure to include specific project elements that are planned, and any associated cost detail.

The Hebgen Lake Map contains bathymetry (lake bed elevation) data, depths, and recreation information and is distributed free of charge to the recreating public. It is intended for use by visitors that may be unfamiliar with the varying depths in Hebgen Lake to avoid disaster in shallow areas. It also provides a variety of pertinent recreation and access information.

Bathymetry of Hebgen Lake was collected in 2007, but some commercial operators around Hebgen Lake feel it may be less accurate today than it was 18 years ago. Therefore, this project will include updating bathymetry data in key shallow areas and printing a batch of 10,000 double-sided, full color maps on waterproof paper.

Rather than completely re-surveying the entire lake, bathymetry data will be ground-truthed and updated in key shallow areas that pose the most risk of catching boaters off guard, resulting in accidental boat groundings. The cost associated with that effort includes up to two weeks of data collection and associated data management by River Design Group for \$42,000. Once the data is finalized, Advanced Litho will perform the layout of the map layers and informational panels and print 10,000 maps for \$10,397. Adding in a 20% contingency brings the total to \$62,876.

3. **Project Phasing:** Briefly discuss whether the project could be phased over more than one year or construction season.

There are two distinct elements of the project: updating bathymetry data and layout/printing of the map. While these elements go hand-in-hand, they could be funded separately (with breakdowns as above). However, the current supply of maps is very low and nearly depleted, and funding in phases will push printing of the maps out another year (to 2027), which is not ideal.

4. **Cultural Resource Management:** Cultural Resource Management (CRM) requirements for any activity related to this Project must be completed and documented to NorthWestern Energy as a condition of awarded River Fund grant funds or NorthWestern Energy matching funds. Grant and matching funds may not be used for any land-disturbing activity, or the modification, renovation, or removal of any buildings or structures until the CRM consultation process has been completed. Agency applicants must submit a copy of the proposed project to a designated Cultural Resource Specialist for their agency. Private parties or non-governmental organizations are encouraged to submit a copy of their proposed project to a CRM consultant they may have employed. Private parties and non-governmental organizations may also contact the NorthWestern Energy representative for further information or assistance. Applications submitted without this section completed will be held without any action until the information has been submitted.

Summarize how you will complete requirements for Cultural Resource Management.

Since there will be no land or lakebed disturbance, there will be no cultural resource management associated with a bathymetric survey or redesigning and printing the map.

5. **Scoring Criteria.** Respond to the following Scoring Criteria. Start answers after ►.

5.1 Does the project occur at a 2188 license site?

Yes. All 2188-license sites associated with the Hebgen development (Fisherman's Point, Lonesomehurst and Rainbow Point boat launches, RV dump station at Terra Nova Cabins, and the Hebgen Dam Day Use Site) will be included on the map, and Hebgen Reservoir is a 2188-license facility.

5.2 Project is for operation and maintenance of an existing recreation site. Describe if the project will meet operation and maintenance needs. Higher points awarded to projects that are higher priority and are not a recurring expense. Lower points awarded to projects that are low priority and/or have been previously funded. It is unlikely that the timeframe of River Fund would address emergency operation and maintenance needs but could support non-emergency operation and maintenance needs.

Printing of this map has been previously funded by the River Fund simply because there is really no other logical mechanism to do it otherwise. Making the map free of charge is critical so that visitors will use it. If they have to pay for the map, it's likely many visitors would opt to "just figure it out" and the number of accidental boat groundings would increase. The map does not specifically serve to operate or maintain recreation sites.

5.3 Project involves collaboration with other agencies or organizations. Identify project partners other than NorthWestern Energy or River Fund, if any, and describe their participation. Document all funding sources and all in-kind support and services to a project, because all are sources of partnerships and in-kind contributions from public agencies qualify for calculation of NorthWestern Energy matching funds. If there are no project partners, explain why.

The Hebgen Lake Map committee has always been and continues to be a collaboration of local business and Forest Service volunteers that review the map and update the content to reflect current offerings. In addition, many of these businesses as well as the Forest Service have pledged financial support for the project, further demonstrating the collaborative nature of the project. Finally, the West Yellowstone Foundation will serve as the fiscal sponsor for the project, which ensures that funds are accurately tracked and distributed.

5.4 Project provides a benefit to public recreation in the Project Area and addresses specific issues and goals of the Missouri-Madison Comprehensive Recreation Plan (CRP). Identify how the project provides a benefit to public recreation and describe how the project specifically addresses issues and goals in Chapter 2-1 of the CRP.

The recreating public that choose to access Hebgen Lake by boat will greatly benefit from having the map as a guide so they can identify shallow areas to avoid. Additionally, the map will have recreation facilities and amenities marked so visitors can find what they need in terms of camping and lodging, food, RV hookups and dump station, fishing access, etc. Without the map, it will be challenging for visitors who are unfamiliar with the contours and depths of Hebgen Lake to navigate it safely or to know where amenities are offered.

The Missouri-Madison CRP identifies maintaining or proactively increasing public safety for recreationists as a goal, and providing the lake bathymetry accomplishes that goal. The CRP also identifies improving or expanding recreation opportunities that offer universal accessibility, and the map accomplishes that goal by identifying areas with ADA accessibility. Finally, the goal of providing safe and well-managed areas that result in enjoyable user experiences is accomplished by the map as it identifies the various recreation amenities and opportunities available around the lake so that users can tailor their outing to their expectations and desires.

- 5.5 Project responds to a clearly identified need. Describe and document the need for this project and how the project would address that need. Cite specific sources, as possible, to establish need and support the project. Discuss consequences if the funding request is unsuccessful. For a new construction or acquisition project, identify how post-project, long-term costs (such as site maintenance and management) will be provided.

The bathymetry for the Hebgen Lake was originally completed in 2007. However, some commercial marina and boat rental operators on the lake feel that the contours are not entirely accurate as they have guests that ground rental boats in shallow areas and need to be rescued. Updating the bathymetry will help reduce the instances of boat grounding.

The map has been printed three times since 2008, and the available stock has once again been depleted. The last printing occurred in 2017 when 7,500 maps were printed. Printing a new batch of 10,000 maps should last 6-8 years, if not longer. A lack of funding will result in a delay in printing the maps and replenishing the depleted stock.

- 5.6 Project design options have been considered, estimated, and a preferred design selected. Well-designed projects reduce occurrences of budgetary overages, design changes, and additional complications. Discuss the current design phase for this project, demonstrate that the project has been well vetted, and include cost estimates.

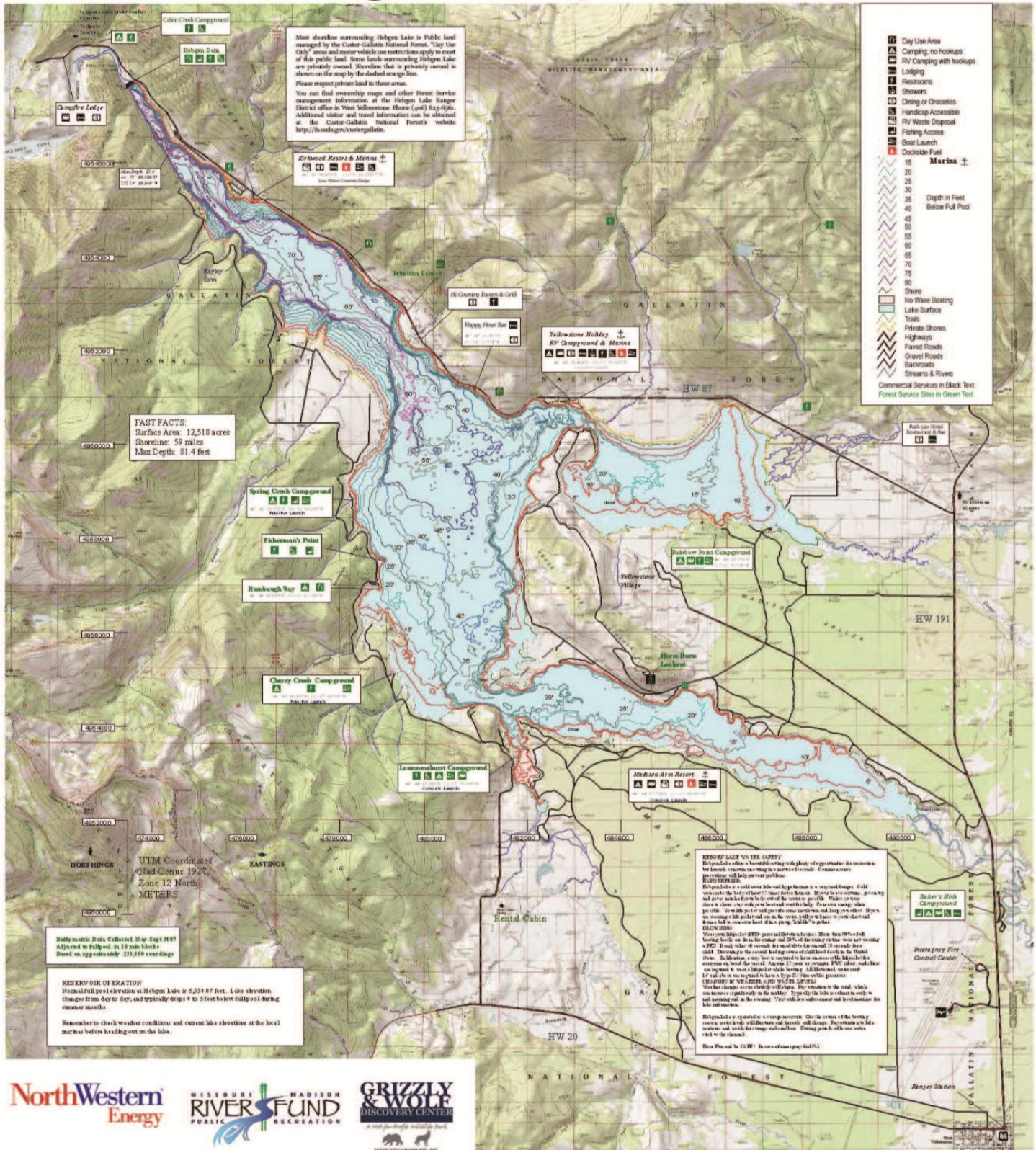
The design of the map has been thoroughly vetted with collaborators and has worked well to provide information on lakebed contours and depths as well as public recreation amenities and opportunities. The map also provides contours of nearby Quake Lake, and the various panels provide information related to common fish species, the history of Hebgen Dam, blue-green algae and hazardous algae blooms, aquatic invasive species prevention, and sources of information such as safe boating practices and fishing regulations. Overall, the content provides an excellent cross-section of relevant information and will be reviewed for accuracy and necessary updates, though a large-scale redesign is not warranted.

- 5.7 Project supports or protects other resources and is consistent with or supports resource plans in the Project Area. Describe how this project will protect resource values (such as public access, water quality, fisheries, wildlife, habitats, and cultural resources) and support other resource and agency plans, including Project 2188 License plans and land use and land management plans in place in the Corridor. Management plans should provide justification for the project.

Water quality and fish habitat may be negatively impacted by boat grounding in shallow areas, so preventing that from occurring by providing accurate depth data will protect these resource values. Public access locations identified on the map will help prevent conflicts with trespass on private property and will help protect shoreline and cultural resource values by concentrating use in designated areas. The map supports FWP law enforcement goals by promoting safe boating practices and fishing regulations, and responsible visitor behavior through AIS prevention. It protects visitor safety by providing information related to harmful algae blooms, and supports National Forest goals for multiple-use of resources through land- and water-based recreation.

6. Insert map(s) showing the location of the proposed project, drawings and design work related to the project, and a reasonable number of photos (as available) here.

Hebgen Lake, Montana



NorthWestern
Energy

MISSOURI RIVER FUND
PUBLIC RECREATION

GRIZZLY & WOLF
DISCOVERY CENTER
A Park for People in Wildlife Park
www.yellowstone.net



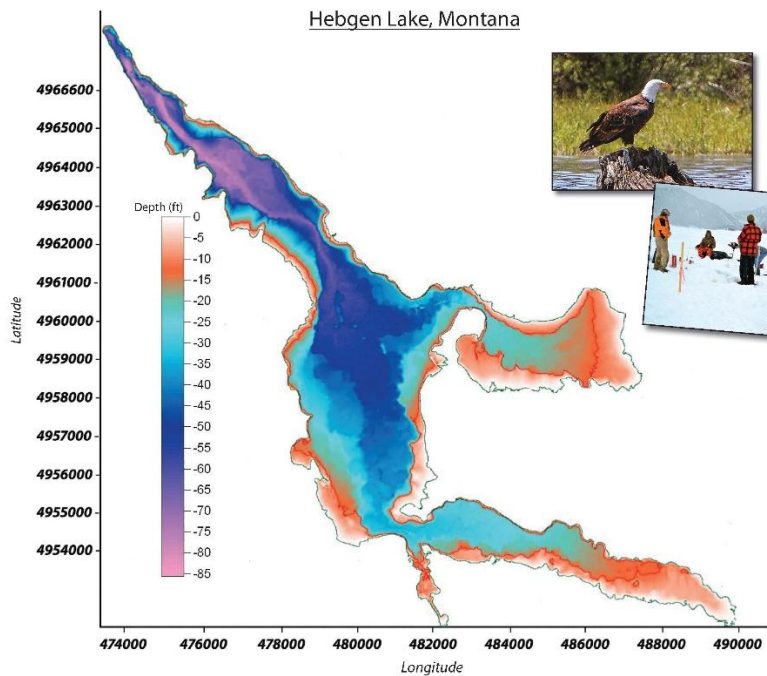
Montana Fish,
Wildlife & Parks

Point Coordinates in Lat/Long WGS 1984
0 Miles

NOT INTENDED FOR INWATER NAVIGATION
HAZARDS NOT SHOWN

Map: Graphics & Text by
COURTESY OF THE YELLOWSTONE
FUND & RECREATION MANAGEMENT
P.O. Box 100, Helena, MT 59604
www.yellowstone.net
http://www.mt.gov/visit/visit.asp
Copyright 2007 ©





Fish Common to Hebgen and Earthquake Lakes



Rainbow Trout



Brown Trout



Mountain Whitefish



Utah Chub



Cutthroat Trout

Fish illustrations by Joseph Tomelleri & Daniel Lindvig

History of Hebgen Dam

Built in 1915 by the Montana Reservoir and Irrigation Company to regulate water flow for downstream irrigation, today Hebgen Dam is owned and operated by NorthWestern Energy to provide benefits for recreation, flood control and downstream resources. Hebgen Dam is named after Max Hebgen, a pioneer in the successful design of electric utility systems and several hydroelectric developments in Montana between 1895 and 1915. The 721-foot-long and 88-foot-high dam is an earth-filled structure with a concrete core wall.

Hebgen Dam is known as "the dam that held" during the August 17, 1959 Hebgen Lake Earthquake. With the quake epicenter less than 13 miles away and land displaced up to 22 feet along the fault scarp, water sloshed back and forth in the lake and huge waves known as seiches crested the dam following the earthquake. Although the dam cracked, it held, preventing another disaster.

Follow the auto tour route along the north shore of Hebgen Lake and through the Earthquake Lake Geologic Area. Stop at the Earthquake Lake Visitor Center to learn more about this natural disaster.



FOCUS ON: Aquatic nuisance species

STOP Aquatic Nuisance Species: Clean all recreational equipment!

Our fisheries are under attack by invasive aquatic creatures.

These exotic species are not native to Montana, and cause damage by threatening the diversity and abundance of native species, and disrupting the ecological stability of our water habitats. Here are some simple steps you can take to reduce the spread and introduction of these harmful invaders:

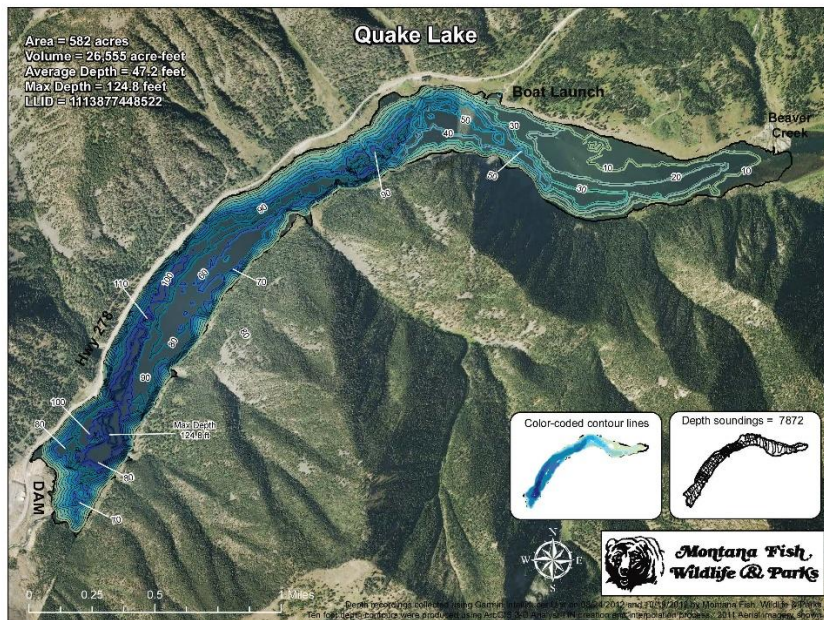
- Inspect your gear and remove plants, organisms, or dirt
- Wash your gear with soap and water
- Thoroughly dry your gear
- Drain live wells and baited barrels, pull all plugs
- Never transport any fish, plants or animals from one body of water to another
- Spread the word: encourage others to follow these practices

Remember: Clean • Drain • Dry

This message brought to you in partnership by:

For more information visit: www.cleanangling.org

Large amounts of aquatic vegetation are present at the Lonesomehurst, Rainbow Point, and Madison Arm Launches. Clean all vegetation from boats, motors, trailers, and gear.



What are Blue-Green Algae or Cyanobacteria?

Blue-green algae or cyanobacteria are common, native species found in rivers, lakes, and ponds throughout Montana. These algae can form large "blooms" when environmental conditions are favorable. The blooms may appear as scum layers or large floating mats and often have a bluish-green color and an unpleasant odor.

Some species of cyanobacteria naturally produce toxic substances. Humans and animals may experience illness or other health effects if there is skin contact with algal toxins or if large quantities are ingested. At Hebgen Lake, cattle deaths in the late 1980s and a dog death in 2007 were attributed to toxic cyanobacteria. It is difficult to determine the presence of algal toxins, so common sense precautions are necessary if algal blooms are present.

Symptoms of Contact with Cyanobacteria Toxins

Swallowing or ingesting water with an algal bloom may cause symptoms such as: vomiting, diarrhea, nausea, headache, throat irritation, muscle and joint pain, and in severe cases, paralysis, respiratory failure, or death, and seizures or convulsions in pets.

Common Sense Precautions to Protect Your Safety

1. Avoid contact with scum layers, large mats, or other visible blooms of cyanobacteria or blue-green algae.
2. Do not allow pets or children to play in shallow, scummy areas or areas where blooms of algae are present.
3. Do not allow pets to drink or swim in algal blooms.

For more information, call the Gallatin City-County Health Department at (406) 582-3120.

For More Information

Current lake elevation
Local marinas and the USGS website
<http://waterdata.usgs.gov/mt/nvis/rt>
USGS 06038500 near Graying, MT

US Forest Service
Hebgen Lake Ranger District
<http://www.fs.usda.gov/custergallatin>

Boating and fishing regulations and online fishing licenses
<http://fwp.mt.gov/fishing>

West Yellowstone businesses
www.destinationyellowstone.com

Fishing license vendors on Hebgen Lake
Yellowstone Holiday RV Campground & Marina
Kirkwood Marina
Madison Arm Resort & Marina

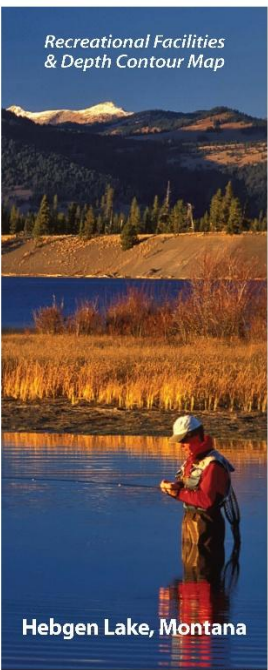
Fishing licenses and boating information are also available from many West Yellowstone businesses.

Thanks

Special thanks to the following agencies, groups and businesses who contributed to the design and production of this map:

Missouri-Madison River Fund
Custer - Gallatin National Forest
Kirkwood Marina
Yellowstone Holiday RV Campground & Marina
Madison Arm Resort & Marina
Grizzly & Wolf Discovery Center
NorthWestern Energy
Montana Fish, Wildlife & Parks
West Yellowstone Foundation

Hebgen Lake photographs provided by: Rob Eanes, Brad Grein, Frank Pickett, and Jim Allen. Cover photo by Ken Takata.



Hebgen Lake, Montana

(Third Printing)