

# DIVE PLAN – 2019 FLATHEAD LAKE EXPEDITION Rev.1

## Objective:

Flathead Lake is a large natural lake in northwest Montana, and is the largest natural freshwater lake by surface area west of the Missouri. On August 5-9, Nekton Gamma and the R300 will be used in conjunction with University of Montana Flathead Lake Bio Station (FLBS) researchers to better understand the substrate and biota in the littoral zone of Flathead Lake. Nekton Gamma will be used to take bottom samples at the mouth of the Flathead River for Chemical and algal analysis of substrate. A night dive is planned in Yellow Bay to study temporal vertical migration of Mysis shrimp. Other dive sites include Painted Rock, Woods Bay and Bird Island. The base of operation for the Expedition will be the FLBS facilities at Yellow Bay



**Nekton Gamma – Hank Pronk**



**R300 – Cliff Redus**

## Base Location:

Flathead Lake Bio Station  
32125 Bio Station Ln., Polson, MT 59860-6815

## Accommodations:

Faculty Cabins F2, F3, F4, F5

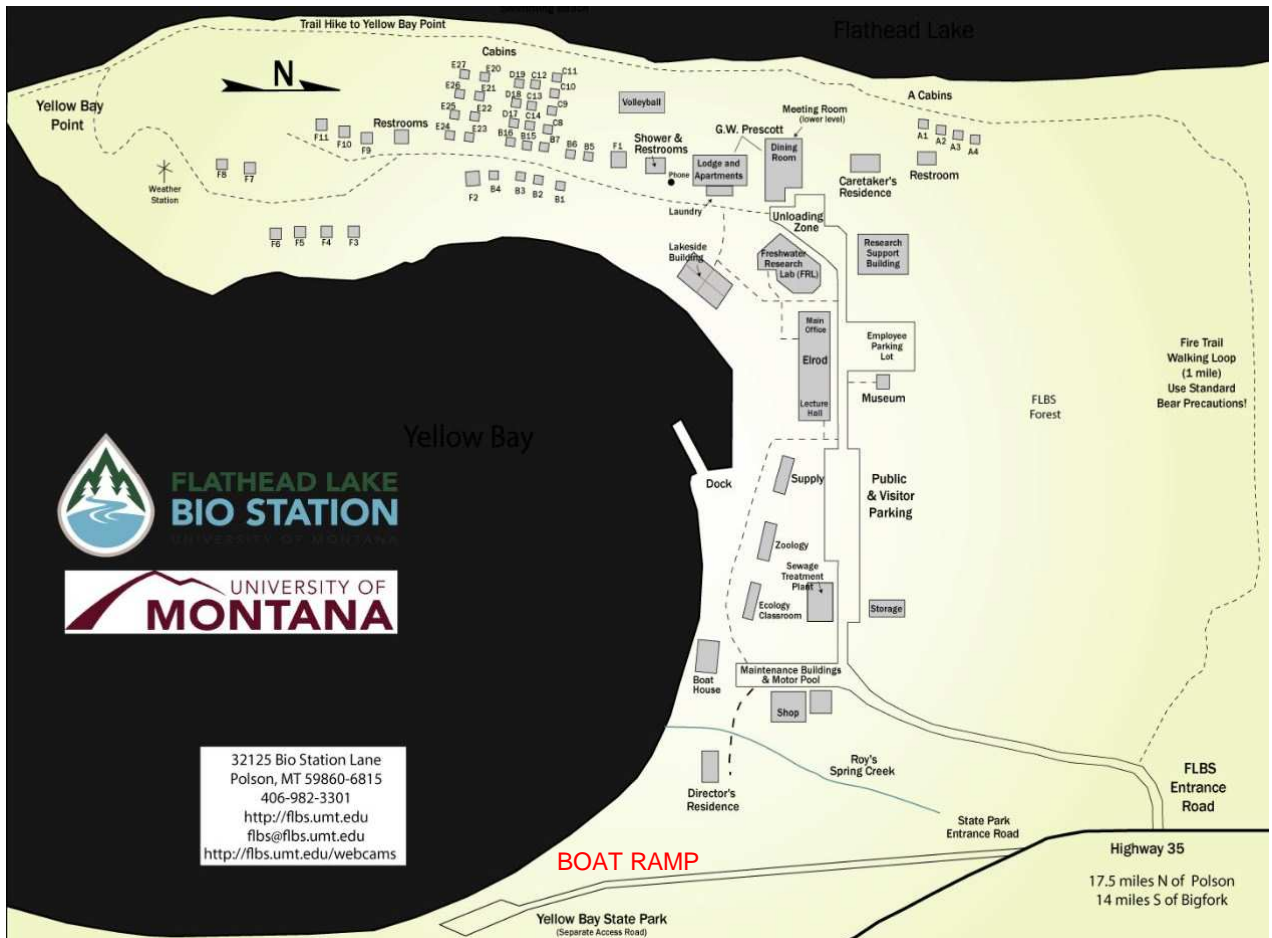
Crew	Cell Number	Role
<b>Submersibles:</b>		
Cliff Redus	830-931-1280	Captain R-300, Psub Coordination
Hank Pronk	250-342-1292	Captain Nekton - Gamma
Andrew Bibby	250 428 1472	SOC - Gamma
Tim Novak	604-274-8586	Crew
Shelley Novak	604-274-8586	Crew
Alan Parks	210-413-2489	Crew
David Colombo	707-536-1424	Video/Photography, Head, InnerspaceScience.org
Wyvonne Colombo	707-328-1227	Crew
Mason Niblack	406-250-7139	Crew
<b>Science:</b>		
Jim Craft	(406) 872-4508	Science Coordinator
Tom Bansak	(406) 982-3301	FLBS Assistant Director
<b>Divers:</b>		
Josef Crepeau	406-370-4165	Coordinate Divers / Rescue
Chris Hanson		Diver / Rescue
Sean Stevenson	587-873-7326	Diver / Rescue, SOC R300

**Emergency Numbers:**

1. Call 911 in the event of an emergency
2. Rescue Divers - Josef Crepeau, (406-370-4165 )
3. FLBS Tom Bansak, FLBS Assistant Director, (406) 982-3301
4. Nearest Scuba Shop, Flathead Scuba, 406-253-8320
5. Nearest hyperbaric chamber – Virginia Mason Center for Hyperbaric Medicine, Seattle WA (206-583-6543)

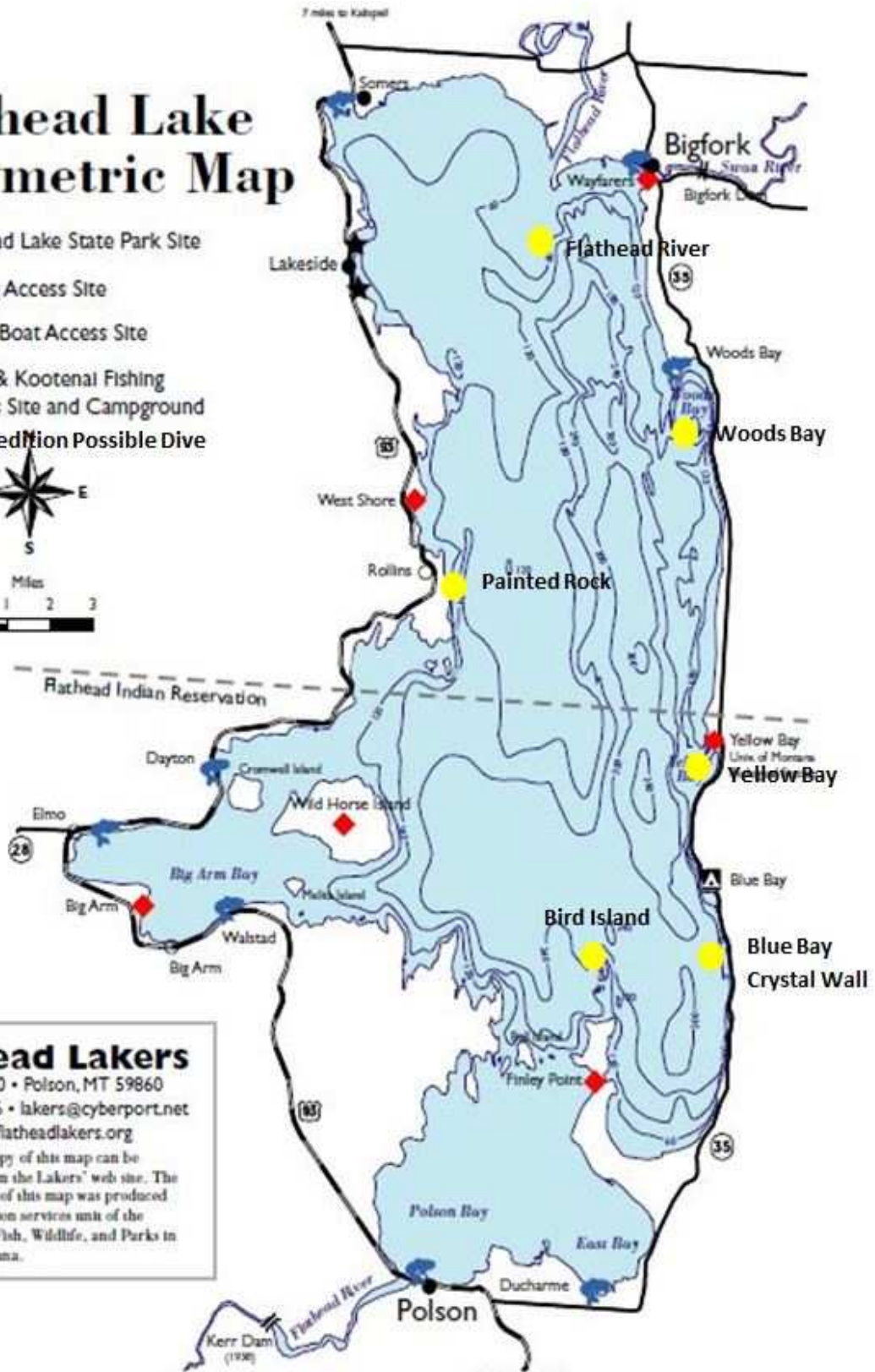
**SAFETY BRIEFING** – Staging area near launching davits or boat ramps

1. Communications Channel ( Marine VHF – CH 68)
2. OTS Thru Water Communication Channel: 1 (33 kHz)
3. Emergency Contact numbers (See above)
4. Key safety issue for the subs is entanglement.



# Flathead Lake Bathymetric Map

- ◆ Flathead Lake State Park Site
- 🚤 Fishing Access Site
- ★ Public Boat Access Site
- ⚠ Salish & Kootenai Fishing Access Site and Campground
- Expedition Possible Dive



**Flathead Lakers**  
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[www.flatheadlakers.org](http://www.flatheadlakers.org)

An electronic copy of this map can be downloaded from the Lakers' web site. The original version of this map was produced by the information services unit of the Department of Fish, Wildlife, and Parks in Kalispell, Montana.

**2019 Flathead Lake Expedition**

Rev 5, 7-3-19

**Submersible Schedule - August 5-9, 2019**

**Monday 8/5/19**

Submersible	Crew	Tender	AM (9-12)	PM (2-5)	Key Science Goals	Notes
Gamma	Hank Pronk - Captain Jim Craft David Colombo	Jessie B	Flathead River	Flathead River	Chemical & algal analysis of substrate	1. Transit between Flathead River to collect sediment samples and imagery. 2. Depth 20-60ft
R300	Cliff Redus - Captain David Colombo - Captain	Valery J	Yellow Bay	Yellow Bay	Describe substrate and biota	1. Provided a detailed transcribed inspection at site and identify possible fish. 2. Depth 30-80ft

**Tuesday 8/6/19**

Submersible	Crew	Tender	AM (9-12)	PM (2-5)	Key Science Goals	Notes
Gamma	Hank Pronk - Captain Passengers TBA	Jessie B	Yellow Bay	Yellow Bay	Describe substrate and biota	1. Collect sediment samples and imagery. 2. Depth 30-80ft
R300	Cliff Redus - Captain David Colombo - Captain	Valery J	Painted Rock	Painted Rock	Describe substrate and biota	1. Transit along steep shore to collect imagery from multiple sites. 2. Depth 60-180ft

**Wednesday 8/7/19**

Submersible	Crew	Tender	AM (9-12)	PM (2-5)	Key Science Goals	Notes
Gamma	Hank Pronk - Captain Passenger TBA	Jessie B	Blue Bay/Crystal Wall	Blue Bay/Crystal Wall	Describe substrate and biota	1. Collect sediment samples and imagery. 2. Depth 20-160ft
R300	Cliff Redus - Captain	Valery J	Bird Island	Bird Island	Describe substrate and biota	1. Transit along steep shore of island to collect imagery from multiple sites. 2. Depth 20-180ft

**Thursday 8/8/19**

Submersible	Crew	Tender	AM (9-12)	PM (9-12) Night Dive	Key Science Goals	Notes
Gamma	Hank Pronk - Captain	Jessie B	Painted Rock	Yellow Bay	Mysis distribution in Yellow Bay	1. Night dive - Observe and document Mysis shrimp in water column 2. Provided a detailed transcribed inspection at sites and identify possible fish.
R300	Cliff Redus - Captain	Valery J	Blue Bay/Crystal Wall	Yellow Bay	Mysis distribution in Yellow Bay	1. Night dive - Observe and document Mysis shrimp in water column 2. Blue Bay/ Crystal Wall Depth 20-160ft

**Friday 8/9/19**

Submersible	Crew	Tender	AM (9-12)	PM (1-5)	Key Science Goals	Notes
Gamma	Hank Pronk - Captain	Jessie B	Open	FLBS Open House	Describe substrate and biota	1. Setup for Open House 2. Public show and tell on submersibles in afternoon
R300	Cliff Redus - Captain	Valery J	Open	FLBS Open House	Describe substrate and biota	1. Setup for Open House 2. Public show and tell on submersibles in afternoon

Notes:

- 1) FLBS - "Jessie B" is 30ft, twin 300hp engines (cruising speed of 25 knots), a large cabin, working deck on the back and dive door. Max capacity is 20 people. There is ample room for gear and 5 people.
- 2) FLBS - "Monarch" is 15ft tri hull with a 120hp outboard. The engine is a bit undersized for the boat. It is better suited for 2 people with light gear. Also, there is no dive ladder on this boat.
- 3) Josef Crepeau's "Valery J" is a 19 ft Boston Whaler owned by Josef Crepeau. This boat will tender the R300 and serve as dive operations boat.
- 4) Record ambient temperature with external sensor for all subs
- 5) Observe and document Mysis shrimp from both subs on each dive.
- 6) Take pictures and video of environment on all dives. Document GPS coordinates and time.

<b>2019 Flathead Lake Expedition</b>		
<b>Ramps for Dive Sites - August 5-9, 2019</b>		
<i>Dive Site</i>	<i>Ramp</i>	<i>Description</i>
<b>Flathead River</b>	Sportsman Bridge	This location is about a 1.5 mile tow west from Wayfarers. This location will be the starting point for Gamma to take a series of bottom settlement samples. The goal is to see how the substrate changes as you move out into the lake. For the most part this is a featureless area made of silt that has settled from the Flathead River as velocity drops off.
<b>Yellow Bay</b>	Yellow Bay	This is the deepest part of the lake, plus it has warm, sandy beaches. The beaches and the beauty of the area make it one of the lake's busier destinations. Best features are at depths between 30 and 60 feet. There is a steep slope/wall just south of the FLBS that Joe will give us the GPS coordinates of the site.
<b>Blue Bay Chrystal Wall</b>	Blue Bay	Just south east of the Blue Bay boat ramp three boats were sunk to attract fish for scuba divers. After diving the wrecks, a two mile surface transect south along the eastern shore of the lake will bring us to Chrystal Wall. This is just off Crystal Creek. This is a nice wall dive. Joe will give us the GPS coordinates of both these sites.
<b>Bird Island</b>	Finley Point or Blue Bay	This is the deepest part of the lake, plus it has warm, sandy beaches. The beaches and the beauty of the area make it one of the lake's busier destinations. Best features are at depths between 30 and 60 feet. There is a steep slope/wall just south of the FLBS that Joe will give us the GPS coordinates of the site.
<b>Painted Rock</b>	West Shore	This location is about a 1.5 mile tow southeast of Rollins. Here, the rock formations are at their best, rising up from the lakebed to tower above the surface. If you like underwater photography, this is a good place to get some stunning shots. This is the best wall dive of the lake. Joe will give us the GPS coordinates for this site. A steep slope/wall just south of the FLBS that Joe will give us the GPS coordinates of the site.