# HOLLAND LAKE BENCHMARK

State: Montana County: Missoula

USGS Quad: Holland Lake

Ownership: USFS, Flathead National Forest

Swan Lake Ranger District

Latitude: 47°26'28.3452" N Longitude: 113°36'59.3554" W

Elevation: 4040.51 International Feet

Ellipsoid Height: 3994.89 International Feet

Horizontal Datum: NAD 83 (2011)

Vertical Datum: NAVD 88 Geoid Model: GEOID18



The elevation was determined by static GPS observations, with ties to the following NGS stations: Al7922, Al7923, SU0026, SU0091, ST0439, DL6314, Dl2254, and DE8232.

The monument is a 9/16" X 98' stainless steel rod, driven to refusal. There is a 36" long finned plastic, No-Tox grease-filled sleeve on the upper portion. This is encased in a sand filled 6" X 24" PVC pipe with aluminum access cover. The PVC pipe and cover are set in concrete.

This benchmark was established to help reference the Mean Annual High Water Elevation (MAHWE) of Holland Lake for regulatory purposes. The MAHWE of <u>4035.6</u> feet was calculated using crest gauge readings from 2021—2025. The elevation of the MAHWE is subject to change as more data is gathered and analyzed.







For more information, contact:
Missoula County Public Works, Survey Division
https://www.missoulacounty.us/
government/public-works/surveyors-office



### LAKE INEZ BENCHMARK

State: Montana County: Missoula

USGS Quad: Lake Inez

Ownership: USFS, Lolo National Forest

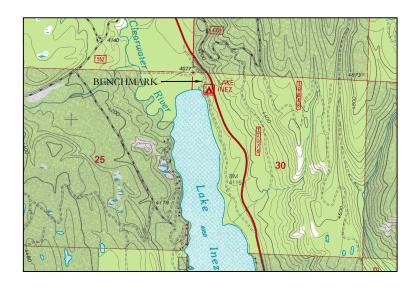
Seeley Lake Ranger District

Latitude: 47°17'42.2240" N Longitude: 113°34'06.5513" W

Elevation: 4074.86 International Feet Ellipsoid Height: 4029.69 International Feet

Horizontal Datum: NAD 83 (2011)

Vertical Datum: NAVD 88 Geoid Model: GEOID18



The elevation was determined by static GPS observations, with ties to the following NGS stations: Al7923, Dl2254, DL6314, ST0418, SU0091, and DE8232.

The monument is a 9/16" X 48' stainless steel rod, driven to refusal. There is a 36" long finned plastic, No-Tox grease-filled sleeve on the upper portion. This is encased in a sand filled 6" X 24" PVC pipe with aluminum access cover. The PVC pipe and cover are set in concrete.

This benchmark was established to help reference the Mean Annual High Water Elevation (MAHWE) of Lake Inez for regulatory purposes. The MAHWE of <u>4063.5</u> feet was calculated using crest gauge readings from 2020—2025. The elevation of the MAHWE is subject to change as more data is gathered and analyzed.







For more information, contact:
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Surveyed by Steve Niday & Corryn Greenawalt

### LINDBERGH LAKE BENCHMARK

State: Montana County: Missoula

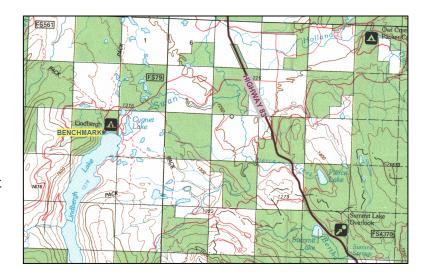
USGS Quad: Cygnet Lake Ownership: USFS, Flathead NF

Latitude: 47°24'15.7079" N Longitude: 113°43'32.3705" W

Elevation: 4334.12 International Feet Ellipsoid Height: 4288.65 International Feet

Horizontal Datum: NAD 83 (2011)

Vertical Datum: NAVD 88 Geoid Model: GEOID18



The elevation was determined by static GPS observations, with ties to the following NGS stations: Al7922, Al7923, DE8232, DG9747, DI2254, ST0448, SU0026 & SU0091.

The monument is a 9/16" X 40' stainless steel rod, driven to refusal. There is a 36" long finned plastic, No—Tox grease filled, sleeve on the upper portion. This is encased in a sand filled 6" X 24" PVC pipe with aluminum access cover. The PVC pipe and cover is surrounded by concrete.

This benchmark was established to help reference the Mean Annual High Water Elevation (MAHWE) of Lindbergh Lake for regulatory purposes. The MAHWE of <u>4331.3</u> feet was calculated using crest gauge readings from 2021—2025. The elevation of the MAHWE is subject to change as more data is gathered and analyzed.







For more information, contact:
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### PLACID LAKE BENCHMARK

State: Montana County: Missoula

USGS Quad: Belmont Point

Ownership: Montana Fish, Wildlife & Parks

Placid Lake State Park

Latitude: 47°07'06.1960" N Longitude: 113°30'11.1536" W

Elevation: 4129.59 International Feet

Ellipsoid Height: 4084.18 International Feet

Horizontal Datum: NAD 83 (2011)

Vertical Datum: NAVD 88 Geoid Model: GEOID18



The elevation was determined by static GPS observations, with ties to the following NGS stations: DI2254, ST0413, DL6314, ST0418, RX0663, and DE8232.

The monument is a 9/16" X 12' stainless steel rod, driven to refusal. There is a 36" long finned plastic, No-Tox grease-filled sleeve on the upper portion. This is encased in a sand filled 6" X 24" PVC pipe with aluminum access cover. The PVC pipe and cover are set in concrete.

This benchmark was established to help reference the Mean Annual High Water Elevation (MAHWE) of Placid Lake for regulatory purposes. The MAHWE of <u>4126.5</u> feet was calculated using crest gauge readings from 2021—2025. The elevation of the MAHWE is subject to change as more data is gathered and analyzed.







For more information, contact:
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Surveyed by Steve Niday & Corryn Greenawalt



## SALMON LAKE BENCHMARK

State: Montana County: Missoula

USGS Quad: Salmon Lake Ownership: State of Montana Salmon Lake State Park

Latitude: 47°05'10.7652" N Longitude: 113°23'37.8645" W Elevation: 3922.73 International Feet

Ellipsoid Height: 3877.50 Int. Ft Horizontal Datum: NAD 83 (2011)

Vertical Datum: NAVD 88 Geoid Model: GEOID18



The elevation was determined by static GPS observations, with ties to the following NGS stations: DE8232, RX0663, DL6314, and ST0413.

The monument is a 9/16" X 26' stainless steel rod, driven to refusal. There is a 36" long finned plastic, No-Tox grease-filled sleeve on the upper portion. This is encased in a sand filled 6" X 24" PVC pipe with aluminum access cover. The PVC pipe and cover are set in concrete.

This benchmark was established to help reference the Mean Annual High Water Elevation (MAHWE) of Salmon Lake for regulatory purposes. The MAHWE of <u>3913.6</u> feet was calculated using crest gauge readings from 2020—2025. The elevation of the MAHWE is subject to change as more data is gathered and analyzed.







For more information, contact:
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#### SEELEY LAKE BENCHMARK

State: Montana County: Missoula

USGS Quad: Seeley Lake East

Ownership: USFS, Lolo National Forest

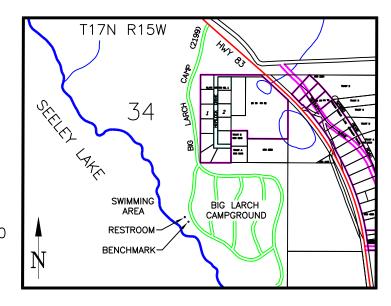
Seeley Lake Ranger District

Latitude: 47°11'03.6108" N Longitude: 113°29'45.5005" W

Elevation: 4005.26 International Feet Ellipsoid Height: 3959.91 International Feet

Horizontal Datum: NAD 83 (2011) Epoch 2010.00

Vertical Datum: NAVD 88 Geoid Model: GEOID18



The elevation was determined by static GPS observations, with ties to the following NGS stations: ST0439, ST0644, ST0413, ST0418, RX0663, DE8232, SU0091.

The monument is a 9/16" X 80' stainless steel rod, driven to refusal. There is a 36" long finned plastic, No—Tox grease filled, sleeve on the upper portion. This is encased in a sand filled 6" X 24" PVC pipe with aluminum access cover. The PVC pipe and cover is set in concrete.

This benchmark was established to help reference the Mean Annual High Water Elevation (MAHWE) of Seeley Lake for regulatory purposes. The MAHWE of <u>3998.7</u> feet was calculated using crest gauge reading from 2019—2025. The elevation of the MAHWE is subject to change as more data is gathered and analyzed.







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