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**FLATHEAD LAKE
BIO STATION**
 UNIVERSITY OF MONTANA

MONITORING MONTANA WATERS FIELD GEAR GUIDE

Providing assistance with water monitoring efforts in Montana

Recommended field gear, as well as optional gear and other parameter-specific gear is listed below. The recommended section includes items all groups will need to collect basic water quality sampling in the field, document the location of sites and take photos of field work. Optional field gear includes items needed for specific parameters that all groups may not sample for, and alternative items that can be used if needed (for example, less expensive pocket meters if groups cannot afford a YSI multiprobe). Please reach out to MMW with any questions or for advice on sampling gear.

Recommended Gear	Analyte/Purpose	Source
YSI Probe	Dissolved oxygen, pH, conductivity, turbidity, and more	YSI ProQuatro , YSI ProDSS , or YSI Pro Swap (contact us for other options)
Measuring tape (100ft/30m)	Site measurements	Forestry Suppliers
Wash bottle (16 oz)	Cleaning sampling gear	Cole-Parmer
Tweezers/forceps	Filter handling	Forestry Supplies
Colored tape (solid color)	Labeling	Cole-Parmer
Graduated cylinders (50 mL, 100 mL, and 250 mL)	Measuring sample volumes	Cole-Parmer
Centrifuge tubes (50 mL)	Filtered sample holder	Cole-Parmer
GPS	Data collection point recording	Forestry Suppliers
Syringe (60 mL)	Filtering raw samples	Cole-Parmer
Filters (0.45 µm)	Filtering raw samples	Cole-Parmer
Rite-in-Rain Waterproof Notebook	Field notes	Forestry Suppliers
Waterproof Digital Camera	Field photos	Amazon

*All coolers and sampling bottles are provided by FRL and shipped to groups for each sampling session.

Optional/Parameter-Specific Gear	Analyte/Purpose	Source
E. coli presence/absence test	E. coli	Hach
Hach Turbidimeter	Turbidity (streams)	Hach
Oakton EC Pocket Meter	Electrical Conductivity/TDS	Cole-Parmer
Oakton pH Pocket Meter	pH	Cole-Parmer
Secchi discs	Turbidity (lakes)	Forestry Suppliers
Petri dishes	Chlorophyll- α	Cole-Parmer
Vacuum handpump	Chlorophyll- α	Fisher Scientific
Handpump tubing	Chlorophyll- α	Cole-Parmer
Nalgene filtering unit	Chlorophyll- α	Cole-Parmer
Glass fiber filters (0.70 µm)	Chlorophyll- α	Cole-Parmer
Aluminum tray	Work surface in the field	Forestry Suppliers
Swing sampler	Extended reach collection	Forestry Suppliers
Flow meter	Stream flow/velocity	Forestry Suppliers



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Easily Obtainable Field Gear

Aluminum foil
Sharpie
Pens/pencils

Other Field Gear Sources

Montana State University Extension Volunteer Monitoring assistance program has a [Gear Loan](#) program. It may be possible to borrow equipment for sampling from them, however the gear is only available for short term loan and priority is given to groups based on the order requests are received. Their Gear Loan program also lists some additional items used for substrate surveys and determining solar radiation inputs to sites.