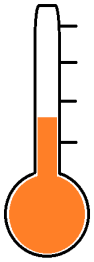
Surface Water Monitoring Network
2024 Watershed Health Summary

Site Description	Site ID	Parameter Status				
		Temp	DO	TN	TP	Nitrate + Nitrite
Upper E. Gallatin River and Tributaries						
E. Gallatin R. near Story Hill & Kelly Canyon Rds	EGALMSU					
Bozeman Ck. @ Tuckerman Park	BOZMC03					
Limestone Ck. @ mouth	LMSTCMTH					
Matthew Bird Ck. @ College St. & Black Ave.	MTWBC01					
Bozeman Ck. @ mouth	BOZMC00					
Bridger Ck. @ Story Mill Rd.	BRIDC01					
Mandeville Ck. above Red Wing Dr.	MANVC01					
E. Gallatin R. above Springhill Rd.	EGALUSGS	ND				
Lower E. Gallatin River and Tributaries						
Hyalite Ck. @ Valley Center Rd.	HYLTVCRD					
Hyalite Ck. @ mouth	HYLTC01					
Thompson Ck. @ Dry Ck. Rd.	THMPCMTH					
Dry Ck. @ mouth	DRYCMTH					
E. Gallatin R. @ Gallatin River Ranch	EGALGRR					
Lower W. Gallatin River and Tributaries						
Gallatin River @ Harringer Bridge.	GALHRNGR	ND				
Baker Creek @ Amsterdam Rd.	BKRCDNRC					
Camp Ck. @ Dry Ck. Rd.	CAMPMTH					
W. Gallatin R. @ Nixon Gulch Rd.	WGALMTH	ND				

ND = No data available

SWMN Watershed Health Summary Parameters:



Water temperature can affect many aspects of stream ecology. Warmer water temperatures accelerate photosynthesis by algae and aquatic plants, which can lead to overgrowth in streams with adequate nutrients. Because cold water can hold more oxygen than warm water, trout become stressed when water is too warm for too long. MT Fish, Wildlife & Parks often temporarily suspends fishing on streams where the daily maximum temperature reaches 22.8°C (73°F) for three or more consecutive days. **GREEN indicates that the daily maximum temperature never exceeded 22.8°C. YELLOW indicates that the daily maximum temperature exceeded 22.8°C, but never for more than two consecutive days. RED indicates that the 22.8°C threshold was exceeded for three or more consecutive days.**

Dissolved Oxygen (DO) allows fish and aquatic insects to breathe under water. Increased water temperature and salinity (dissolved salts) can both decrease the amount of DO water is capable of holding. Guidance from the MT Department of Environmental Quality (DEQ) indicates DO concentrations of 8.0 mg/l as the minimum required by all fish life stages. **GREEN indicates that all monthly measurements met or exceeded 8.0 mg/l. YELLOW indicates that no more than two monthly measurements were below 8.0 mg/l. RED indicates that three or more monthly measurements were below 8.0 mg/l.**

Nutrients - specifically nitrogen and phosphorus - are essential to aquatic plant and algae growth. Nutrients normally occur at low concentrations relative to demands, but when waterways become over-fertilized, excessive plant and algae growth can degrade water quality.

In 2021, the Montana Legislature set aside numeric nutrient standards in favor of descriptive, or "narrative", standards that are currently being crafted into administrative rules. However, since both types of standards are derived from a common dataset that can be used to correlate levels of Total Nitrogen (TN), Total Phosphorus (TP), and Nitrate + Nitrite (n+n) in Montana's streams based with excessive algal growth and detriment to aquatic life, comparisons to the **pre-2021 numeric standards for each stream reach are used here. GREEN indicates that all monthly measurements were at or below the standard. YELLOW indicates that no more than two monthly measurements exceeded the standard. RED indicates that three or more monthly measurements exceeded the standard.**

For more information on monitoring methods and sampling schedule, please see the GLWQD Surface Water Monitoring Network Project Plan at: https://glwqd.org/surface-water-monitoring-program/