



## **FISCAL YEAR 2021 WORK PLAN**

### **Gallatin Local Water Quality District**

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Approved by the GLWQD Board of Directors on May 7, 2020

# Gallatin Local Water Quality District Mission

To protect, preserve, and improve the quality of surface water and groundwater within the District.

## Work Plan Purpose

This work plan outlines the Gallatin Local Water Quality District’s projects and activities for Fiscal Year 2021 (July 1, 2020 through June 30, 2021).

The work plan aligns with the District’s Five Year Strategic Plan (Fiscal Years 2020 through 2024) adopted by the Board of Directors March 7, 2019. The strategic plan is available on the District website at [www.glwqd.org](http://www.glwqd.org).

## Program Approach

The District covers 1,299 square miles within Gallatin County. It includes the incorporated areas of Belgrade, Bozeman, and Manhattan; and the unincorporated communities of Amsterdam, Churchill, Four Corners, Gallatin Gateway, and the Gallatin County portion of Big Sky (Figure 1).

A watershed perspective is used to plan and carry out District activities. Water resources do not adhere to property or political boundaries. Therefore, to aid in meeting the District’s mission, programs and activities are based on a watershed perspective. Using this approach, the flow system is viewed as an interconnected whole rather than focusing on groundwater and surface water as separate resources.

Staff operate under the general philosophy that the District is a place where citizens can receive satisfactory answers to questions related to water resource issues. The District strives to be a clearinghouse for information, and assists citizens with contacting other agencies and organizations as needed. This same level of service is extended to local organizations and governmental agencies.

The District is a non-regulatory entity of Gallatin County and does not administer or enforce any local governmental ordinances, rules, or regulations pertaining to water quality. The District may be indirectly involved in regulatory issues by providing information, data, technical assistance, or comments to other agencies or organizations, when the regulatory issue(s) pertain to water

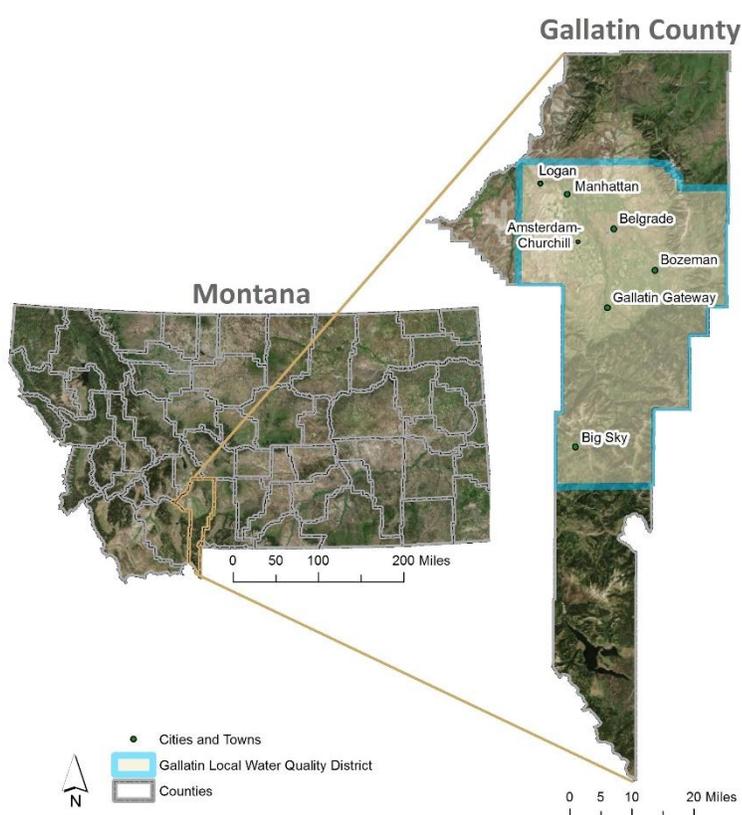


Figure 1. GLWQD location.

resources within the District; and the regulatory activities may have an impact on the District’s mission to protect, preserve, and improve water quality. While District programs do not include development of local regulations, this does not preclude other agencies or interested organizations from developing regulations based on data or information collected by the District.

When local citizens reach out to District staff with valid complaints regarding water-related issues, staff will provide citizens with contact information for the appropriate local, state, or federal agencies responsible for enforcement of regulations designed to protect water resources. If data collected by the District indicates that water resources are threatened by activities that appear to be in violation of existing rules or regulations enforced by other agencies, the District will notify the enforcing agency of the concerns and provide any existing data requested by the enforcing agency. However, the District will not specifically collect data for an enforcement agency related to a specific potential violation.

## **Fiscal Year 2021 Work Plan Capacity and Activities**

Potential activities for Fiscal Year (FY) 2021 were ranked by the Board of Directors and District staff after discussion and review at the March, 2020 GLWQD Board Meeting. The top ranking activities were combined here with a set of “primary ongoing activities” as the district staffing capacity allows (see below, approximately 30 months of man hours available for this fiscal year). This resulted in six top ranked activities (and two additional activities as time allows) combined in this work plan with all primary ongoing activities.

**Staffing capacity = 3 FTE = 30x⌚**

where ⌚ = ≤1 month of FTE time

(11 of 12 months included in capacity calculation to account for paid holidays, sick leave, and staff vacation time; three additional months of 1 FTE removed for staff maternity leave).

### **KEY:**

⌚ = ≤1 month of FTE time

⌚⌚ = 1-2 months of FTE time

⌚⌚⌚ = ≥ 2 months of FTE time

\$ = \$0 - \$500 (excluding staff time and other fixed costs\*)

\$\$ = \$500 - \$1,000 (excluding staff time and other fixed costs\*)

\$\$\$ = >\$1,000 (excluding staff time and other fixed costs\*)

**\*Other fixed costs include liability insurance, computer and phone node charges, office space rent, GIS software, and basic office supplies.**

## **PRIORITY AREA: MONITORING AND RESEARCH OF WATER RESOURCES**

*Goal: Collect and analyze water data and implement monitoring projects that evaluate, protect, and improve long-term water quality.*

**Conduct groundwater and surface water monitoring and research activities that can be used to establish baseline data needs, evaluate long-term trends in water quality and quantity, and assess water quality issues of concern. The District will use data collected to support decisions and the prioritization of on-the-ground activities. Projects and activities may be undertaken by the District in partnership with other agencies and organizations.**

**The District has established monitoring networks for groundwater and surface water so trends in water quality and availability can be documented. As the datasets for these networks continue to grow, the District will be able assess water quality and quantity issues of concern and changes over time.**

### ***Activity 1: Long-Term Groundwater Monitoring Network (primary ongoing activity)***

Operate the groundwater monitoring network as outlined in the District's Long-Term Groundwater Monitoring Network Plan: quarterly water level measurements and level data logger downloads from 64 wells in cooperation with MT Bureau of Mines and Geology, water level measurements on a monthly subset of wells, and water quality sampling. For FY21, this item involves limited sampling of only VOCs (volatile organic compounds) at 5 locations. Expand network and instrumentation as needed.

Time estimate includes field work as well as data management.

Sample analysis cost is \$910; supplies and equipment cost approx. \$200; travel/fuel cost approx. <\$200, logger replacement and upgrades (equipment) cost approx. \$3,612.

Total estimated cost = <\$4,922.

**Time:** ☹

**Cost:** \$\$\$

### ***Activity 2: Long-Term Surface Water Monitoring Network (primary ongoing activity)***

Operate the surface water monitoring network as outlined in the District's Surface Water Network Quality Assurance Project Plan. Measure stream flow, stream stage, download stage data loggers, and conduct water quality sampling. Water quality sampling is conducted annually at eight stations (half of all sites) on an alternating schedule. Macroinvertebrate (aquatic insect) sampling is being conducted annually for the first three years to establish baseline conditions; then sampling will occur every five years. Thirteen stations in the network have been instrumented with data loggers for continuous stage measurements, which are important for interpreting chemistry data and creating hydrographs.

Time estimate includes field work as well as data management.

Sample analysis cost is \$7,745; supplies and equipment cost approx. \$400; travel/fuel cost approx. \$400.

Total estimated cost = \$8,545.

**Time:** ☹☹☹

**Cost:** \$\$\$

### ***Activity 3: Big Sky Nutrient Monitoring***

Continue groundwater nutrient monitoring in Big Sky on eight locations in cooperation with the Big Sky Water and Sewer District (BSWSD) and MBMG. BSWSD is covering standard lab analysis costs for the calendar year 2020. It is unclear whether nitrate isotopes would help

identify the nutrient source at these locations. If nitrate isotope sampling occurs, GLWQD will cover the lab analysis costs (9 samples x \$38/sample x 2 sampling rounds = \$684). Time estimate includes travel time, field work, as well as data management. Standard sample analysis cost is covered by BSWSD; supplies and equipment cost approx. \$150; travel/fuel costs approx <\$250; NO3 isotopes TBD- cost approx. \$684. Total estimated cost = <\$1,084

**Time:** ☹☹

**Cost:** \$ - \$\$\$ (depending on nitrate isotope sampling-TBD)

***Activity 4: Planning and data collection prior to DEQ Focus Watershed Funding availability***

Montana Department of Environmental Quality (MDEQ) has announced that in 2022, “Focus Watershed” 319 non-point source pollution funding will be available to the Lower Gallatin Watershed. This funding is approximately \$500,000 per year for three consecutive years. At the March 2020 GLWQD Board Meeting, a project idea was discussed to develop a focused strategy for data collection to assess non-point source (NPS) pollution problem areas, prior to this 2022 MDEQ 'Focus Watershed' funding becoming available. Developing a strategy for how to prepare for and best utilize Focus Watershed funds would be in partnership with Gallatin Watershed Council (GWC) and potentially other partners. Investigative field work screening during this FY could include use of nitrate test strips as a first pass at assessing nutrient problem areas (\$13-\$30 for 25 test strips), or other techniques for other NPS issues such as bacteria or sediment. Time estimate includes meetings and coordination with GWC and other partners, staff time for strategy development and development of work plans needed prior to any additional data collection.

At this time no specific data collection activities are planned and estimated cost is for travel/fuel to related meetings; cost approx. <\$100. If nitrate test strip field screen occurs, test strip cost approx. \$300.

Total estimated cost = <\$400.

**Time:** ☹☹☹

**Cost:** \$

***Activity 5: Public Water Supply Nitrate Investigation Work Plan***

Develop a work plan to investigate nitrate source in Public Water Systems (PWS) with rising nitrate levels. Many PWS in Gallatin County, especially in the Belgrade area and along the Jackrabbit Lane corridor south of Belgrade show nitrate levels rising over time. This activity would generate a work plan with a budget to utilize wastewater and agricultural tracers to identify the source of the nitrate. Funding for project implementation could be sought out upon completion of this activity and project field sampling is not anticipated to begin this Fiscal Year. Time estimate includes staff time for plan creation.

Total estimated cost = \$0\* (no additional costs anticipated beyond operating fixed costs).

**Time:** ☹☹

**Cost:** \$

***PRIORITY AREA: EDUCATION, OUTREACH AND COMMUNITY ASSISTANCE***

*Goal: Improve public awareness and understanding of local water quality, water resources, and the District.*

**Increase public awareness and understanding of the importance of protecting water resources within the District by conducting educational programs and pursuing partnerships whenever possible to prevent duplication of effort.**

***Activity 6: State of the Waters Report 2020 Update***

Create 2020 State of the Waters Report to be completed by end of calendar year 2020 and published/printed in early calendar year 2021. This project is a follow up to the 2015 version created. Positive community feedback was received on the 2015 version and the original intent was to recreate the document every five years (2020, 2025, etc). This report may include items such as District project updates, updated groundwater level trends, the Surface Water Monitoring Network Watershed Health Summary, Superfund Site updates, or other items.

Time estimate includes three or more months of staff time to create and finalize this report and prepare it for printing.

Printing cost estimate = \$1,200; Adobe Illustrator software = \$22/month.

Total estimated cost = \$1,464.

**Time:** ☹☹☹

**Cost:** \$\$\$

***Activity 7: Gallatin Groundwater Report***

Develop an informational Gallatin Groundwater Report, identifying and explaining patterns seen in long-term monitoring well hydrographs throughout the valley.

Time estimate includes three or more months of staff time for data analysis (time partially overlaps with State of the Waters Report creation).

Printing cost approx. \$300; software cost overlaps with State of the Waters Report (Activity 6).

Total estimated cost = \$300.

**Time:** ☹☹☹

**Cost:** \$

***Activity 8: Education and outreach to various groups (primary ongoing activity)***

Provide education and outreach as requested for workshops, youth camps, school classes, Realtor Continuing Education courses, Gallatin Valley Farm Fair (>1,000 fourth graders) Music on Main booth(s), and others.

Time estimate includes staff time for preparation and conducting activities and presentations.

Miscellaneous supply cost approx. <\$200; travel cost approx. <\$100.

Total estimated cost = <\$300.

**Time:** ☹

**Cost:** \$

***Activity 9: Engage with local organizations (primary ongoing activity)***

Participate with partner organizations: Gallatin Watershed Council (GWC) Education and Outreach Committee, GWC Watershed Stewards Program (including assisting with annual training of Gallatin Stream Teams volunteers who will assist with the District's Surface Water Monitoring Network data collection), Gallatin Conservation District and the Association of Gallatin Agricultural Irrigators. Assist with other partner organizations and groups as requested.

Time estimate includes staff time for meetings, related events and travel time.

Travel cost approx. <\$100.

Total estimated cost = <\$100.

**Time:** ☹

**Cost:** \$

***Activity 10: Share information at conferences and professional meetings (primary ongoing activity)***

Attend conferences (MT Section American Water Resources Association and potentially others) and professional meetings as budget allows to share information and network. Participate in the annual Montana Water Quality District's Annual Meeting.

Time estimate includes preparations of presentations, staff time at events, and travel time.

Conference registration (training) cost approx. \$450; lodging cost approx. \$750; travel/fuel cost approx. <\$150.

Total estimated cost = <\$1,350 for MT AWRA meeting and more if other conferences are attended.

**Time:** ☹

**Cost:** \$\$\$

***Activity 11: Subdivision Review (primary ongoing activity)***

Conduct subdivision reviews as requested by the Gallatin County Planning Department following the GLWQD Subdivision Review Policy. These comments are provided to evaluate water related data and potential impacts to water resources along with any means of mitigation of adverse impacts. Reviews are non-regulatory in nature. Approximately 15-25 applications are reviewed by staff annually.

Time estimate includes staff time for review and document creation.

Total estimated cost = \$0\* (no additional costs anticipated beyond operating fixed costs).

**Time:** ☹

**Cost:** \$

***Activity 12: Healthy Headwaters Initiative participation (primary ongoing activity)***

*This item ranked outside of expected staff capacity but participation will occur as time allows.*

Participate in the Gallatin River Task Force Healthy Headwaters Initiative. This Initiative is a result of the water stewardship plan created by the Big Sky Sustainable Water Solutions Forum and is focused on protecting the ecological health of the Gallatin River system.

Time estimate includes staff time at meetings in Big Sky and travel time.

Travel cost approx. <\$100.

Total estimated cost = <\$100.

**Time:** ☹

**Cost:** \$

***PRIORITY AREA: INFORMATION COLLECTION AND DISSEMINATION***

*Goal: Compile, store and disseminate water quality data and information.*

**GLWQD intends to be the central repository for water quality data in the Gallatin Watershed. Water resource information generated by the District and other agencies and organizations is collected, organized, stored and made available to the public. This includes sharing information and water resource data among citizens, organizations, and governmental agencies to improve understanding and management of water resources in the District. Making sure that data collected is reliably stored for long-term use is crucial. This is accomplished by maintaining and populating internal databases and providing that data to partners for inclusion in their databases (MBMG GWIC, DEQ eWQX/STORET).**

***Activity 13: Surface Water Database***

Begin development of a Surface Water Quality Database (similar to the GLWQD Groundwater Database). This project would need to be done in coordination with the County GIS Department and therefore is largely dependent on their workload.

Time estimate includes meetings with GIS staff, data organization in preparation of database creation.

Total estimated cost = \$0\* (no additional costs anticipated beyond operating fixed costs).

**Time:** ☹☹☹

**Cost:** \$

***Activity 14: Groundwater Database Maintenance (primary ongoing activity)***

Maintain the GLWQD Groundwater Database and GLWQD Mapper in coordination with the Gallatin County GIS Department. This fiscal year this will include adding 2018-2019 Well Educated domestic well testing data into the database.

Time estimate includes formatting Well Educated data for upload into the database in cooperation with the GIS department, project data entry and other miscellaneous data entry.

Total estimated cost = \$0\* (no additional costs anticipated beyond operating fixed costs).

**Time:** ☹☹

**Cost:** \$

***Activity 15: Superfund Site review (primary ongoing activity)***

Review status reports for existing Superfund sites and advocate for effective remediation as needed.

Time estimate includes coordination with other county departments, state or federal agencies, reviewing documents and data.

Total estimated cost = \$0\* (no additional costs anticipated beyond operating fixed costs).

**Time:** ☹ - ☹☹

**Cost:** \$

***PRIORITY AREA: ORGANIZATIONAL CAPACITY AND QUALITY SERVICE***

*Goal: Maintain sustainability of the District's activities and serve the rapidly growing Gallatin community.*

**Providing quality service within budget limitations coupled with projected increasing demand for services requires the District to be proactive in our efforts to respond successfully.**

***Activity 16: Public assistance and well testing assistance (primary ongoing activity)***

Assist the general public and respond to inquiries via phone, email, and in person. Serve as local facilitator for MSU Extension Water Quality Well Educated Program. Provide information to citizens as requested. Assemble all water isotope data for Gallatin County and share with MSU and other Montana University researchers.

Time estimate includes staff time for response to inquiries, assisting with well testing information, and retrieving data.

Total estimated cost = \$0\* (no additional costs anticipated beyond operating fixed costs).

**Time:** ☹

**Cost:** \$

***Activity 17: District website maintenance (primary ongoing activity)***

Maintain District website with up to date announcements, relevant information, electronic versions of reports, fact sheets, brochures and other information.

Time estimate includes staff time for maintaining and updating the website.

Website cost approx. \$100/year.

Total estimated cost = \$100.

**Time:** ☹

**Cost:** \$

***Activity 18: District Manager continuous tasks (primary ongoing activity)***

Continuous GLWQD Manager tasks: evaluate revenue-expenditure projections for current and past FY (ongoing). Create Annual Report of Activities and Services. Create and update staff Individual Work Plans with timeline. Hold weekly staff check-ins. Organize and prepare for GLWQD Board Meetings. Prepare annual work plans, annual budgets, review documents and reports created by staff, provide guidance, direction and assistance on District projects.

Time estimate includes manager staff time for these tasks and all staff time for weekly meetings.

Total estimated cost = \$0\* (no additional costs anticipated beyond operating fixed costs).

**Time:** ☹ ☹ ☹

**Cost:** \$

***Activity 19: Continuing Education for staff (primary ongoing activity)***

*This item ranked outside of expected staff capacity but participation will occur as time and funds allow.*

Continuing education for staff through relevant professional training (both free and paid) in-person and online.

Time estimate includes staff time spent in training.

Total estimated cost = \$0-\$750.

**Time:** ☹

**Cost:** \$\$

Updates on progress toward achieving work plan activities will be presented to the Board of Directors in December 2020 and June 2021.