

Gallatin Local Water Quality District Annual Work Plan for Fiscal-Year 2012

Prepared
For

Gallatin Local Water Quality District Board of Directors

By

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*Approved by Board of Directors
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PURPOSE

This document outlines the Gallatin Local Water Quality District's priorities for Fiscal-Year 2012 (July 1, 2011 through June 30, 2012). These priorities are based on the District's long-range work plan entitled Gallatin Local Water Quality District Five-Year Strategic Plan for Fiscal Years 2010 Through 2014. The Five-Year Strategic Plan was updated and approved by the Board of Directors on October 7, 2010 to incorporate work objectives associated with newly added land areas to the District to the south, west, and north of the original District boundary. A copy of the Five-Year Strategic can be downloaded from the District website at www.gallatin.mt.gov/GLWQD. The Fiscal-Year 2012 priorities are focused on specific objectives and tasks, whereas the Five-Year Strategic Plan is focused on long-range goals and objectives.

MISSION STATEMENT AND WORK APPROACH

Mission Statement

The mission of the Gallatin Local Water Quality District is *“To protect, preserve, and improve the quality of surface waters and ground waters within the Local Water Quality District.”* While the District's mission statement is focused on surface-water and ground-water quality, water quantity issues are also important and will be addressed.

District Service

District staff will operate under the general philosophy that the District is a place where citizens can get satisfactory answers to questions related to water resource issues. The District will strive to be a clearinghouse for information, and assist citizens with contacting other agencies and organizations as needed. This same level of service will be extended to local organizations and governmental agencies. Recognizing that timely response is important, District staff will strive to return phone calls, respond to emails, and respond to complaints in a timely manner.

Watershed Perspective

A watershed perspective will be used to plan and carry out District activities. With a watershed perspective both ground water and surface water resources are evaluated within the context of flow patterns, source areas, recharge areas, discharge areas, climate, geology, and land use patterns. For example, when interpreting the results of a water quality sample collected from a well, the flow path the ground water has likely taken, the geology of the source area, the geology of the local area, and land uses in the area would be considered.

Ground Water/Surface Water Interaction

Development of a better understanding of the interactions between ground water and surface water will be an important objective of the District. Although limited data are available, the hydrogeologic setting within the District suggests there is significant interaction between ground water and surface water due to the presence of shallow ground water in many areas, an extensive network of surface-water features, and the extensive use of irrigation within the boundaries of the District. The interconnection of ground water and surface water will be considered when planning data collection activities.

Work recently completed in the River Rock area showed that significant recharge of ground water occurs in the western portion of the area due to leakage from the West Gallatin River. Additional work being completed by the Montana Bureau of Mines and Geology along the West Gallatin River, from Four Corners to Manhattan, should greatly improve the understanding of how the river interacts with ground water in the Gallatin Valley.

Non-Regulatory Focus

The Gallatin Local Water Quality District does not administer or enforce any rules or regulations, and will continue to function as a non-regulatory agency. Direct District involvement in enforcement of regulations developed by other Federal, State, or local governmental agencies is not anticipated. 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 resources within the District and the regulatory activities may have an impact on the District's Mission. While the District's programs will 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.

Statutes governing formation and operation of local water quality districts in Montana do allow districts to pursue enforcement authority from the State to enforce provisions of the Montana Water Quality Act as allowed by MCA 17.30.1806 if a significant problem warranted the action. This authority is granted on a case-by-case basis only. If an emergency or significant water quality issue warranted it, the Board of Directors, with concurrence from the Gallatin County Commission, could authorize this type of regulatory action. It should be noted that this statutory authority has never been pursued since the District was formed in 1997, and there are no current plans to pursue this authority.

To aid in protecting water resources within the boundaries of the District, staff will aid local citizens by forwarding valid complaints regarding regulatory issues to the agencies responsible for enforcement of regulations designed to protect water resources. In addition, 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. As an example, if District staff document a possible unlicensed landfill site while compiling inventory data, the District may forward the site information to DEQ for follow-up, but will not at DEQ's request go to the site and collect samples or information for enforcement purposes.

FISCAL YEAR 2012 PRIORITIES AND ONGOING ACTIVITIES

Objectives for fiscal-year 2012 are listed below in bold type. The objectives are organized based on priority from high to low. Under each objective specific tasks are listed to meet the objective. A schedule for completion of the work is attached. Staff will focus first on completing high priority objectives, then medium priority objectives, and finally, low priority tasks within the limits of staff time and budget. Ongoing activities will be completed throughout the year. It is important to note that the prioritization does not necessarily reflect overall importance, but rather provides guidance for completion of working during the fiscal-year. For example, making improvements to the District's website is not a low priority overall, but given the objectives and tasks selected for completion in the fiscal-year it is a lower priority than those listed as high or medium priority.

HIGH PRIORITY

1. DEQ 319 Program-Gallatin Ground Water Project

The District was awarded a grant to fund a ground water study designed to look for changes in ground water quality (cumulative impacts) in areas of high density subsurface disposal of treated wastewater. The grant is funded through the DEQ 319 Nonpoint Source Program. Work started on the project in July 2011 and will continue through July 2013.

- a) Draft a Sampling and Analysis Plan (SAP) and obtain DEQ approval of the SAP.
- b) Edit and update the District's Septic System Geographic Information System (GIS) layer.
- c) Edit and update the District's existing Public Sewage System GIS layer.
- d) Convert Septic System and Public Sewage System GIS layers into a nitrogen loading grid layer.
- e) Select cumulative impact focus areas based on the GIS mapping.
- f) Begin selection of sampling locations around and within selected focus areas.
- g) Construct a spatial data layer of the Source Water Delineation areas for public water supplies.

2. Ground-Water Quality Database

The District has a functional Microsoft Access® database of water quality data collected within the District. Work was completed last fiscal year to add water quality data to the database and this work will continue throughout FY 2012. Data from the Access® database can be imported into GIS to create a spatial water-quality data layer, but there are problems and limitations with importing the data into GIS. During FY 2012 the District will work with the Gallatin County GIS Department to determine if the Microsoft Access® database can be imported into a Microsoft SQL Server® database, which would resolve the limitations. A specific task of the DEQ 319 Nonpoint Source Program-Gallatin Ground Water Project is to "Refine and Enhance the GLWQD Ground Water Database."

- a) Continue to add previous and ongoing ground-water quality data to the database.
- b) Work with the County GIS Department to determine if data from the District's Microsoft Access® database can be periodically imported into Microsoft SQL Server® for use in GIS.

3. Ground Water Monitoring Well Network

The District maintains and monitors a network of wells throughout the District in cooperation with the Montana Bureau of Mines and Geology(MBMG)-Statewide Monitoring Program. Currently the network consists of 51 wells that includes a mix of monitoring wells owned by the District, monitoring wells that are part of the MBMG Statewide network, and domestic wells that are part of the MBMG Statewide network. The District maintains water-level monitoring probes in 21 of the wells, all of which are owned or under the control of the District. The probes measure the water level and water temperature daily and record it. The wells are also periodically sampled for water quality on a varying schedule depending on the ownership of the well. Additionally the wells may be sampled for specific studies. Well logs, and all of the water level and water chemistry data collected from the wells, are available to the public via the MBMG Ground Water Information Center website at <http://mbmggwic.mtech.edu>.

- a) Visit well sites and measure water levels on a quarterly basis per the MBMG MOU.
- b) Visit well sites with water-level probes and download data on a quarterly basis.
- c) Establish SOP for processing water-level probe data and submitting the data to GWIC.
- d) Submit previously collected and processed water-level monitoring probe data to GWIC.
- e) Process water-level probe data semi-annually and submit data to GWIC.
- f) Establish at least one (1) new monitoring well location in the Churchill area.
- g) Establish at least one (1) new monitoring well location in the Logan area.
- h) Install at least two (2) additional water-level monitoring probes in network wells.

4. Logan Ground Water Assessment

The unincorporated town of Logan is located within the area recently added to the northern portion of the District. The town is situated on a small alluvial terrace adjacent to the Gallatin River and is surrounded by exposed bedrock. Homes in the area are on small lots and they all use individual wells for water supply and individual septic systems for wastewater treatment. There have been several complaints of surfacing sewage in the town in the past. Nitrate levels above the Safe Drinking Water Standard (10 mg/l) have been documented in two wells in the town area. The District will collect water quality samples from wells in the area on a volunteer basis and review existing information to evaluate and document water quality and assess the hydrogeology of the area. The purpose of this work is to evaluate the magnitude and extent of nitrate contamination in the ground water, and determine if there is a health risk to residents in the area. The District will coordinate this project with the Environmental Health Division of the Gallatin City-County Health Department.

- a) Draft Logan Area Ground Water Assessment Work Plan for Board approval.
- b) To the extent practical, inventory wells and septic systems in the area.
- c) Collect water quality samples from wells on a volunteer basis.
- d) Assess the hydrogeology of the area using well logs and other available information.

5. River Rock Area Ground Water Assessment Final Report

The area located southwest of Belgrade, including the River Rock subdivisions and numerous others, has a history of issues associated with elevated levels of nitrate. In 2007 homeowners near the River Rock wastewater treatment plant complained that their well water was potentially being degraded due to the treatment plant. The District completed some initial well sampling in the summer of 2007 and extensive water quality sampling in 2008 and 2009. Some additional sampling was done by the District and others in 2009 and 2010. While all of the field work for this project has been completed, the final report is still being prepared.

- a) Complete final report and distribute to interested parties by the end of October.

6. Forest Park Waste Water Treatment Plant Ground Water Quality Assessment

The Forest Park mobile home park is located in Four Corners, along the east bank of the West Gallatin River. Two ground water monitoring wells are situated on the north and west sides of the rapid infiltration beds. Over the years there have been numerous complaints and concerns with the parks wastewater treatment plant (WWTP), because it is in an area with high ground water, and it is located close to the river. The District has agreed to work with DEQ and the system operator to collect effluent samples and ground-water samples three (3) times during the year. The purpose of the sampling is to better understand how the system functions and to determine whether it may be contributing to undesirable aquatic life in adjacent surface water or otherwise negatively impacting ground-water quality.

- a) Assist DEQ with development of ground water sampling work plan
- b) Collect three (3) sets of ground water and effluent samples from the WWTP in fall 2011, late winter 2012, and summer 2012.
- c) Review sampling data and prepare summary report for DEQ.

MEDIUM PRIORITY

7. Bozeman Creek Enhancement Project

The Bozeman Creek Enhancement Project is spearheaded by a working committee of community organizations, city and agency staff, and landowners with a goal of developing a long-term vision for Bozeman Creek from Goldenstein Lane to the confluence with the East Gallatin River. Efforts include developing a 20-year plan, and identifying and beginning work on high-priority, early-action projects.

- a) Provide staff participation on the BCEP Steering Committee.
- b) Attend associated public outreach meetings and tours.
- c) Administer the DNRC RRGL Planning Grant for Hydraulic Modeling of Bozeman Creek.

8. Volunteer Stream Monitoring Program-Gallatin Stream Team

The Gallatin Stream Team is a citizen-based volunteer stream monitoring program developed and implemented in partnership with the Greater Gallatin Watershed Council. The goal of this program is to provide a framework for citizen volunteers to collect scientifically-credible water quality data for long-term trend analysis; supplement the GLWQD Stream Monitoring Network; identify problems requiring further attention or study; educate residents on connections between land use and water quality; and have the data available for use by state and local agencies and decision-makers.

- a) Coordinate annual volunteer monitor training and 3 field season monitoring days.
- b) Oversee technical aspects of the program including updating QAPP, SOPs, and field forms.
- c) Provide technical oversight of volunteer data collected including laboratory data QA/QC.
- d) Input volunteer monitoring lab data into MT DEQ EQUIS database.

9. Continue to Seek Funding for Establishment of a Surface Water Monitoring Network

In FY 2011 District staff drafted a plan for establishment of a surface water monitoring network to parallel the ground water monitoring network. While the District desires to proceed with establishment of a surface water monitoring program with designated long-term monitoring sites, the current budget does not allow it. Current plans are to somehow incorporate the efforts of the Volunteer Stream Monitoring Program (#7 above) into the surface water monitoring network. This remains a long-term goal and staff will continue to seek funding to establish the surface water monitoring network during FY 2012.

- a) Evaluate potential partnerships with other agencies and organizations.
- b) Continue to seek potential sources of funding for surface-water monitoring.

10. Public Education

Public education to inform citizens about water resources and how to protect them is an ongoing objective for the District. It is likely that during the year unanticipated opportunities will arise to inform and educate the public about water resources within the District. The following list is considered a reasonable work list for this fiscal year due to the work load anticipated for the 319 Ground Water Project (see #1).

- a) Draft an annual report to be distributed via email, the website, and limited print copies.
- b) Complete and distribute a fact sheet on fluoride in ground water within the District.
- c) Complete and distribute a fact sheet on iron bacteria in well water.
- d) Hold at least two workshops to provide information to homeowners on maintenance of wells and septic systems.
- e) Continue to promote and distribute *Well Educated* water testing kits in cooperation with MSU Extension Water Quality, including advertizing of the program in the spring.

LOW PRIORITY

11. Storm Water

The City of Bozeman has an MS4 Stormwater Permit issued by DEQ. The District is referenced in this permit as a partner organization for providing assistance and public education. DEQ recently completed an audit of the City's Stormwater Management program under the permit. The final report on this audit is currently being prepared, and the report is expected to highlight areas where improvements can be made.

- a) Review the City of Bozeman MS4 Stormwater Management Program Audit Report.
- b) Meet with City staff to determine how the District might assist with public education.
- c) Distribute information to the public on how to prevent contamination of stormwater.

12. Public Water Supplies

The District will be constructing a Geographic Information System (GIS) spatial data layer of the Source Water Delineation areas for public water supplies within the District. This work is included within the DEQ 319-Ground Water Project (see #1 above). Due to workload, no other specific projects dealing with public water supplies are anticipated. The following tasks will be completed as opportunities arise.

- a) Continue to pursue funding from DEQ to update the Potential Contaminant Source Database.
- b) Assist public water supply operators with information upon request.
- c) Assist the public with accessing information on PWS monitoring data upon request.

ONGOING ACTIVITIES

13. Phone Calls, Complaints, and Requests for Information

Strive to respond to phone calls from the public, agencies, and others within 2 business days.
Strive to respond to complaints within 2 business days.
Strive to respond to requests for information within 5 work days.

14. Website Maintenance

Continue to maintain and improve the District's website.
Update information on the Bozeman Solvent Site cleanup.
Update information on the Idaho Pole Site cleanup.

15. Cooperative Programs

Work with the Greater Gallatin Watershed Council.
Work with the Association of Gallatin Agricultural Irrigators.
Work with other organizations and agencies as needed, including, local schools.

CONTACT INFORMATION

The Gallatin Local Water Quality District office is located in the Judge Guenther Memorial Building at the following address:

**Judge Guenther Memorial Building
1709 West College Street, Suite 104
Bozeman, Montana 59715**

For information or questions regarding this work plan, or the current status of District activities, contact Alan English at the address listed above, or by phone at (406) 582-3148, or email at alan.english@gallatin.mt.gov.

Additional staff contacts:

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You can also visit our website at www.gallatin.mt.gov/GLWQD!