Your Home Watershed Update

A semi-annual newsletter for Gallatin Watershed residents

Promoting conservation and enhancement of our water resources while supporting the traditions of community, agriculture and recreation.

Spring 2009

In this Issue

Quotable Quotes

"When you put your hand in a flowing stream, you have touched the last that has gone before and the first of what is still to come."

- Leonardo da Vinci

GGWC and DEQ Team Up to Assess Local Water Quality

In the summer of 2008, the Greater Gallatin Watershed Council (GGWC) teamed up with the Montana Department of Environmental Quality (DEQ) and Oasis Environmental, Inc. from Livingston, MT to sample water quality data on local streams. Several streams in the Gallatin watershed have been identified by the DEQ as 'not meeting water quality standards' due to pollutants that have been found to increase risks to human health and aquatic life. To evaluate existing water quality conditions and develop DEQ's Total Maximum Daily Load (TMDL) standards, 60 water samples throughout the the watershed were analyzed. The samples provided data on nutrients (nitrogen and phosphorus), e.coli bacteria, suspended solids, and a variety of field parameters (dissolved oxygen, conductivity, and water temperature). In addition to water quality samples collected, stream flow and algae levels were measured at each site. This sampling activity marks the beginning of a multi-year evaluation of pollutant sources and their impact on local streams in the Gallatin watershed.

East Gallatin River near the Water Treatment Plant, Bozeman. Photo Courtesy GGWC

Results from 2008 sampling activity suggest that bacterial and nutrient-enrichment is impairing human health and recreational uses of several streams in the watershed. Additional water quality sampling is planned for the summer of 2009 to verify these stream conditions, and to further evaluate the relative contribution nutrients and e.coli inputs from a variety

"TMDL" continued page 2

Install a Rain Garden to Improve Water Quality

Homeowners can help reduce impacts to our water in the Gallatin watershed by installing a rain garden. A rain garden is a planted depression that allows rainwater and stormwater runoff from impervious urban areas like roofs, driveways, walkways, and compacted lawn areas the opportunity to be absorbed into the ground (http://en.wikipedia.org/wiki/Rain_garden). Plant selection and garden design location are deliberately placed in areas that can withstand moisture extremes and nutrient concentations. Additionally, a rain garden helps:

* Increase the amount of water that filters into the ground, which recharges local and regional aquifers.
* Protect communities from flooding and drainage problems.
* Protects streams from harmful pollutants carried by urban storm water, such as lawn fertilizers and pesticides and oil and other fluids that lead from cars.
* Enhance the beauty of yards and neighborhood.
* Provide valuable habitat for birds butterflies and many beneficial insects.

Rain Gardens: A How To Manual for Homewoners, http://www.dnr.state.wi.us/org/water/wm/dsfm/shore/documents/rgmanual.pdf

Other resources are available to help you create a rain garden including the Department of Natural Resources and Conservation Service, http://www.mt.nrcs.usda.gov/technical/ecs/water/lid/raininfo.html, and the Low Impact Development Center, http://www.lowimpactdevelopment.org/.

Letter from the GGWC Chair

Dear Gallatin Valley Residents and Visitors,

With spring knocking on our doors, it's a natural time for those of us living in the Greater Gallatin Watershed to reflect on our progress since our Fall 2008 Newsletter. We've been busy!

Our winter season started off with a bang with some respectable snowpack accumulating both in the Valley and up in the mountains of the Greater Gallatin. January proved to be a fairly dry month, at least in the north end of the Gallatin Valley. As of this writing, those of us focused on this year's water supply are optimistic about receiving more of that white stuff that blanketed the watershed in late February. Keep it coming!

GGWC's Annual Meeting on January 21 in Bozeman was a tremendous success! In addition to getting the word out about the work that GGWC is doing, the event also raised upwards of $2,700. Thanks again to all those who made this meeting and fund-raiser a raging success. Look for an even better event coming up in early 2010!

GGWC is gearing up for a busy spring and summer season. On our docket is a stormwater tour in the north end of the watershed and the second consecutive season of our Volunteer Water Quality Monitoring Program. The Thompson Creek Watershed Group north of Belgrade has geared up efforts to work with USDA Natural Resources Conservation Service, MT Fish, Wildlife and Parks, and private consultants to get restoration projects moving on the Thompson Creek. Because this is one of our "listed streams" that does not meet state water quality standards for sediment being transported in the stream, we're excited about this project taking wing this year.

Good news came to GGWC in January when the Gallatin Conservation District announced it will continue its partnership with GGWC via a cooperative memorandum of understanding. Not only does the agreement enable the two organizations to work closely together on conservation projects and activities, but it provides much-needed funding to GGWC to continue its priority work. Many thanks to the GCD Board of Supervisors and everyone who helped put this valuable partnership together again this year!

We trust that you'll find this latest version of our newsletter both informative and interesting. We also hope that it will encourage new volunteers to step forward to help GGWC advance its mission of conservation of our watershed. Please contact us if you have questions or wish to learn more. Thank you for helping us to conserve our water … our home!

Sincerely,

Tom Hinz, Chair

"TMDL" Continued

Dense algae in the lower East Gallatin River.

of different sources throughout the watershed. Stream sediment and habitat assessments are also planned for the summer of 2009.

For a copy of the 2008 Lower Gallatin Water Quality Sampling Report contact the GGWC. This report provides a brief summary of sampling activity, sampling locations, and data results for the 2008 field sampling season. For more detailed information, complete data results, supporting documentation (sampling and analysis plans, quality assurance review, analytical lab reports), or information on DEQ's TMDL development process and water quality standards evaluation, contact DEQ's project manager, Pete Schade at pschade@mt.gov.

Pete Schade is a Senior TMDL Planner for the Montana Department of Environmental Quality

Did You Know?

Soil and silt in the water increase water temperature and murkiness, which harm fish and their food supply.

Kids Korner

Tidbits from Tom the Trout

Why is a fish so easy to weigh?
Because it has its own scales!

Did you know that fish have been around for 500 million years!

Tom is a Westslope Cutthroat Trout, the only native trout in the Gallatin watershed.

Quotable Quotes

"The river is the report card for its watershed."

- Alan Levere

Gallatin Conservation District News

By Marcie Murnion-Learn

Greetings from the Gallatin Conservation District! Your District has some great educational workshops coming up. There is no cost to attend workshops, all workshops held from 6-8 p.m. Please rsvp at 522-4016 or email: daniel.durham@mt.nacdnet.net.

April 2nd, Land Management 101. USDA Building, 3710 Fallon St. Explore the basics of soils, plants, weeds, water resources, animal behavior, pastures, and overall land management.

April 14th, Pine Beetle Overview. USDA Building, 3710 Fallon St. Learn to recognize infected trees and how to prevent pine beetle attack.

April 21st, Pine Beetle Overview. Belgrade Senior Center, 92 W Cameron Ave. Repeat of April 14th; held in Belgrade to accommodate neighboring communities

April 23rd, Weeds & Sprayer Calibration. Fairgrounds, 901 North Black, in conjunction with the Weed District. Learn weed ecology, weed ID, and sprayer calibration. All attendees will be entered into a drawing to win a backpack sprayer.

May 5th, Weeds & Sprayer Calibration. Central Valley Fire Hall, 205 E Main, Belgrade. This same session will be held in Belgrade to help accommodate neighboring communities. All attendees will be entered into a drawing to win a backpack sprayer.

Upcoming workshops will be posted on our website at: www.gallatincd.nacdnet.org.

Marcie Murnion-Learn, is the District Administrator for the Gallatin Conservation District, Bozeman, MT.

The Rural View of Stormwater

By Susan Duncan

An irrigation ditch near Belgrade. Photo courtesy of Jennifer Mohler

In the country, rainfall soaks into the soil. Any excess filters down to the water table and eventually, into springs and streams. Precipitation is viewed as a blessing.

In urban areas, rooftops and pavement allow no infiltration and the water runs off. Run off water carries fertilizers, herbicides and pesticides, pet manure from lawns and petrochemicals from roadways. If the runoff is heavy, it can carry soil, leaves, and trash in suspension. Stormwater is viewed as waste-water that needs to be removed as soon as possible.

When urban development encroaches on farmland the two views collide. Developers want to remove waste water. Irrigation ditches going through a subdivision seem like a ready solution. Irrigation ditches are engineered to carry water by gravity flow (like streams), but they are designed to carry only the amount that the farmers have a right to divert from the river or stream source. Storm water carries pollutants that farmers don't want on their fields. "Extra water" from stormwater diversions during the irrigation season may overwhelm the capacity of the system. In winter, such additions can freeze in the ditch and cause flooding. Farmers get calls from angry homeowners about flooding.

But these problems can be negotiated. The City of Bozeman and Farmer's Canal Company have a written agreement about stormwater runoff diverted into the Canal. Spain-Ferris Ditch has an agreement with the gravel pit east of Belgrade for disposal of water from the pit. Ditch company representatives, planners, and developers are learning to discuss their needs earlier in the development process before problems arise.

Susan Duncan is a board member of the GGWC and the Association of Gallatin Agricultural Irrigators (AGAI), Belgrade, MT.

Did You Know?

Ten gallons of water are needed to refine one gallon of gasoline!

Help Support the Gallatin Watershed

Enclosed is my tax-deductible donation payable to the Greater Gallatin Watershed Council:

_____ $15 _____ $25 _____ $50 _____$75 _____ $100 _____ $Other

_____ I am interested in volunteering my valuable time to help the GGWC

Name _____

Address _____

City, State, Zip _____

Tel: _____ Email _____

THANK YOU FOR YOUR CONTRIBUTION

What Have We Been Up To?

The Greater Gallatin Watershed Council has been busy over the past several months and we would like to share the highlights with you

New Board Members Named. The GGWC welcomes four new members to its Board of Directors:

- Peter Skidmore - Principal of Skidmore Restoration Consulting.
- Jennifer (J.P.) Pomnichowski - A second-term legislator in Montana's House of Representatives.
- Doug Fletcher - Doug has served as Co-Founder and CEO of Bozeman based North Star Counsulting Group.
- Kristin Gardener - Kristin is a resident of Big Sky and is the Executive Director of the Blue Water Task Force.

The GGWC would also like to thank Mary Jane McGarity for serving on the GGWC Board of Directors from 2005 to 2008.

Volunteer Water Quality Monitoring Mini-Symposium. The GGWC hosted a mini-symposium, February 26, 2009, at the the Bozeman Public Library. Volunteers from each of the *Gallatin Stream Teams* shared their experiences and lessons learned from each stream monitored, Bozeman Creek, Bridger Creek, and Thompson Creek. Stream Teams learned how the data they collected is being used by the Montana Department of Environmental Quality for use in the Lower Gallatin TMDL Restoration Program.

The GGWC and Gallatin Stream Teams will be back in the water in 2009! Interested residents of the Gallatin watershed are encouraged to contact the GGWC for more information.

Low Impact Development Guidelines and Stormwater Workgroup - Progress Report. The GGWC's Stormwater workgroup successfully presented the Low Impact Development (LID) Guidelines to the Gallatin Planning Board in January, 2009. Stay tuned for more presentation in the coming year!

Annual GGWC Fall Tour. The 3rd annual Fall tour was held October 29th, 2008. Once again, the tour was well attended. Tour participants learned how upstream activities affect Bozeman Creek, the East Gallatin, and beyond. GGWC would like to thank all the speakers who generously donated their time. Sponsors included, First Interstate Bank, Gallatin Conservation District, Gallatin Association of Realtors, and the Gallatin Local Water Quality District.

The GGWC would like to thank the Gallatin Conservation District for their support funding this newsletter.

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Visit the GGWC at the MOSS Watershed Festival, May 16th, 2009!