

## BIG GOOSE WATERSHED CONTROL PLAN by Cory Medill, City of Sheridan

In 2015 K-COE ISOM completed a Watershed Control Plan for the Upper Big Goose Creek Watershed. This plan was initiated by US Environmental Protection Agency (EPA) regulations to help control microbial pathogens in surface water supplies for public water systems. Because the City of Sheridan and SAWSJPB both receive their water from Big Goose Creek, evaluating the watershed as a whole in addition to monitoring water quality in the creek is a necessary holistic approach.

The Watershed Control Plan (WCP) was made official by EPA in January of 2018, and provides an outline for identification of potential and/or possible sources of one waterborne pathogen in particular called *Cryptosporidium* (Crypto). In addition, the control plan addresses measures that can be implemented for control of potential pollutants. The effort for implementing this plan is a partnership between the City of Sheridan, Sheridan County, the US Forest Service, Sheridan County Conservation District, and SAWS.

Implementation has been guided by a set of action items within the WCP. At the forefront of these action items is additional monitoring for Crypto. Sampling for Crypto has been performed on a monthly basis at the City's raw water intake facility since 2004. Per the WCP, 3 additional sampling sites have been located within the watershed and will be sampled 3 times per year.

Another important action item is creating awareness of where our source of water originates. Users of the watershed in particular should be aware that the land and water in which they live and recreate also provides the source of water for a large community. In an effort to create awareness, the working group is having signs placed in the watershed to remind citizens where our water comes from and that we can all play a part in keeping it clean.



Other efforts for implementation include but are not limited to: installation of Best Management Practices throughout the watershed to help control runoff, educational materials and/or programs for school aged children on what a watershed is and where we get our drinking water, assessment of toilet facilities within the watershed, and a watershed sanitary survey conducted by EPA to help identify potential issues.

For more information on the Sheridan Upper Big Goose Creek Watershed Management Plan, please visit the City of Sheridan's website at:

<https://sheridanwy.net/departments/utilities/water>

## 2018 GOOSE CREEK WATER QUALITY MONITORING

SCCD monitored 18 sites during the 2018 season; 10 stations on the mainstems of Big Goose, Little Goose, and Goose Creek, and eight tributary stations. Benthic macroinvertebrate collections and habitat assessments were also performed at eight of the stations in October. The parameters monitored include water temperature, pH, conductivity, dissolved oxygen, discharge, turbidity, and *E. coli*. Continuous water temperature loggers were used to monitor instream temperatures at seven stations. Monitoring has occurred every three to four years since the 2001-2002 Assessment. The purpose is to document changes in water quality over time. Collected data is used to prioritize projects and efforts as conditions change. The 2018 Goose Creek Interim Monitoring Report is currently in the works.



## FINANCIAL ASSISTANCE AVAILABLE FOR QUALIFIED PROJECTS

Through federal and state grants, the SCCD offers financial assistance for projects that benefit water quality in impaired watersheds. Typical projects include installing fencing or stockwater systems to minimize livestock access to waterbodies, relocating corrals or animal feeding areas away from waterbodies, and replacing eligible septic systems to eliminate sewage discharges. Descriptions of select projects are available on SCCD's website:

[www.sccdwy.org](http://www.sccdwy.org)

If you would like to apply for cost-share funds through one of SCCD's many water quality improvement programs, we encourage you to contact SCCD to determine if the project is eligible and to learn more about the application process.

# GOOSE CREEK WATERSHED STEERING COMMITTEE MEETING

The annual Goose Creek Watershed Steering Committee Meeting will be held on **Tuesday, February 26th at 6:00 p.m.** at the **Century 21 BHI Realty Conference Room** (101 South Main Street).

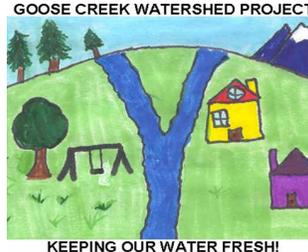
The Goose Creek Watershed Steering Committee, which is comprised of landowners and interested parties, provides input and recommendations to the SCCD for implementing resource programs within the Goose Creek Watershed.

The meeting is open to anyone living in or interested in the Goose Creek Watershed.

**Join us on February 26th, your input is always welcome!**

*Many thanks*

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## SHERIDAN MUNICIPAL WATERSHED WILDFIRE HAZARD MITIGATION ASSESSMENT

by Cory Foreman, HDR Inc.

The Big Goose Creek Watershed is currently the focus of a watershed assessment evaluating the potential risks to Sheridan's water supply, from a potential wildfire in the watershed. The City of Sheridan and Sheridan Area Water Supply (SAWS-JPB) are working with Wyoming Water Development Commission (WWDC) along with the consulting team consisting of Anchor Point, RESPEC, and HDR to conduct the Sheridan Municipal Watershed Wildfire Hazard Mitigation Assessment (MWWHMA) to support the objectives outlined in the Final Report of the Governor's Task Force on Forests, which recommended evaluating the potential risks to water supplies, posed by wildfire. Sheridan's municipal water is withdrawn from Big Goose Creek as it exits Big Goose Canyon at the base of the Bighorn Mountains, making Sheridan's water supply potentially vulnerable to impacts from wildfire.

The goal of the Sheridan MWWHMA is to create a watershed management plan that identifies and prioritizes locations within the municipal watershed where site specific fuels treatments can be placed to prevent or minimize postfire hydrologic impacts in drainage areas that contribute to the municipal supply reservoir and infrastructure. At the foundation of the hazard assessment are technical analyses of expected wildfire impacts and postfire hydrologic response to identify areas that present the greatest risk to municipal water supply. The areas are then prioritized based on the hazard assessment as well as information from resource managers about factors that can facilitate or impede the implementation of forest treatments. This project is a collaborative effort that includes the project team, WWDC, SAWS-JBP, City of Sheridan, Sheridan County, State Forestry, Bighorn National Forest, and multiple local stakeholders.

## STREAMSIDE STEWARDSHIP

Every year during and after spring runoff, we receive calls from folks concerned about bank erosion and flooding. Often the concerns are related to fears about loss of infrastructure or property. While these concerns are certainly understandable, an eroding bank is not necessarily cause for alarm. Erosion is a natural stream process and some level of continual channel adjustment is expected and desired in a healthy stream. Similarly, deposition of material eroded elsewhere is a natural part of stream function. Both of these functions occur because streams are constantly trying to balance their water and sediment supplies. Streams are dynamic systems, constantly adapting to changing conditions.



Removal of deep-rooted, woody cover to enhance the view of the stream, can contribute to bank instability. Similarly, closely mowing, grazing, or producing crops or hay up to the stream edge removes vegetation, and weakens root systems and the plant's regenerative ability, which limit the plants' ability to hold banks in place. Vegetation is the best protection for streambanks, and when managed appropriately is self-regenerating. Planting willow cuttings can be an effective method for controlling erosive banks. All types of willows can be established from cuttings. Cutting and planting needs to be completed in early spring before willows break dormancy. Some success has also been seen with fall establishment. Cuttings must be planted deep enough to reach the water table and be protected from deer, livestock and other wildlife. The SCCD offers assistance for cutting establishment on a first come, first serve basis.