Oklahoma Source Water Protection Program

General Best Management Practices

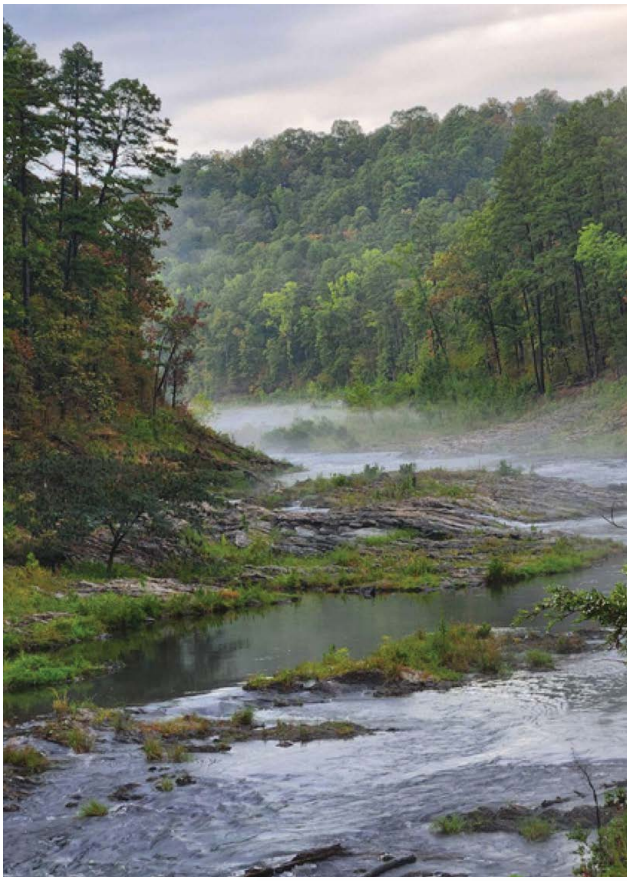
Updated July 2024

What is Source Water Protection?

Source water protection is the act of protecting the source of an area's drinking water. Various types of water resources can be considered a source including groundwater, streams, rivers, and lakes. All of these resources are susceptible to varying types and levels of contamination, so it is important to know how to best approach protection efforts in your specific protection area.

Understanding your Source Water

The only way to know how to protect a system's source water is to understand what it is susceptible to. As part of the Source Water Protection (SWP) Program at Oklahoma DEQ, an assessment is conducted on a system's source water and the surrounding area, otherwise known as the Source Water Protection Area (SWPA). This assessment includes delineating a SWPA, determining any Potential Sources of Contamination (PSOCs) in that area, and quantifying the source's overall susceptibility to these PSOCs.



Utilizing the results of a source water assessment, a SWP Plan should then be developed. This plan outlines areas of greatest concern, SWP projects that could be implemented, and potential sources of funding for those projects.

There is a wide array of projects that can be implemented in a protection area, but a good place to start is with implementing relevant Best Management Practices (BMPs). The drinking water system'semergency response plan should be reviewed following completion of a SWP plan to ensure the system is prepared for potential emergencies related to PSOCs.

All personnel of the drinking water system should know where the SWP Plan is and how to interpret it. This plan should be treated as a living document that gets updated as the system continues to develop or if any major changes occur to the SWPA.

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Groundwater BMPs

Own Land Around Wells

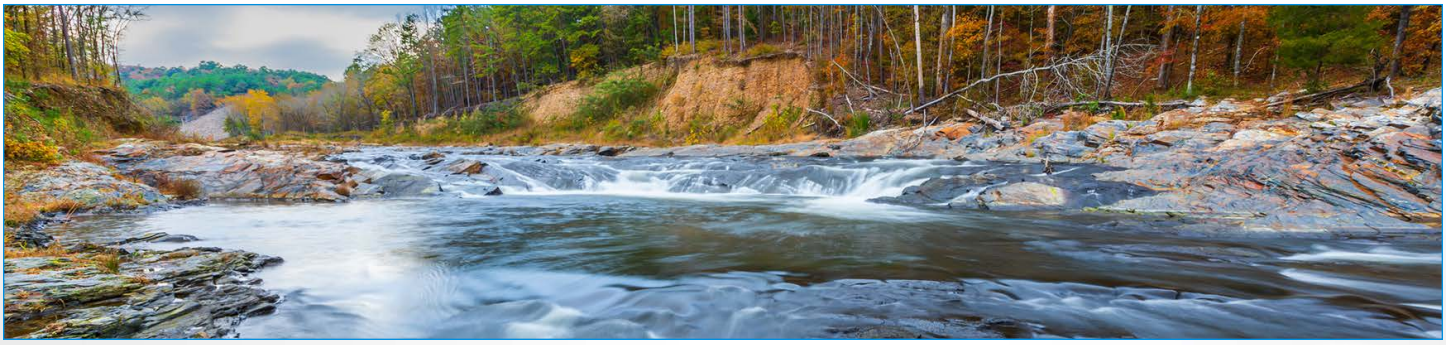
While it is challenging to own all the land that will directly impact source water, owning the land immediately around wells can be incredibly beneficial. It mitigates the risk of contamination since access to the wells is limited to system personnel. Funding sources are available to aid in purchasing land if needed.

Public Education

Encouraging public education can assist systems that use either groundwater or surface water. Education can include information on pesticide and herbicide use, proper chemical storage, recycling, erosion and sediment control, and much more.

Maintain Septic Systems

Improper septic system maintenance can lead to contamination in both surface and ground water sources. Proper maintenance and siting can keep treatment needs down and keep the drinking water healthy for customers. Ways to implement better septic system maintenance include establishing proper siting criteria, establishing operation and maintenance protocols, and specifying appropriate design and construction criteria.



Oklahoma Source Water Protection SWP

Surface Water BMPs

Erosion and Sediment Control

Erosion and sediment control can look like many things, including proper fencing around construction sites as well as good vegetation on hillsides. The purpose of these measures is to retain topsoil within the construction site and prevent the washing of sediments into our water sources during storm events.

Retention Ponds and Storm Water Capture

Retention ponds act as a collector for storm water runoff that is generated during storm events in areas with high concentrations of impervious surfaces, such as towns and cities. These ponds help to retain and treat stormwater therefore reducing pollution, flooding, and sedimentation in downstream water bodies.

Wetland Protection

Rivers, streams, and lakes all naturally have a riparian zone, or the more heavily vegetated area, on the edge of a waterway. These wetlands naturally help filter the water and keep microbes from growing, which can help reduce the demand for treatment. Actively protecting these zones and not mowing or changing them will lead to better source water quality.

Oklahoma Source Water Protection SWP

OKLAHOMA Environmental Quality

Contact DEQ:

Reach out to the Capacity Development Section via email or phone and request to participate in the **FREE** program.

Email: DEQ.CapDev@deq.ok.gov

Phone: (405) 702-8141

You can also visit the DEQ website for more info, helpful resources, and to sign up for the program. **https://tinyurl.com/44hsyfut**