

Resources for Public Supply Watershed Protection

Darcia Routh, P.G. Source Water Protection

Source water protection ultimately takes place at the local level. Around 63% of Arkansans get their drinking water from public water systems using intakes on lakes and rivers. Most of these intakes are located in the Ozarks, Arkansas River Valley and in the Ouachita Mountains, where high quality, abundant surface water is available. Maintaining or improving source water quality is also a cost-effective strategy. It would cost your PWS more to add additional treatment or to select and then develop an alternative source than to maintain or improve water quality in your specific watershed. The US EPA, especially through the Clean Water Act, provides many tools for the protection of drinking water watersheds. But what exactly is their Watershed Approach and how would your PWS go about developing a comprehensive watershed plan?

A watershed is hydrologically defined. Your system's watershed is all the water and land upslope that drain to your specific public water intake. Watersheds are also called drainage basins. Watersheds are influenced by human and natural conditions. Land use, population density and distribution, climate, geology, ecology, and topography all influence the character and health of a watershed.

Watershed planning involves all stakeholders. Ideally, a broad range of public sector (federal, state, and local governments) and private sector (business, residents) Arkansans will participate when you provide a coordinating framework for local community-based watershed planning.

A watershed protection plan strategically addresses priority water resource goals (drinking water quality protection or improvement, habitat restoration, recreation). A strategic watershed protection plan integrates multiple programs (regulatory and voluntary) and is based on sound science. Watershed protection is not really about forbidding certain activities; it's about identifying what activities or conditions pose the highest risks to water quality and reducing those risks.

Six public water systems in Arkansas leveraged Clean Water Act Section 319 (non-point source pollution program) funds to develop comprehensive Nine Element Watershed-Based Plans. How would you go about becoming the seventh system to develop such a plan? Here are two planning tools and resources to guide your PWS forward:

University of Arkansas Cooperative Extension Service offers many watershed planning tools, including workshops where residents and other stakeholders can learn more about local water concerns and how their actions can affect water quality. You can access the watershed planning tools at this url: <https://watersustainability.wordpress.com/watershed/>

Hosting an **Arkansas Watershed Stewards workshop** in your community is an achievable first step toward developing a comprehensive source water protection plan for your local watershed. This workshop was developed by a broad range of stakeholders in 2013 to equip Arkansans at the local watershed level through a one day workshop "to use and to share in the preservation, protection, and improvement of water resources in Arkansas." Find the Handbook at this url:

<http://www.uaex.edu/environment-nature/water/quality/docs/ag1290-small.pdf> Contact Mike Daniels, Ph.D., Professor of Environmental Quality and Nutrient Management, UAEX, the coordinator for the Arkansas Watershed Stewards workshops, at 501-671-2281 or at mdaniels@uaex.edu to schedule a local Watershed Stewardship Workshop. ADH can also assist in coordinating a local or regional workshop.

EPA's online **Watershed Academy** is a distance-learning program offering a variety of self-paced training modules giving a broad introduction to the watershed management field. The modules are organized

around an introduction/overview module and six themes: watershed ecology, watershed change, analysis and planning, management practices, community/social aspects, and water law. These can be found at this url:<https://www.epa.gov/watershedacademy>

An overview of EPA's recommended watershed planning strategy can be found at this url:
http://www.ccpaisaje.org/sites/default/files/watershed_mgmnt_quick_guide.pdf

A watershed approach is the most effective framework to address today's water resource challenges. Watersheds of lakes and rivers supply drinking water to almost 2/3 of Arkansans. Besides drinking water, they provide recreation and sustain life and livelihood. Watershed level planning provides a great return on any investment. It will help your utility to provide safe, economically priced water for years to come from your drinking water source. Healthy watersheds mean clean water.

This is the first in a series of articles on using the EPA's Clean Water Act Section 319 tools for source water protection of surface water supplies. Over the course of the next year, expect case studies of comprehensive watershed protection plans that water utilities have completed and an explanation of the nine required elements needed for a comprehensive watershed-specific source protection plan. If you have questions or would like to suggest a watershed protection resource or strategy, you can reach Darcia Routh or other source water protection staff at 501-661-2623.

