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Arkansas Department of Health Tools for Watershed Protection: Darcia Routh, P.G. (Arkansas Department of Health) Arkansas Water Works and Water Environment Association Presentation

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Ms. Darcia Routh, undertook a presentation at the Arkansas Water Works and Water Environment Association titled:

Arkansas Department of Health Tools for Watershed Protection ("Presentation")

Ms. Routh is a Professional Geologist and Geologist Supervisor addressing Source Water Protection in the Engineering Section of the Arkansas Department of Health (ADH).

Ms. Routh's *Presentation* addressed:

- What is a watershed?
- How does ADH define them?
- What is watershed planning?
- What are ADH tools to improve your intake's protection?
- What are your next steps?

The *Presentation* noted that approximately 62% of Arkansans obtain their drinking water from surface water (i.e., mostly from lakes). Citing 2015 statistics it was also noted that 840,418 Arkansans are served by groundwater.

A watershed was noted to be 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.
- A watershed is a geographic area near your intake.

The influences on watersheds by human and natural conditions were listed such as:

- Land use
- Population density and distribution
- Climate

- Geology
- Ecology
- Topography

The concept of watershed planning was addressed which included three aspects:

- Define your watershed (it was noted that ADH does this)
- Involve all stakeholders
- Develop a watershed protection plan

The *Presentation* noted the various tasks such as:

- Introduction to stakeholders (i.e., what you are protecting)
- Role of ADH in terms of mapping
- Inclusion of all stakeholders
- Priority water resource goals
- Drinking water quality protection or improvement
- Ecological health/habitat restoration
- Recreation
- Multiple designated uses (referencing water supply lake versus United States Corps of Engineers lake)

The *Presentation* discussed monitoring of raw water quality noting:

- Most monitoring is for finished water
- Total organic carbon
- Turbidity
- Pathogens

The discussion of a strategic watershed protection plan noted that the focus is not to forbid certain activities:

- Identify what activities or conditions pose the highest risks to water quality
- Reduce such risks

A strategic watershed protection plan is stated to:

- Integrate multiple programs
- Regulatory (point sources)
- Voluntary (non-point sources)

New ADH GIS staff were noted which include:

- Ben Gilley
- Tyler Couch
- Richard Norwood

Current ADH projects were listed as:

- Drinking Water & Forestry Forum/Collaboration
- HABs workgroup
- ADH technical assistance summer intern
- Baseline sampling N, P & cyanotoxins

Additional resources listed included:

- EPA's online Watershed Academy
- UAEX Arkansas Watershed Stewards program
- Source Water Collaborative

Upcoming ADH Events were listed as:

- Education and Public Outreach for watershed partnerships
- Forestry and Drinking Water Forums SW/River Valley
- Data updates for the SWAP Model

[A copy of the *Presentation* can be downloaded here.](#)