**Title: Kansas Develops Drinking Water Protection Program to Support Assessments and Implementation Actions**

**Contact Information:**

Travis Sieve

Kansas Drinking Water Protection Program

tsieve@kdheks.gov

(785) 296-0051

**Departments/Programs Involved:** Kansas Department of Health and Environment (KDHE) Public Water Supply Section and Watershed Management Section

**Summary:** Due to limited resources, time, and guidance, many PWS have not developed nor implemented source water protection plans. Due to this, the Kansas Department of Health and Environment (KDHE) has begun the development of the Drinking Water Protection (DWP) program. The DWP process outlined below allows the PWS the ability to assess potential and current threats to their source water as well as plan appropriate strategies to address those concerns.

The DWP Program is built on the principle that prevention often costs less than treatment. KDHE encourages public water systems (PWS) and their surrounding communities to complete DWP plans on a voluntary basis.  The program strives to provide technical assistance to public water supplies to restore and protect water quality in order to meet drinking water standards.  The DWP process is locally guided by stakeholders interested in the protection of the drinking water source.  Similar to Kansas’ Watershed Restoration and Protection Strategy (WRAPS) program, this program identifies drinking water source restoration and protection needs, local stakeholders establish source water goals, action steps are created in the DWP plan, and the plan is implemented/monitored.

Drinking water protection stems from the data available from Source Water Assessments (SWA).  These SWAs were completed for all active public water supply systems in 2004 as required to complete as part of the 1996 amendments to the Safe Drinking Water Act. The assessments identified all potential sources of contamination for each public water supply system as well as evaluated the susceptibility of the PWS for contamination.

**Actions:** The SWAs completed in 2004 are the first step in completing a comprehensive plan for protecting the PWSs.  PWSs and their surrounding communities use the SWA and the accompanying Susceptibility Analysis Scores to determine the contaminants and activities that pose the greatest threats to their water supply.  The DWP will evaluate past SWA reports and update the information with a drinking water source investigation.  The investigation uses various water monitoring, modeling, and evaluation techniques to enhance the PWS’s knowledge of the potential for drinking water contamination.

A DWP plan outlines the current conditions of the drinking water protection area including age of the PWS, environmental assessments/DWP investigation results, population, and land use.  The plan will outline needed action steps to protect the drinking water source.  Implementation of the action steps is clearly outlined and scheduled, along with needed resources (funding, technical assistance, regulations, etc.) to fulfil the objectives and goals.  Milestones and a monitoring schedule will allow the PWSS to track efforts in the implementation of the plan.

**Results:** KDHE is currently focusing on water systems with nitrate contamination still below the drinking water standard but are showing trends toward the need for treatment in the near future. By focusing efforts on these communities, the DWP program will strive to mitigate the financial/economic burden of implementing a treatment facility. KDHE will utilize both Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) resources to coordinate efforts to protect drinking water sources. Resources from the SDWA and CWA will help communities investigate the potential and current impairments with the main focus on nitrate contamination. KDHE will contract with approved technical assistance providers to thoroughly assess and investigate the source water protection area using the DWSRF Capacity Development set-aside funds. Assessments will include, but are not limited to water quality monitoring, current data gathering, operational history, aerial assessments, well pump testing, soil testing, and modeling. Investigation plans for each PWSs will be based on site specific circumstances and individual needs. To ensure that the most effective actions steps are developed from the investigation, a standing technical team will meet routinely to evaluate the investigation findings and proposed actions steps. The team will consist of various agencies and university partners with expertise in source water related fields.

Once identified, the DWP plan will be developed and use both SDWA and CWA to implement various action steps identified in the plan. In areas where best management practices (BMP) influence both source water protection as well as targeted priorities for surface water impairments, KDHE will utilize the CWA Section 319 funds for implementation. Drinking Water State Revolving Loan Fund (DWSRF) Capacity Development set-aside funds will allow for BMP implementation, technical assistance with rate increases based on projected implementation cost, and additional monitoring will be available based on the needs of the PWS and DWP plan. KDHE will also encourage utilizing existing CWA programs such as the Kansas WRAPS program for technical assistance, partnerships, and financial resources in implementing the DWP plan. KDHE plans to pilot the DWP program beginning fall 2016.

**Federal/state guidance/tools/funding:** DWSRF Capacity Development set-asides and CWA 319 funds.