March 30, 2015

Why we should integrate our CWA and SDWA activities

Incorporating source water protection (SWP) into our CWA programs provides a more holistic, efficient, and economical means to manage water resources; leverages additional funding sources; and allows for increased engagement with stakeholders with a vested interest in water quality improvements. These benefits are explained below:

- HOLISTIC: **Better protect source water for *all* uses; SWP of both surface and ground water drinking water sources provides a more holistic approach to water resource management and includes issues related to both source water *quality* and *quantity*.** For example, surface water impairments could be the result of contaminated ground water, which would not be discovered unless ground water monitoring data that states collect are considered. Also, in Region 5 where ground water is prevalent, ground water impacts should be considered where green infrastructure is promoted to help clean up urban waters. Green infrastructure can have both positive and negative impacts on ground water; green infrastructure can increase the recharge to dwindling ground water supplies, but it is also necessary to make sure that surface water pollution isn't redirected to underground sources through infiltration without any natural treatment. Protection of underground sources of drinking water involves careful siting and selection of green infrastructure practices in wellhead protection areas, especially at brownfields/cleanup sites.

  Another example is excess salts (primarily chlorides) discharged by wastewater treatment plants (WWTPs) that originate from individual residential water softening units in amounts that cannot be removed to protective levels (for aquatic life and other uses) by WWTPs. In this case, one potential outcome that would reduce the amount of salt entering the WWTP is the centralization of softening treatment at the public water system and removal of the individual residential softeners. This would require significant and unique coordination and communication between government programs, municipal water departments, and residents.

- EFFICIENT: **Better bang for the buck: on-the-ground activities, such as agricultural best management practices (BMPs), can have multiple benefits to CWA and SDWA programs.** For example, green infrastructure measures that take into account how the water infiltrates into the ground can serve to protect ground water quality and quantity, as well as address flooding and runoff problems that affect surface waters. In addition, in areas where the ground water is susceptible to contamination or where there is a connection between ground water and surface water, BMPs that protect surface water quality will likely also protect ground water and vice versa in some cases.

- ECONOMICAL: **The increasing costs of drinking water treatment may not be sustainable in the long term.** The treatment costs at public water systems (PWSs) to remove anthropogenic contaminants in source waters is increasing in certain areas (e.g., where harmful algal blooms are increasing), which may impact system resiliency, particularly for smaller systems, because PWS customers bear the cost of this additional treatment.

- LEVERAGE: **SWP-related funding may be leveraged in SWP areas.** Although it is unknown whether these funding sources will continue to be available, the first two are potential sources of SWP-related technical assistance that could be used to enhance stakeholder outreach in SWP areas, and the third is a potential source for on-the-ground activities in SWP areas:

(1) The U.S. EPA headquarters SWP program has provided contractor assistance to help coordinate stakeholder outreach workshops in the regions (e.g., to help with planning and facilitation, creating mailing lists, sending invitations, preparing workshop summaries, etc.). In the recent past, headquarters has provided this funding to support a sensible salting workshop in Illinois, a nutrients and pesticides workshop in Indiana for commercial applicators and water plant operators, and a drinking water designated use workshop with Wisconsin CWA and SDWA program managers.

(2) The Source Water Collaborative (SWC) is supporting three SWP pilot projects, including one in Wisconsin, in which they're providing contractor assistance (e.g., to develop communication plans).

(3) In addition, Wisconsin is using Drinking Water State Revolving Fund (DWSRF) wellhead protection set-aside funding to support on-the-ground activities (i.e., agricultural best management practices) for its nitrate in ground water project that is also one of the SWC pilot projects mentioned above.

- STAKEHOLDERS: **Involving the drinking water community may bring to the table a broader group of stakeholders who are invested in the quality and quantity of their source waters from a public health and economic perspective.**

  - In some cases, PWSs, particularly larger ones, may have resources to become stakeholders in various initiatives. PWSs have a vested interest in the quality of the source water and may be interested in participating in the implementation of Total Maximum Daily Loads (TMDLs), for example. In addition, PWSs collect some ambient water quality monitoring data that they might be willing to share, and the state agencies that oversee the PWSs may have access to monitoring data that could be useful to track trends/progress.

  - Outreach to connect the public to their drinking water sources (e.g., through U.S. EPA's WaterSense water conservation program) can potentially increase the number of people interested in learning about how to help protect water resources. People might be more willing to get involved in protection efforts if they know that the quality and quantity of water available to their children can be impacted by their actions. Therefore, focusing on drinking water may be a good way to connect people to the other important functions of water resources, such as the quality of fish and wildlife habitat.