

## **Rhode Island's Source Water Assessment Plan - Executive Summary**

The Source Water Assessment Program, or SWAP, was established by the 1996 Amendments to the federal Safe Drinking Water Act (SDWA), specifically by the addition of Section 1453 of that Act. Its stated purpose is to assess the threats to sources of public drinking water, "for the protection and benefit of public water systems, and to support monitoring flexibility". Its funding comes from a \$1.2 million set-aside from the Drinking Water State Revolving Fund. In Rhode Island, the Office of Drinking Water Quality in the Department of Health is responsible for producing these assessments, and will provide them to the suppliers and general public.

The US EPA has approved the State's Source Water Assessment Plan. All assessments must be completed by 4 May 2003.

In writing the Source Water Assessment Plan, the Department of Health made extensive use of both a Technical and a Public Advisory Committee. The committees included representatives of the health and environmental communities, in addition to educators, realtors, municipal officials and water suppliers.

The Department worked closely with DEM in coordinating the Source Water Assessment Program with the Wellhead Protection Program to make them complementary and to maximize the benefits of both to suppliers and municipalities.

There are four basic requirements of the SWAP:

The first step is to delineate the land area that contributes water to the source. This has been done for public wells under DEM's Wellhead Protection Program, based on various hydrogeologic methods. For surface water supplies, the contributing area is the watershed that feeds the reservoir.

The second step is to inventory all potential sources of contamination to the water supply within the SWPA. These are land uses that use, store, or generate chemicals or microbes that are considered risks to human health, and may include everything from industries and agriculture to residences and wildlife. Under the SWAP, existing land-use information will be updated and field-verified, town by town, by citizen-volunteers trained under the Home\*A\*Syst program.

The third step is to assess the overall susceptibility of the supply to contamination, and to estimate the risk associated with each potential source of contamination. This is being done in close cooperation with URI's Cooperative Extension Service, with extensive use of GIS technology.

The last step is to make the results of the assessments known to the suppliers and consumers of public water, as well as to town planners, developers and others with an interest in the long-term quality of our drinking water supplies.

**Process:** All ground and surface water supplies have had at least an initial recharge area delineation completed; a few wells will have refined delineations done under the SWAP. The Department of Health and URI CE will approach the inventory effort on a town-by-town or regional basis, as appropriate. The first step will be to convene a committee, with the following people and groups to be invited:

- all public water suppliers within the town, and those whose recharge areas exist within the town,
- town government: planners, conservation commissioners, zoning boards, etc.,
- local land trusts, local citizens' groups, Chamber of Commerce, others,
- business groups, especially developers and real estate interests,
- RI DEM, Office of Water Resources,
- URI Cooperative Extension,

- Conservation District representatives, and
- The Water Resources Board.

In many areas of the state, committees already exist that are addressing land-use and water-quality issues. By coordinating with the Partners in Resource Protection (coordinated by DEM's Office of Water Resources) and other contacts throughout the state, the Department of Health will try to link with these existing committees. Other persons or groups will be invited to fulfill the purposes of the Source Water Assessment Program. In particular, it is important to include developers and realtors early in the process to gain the widest possible base of support for the protection that we hope will result from the Source Water program.

The local committees will be asked to assess the quality of existing data, recruit volunteer survey teams if necessary (to be trained by RI Home\*A\*Syst), and advise the State on how the assessments can best serve the town's needs. In particular, the SWAP will link with the towns' Wellhead Protection Plans, either to support existing plans or to serve as a basis for producing a new WHPP.

To produce the assessment, risk values have been assigned to the various land-use categories and soil types, well types and substrates. These values will be entered into a matrix that will yield a numerical risk ranking. This will result in an estimation of the vulnerability (based on natural features and well construction) and susceptibility (based on the presence of high-risk land uses) of the water source.

Distribution of the results of the assessments will be concentrated at the municipal level, since land use control and other avenues of drinking water protection are strongest there. Of course, water suppliers, town administrators and planners, and libraries will receive multiple copies; the Consumer Confidence Reports of community water suppliers will contain summaries of the assessments and information on how to get a full copy. Maps, tables and text will be available online for those with Internet access. We will be relying on the local advisory committees to offer suggestions on other distribution techniques. Education of water consumers and residents is still the most cost-effective protection measure available!

The goal is to present this information in a way that will support protection efforts. There will be two direct benefits to water suppliers from the assessments. The first is the information itself, along with the public awareness and support for protection that we hope will result from the process. The second is the stated intent of the law, which is to support monitoring flexibility. If a particular contaminant is not present in a Protection Area, and has never been detected in the water, then a monitoring waiver can be granted. This has the potential of saving a system hundreds of dollars per year in testing fees.

One more general benefit from this effort will be the format of the information collected. The data on which the assessments are based will be made available on computer disks, in a common spreadsheet format. This will allow water systems, town planners or other bodies to update the assessments and keep them current and relevant long after the EPA mandate is satisfied.

It is generally accepted that it is cheaper to protect water from contamination than to treat the water or find new sources. The intent of the Source Water Assessments is to inform suppliers, town and state officials, and consumers of public waters of the threats to their water quality, and enable them to take appropriate action to protect their water. Public participation in the process will make the assessments both more timely and more useful to the public.

For more information the about Source Water Assessment Program, or to become involved with the Program in your community, contact Clay Commons at the Office of Drinking Water Quality, RI Department of Health, Room 209 Cannon Building, 3 Capitol Hill, Providence, RI 02908-5097, telephone (401) 222 - 7769, email [clayc@doh.state.ri.us](mailto:clayc@doh.state.ri.us). Information is also available online at [www.health.state.ri.us](http://www.health.state.ri.us).