ith public water supply demands rising in many parts of North America, water managers are challenged to meet these growing needs while protecting the health of natural ecosystems—rivers, lakes, and aquifers—that are the source of these water supplies. Healthy rivers and lakes provide many benefits, ranging from recreation to wildlife habitat to support of important commercial enterprises such as tourism and commercial fisheries. All of these benefits are highly valued by the American public.

RECOGNIZING UTILITIES

To address these demands and sustain these desired benefits, The Nature Conservancy (TNC) is collaborating with TNC the AWWA and numerous other organizations. The goal of these organizations is to assist water managers with the delicate balancing act of protecting public health and safety while also protecting freshwater ecosystems and meeting the water supply needs of the communities they serve.

For more than 125 years, public water suppliers have had a critical role in the development and sustainability of a high quality of life in North America. First and foremost, public water suppliers provide public health protection to communities large and small. Serving as the barrier to waterborne diseases and the introduction of synthetic contaminants, utilities comply with a myriad of federal, state, provincial, and local regulations to ensure that water is safe to drink “24/7/365.” Water suppliers also play a critical role in public safety, providing water to extinguish fires that threaten lives and property. Moreover, public water systems also serve as a key component in the economic vitality and sustainability of the communities they serve, affording manufacturers, retailers, and homeowners a feeling of confidence and assurance that the water supply is safe and sufficient to meet their needs.

Despite the significant positive contributions they make, public water supply systems can also have a negative impact. For example, some water systems can adversely affect the health of freshwater ecosystems by changing natural cycles of water flow, water quality, and temperature.

Aquatic plants and animals are like dancers in a theatrical troupe, trained to respond to the rhythms set by rising and falling water levels. Through the millennia, plants and animals living in or near rivers and lakes have adapted to natural seasonal variations in the amount of water flowing through freshwater ecosystems. Rising water levels during a particular time of year provide a signal to fish that it is time to begin their upstream spawning migrations. Many riverside trees disperse their seeds just as high water levels are receding, thus ensuring that the seeds can germinate on moist, nutrient-rich soils. Even the timing and amount of low water levels can be critically important. For example, many wetland plants spend most of their lives growing in water but can reproduce only when water levels drop to...
As part of the Blue Water Awards Program, it is envisioned that utilities would have to maintain and, where necessary, improve the quality of drinking water sources and all ecosystem components where they are located.

expose the edges of rivers and lakes. When water is withdrawn from these ecosystems or when storage reservoirs are built in order to control water flows, the water symphony that sustains the theater of aquatic life can be severely disrupted.

Today’s water managers must be more engaged with these ecological relationships. They can do this by minimizing their utilities’ effects on freshwater ecosystems and by putting these relationships in the proper context relative to the other challenges and realities of public water supply. A consortium of organizations led by TNC and AWWA is evaluating an effort that would recognize water utilities that are doing an outstanding job of protecting the natural environment.

BLUE WATER AWARDS

This initiative, tentatively called the “Blue Water Awards,” is envisioned as a voluntary, incentive-based program in which water utilities would be invited to apply for an award by demonstrating that they are meeting environmentally based performance standards. Though not yet formalized, it is envisioned that standards would be developed in five categories to support the following objectives:

• **Water quality.** Utilities must ensure that adequate steps are taken to maintain and improve the quality of surface water and groundwater with their in source watersheds as well as downstream of surface water diversions, storage reservoirs, and wastewater discharges.

• **Source water protection.** Utilities must maintain and, when necessary, improve the quality of drinking water sources and all ecosystem components where they are located. This program objective would be achieved by ensuring that the physical environment is protected to the maximum extent feasible.

• **Environmental (instream) flows.** Utilities must maintain environmental flows and groundwater levels as close to their natural regimes as possible so that native species, ecological functions, and ecosystem services are sustained while providing reliable water supplies for human use.

• **Efficiency and conservation.** Utilities must provide sufficient water to meet consumers’ health and safety needs while avoiding unnecessary wasting of water, thereby minimizing withdrawals of water from aquatic ecosystems.

• **Integrated water resource management.** Utilities must use a highly participatory process to prepare and regularly update a long-range water resource plan that balances the least-cost analysis of supply-side and demand-side water management options with protection of natural resources and aquatic ecosystem.

ELEMENTS OF THE PROGRAM

A number of questions were raised among participants in a roundtable that included TNC, AWWA, and a number of other organizations (see sidebar on page 54). These questions will need to be addressed during the feasibility assessment. These questions include:

• What will be the key components of the program? Possible components include standards that would define “best environmental practices” in the water utility community; capacity-building to help water professionals expand their expertise to include environmental stewardship; auditing of water utilities to verify whether the standards have been met and whether a city or utility has “earned” recognition or certification; establishment of incentives, financial or otherwise, to support changes in water utility procedures and policies; and education and promotional activities that would reach a broad populace. Each program component will need to be market-tested in order to determine the extent of interest in participation in any one or more of them and in order to determine the
ability to recoup costs associated with provision of these components.

- Who will be the target audience? The roundtable meeting began with the assumption that only drinking water utilities would be targeted. However, during the course of the meeting, many individuals expressed strong opinions that wastewater utilities and even stormwater utilities should be included, thereby suggesting that perhaps cities rather than individual utilities would be the entities to be recognized. Analysis will include the costs and benefits of limiting or expanding the scope of this program to determine the most favorable and influential target audience.

- What will be the geographic scope of the program? The feasibility of designing a program that has the flexibility to work in different economic and social contexts will need to be examined closely, e.g., the issues related to developed and developing countries, large and small utilities, differing degrees of watershed control, and current condition of freshwater ecosystems (in need of protection or restoration) must be evaluated. Although current consensus supports a global program, it may be sensible to build the program incrementally, e.g., initiate the process in the United States and one or two other countries that have expressed strong interest in the program and then expand.

- Should this be a recognition program or a certification program? Compelling arguments that have been made on both sides of this question need to be examined more rigorously. The analysis must evaluate whether a simple recognition program (i.e., awards) could provide enough motivation to cause desired changes in business practices to benefit freshwater ecosystems or whether a more formal certification program is needed to drive such change.

- What is the market for this program? Ultimately, a program that will have broad appeal in the water community and will accomplish our freshwater ecosystem protection goals needs to be designed. The current size of the market for a voluntary program for cities and their water utilities must be determined and ways to increase this market should be investigated. An understanding of the motivation for cities or utilities to participate in the program and feasible cost levels is also needed.

It will take at least two years to fully design this program and prepare it for implementation. After conducting the feasibility assessment, experts from around the world will be contacted to develop standards, pilot-test those standards in a variety of cities, and create an institutional design and business plan for the program. Those interested in staying apprised of this program can check for updates at www.nature.org/freshwaters or write to Diedre Paterno-Pai of the Sustainable Waters Program at dpaterno-pai@tnc.org.

Brian Richter is the director of The Nature Conservancy’s Sustainable Waters Program, an initiative that is supporting conservation projects across the Americas, Asia, and the Pacific Region.