

Forests, Water & People Assessment

Identifying Connections between Forests, Water & People in the Northeastern Area

USDA Forest Service
Northeastern Area
State and Private Forestry



Description

The importance of forests to water quality is becoming more recognized by foresters and land use planners. Historically, forests have been managed primarily for wood products. However, the importance of forests as a crucial first barrier to source water protection and the primary focus of managing forests for water is becoming increasingly important as water demand in the Northeastern Area (NA) rises and as the population increases. In NA, approximately 50 to 75 percent of the population relies on surface water as their municipal drinking water source. There are approximately 3,500 community water systems that supply clean water to more than 70 million people! Water quantity and quality depends significantly on the conditions of the watershed forests and reservoirs that supply the drinking water. There is a direct geographic connection between forests, water, and people – a connection called “forest to faucet.” Greater recognition of this “forest to faucet” connection will enable the Forest Service to maximize the protection and enhancement of forests, drinking water supplies, public health and aquatic ecosystems. This project describes, evaluates and ranks these connections to demonstrate the importance of forests to surface drinking water quality protection through forest conservation and restoration.

Key Issues

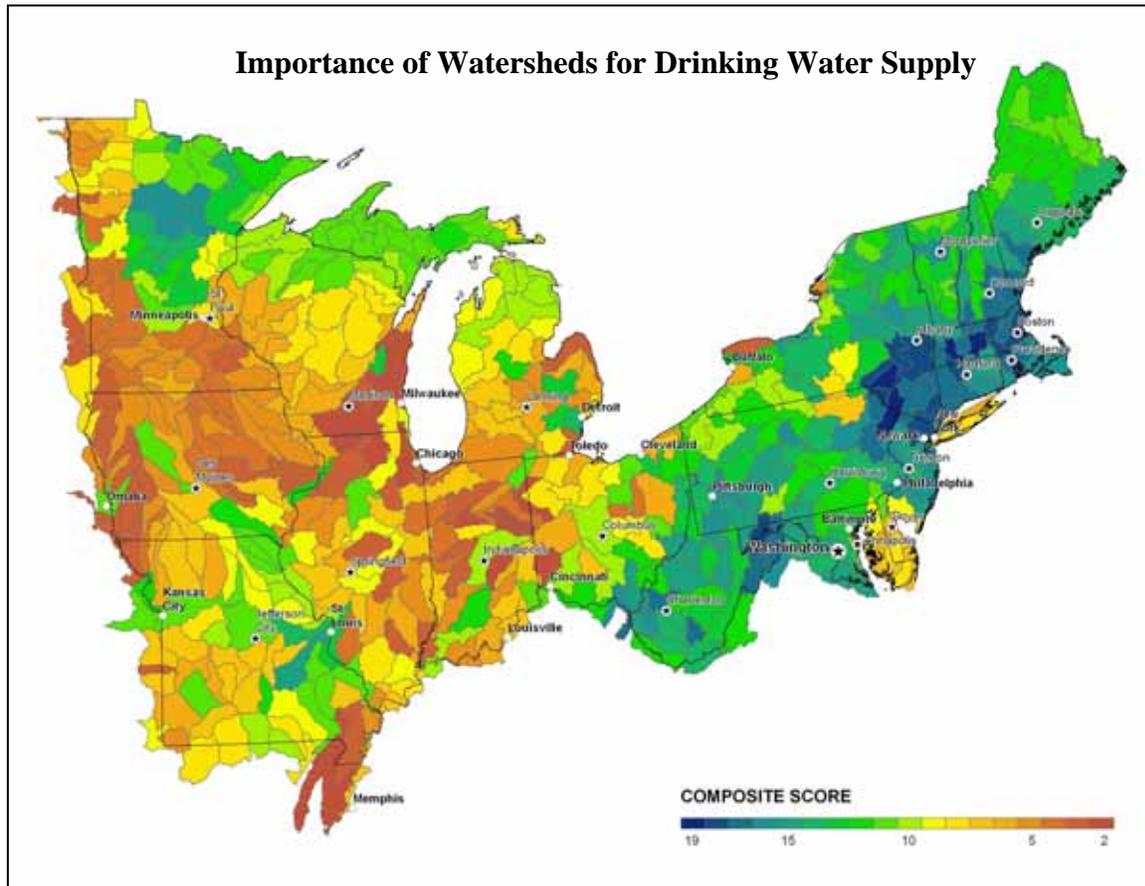
- Watershed forests that protect drinking water supplies for millions of Americans are threatened by land use conversion.
- More than three-quarters (78%) of all NA forests are privately owned and subject to development pressure.
- Forests are the best land cover for protecting soil and sustaining good water quality; they are the crucial first barrier for source water protection.
- Forested watersheds also provide recreational opportunities, fish and wildlife habitat, and other benefits such as increasing property values.



Accomplishments / Results

- Compiled a GIS database for 540 8-digit HUC watersheds in NA using a four-step process to describe current and future conditions.
- Determined each watershed’s “ability to produce clean water” using an index of water quality and watershed integrity containing forest land; agricultural land; road density; riparian forest buffers; highly erodible soils; and housing density. Results for this step were driven by land use; areas with more forest land and forested buffers ranked highest.
Determined total water consumers served by surface water intakes (reservoirs, not wells) to prioritize watersheds which supply surface water to the greatest number of people. Areas that ranked highest are where New York, New Jersey and Pennsylvania intersect (near Port Jervis, NY), the Catskill region of New York, and large parts of Massachusetts, Connecticut and Rhode Island.
- Highlighted areas critical for surface water drinking supply and containing unprotected private forest lands. Initial results show areas that are important for surface water supply and most dominated by unprotected private forest lands are generally in the northeast. Other important areas for surface water supply and with large tracts of private forest are in western New York, western Pennsylvania, and large portions of southern and western West Virginia.

- Highlighted areas with the greatest development pressure and also containing private forests in surface drinking water supply areas. Areas that ranked highest were primarily surrounding the Boston-New York metropolitan corridor: in New England (southern Maine, Massachusetts and Rhode Island), southern New York and northern New Jersey.



Budget History

This project is accomplished through an ongoing partnership with the University of Massachusetts and the internal support of NA staff.

Future Direction

- Final report and maps will be ready for web posting by March 2007, with a printed report available by May 2007.
- Companion state map sets for each NA state containing all of the maps available for the regional assessment as well as the data supporting the maps will be available in spring 2007.
- Release of technical data and journal article in spring 2007.
- Results to be applied in Forest Legacy, Forest Stewardship and other conservation and on-the-ground stewardship programs.
- Specific areas to be identified for watershed-scale pilot projects.
- Data to be updated once 2001 National Land Cover Dataset is available.



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Revised March 2007

