

Forests, Water and People Assessment

WHAT IS THE ASSESSMENT?

This assessment uses maps produced in a geographic information system (GIS) to highlight the important connections between forests and the protection of surface drinking water quality. This connection of "forest to faucet" is of vital importance to people in the Northeastern Area (NA). Forests are the crucial first barrier to protection of drinking water and managing forests for source water protection is becoming more important as the population and water demand in the NA increases. Approximately 50 to 75 percent of NA's population relies on surface water as their municipal drinking water source. There are nearly 1,600 community water systems that supply clean surface water to over 52 million people in the region! These water supplies are protected largely by private forest lands.

FOUR-STEP PROCESS

Specifically, the assessment displays maps for 540 8-digit hydrologic unit code (HUC) watersheds in NA using a four-step process to describe current and future conditions.

Step 1 is an evaluation of physical and biological factors that serves as an index of the ability to **produce clean water** index for each watershed. This index provides a comparative ranking of predicted water quality and watershed integrity.

Step 2 shows the **total water consumers served** by surface water supplies in each watershed and ranks these watersheds in terms of their importance in providing drinking water to the greatest number of people.

Step 3 highlights watersheds that are both critical for water supply to large population and contain a **high percentage of unprotected private forest lands**.

Finally, Step 4 highlights areas where the **greatest development pressure** threatens private forests that are important to the protection of surface drinking water supplies.

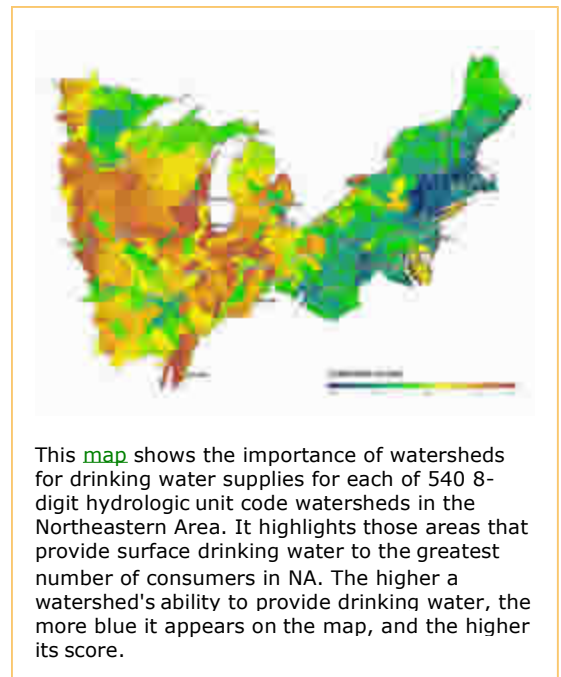
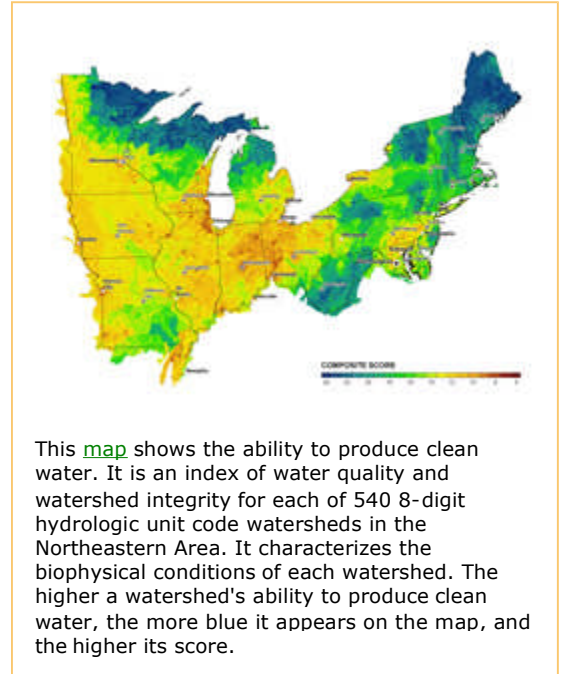
WHY THIS ASSESSMENT WAS DONE

Results will let the Forest Service accomplish a wide range of goals:

- Maximize the protection and enhancement of forests, drinking water supplies, public health, and aquatic ecosystems.
- Target Forest Service resources to priority watershed areas.
- Assist in developing Forest Legacy, Forest Stewardship, and other conservation and on-the-ground stewardship programs.
- Provide a surrogate for water quality in regional and national Forest Service applications.
- Aid states served by NA in developing their State Forest Resource Assessments and other planning efforts such as the Criteria and Indicators-Sustainability assessments.

PLANNED NEXT STEPS

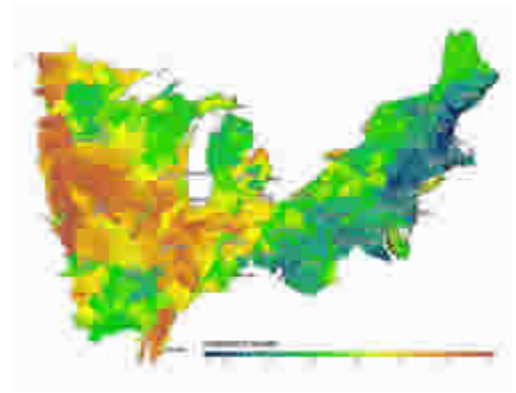
- Final report to be posted online in Spring 2008. To get a copy of the draft report, please email Martina Barnes, NA Regional Planner at martinabarnes@fs.fed.us
- Release of technical data and journal article in spring 2008.
- State-specific results to be posted in an atlas online with maps and a state fact sheet in February 2008.



- Ability to produce clean water index to be updated using 2001 National Land Cover Dataset.

ACKNOWLEDGMENTS

This assessment was accomplished through an ongoing partnership with the University of Massachusetts Watershed Exchange Technology (WET) Partnership and the internal support of NA staff. The authors of the report are Martina Barnes, NA Regional Planner; Dr. Paul K. Barten, Associate Professor, University of Massachusetts-Amherst; Albert H. Todd, NA Watershed Program Leader; and Rebecca Whitney, NA GIS Analyst.



This [map](#) shows the development pressure on forests and drinking water supplies. The map combines the map of the ability to produce clean water, surface drinking water consumers served, percent private forest land, and housing conversion pressure to highlight important water supply protection areas that are at the highest risk for future development. The greater a watershed's development pressure, the more blue it appears on the map, and the higher its score.

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