

TALKING POINTS
FORESTS & WATER QUALITY IN THE NATUCAHG RIVER BASIN
FLOATING WORKSHOP, JUNE 13, 2008

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- Water quality in this basin is among the highest in the state.
- The percentage of this watershed that is forested is also among the highest in the state:¹ 76% (85,575 forested acres out of 113,016 total acres). ***This is not a coincidence!***
- Forests provide a multitude of benefits, often taken for granted by our society. Perhaps the most important of these is **clean water**. ***Virtually all the water we drink or use for cooking, cleaning and playing, starts as precipitation that falls in the forest someplace.***
- In the forest there are no paved areas to contribute contaminated runoff, no septic systems to fail and virtually no erosion or sedimentation.
- In fact, forests **actually clean the water** that flows through them, and serve as vast storage areas to recharge rivers, ponds and groundwater, and to prevent flooding. **HOW?**
 - The undisturbed forest floor consists of a thick layer of leaf litter on top of loose friable soil, high in organic matter and securely bound by tree roots. This gives forests a remarkable capacity to absorb rainfall, regulate stream flow and clean water as it moves through the forest ecosystem.
 - Forests have been shown to absorb as much as 20 inches of rainfall per hour, while the maximum rate of rainfall ever recorded in the eastern is about 6 inches per hour.
 - As a result, overland flow or runoff is very rare in undisturbed forests, and significant erosion is virtually unheard-of. Instead, clean water gradually percolates through the soil to the groundwater. It eventually emerges in streams, ponds, wells, or reservoirs like this one, and/or recharges vast natural underground storage reservoirs called aquifers.
 - ***The moral: water produced by forested watersheds is as clean and pure as nature can provide.***
- ***This water cleansing function has a very real economic value!*** The City of New York is perhaps the most noteworthy of several cities around the country in recent years that have embarked on a program to protect and maintain thousands of acres of forest cover within their water supply watersheds. **Why?** Because they feel it will save them billions of dollars in potential filtration costs.
- Do trees grow fish? In a way they do!!

¹ Based on the newly-acquired 2006 land cover data, the forested area (comprised of the deciduous forest, coniferous forest, and forested wetland categories)

- forested watersheds absorb and **regulate the flow** of groundwater, yielding a steady and continuous supply of water, even in times of dry weather. Water that has been stored in forest soils maintains stream flows and pond levels throughout the summer. Populations of fish, amphibians, reptiles, insects, waterfowl and other wildlife depend on this process to reproduce and thrive.
 - Forest canopies also shade streams and keep water temperatures down during hot summer days. Thus, to say that fish populations depend on the forest for their survival is not such a far-fetched claim.
- In summary:
 - The water in this reservoir is as clean as it is primarily because its watershed is so heavily forested.
 - Forests are built by nature to cleanse and regulate the flow of water. They have honed this ability through thousands of years of evolution. We need only leave them alone to reap the benefit of that process.
 - The water cleansing ability of the forest has a very real monetary value that, once lost, can only be replaced with huge annual expenditures in chemical and mechanical filtration and processing.
 - In a watershed like this one, all the other services, benefits and functions that forests provide can be viewed as happy byproducts of their primary function: keeping the water clean.
 - Every community in this watershed: those upstream who supply the water, and those downstream who drink it, will benefit by, and have a common interest in, keeping the watershed forested for future generations.