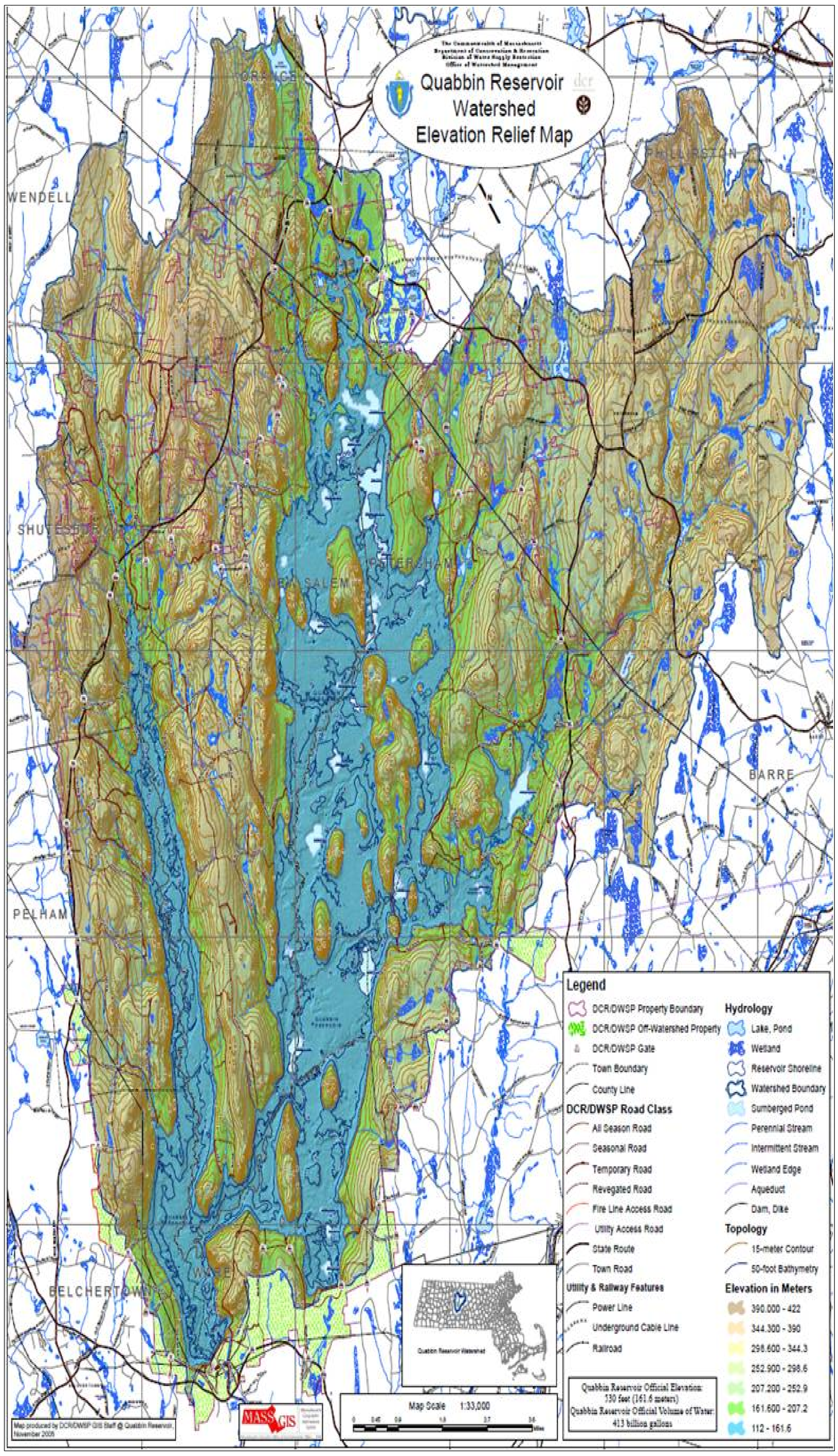
Watershed Protection: The Best Pollution Control



Elevation map of the Quabbin Reservoir.

The primary mission of assuring the availability of pure water for future generations determines what types of recreation DCR-DWSP allows. However, Quabbin's vast acreage provides many opportunities for wildlife viewing, hiking and fishing. The first Public Access Plan for the Quabbin Reservoir watershed was published in 1988. This plan outlined control policies and monitoring mechanisms used to mitigate possible negative impacts from public access to Watershed Management property in Barre, Belchertown, Hardwick, New Salem, Orange, Pelham, Petersham, Shutesbury, Ware, and Wendell. The most recent update was completed in 2018.

DCR and its predecessor, the Metropolitan District Commission (MDC), have continuously involved stakeholders in its public access policy development, review, and modification. The planning process for this latest update included public meetings and user surveys. The input received while updating the Quabbin Access Management Plan demonstrated that local residents, land abutters, visitors, and environmental organizations are supportive of DCR's policies to protect the public water supply while allowing controlled access to these resources.

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When we turn on our tap and water flows out, we rarely stop and think about its source. But our everyday activities, as well as large scale land use and development, can affect the quality of our water supply. Both point (identifiable) sources of pollution and more general non-point contamination such as traffic or sewage run-off may negatively affect a drinking water source.

Three watersheds form the drinking water supply of the Department of Conservation and Recreation/MA Water Resources Authority (DCR/MWRA) water system. Quabbin, Ware and Wachusett watersheds provide drinking water to 40% of Massachusetts residents. 150,000 acres of land are protected within these three watersheds in order to maintain high quality water.

What is a Watershed?

A watershed is an area of land that feeds all the water running under it and draining off of it into a body of water, such as a stream lake or river.

Watersheds come in all shapes and sizes. They cross town, state, and national boundaries. According to the Environmental Protection Agency, in the continental US, there are 2,110 major watersheds; including Hawaii, Alaska, and Puerto Rico, there are 2,267 watersheds.

What watershed do you live in?
Visit https://mywaterway.epa.gov to find out.

As a drinking water watershed, Quabbin Reservoir is protected by a variety of federal and state regulations. One of the most important regulations is the federal **Safe Water Drinking Act**. This law requires filtration for all surface drinking water supplies, unless the water supply is of very high quality and meets specific criteria to qualify for a waiver. The combination of Quabbin's size, the watershed's natural characteristics, and DCR's management activities were a cornerstone to the MWRA's ability to obtain filtration waivers for this water supply.

By the Numbers

51 communities are part of the MWRA/DCR water system

3 million people - number of Massachusetts residents that drink Quabbin water

202.78 million gallons per day - average daily water usage for the water system in 2013

300 million gallons per day - average daily yield of Wachusett and Quabbin Reservoirs

412 billion gallons - full capacity of Quabbin Reservoir

64 billion gallons - full capacity of Wachusett Reservoir

22 million gallons - released daily into the Swift River below the Winsor Dam

As an unfiltered water supply, Quabbin Reservoir is managed to protect the quality of the water. Water quality sampling and field inspections help identify any potential water quality problems and ensure compliance with state and federal water quality criteria for public drinking water supply sources.

A healthy, resilient forest cover on watershed lands also contributes to the protection of the water supply. A vigorous forest filters incoming precipitation, stabilizes soil and mitigates impacts of natural and manmade disturbances. Careful thinning operations of the wooded land surrounding the reservoir help to promote a diverse forest and benefit both water quality and wildlife.

Continuous Forestry Inventory

Early in his tenure as Forest and Park Supervisor for MDC (now DCR) properties in the early 1960's, Fred Hunt recognized the potential value of installing a Continuous Forestry Inventory system at Quabbin, based on the USDA Forest Service plan. The intent was to gather periodically updated information on the current condition of the forest, sufficient to guide the improvement of both water and forest values on the watershed. The objective included an assessment of the current vegetative cover against an ideal composition and structure, and the calculation of sustainable periodic yields that might be attained in the process of managing toward that ideal. That system of 347 plots has been measured every ten years since 1960. Plot information gathered includes forest type, stocking and size class, land use disturbance, accessibility and recommended future silviculture.