

Department of Conservation and Recreation
Quabbin Interpretive Services
Educational Information Packet



Points of Interest from Gate 35 New Salem

Dana, Enfield, Greenwich and Prescott were not the only towns affected by the creation of the Quabbin. Several of the surrounding towns had land, homes and businesses taken as well, just not to such an extreme. New Salem was one such town to lose land to the State, and it is in New Salem that Gate 35 is located.

The primary interest of a visit to gate 35 is the observation of wildlife. When the Quabbin was “built”, 45 thousand acres of land surrounding the water was designated as Reservation land. This is land that remains primarily forested to ensure the purity and conservation of the water supply. All structures were removed from this land and open fields were planted with various types of trees to reduce erosion into the reservoir and to be a natural filter for the water system. Because this land has remained under very restricted use for decades, it has become a sanctuary for many species of plants and animals. Deer, beaver, fox, coyote, bear and moose are just some of the mammals that have made this wilderness their home, as well as dozens of varieties of species of microorganisms, reptiles, amphibians, and birds. Loons have been nesting here since 1976, and in the 1980’s a project was undertaken to re-establish a population of Bald Eagles here. That project was greatly successful and we now have 8-10 nesting pairs, as well as an increasing population that winter here from Canada and northern New England. Eagles can be seen here year round, though the most frequent sightings are in December and January.

This road goes for about 1 ½ miles then ends at the water. Shortly before the end, it connects with another road, and it is possible to continue traveling on multiple roads for several miles. We do not recommend this extended hike for school groups. Instead we suggest only traveling this road for approximately 1 1/3 mile, to the tower which will be on the left hand side. This tower was built in the 1940’s by the U.S. Military as an observation and guide tower for the bombers that were practicing at targets in the valley. It is an open area and suitable for busses to turn around in. Bus access is allowed only for groups that are accompanied by a DCR Interpreter.

In addition to having the opportunity to observe local wildlife, groups to Gate 35 can also see some old cellar holes and foundations from the buildings that once stood here, as well as the following two features of interest:

Old Railroad Bed:

The road to the left inside Gate 35 is actually an old railroad bed. The first railroad that ran through here was the Athol & Enfield RR that had its first run in 1871. The A & E went through a few extensions and name changes before ultimately being purchased by the Boston & Albany Railroad in 1880, and was owned by them until its final run in 1935. Known locally as “The Rabbit”, this was a lifeline for the Swift River Valley, providing valuable transportation in the days before automobiles. If you walk down the road when the water is very low, you can see the remains of the foundation of the New Salem Railroad Station along the shoreline at approximately the one mile point. A bit further along, you can see stretches of tar that is all that is left from old Route 21. Wetland plants as well as some invasive species have taken over the places where farmer’s fields and orchards once stood, and this is a good spot to observe the new habitat and discuss the ecological changes that occurred.

Ice Pond:

On the right hand side past the power lines is a beaver pond. This pond, along with many others, was used to collect ice in the winter. Household refrigerators were not invented until the early 1900's and were not in common use until the 1930's. In order to keep food cold, it was usually kept in an "icebox". This was, literally, an insulated box in which a large chunk of ice was kept in one compartment, chilling food which was stored in another compartment. The ice was cut from designated ponds in a laborious process that took several men as well as a team of horses. The ice had to be 18" – 28" thick, cut with a saw then pushed up with pike poles. The men used tongs to move the ice onto horse drawn sleds, where it was taken to an "ice house" (a barn or shed), and packed in layers of sawdust and sometimes hay as insulation. It was stored here until it was then taken either to local homes or to the railroad to be shipped elsewhere.

Suggestions to Tie-in to Frameworks Standards by Grade

(This is not an all-inclusive list, merely a starting point to encourage teachers to think of the many facets of Quabbin Reservoir and the educational opportunities available here.)

Pre-K – 2:

Science

ESS1 – Recognize that water, rocks, soil and living organisms are found on the earth's surface. *All these things can be observed on the Gate 35 trail.*

LS3 – Recognize that plants and animals have life cycles, and that life cycles vary for different living things. *Students can see different stages of tree growth.*

LS8 – Identify the ways in which an organism's habitat provided for its basic needs. *Many different habitats at Quabbin provide for different life forms.*

Grades 3 – 5:

Science

ESS10 – Describe how water on earth cycles in different forms and in different locations, including underground and in the atmosphere. *Study Quabbin watershed.*

ESS12 – Give examples of how the surface of the earth changes due to slow processes such as erosion and weathering, and rapid processes such as landslides, earthquakes, and volcanic eruptions. *Discuss reforestation of watershed to reduce erosion and filter water.*

LS6 – Give examples of how inherited characteristics may change over time as adaptations to changes in the environment that enable organisms to survive eg. shape of beak or feet, placement of eyes etc... [Compare and contrast the physical characteristics of plants or animals from widely different environments]. *Different environments at Quabbin provide for good observation of this.*

LS7 – Give examples of how changes in the environment have caused some plants and animals to die or move to new locations. *Discuss invasive species of plants here, change from farmland to lake & forest, changes brought by forestry/reclaimed fields, deer population, bald eagle, loons and etc.*

LS10 – Give examples of how organisms can cause change in their environment to ensure survival. Explain how some of these changes may affect the ecosystem. [Research local projects where humans are changing the

environment to ensure a species survival.]. *Discuss the change humans made at Quabbin and the reasons for it; discuss forestry, reclaimed fields, conservation, wildlife management, bald eagles, reasons for restrictions on use.*

Technology and Engineering – The construction of the reservoir and the railroad provide ample opportunity for studies in technology and engineering from the very simple to the very complex depending on classes level of interest and ability.

History

H3.12 – Explain how objects or artifacts of everyday life in the past tell us how ordinary people lived and how everyday life has changed. Draw on the services of the local historical society and local museums as needed. *Discuss how the introduction of a railroad into an otherwise secluded valley impacts the people both positively and negatively.*

H4.11 – Describe the climate, major physical features and major natural resources in each region. *Quabbin is both a major physical feature of the region and a provider of natural resources.*

Grades 6 – 8

Science

LS13 – Give examples of ways in which organisms interact and have different functions within an ecosystem that enable the ecosystem to thrive. *Study the ecosystems of the Quabbin and understand reason for wildlife and habitat management.*

LS17 – Identify ways in which ecosystems have changed throughout geologic time in response to physical conditions, interactions among organisms and the actions of humans. Describe how changes may be catastrophic such as volcanic eruptions or ice storms. *Study the geologic factors of the Swift River Valley and how they contributed to the creation of the reservoir; study the impact of human intervention on the ecosystems that have developed since that time.*

Technology and Engineering – The construction of the reservoir and the railroad provide ample opportunity for studies in technology and engineering from the very simple to the very complex depending on each classes level of interest and ability.

High School

Science

ESS3.4 – Explain how water flows into and through a watershed. Explain the roles of aquifers, wells, porosity, permeability, water table and runoff. *Study the Quabbin Watershed, reason for size, trees, purity control/regulations of, spillway for overflow and etc.*

ESS3.5 – Describe the process of the hydrologic cycle, including evaporation, condensation, precipitation, surface runoff and groundwater percolation, infiltration and transpiration. *Study the Quabbin Watershed and the affect the hydrologic cycle has on it.*

BS2.3 – Use cellular evidence and modes of nutrition to describe the six kingdoms. *The varying habitats of the Quabbin support species from all kingdoms.*

BS5 Evolution and Biodiversity & BS6 Ecology – The full range of these standards can be taught & observed at Quabbin. Teachers are encouraged to explore all the possibilities of bringing students to Quabbin for these lessons.

PS3.2 – Explain how heat energy will move from a higher temperature to a lower temperature until equilibrium is reached. *Study how heat from surface of water at certain times of the year affects the other zones in the water which in turn affects plant and animal life, movement & growth.*

Technology and Engineering – The construction of the reservoir and the railroad provide ample opportunity for studies in technology and engineering from the very simple to the very complex depending on classes level of interest and ability.

History

USI.18 – Explain the major components of local government in Massachusetts, including the roles and functions of school committees, town meetings, board of selectmen, mayors and city councilors. *Discover what happened to the local governments of the 4 towns that were taken for the Quabbin.*

USI.19 – Explain the rights and responsibilities of citizenship and describe how a democracy provides opportunities for citizens to participate in the political process through elections, political parties and interest groups. *Discuss what voice or level of participation that the citizens of the 4 towns in the Swift River Valley had during the entire process, from conception of the idea to put a reservoir there through the taking of the lands and eviction of the people. What different experience might the residents of towns like New Salem, which were only partly affected, have had compared to the residents of the 4 towns.*

USII.2 – Explain the important consequences of the Industrial Revolution. *Study how the results of the Industrial Revolution in Boston contributed to the need to build the Quabbin Reservoir and what part railroads played.*

USII.13 – Explain how the Great Depression and the New Deal affected American society. *This was the time at which residents of the valley have to start moving out and starting new life; explore their challenges and what the government did or did not do to help the people it was evicting; discuss how such a massive construction and relocation project would have been funded at this time.*

USII.17 – Explain important domestic events that took place during the war. *See where target practice for bombs was done at Quabbin.*

Explore the **economic** factors surrounding the Quabbin project including cost of water supply to metropolitan area, relocation, construction, lawsuits, surveys and etc.

Explore the various issues of **government**, civil rights, and eminent domain as related to the creation of the Quabbin Reservoir.