

2.2. History of the Schoharie Valley

The name “Schoharie” is of Native American decent, derived from a tribe of Mohawks who inhabited the Schoharie Valley area before the arrival of the Europeans. It is thought to be a word meaning “driftwood”. The correlation between driftwood and this region can be seen throughout the valley, with debris accumulating at various locations on the creek, often from bank to bank. The name “Schoharie” is also similarly translated as a corrupted version of a Native American word meaning "The Great Jampile," or a natural bridge formed by driftwood (Frisbie, 1996).

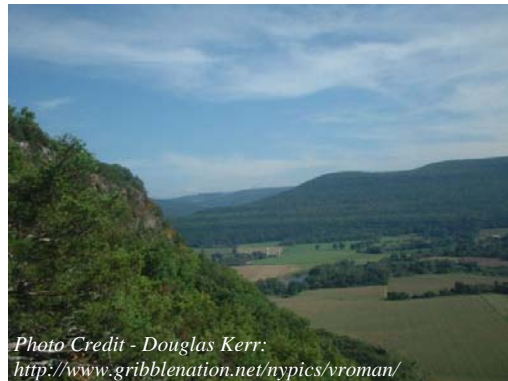


Photo Credit - Douglas Kerr:
<http://www.gribblenation.net/nypics/vroman/>
Northern view of the Schoharie Valley.

The Germans were the first Europeans to settle the area in significant numbers. A territory known as Palatinate, stricken by the toils of war, would provide a flush of immigrants from Germany to America. The first group arrived in New York in 1710, most settling just south of the Schoharie Valley. They were expected to work out expenses to Governor Hunter of New York by producing tar, pitch, and turpentine from the local pine trees. In return the immigrants received food and supplies as well as land to live on. Governor Hunter and the English government (who funded this project) overlooked one significant detail. The local pines did not have enough pitch to make this prosperous. Unlike true “pitch pines” the white pines of the New York region were low in resinous material. Upon realizing that the results were less than prosperous, the English redirected their funding elsewhere. In September of 1712 Governor Hunter was forced to cease subsistence supplies to the immigrants.

This came at a terrible time for the Palatines, just before winter. Food was scarce and the loss of their subsistence supply line came quite suddenly. Many of the Palatines, no longer able to rely on government aid, decided to retrieve agreement from the native Mohawks to settle the nearby Schoharie Valley, which was rich in farmland. Although the English already held claim to this land, the Palatines worked out their own agreements with the natives to purchase it. The lack of regard for the prior ownership of the land would prove to cause trouble, resulting in the owners demanding rent. Many Palatines would leave while others would decide to stay and pay the rent. (Frisbie, 1996); (Smith, 2006).

Upon settling the valley, the Palatines proved to be good farmers, practicing more careful and advanced farming techniques than most pioneers. In the clearing of forested land for example, they did not practice the common technique of girdling the trees and leaving them to die for firewood the next year. Instead they cut them down and burned the brush, leaving the ground more suitable for cultivation the next year. They made many of their own farming tools and built fences and barns of very high quality. Over the course of time, the Palatines would play a significant role in introducing many improved farm tools to the area as well as creating beautiful works of art through the meticulous crafting of their tools (Meyer, 1997).

Much of the Schoharie Valley's cultural heritage is derived from these early settlers. One of the earliest settlers to establish a farm in the area was Adam Vroman (est. 1713). His memory lingers along the Long Path, a hiking trail which stretches from the George Washington Bridge in New York City all the way to White Face Mt. in the Adirondacks. The path darts along the Schoharie



Photo Credit: <http://www.localhikes.com>

Valley, reaching a spot called Vroman's Nose. At the summit one can view the rolling farmlands of the Schoharie Valley.

This hiking destination was also involved in the military's production of the M1 smoke generator during World War II. In 1942 the secretive projects' debut test was viewed by scientists and military officials from Vroman's Nose. Overlooking the test site, officials watched as the smoke generator filled the Schoharie Valley with smoke. The device proved successful overseas, obstructing the view of fighter pilots and thereby foiling German air attacks (Simonson, 2004).

The Schoharie Creek begins in the southeast corner of Greene County near the Village of Tannersville. Tannersville grew from the local tanning industry, and was duly named in 1895. The creek was used for its power to run mills for the tanneries. As the tanning industry passed, the town remained popular and continued to grow. Businesses sprung up as a result of the area being a popular vacation destination. The Schoharie Creek continues through the town of Hunter, then through the town of Lexington before it enters the Schoharie Reservoir in Prattsville. Hunter and Lexington were both formed from the town of Windham in 1813. Hunter was then called Edwardsville and Lexington was called New Goshen. The two towns received their current

names shortly thereafter. As with Tannersville, the tanning industry had a major impact on these towns, followed by a boom in tourism. Hunter continues to be an especially popular tourist destination because of its ski resort.

The Tanning Industry

The Schoharie Valley has a long history of farming. Many families still farm the land and can trace their ancestry back to the original farmers. Logging also took place in the valley. While these industries may have had positive effects on the local economy, they often adversely affected the local environment. None however match the impact that the tanning industry had. In the early-to-mid 1800's, the tanning industry exploded in the Schoharie Valley. Zadock Pratt, a former militia colonel, built a tannery in Prattsville in 1824. While other tanneries of the era were mere small shanties using the local neighborhood hemlocks for their tanning, Pratt's was much bigger. By the 1840's Pratt's industry had stripped the surrounding mountains bare of all the hemlocks. He was forced to close the business in 1846 as a result, but not before it had a chance to make him very wealthy.

The land was then used for cultivation and was quite productive. However, the tanning industry had a tremendously negative effect on the local environment. It was not until after the devastation of the forests that people began to consider the industry's environmental ramifications. Over time, the forests were allowed to re-grow. The effects of the tanning industry can still be seen today in the mountains' young second-growth forests.

Prattsville and the surrounding area owe much of their history to Zadock Pratt. He helped build or rebuild all of Prattsville's churches. Along Rt. 23 there is a picnic area near a cliff called Pratts Rock. It was here that Pratt commissioned a stone sculptor to carve a bust of Pratt himself in the hillside. This sculpture, as well as several other carvings, are accessible to the public and can be viewed via a very short climb up the hillside (Evers, 2002).

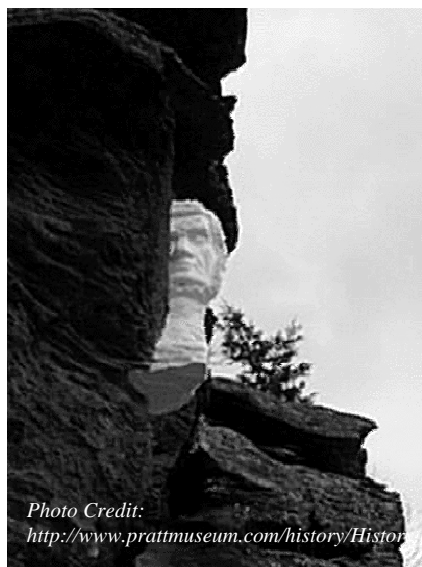


Photo Credit:
<http://www.prattmuseum.com/history/Histor>

Pratt's Rock, located along Rt. 23 in Prattsville.

The clearing of land for farms and local industry can often worsen flood issues and cause receiving waters to become polluted. The Schoharie's industrial history caused periods of intense pollution from sediment laden runoff and the toxic pollutants that accompanied the tanning industry. However, water quality improved with the reforestation of the basin. Despite this, challenges still remain from increased development and reverberations from the watershed's industrial past.

Schoharie Reservoir

The Schoharie Reservoir, located at the intersection of Schoharie, Delaware and Greene Counties, was formed by the construction of the Gilboa Dam. Construction of the dam began in 1920, with completion in 1927. The flooding of the valley for the creation of the reservoir effectively inundated the town of Gilboa, forcing the relocation of 350 of its residents. The Schoharie Creek provides approximately 80% of the water to the reservoir, with the remainder coming from direct drainage streams such as the Bear Kill and Manor Kill (Joint Venture, 2004). An 18-mile conduit between the reservoir and the Esopus Creek called the Shandaken Tunnel was completed in 1926. With the capacity to transfer 615 MGD, this underground system connects the Schoharie reservoir basin to the waters of the Ashokan reservoir basin in Ulster County (Figure 2.2.1). The Schoharie and Ashokan reservoirs were designed to allow the exchange of water from the Schoharie basin to the Ashokan basin thus forming the Catskill water supply system which ultimately drains to the Kensico Reservoir in Westchester County (Figure 2.2.1). Reservoir Release Regulations (Part 670) stipulate that the tunnel operators must seek to maintain an adequate flow of water downstream to sustain the trout fishery in the Esopus Creek and support recreational uses.

The Shandaken tunnel also operates under a New York State Pollutant Discharge Elimination System (SPDES) permit that stipulates levels of turbidity, solids, temperature and phosphorus that can be released into the receiving waters of the Esopus Creek. The State Pollutant Discharge Elimination System (SPDES) program, Article 17 of the Environmental Conservation Law, was approved by the United States Environmental Protection Agency in accordance with the Clean Water Act. The program's goal is to maintain the highest quality of water possible to protect public health, promote public enjoyment of the resource and allow for

the protection and propagation of fish and wildlife, while allowing for industrial development in the state.

Through the Catskill Turbidity Control Studies, NYCDEP analyzed the effectiveness of several measures to help meet the turbidity and temperature permit requirements. These measures included watershed protection, multi-level intake at the Schoharie Reservoir, turbidity curtain, in-reservoir baffle, modification of operations and engineered treatment. Upon thorough review, the options that would offer some level of turbidity reduction and temperature control were the modification of operations and a multi-level intake at the Schoharie reservoir (Joint Venture, 2006). Computer model simulations indicated that Schoharie Reservoir operations could be modified to reduce peak summer temperatures and the incidence of elevated turbidity levels (median reduction of less than 8 NTUs), and to substantially lower solids loading (up to 60% reduction) to Esopus Creek (Joint Venture, 2006). An Operations Support Tool will be developed to maximize reservoir operations to reduce turbidity, solids and maintain temperatures. Based on computer modeling, the multiple level intake option would provide minimal benefit to turbidity in May, June and the beginning of July, but at substantial cost for installation. However, this option remains as a possible measure to be included in turbidity control. Knowing that major threats to the water supply occur following large storms and the erosive nature of the Catskill's geology, watershed protection measures were not considered as viable options. However, these programs remain important for the long-term protection of the basins to prevent any further deterioration of water quality during non-storm periods.

The Schoharie Reservoir is made up of one diversion basin, which is approximately 4.2 miles in length, with a surface area of 1.9 square miles, a maximum depth of 140' and can hold 19.6 billion gallons of water ((Joint Venture, 2004). It is considered a diversion basin since the reservoir has a relatively small storage capacity (19.6 billion gallons) compared to its large watershed (314 square miles). For example, the Ashokan Reservoir has a storage capacity of 127.9 billion gallons and a watershed area of 257 square miles. Therefore, the Schoharie Reservoir fills rapidly and is primarily used to supplement the supply in the much larger Ashokan Reservoir. However, the reservoir contributes approximately 15% of NYC water annually (Joint Venture, 2004). The Blenheim-Gilboa Reservoir is located just a few more miles down the Schoharie Creek. It is operated by the New York Power Authority which uses it to produce hydro-electric power.



Figure 2.2.1. The New York City Water Supply.



The Gilboa Dam and Schoharie Reservoir.

Following an engineering analysis in 2005, it was determined that the Gilboa Dams did not meet NYS Dam Safety requirements. The fear was that in the case of a bad flood (larger than the flood of record in 1996), the water in the reservoir could rise to a level which would break through the structure and cause terrible damage to downstream communities (DEP, 2006). In 2006, the

NYC Department of Environmental Protection implemented a \$24 million dollar project targeted at bringing the eighty year old dam up to current New York State dam safety standards. The plan, expected to be completed in December of 2006, includes the installation of debris protection structures, drainage units, an overflow notch and anchoring cables. A full scale \$300 million dollar reconstruction of the dam is expected to begin in 2008 which will bring the dam up to an even higher standard of safety.

Significant Historical Sites Downstream of Reservoir

The Schoharie Valley is a region which prides itself on its farming history. There are many antique fairs for those interested in seeing the old tools used to farm the land in the past (Fairbairn, 2005). While visiting these fairs, one may also visit one of the area's oldest buildings, the Palatine House. It is located on Rt. 30 in the town of Schoharie and is the oldest existing building in the village, built in 1743. It is one of the few frame-buildings left after Schoharie was burned during the Revolutionary War (Round the Bend, 2004).

The Blenheim Bridge, built in 1865 by Nicholas Montgomery Powers in the town of North Blenheim, also holds historical significance in that it is the longest single span bridge in the world (226 ft.) and one of only six remaining "double barreled" bridges in the world. On the bridge a sign tells the story of a "freshet" (old word for flood) in 1869. The sign reads, "In the spring of 1869, a severe freshet washed out a wide channel across the western approach. A wooden extension was added to the Blenheim Bridge to span the new channel. In 1895 it was replaced by an iron extension. The wooden covered bridge was retired from use in 1931 and the Board of Supervisors voted to retain the bridge as a public historic relic." (NYS Covered Bridge



The Blenheim Bridge in North Blenheim.

Society, 2006). Today these as well as several other museums and relics offer the visitor a glimpse into the history of the Schoharie Valley.

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