

GREAT FALLS, INDUSTRY, and the LEVINE RESERVOIR

In 1791, founding father Alexander Hamilton recognized the inherent value of the Great Falls of Paterson as an energy source that could use falling water to power multiple industries. With his assistant, Tench Coxe, he organized the Society for Establishing Useful Manufactures (SUM) in that year to attract manufacturing companies to Paterson. Pierre L'Enfant was enlisted to design a raceway system that would divert water from the Upper Passaic River to the industries before spilling back into the Lower Passaic River. He completed that design in 1792. The Society contracted with Peter Colt—later to become a famous gun manufacturer in Paterson—to make modifications to L'Enfant's design. The first raceway was built in 1800 and modified in 1827¹.

True to Hamilton's vision and L'Enfant's (and Colt's) engineering, the Passaic River at Great Falls went on to power textile, silk, paper-making, locomotive-building, weaving, and many other industries. The raceway system designed by L'Enfant was operational by 1815, and was described in a work published in 1834.² The system was so successful in attracting industry that, in an age when agriculture was New Jersey's leading industry, the City of Paterson grew rapidly around its manufacturing industries, from about 500 residents in the 1790's to over 5,000 by 1820³.

Great Falls and its surroundings have received a series of important national distinctions including:

- Great Falls was designated a National Natural Landmark in 1967—a designation recognizing the unusual geology of the area;
- The Great Falls of Paterson / SUM Historic District was listed in the National Register of Historic Places in 1970 (the district was later expanded);
- The Great Falls National Historical Park was established in 2009.

The Stanley M. Levine Reservoir sits within the area of the District, but it is not within the National Historical Park. The reservoir itself was not a part of the process of manufacturing at Great Falls; it was built 93 years after the SUM was organized. The reservoir was not a part of, nor associated with the raceway system. It was built in 1885, during the latter part of the period of intense industrial development that was spawned by the Great Falls raceway system (1793-1912). Richard Grubb Associates prepared this historic description of the reservoir:

“The Levine Reservoir, historically known as the Stony Road or Grand Street Reservoir, was built in 1885 by the Passaic Water Company to improve water supply to the City of Paterson (Brown 1890:79; Robinson and Pidgeon 1884...).”
“Organized in 1854, the Passaic Water Company constructed three reservoirs

¹ Russell I. Fries, *European vs. American Engineering: Pierre Charles L'Enfant and the Water Power System of Paterson, NJ*, Northeast Historical Archaeology, Volume 4, Issue 1, 1974: Symposium on Industrial Archaeology, Paterson, NJ, Article 9.

² Thomas F. Gordon, *A Gazetteer of the State of New Jersey: Comprehending a General View of its Physical and Moral Conditions, Together with a Topographical and Statistical Account of its Counties, Towns, Villages, Canals, Railroads, Etc., Accompanied by a Map*, published by Daniel Fenton, Trenton, NJ, 1834.

³ Wikipedia article on the Society for Establishing Useful Manufactures, found here:
https://en.wikipedia.org/wiki/Society_for_Establishing_Useful_Manufactures

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(Lower, Middle, and Totowa) in its first 30 years of existence. The growth of the city's industry and population during the late nineteenth century created a demand for additional improvements to the water supply and led to the purchase of the Levine Reservoir property in 1884 (Brown 1890: 73-79). Constructed and put into service the following year, the new Levine Reservoir became the largest of the company's four water storage facilities, with a capacity of 25 million gallons (Sanborn Map Company 1915).⁴

The Levine Reservoir has its own history and ongoing function as a component of the city's waterworks, that system has followed a series of constant enhancement in an ongoing effort to provide clean, safe drinking water for the city separate from the Great Falls National Historical Park. The history of the Levine Reservoir demonstrates a perpetual effort to provide the best quality drinking water in adequate supply for the growing needs of the city. The present call by the US EPA to convert open reservoirs is part of that tradition of constant improvement of the water system.

Of the four reservoirs built by the Passaic Water Company, Levine Reservoir is the only one remaining. The conclusion that we may draw from this is that while the reservoir has its own history and ongoing function as a component of the city's waterworks, that system has followed a series of constant enhancement in an ongoing effort to provide clean, safe drinking water for the city. The re-positioning of the water intakes and the opening, closing, and replacement of the first three reservoirs demonstrate a perpetual effort to provide the best quality drinking water in adequate supply for the growing needs of the city. Certainly, the present call by the US EPA to convert open reservoirs is part of that tradition of constant improvement of the water system.

The following chronology of events presents the key milestones in the history of the Great Falls and subsequent Levine Reservoir:

- **1791** Establishment of Society of Establishing Useful Manufactures by Alexander Hamilton.
- **1792** Pierre L'Enfant designs water raceway system to convey water from Upper Passaic River to power industries in Paterson.
- **1799** Peter Colt modifies L'Enfant's raceway design.
- **1800** First raceway opens and delivers waterpower to textile industries at Great Falls.
- **1827** Raceway system is modified.
- **1849** The Passaic Water Company was incorporated, and secured franchises for water distribution to the town of Paterson & environs.
- **1857** Principal intake of Passaic Water Company completed-located on Passaic River below the Great Falls in Paterson and pumping water directly into the mains that supplied the city. As pollution worsened in the river, the intake was moved just above the falls and then to the present intake at Little Falls, five miles upstream of Paterson.
- **1885** Stanley M. Levine reservoir, originally named the Stony Brook Reservoir, constructed by Passaic Water Company.

⁴ Richard Gibbs Associates, "Cultural Resources Study" published in 2010.

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- **1899** Intake relocated to present intake on the Passaic River in Little Falls
- **1902** The East Jersey Water Company constructed the world's first large rapid sand filter system at Little Falls—the beginning of water treatment for Paterson.
- **1916** North Jersey District Water Supply Commission created by Act of Legislature
- **1927** Passaic Valley Water Commission created by an Act of Legislature to acquire the privately owned water works system for Clifton, Passaic and Paterson.

Although the Levine Reservoir was not a part of the historic raceway system and is not part of the Great Falls National Historical Park, PVWC recognizes that the reservoir is considered to be a "contributing resource" to the Great Falls of Paterson / SUM Historic District. As such, any undertaking that we may seek to do to modify the reservoir will have a direct effect upon that district. New Jersey's Historic Preservation Office has asked that we evaluate project alternatives and measures that would minimize and/or mitigate any adverse effects. PVWC has examined several alternatives that would allow us to meet the requirements of the EPA's LT2 Rule, as well as their costs. We have also examined measures to mitigate the possible adverse impacts of those alternatives. The options we have considered are all provided for the public to review on our website: www.PVWC.com. More importantly, the public has the opportunity to express its own preferences with regard to those alternatives in our online survey, which is also available online at www.PVWC.com. We encourage you to take the survey so that your opinion will be included in our decision-making process.