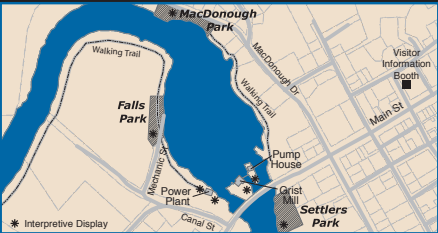


The Vergennes Pump House

“People of Vergennes at the mercy of the flames.”
--H.C. Johnson, Editor, Vergennes Vermonter, Oct. 18, 1867.



City of Vergennes
For information: 802.877.2841
www.vergennes.org

In Need of Water

Fire was the scourge of downtowns all across America in the nineteenth century. Buildings were destroyed by fire time and time again. Water often had to be transported from nearby rivers. Firefighting efforts were frequently in vain as fires were doused by hand-held buckets and hand pumps.

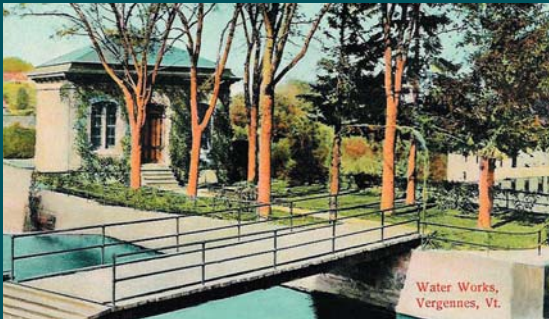


The aftermath of the Sherman Block fire of April 9, 1896. Courtesy of the Bixby Library.

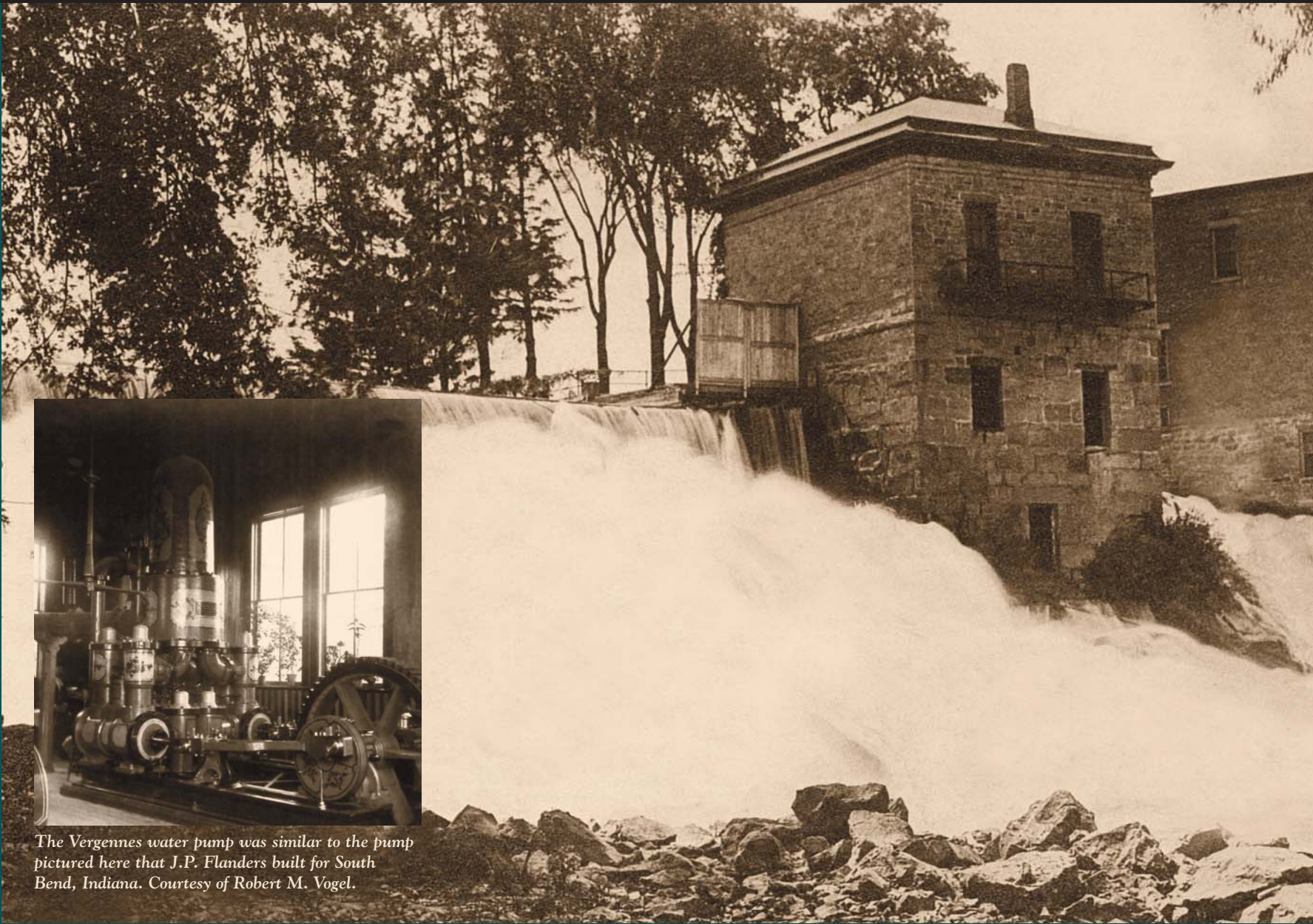
A City Waterworks

In 1868, Vergennes took its first steps to construct a city waterworks for fire protection by installing three turbine-powered water pumps at the base of Otter Creek Falls. The pumps proved unreliable, however. The City soon contracted with John P. Flanders, owner of the Vergennes Machine Company, to build a better pump. Flanders designed, cast, machined, and subsequently patented all the parts of a unique double-acting piston pump.

To house the new pump and turbine, the City constructed a 30 foot square building in the Italianate style on an island at the top of the falls in 1874. The three foot thick walls were built of limestone quarried in Essex, New York.



Vergennes Pump House, c. 1910
Courtesy of the Bixby Library.



The Vergennes water pump was similar to the pump pictured here that J.P. Flanders built for South Bend, Indiana. Courtesy of Robert M. Vogel.

Vergennes Pump House and falls, with Norton Gristmill on the right. Courtesy of the Bixby Library.

The Flanders Water Pump

To power the pump's gears, cranks, and pistons, water from Otter Creek was diverted through a large water turbine in the lower level of the pump house. Water from the creek also was piped to a cistern in the lower level, where the sediment settled out before it was pumped to factories and other users in the city. The pump remained in service until the 1930s, when the City developed a new water system as part of the Depression Era Works Progress Administration project.

Pump Specifications

- Type: Double cylinder, double acting water pump, patented, 1873
- Dimensions: Length 14 feet, Height 14 feet, Width 6 feet
- Weight: 18 tons, Piston stroke: 22 inches
- Pumping capacity: 50 gallons per revolution

Pump Speed revolutions per minute	Water Pressure pounds per square inch	Output gallons per hour
Normal 1-2	60	2,500
Emergency 7 (fire-fighting)	110	18,000

- Power source: Water driven turbine
- Type: Horizontal, Fournayron with inward flow
- Head of water: 15 feet directed through flume and control gates
- Speed: 5-35 revolutions per minute