

Stevens Point

In 1845 William Brawley applied for authorization to build a dam at Stevens Point. This was granted by the Territorial Government of Wisconsin on February 3, 1846.³² Later in 1846, Brawley completed construction of a boom dam across the river. The dam was a rock crib dam, 7 feet high and 800 feet long. It was built about 1,500 feet downstream of the old wagon bridge. This bridge burned in 1923 and was replaced with the present Clark Street Bridge.

Upstream of the bridge on the west side of the river is a small park with a play ground and beach, named Mead Park. Where the beach is located once stood the "Red Mill". The mill yard extended south to Clark Street. It was built in 1873 and turned out 8 million board feet of shingles and lath in a year. The Red Mill burned in 1896. Across the river where Pfiffner Pioneer Park is located, stood the John Weeks Lumber Company. It was located on Sawdust Street, now known as Crosby Avenue. This mill turned out 10-12 million board feet of lumber, 4 million lathe and 5 million shingles in a good year. The mill burned in 1929. Moving on the east side, downstream of the wagon bridge (today's Clark Street Bridge), was the Owen Clark mill and below that stood the Jackson Milling Company flour mill.³³ On the west side of the river was a stone quarry.

The Jackson Milling Company was organized in 1887. Among his other duties, J.D. Witter was the Treasurer. The company built a flour mill on the east bank of the river at the old Brawley dam. Three turbines were installed here, rated at 140 horse power to operate a feed and flour mill.³⁴ The Jackson Milling Company building sat near the north end of the present Stevens Point Division parking lot.

Shortly after the turn of the century plans were laid for a new dam and power house to be built 1,000 feet below the 1846 dam. This project was started on September 19, 1917 by the Jackson Milling Company.³⁵ This dam was to cost \$500,000, have sixteen flood gates 26 feet wide and a 300 foot spillway.³⁶ The hydro generators at the Stevens Point dam were installed in the winter of 1918 and 1919. These had vertical Francis water

³² K.C. MacLeish, *Investigation of use of Rocky Run as Emergency Spillway for the Wisconsin River above the Jackson Mill Dam owned by the Consolidated Water Power and Paper Company*, Memorandum, I-WP-168, Page 2, June 30, 1936

³³ *The Stevens Point Daily Journal*, Saturday, June 28, 1958

³⁴ *The Water Powers of Wisconsin*, Wisconsin Geological and Natural History Survey, Page 139, Madison, WI, 1908

³⁵ C.H. McCarthy, *Stevens Point Division, Historical Account*, 1965

³⁶ *The Stevens Point Journal*, Saturday, September 22, 1917.

wheels rated at 950 horse power each under a 17½ foot head. They were built by Allis-Chalmers of West Allis, WI. These turbines were directly coupled to Allis-Chalmers generators, controlled by No.2 A-C governors. Maximum continuous output of the plant was rated at 3,840 kilowatts per hour.³⁷ As with all hydro, this was dependent on the river flow. Three of the original water wheels or runners, were replaced in the mid-1980s. The other three are in good shape after 75 years of almost continuous service. Possibly because of the war, for whatever reason, the buckets were built of boiler plate steel. Another anomaly of this plant is that some of the hydros have steel thrust bearings³⁸ and some are babbit. The reason for this is also unknown.³⁹ Finding people to properly repair and dress steel thrust bearings has been difficult; it seems to be a lost art. The number three unit thrust bearing was replaced with a special roller bearing for that reason after it failed due to water in the oil. The life of the roller bearing is 20 - 25 years. The lower guide bearings on these hydros, as with all the hydros owned by CWPCo prior to 1940, were made of Lignum Vitae⁴⁰ wood. This wood is extremely scarce today and CWPCo replaces it with rubber or a composite of graphite. For a few years, a phenolic⁴¹ material was used, but it didn't hold up well.

When the plant went on line in 1919, the power produced supplied the old Jackson Milling Company, the new CWP&PCo Paper Mill and the remainder was sold to the Wisconsin Valley Electric Company⁴² which served customers in Stevens Point and Wausau. A 44,000 volt transmission line was built from the substation to Wausau with plans to build another line to the Biron and Grand⁴³(now Wisconsin) Rapids Paper Mills of the CWP&PCo.

On July 1, 1918, the Oneida Paper Company was organized as a subsidiary of CWP&PCo for the express purpose of acquiring the water power site at Stevens Point. Construction was started on a new paper mill. On November 8, 1919, the name of the

³⁷ *Consolidated Water Power and Paper Company, Historical Review*, Author Unknown, September 1943.

³⁸ The whole rotating part of a vertical hydro hangs in a thrust bearing. Stevens Point uses "Kingsbury" thrust bearings.

³⁹ A write up in a periodical of the day states all the thrust bearings were cast iron. See Footnote 43.

⁴⁰ Lignum Vitae has a natural lubricant in the wood, which makes an excellent bearing material when used with water.

⁴¹ Laminated plastic.

⁴² The Wisconsin Valley Electric Company became part of what is now the Wisconsin Public Service Corporation.

⁴³ *Hydroelectric Development on Wisconsin River at Stevens Point*, Electrical Review, William F. Snyder, Chicago Ill, May 31, 1919

company was changed to Oneida Power, and its purpose to a public utility. The mill became the Stevens Point Division of the CWP&PCo. Eight years later, on April 1, 1926 the Oneida Power Company acquired the rights to the dams at Biron and Wisconsin Rapids, and again made a name change. The new name was an old name. After a 24 year hiatus, the Consolidated Water Power Company stood alone again. This time as a public utility, which it remains to this day.

While the hydros at Stevens Point were rated to run at a 17 foot or better head, for the first 14 years, the head was only 14 feet. CWPCo applied for permission from the Public Service Commission to raise the head 3 feet. Permission was granted on June 30, 1932. In those days old Highway 10 from Stevens Point to Junction city ran close to the river and flooded on an average of three times a year. This was from the river flow following the Rocky Run Creek channel whenever the water elevation of the Wisconsin rose due to high flows or floods. Many people feared worse flooding if the head was raised, not only on the west side of the river, but also on the east. Records show many complaints about flooding. After an extensive survey of the area and study in 1936,⁴⁴ it was determined that the Clark Street Bridge had more effect on high water than the dam. Ice jams against the bridge could be especially devastating. To be sure the Rocky Run would take the overflow, a spillway was built in the dike on the west side of the river to act as a safety valve for floods to protect the city of Stevens Point. A few years later Highway 10 was rebuilt away from the river, higher and with bridges designed to pass floods without affecting traffic to and from Point.

On the east side of the river a pumping station was built on Moses Creek since the old creek would not be able to flow into the Wisconsin because of the higher elevation. CWPCo operated this pumping station, known as the Point Slough Pumps, until the mid 1980's. This creek, today almost completely underground, flows past the present dam and into the river through large sewer pipes. The old pumping station was removed for the down town development.

In 1943 a new gravity wall was built between the power house and the gate section. This wall replaced the original and closed off one taintor gate. The old wall was deteriorating and had been undermined by water flow. 15 gates remain and have been enough to pass all the floods passing through Stevens Point. Then, in 1947, at the request of the Public Service Commission, the 300 foot flash board section was replaced with a concrete gravity wall.

⁴⁴ K.C. MacLeish, *Investigation of use of Rocky Run as Emergency Spillway for the Wisconsin River above the Jackson Mill Dam owned by the Consolidated Water Power and Paper Company*, Memorandum, I-WP-168, Page 2, June 30, 1936