

## Biron

On October 5, 1840, title for several government lots and an island, in Section 34, Town 23, Range 6 east, were assigned to Gideon Truesdall, Joshua Draper, Paul Kingston and Harrison Fay. This is the site of the present Biron Division. Fay and Draper had built a sawmill prior to the survey, about 1837. Hathaway noted the existence of a railroad at this location in 1839 running from the sawmill through the swamps to a point a few hundred yards south of the present intersection of Eagle Road and Highway 54. This was a wooden track railway and apparently the only method of getting through the marshy area to the sawmill. Logs, laid longitudinally on cross ties, dressed and gauged to match the wheels of oxcarts, made up the rails.<sup>26</sup>

Fay died in 1840, and the "Widow Fay's Saw Mill" was sold to Theodore Weston. Weston sold the mill in 1846 to Francis X. Biron. In 1865 Francis built the "White House", which today houses the Biron Mill Manager and staff. In 1873, one year after the Green Bay and Western Railroad connected Grand Rapids with the east part of Wisconsin, Biron built and equipped a new, larger sawmill on the site of the old. In that same year Mrs. Biron passed away. Francis died 4 years later in 1877. They left the mill to their three children, Francis junior, George Severe and Laura. After the flood of 1880, which damaged the mill considerably and caused a high loss of property, Francis relinquished control of the mill to George. George (often referred to by his middle name, Severe) carried on with the mill until the lumbering days were over.

George and Laura Biron were authorized by Chapter 236 of the Wisconsin Laws of 1889 to "raise, build and maintain a dam across the Wisconsin River, not more than 8 feet in height above low water mark,...for hydraulic manufacturing, booming, and flooding purposes."<sup>27</sup> On December 14, 1892, the Grand Rapids Pulp and Paper Company was incorporated by J.D. Witter, G.S. Biron and some others to manufacture paper, pulp, improve the water power, buy and sell real estate.<sup>28</sup> In 1893, Chapter 20 gave the Biron's authorization to raise the head to 13 feet, but "not to obstruct or impede" the running of lumber rafts, logs, etc. The Grand Rapids Pulp and Paper Company razed the old sawmill and built the new Biron Paper Mill on the same site. Construction on the new mill began in 1894 and was completed in 1897.

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<sup>26</sup> J.B. Purvis, *Biron, Old and New*, Consolidated News, 1927 (J.B. Purvis was Biron Mill Manager at that time.)

<sup>27</sup> Chapter 236, Number 691, A. Section 1., April 3, 1889

<sup>28</sup> Paper in CPI Archives, date and author unknown.

The Biron facilities were purchased by the CWP&PCo on September 5, 1911.<sup>29</sup> Additional grinders were installed in 1912 and 1913. Records show six sets of quad runner camel back turbines, each turbine having 4 water wheels. These were built by S. Morgan Smith and Allis-Chalmers.<sup>30</sup> Sometime in the 1930's five of the turbines were reduced to 2 water wheels, the parts removed to be used as spares. The number 7 unit, on the east end of the line up, had 4 runners until 1992, when it was discovered on inspection that all 4 were unrepairable. The downstream pair was replaced with new and the upstream pair abandoned. Experience shows the two turbines do not share load equally, the downstream turbines do most of the work.

In 1916 a vertical hydro unit was installed at the river end of the old grinder flume lineup. This hydro generator had a 700 horse power Allis-Chalmers Francis turbine turning an A-C generator controlled by a No.2 A-C governor. This is the present #3 hydro generator and has just undergone its first major turbine overhaul, although the generator has been rewound at least once. The water wheel is in good shape, but all brass bushings and some other small parts were replaced. CPI Machine Shops at Biron and Wisconsin Rapids made the new parts. The original A-C governor, which was only used as a gate actuator since 1965, was replaced this year after 78 years of service. Also in 1916, the Public Service Commission of Wisconsin allowed CWP&P Co to raise the head water level. Besides the new vertical hydro, 11 new steel taintor gates were built just upstream of the Power House.<sup>31</sup> These gates replaced a wood and stone overflow section from the old 1896 dam.

The years 1920 to 1923 saw expansions at the Biron Mill and Hydro Plant. In 1920 work was started on a new hydro plant and in 1921 two new hydro generators were installed next to the #3 unit. These two units had dry gate cases vs the submerged wet gate case on number 3. These units were also built by Allis-Chalmers of Milwaukee and had Francis turbines rated at 1,500 horse power each. The units have been rewound twice, but the turbines are unchanged since 1921. They were extremely well built and are nowhere near the end of their serviceable life.

In 1926 the Biron hydro plant and dam were acquired by the Oneida Power Company, which changed to Consolidated Water Power Company. The following year, 1927, new gate steel was ordered and replacement of the 1916 gates (now the "A" gates) began. This project took part of two summers, cold weather halting the job during the winter. The change was due to the fear that the old gates might not withstand the pressure of the higher head. The gate sections were transported by rail to Biron and floated

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<sup>29</sup> Consolidated Water Power and Paper Company, Historical Review, Author unknown, September, 1943.

<sup>30</sup> Allis-Chalmers bought out S. Morgan Smith many years later.

<sup>31</sup> Two gates were removed later when a new gravity wall was added with the new Hydro Plant.

upstream to the dam by company barge, the *Jane Agnes*. All 9 gates were again rebuilt in the 1980's. Some steel was added to strengthen the framework, steel skin was replaced and new seals were installed.

In 1930 a portion of the old overflow section on the island was rebuilt wider and higher with concrete. To relieve water leakage internally, two ten inch drains were installed to channel the seepage downstream. The flow from this drain gave the appearance of a spring or boil for years below the gravity wall on the island.

In 1933, CWP Co applied for permission to again raise the water level at Biron. This was granted by the PSCW on March 17, 1933. In 1935, ice coming down river severely damaged the part of the overflow section that was situated on the island between the two gate sections. In 1936 the remainder of this wall was rebuilt, and a portion of the spillway replaced with 5 new steel taintor gates. These gates are referred to as the "B" gates today. The new gate section was built just downstream of the overflow section and as soon as possible the following year, the pond was lowered and the old stone cribs leveled off to the same elevation as the bottom of the gate sill. These gates were rebuilt in the late 1980,s with new steel skin, stiffeners, sills and seals.