

### **Upstream of Control Gate**

The dam, retaining wall, and entrance to the control gate from upstream. Debris and trees are carried down the creek and batter the gates and masonry in the northwest corner of the mill. The metal plates used to close off the gates are visible from this location.



The retaining wall upstream from the mill shows evidence of erosion of the masonry and has been undermined. The water is visibly flowing under/through the wall.



The structure between the dam and the control gates is stone masonry covered with concrete. This shows signs of deterioration due to debris slamming into it, freezing damage, and erosion from water flow. Plants and trees should be removed so their roots do not cause additional damage.



#### **Control Gates**

The control gates are currently blocked with planks and metal plates. Three fragments of the trash rack remain. There is no other evidence of the original gates other than the opening size. The masonry walls on both sides have deteriorated and now leak. A leak to the right of the gate has seriously eroded the masonry.



A close view of the gates shows the metal sheets, wooden timbers, and trash rack sections as well as the flow of water coming through and around the gates.

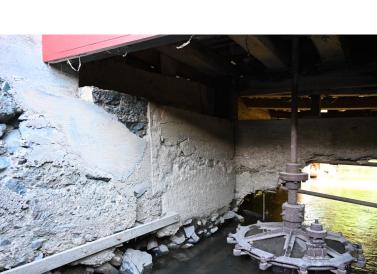


Water flowing through and around the gates has undermined the stone and concrete masonry by several feet.



### **Forebay and Turbine Box**

The south side of the turbine forebay and turbine box consisting of concrete walls poured inside the stone masonry. The fragment of the back wall appears as an arch but was originally a solid wall across the back.



The north side of the forebay and turbine box also consists of concrete poured over the stone masonry walls. The walls are severely deteriorated by water flow and freezing. The different stages of construction are visible in the walls including more recent repairs that show plywood forming was used. The wall has been affected by the erosion and water running through it.





Entire back wall of turbine box with turbines in foreground.



South Side of back wall.

(Right) North Side of back wall and (Below) South Side of wall. Both show the shafting used to shafts used to reinforce the poured concrete wall.



### **Turbine Box Back Wall**

The back wall of the turbine box is constructed of concrete. The middle section has collapsed forming an arch. The wall was poured using mill shafting with couplings as reinforcement. The remainder of the wall has not only collapsed but shows evidence of twisting.



Turbine box with turbines in foreground.





### **South Side Tailrace Wall**

The south side tailrace walls are stone masonry construction. They show signs of dash pointing but also show evidence of damaged pointing in several areas and significant erosion along the bottom of the wall. There are large cracks that should be repointed in addition to the erosion at the bottom. The wall shows evidence of slight bulging. The top of the wall is uneven to address the different sized timbers and supports for posts.







### **North Side Tailrace Wall**

The north side tailrace wall is a poured concrete wall on top of a stone masonry wall. The majority of the concrete extends partially to the top. The stone section consists of three separate parts that might reflect previous damaged areas and earlier openings. Toward the east end of wall a concrete pier was added to support both a main timber and floor timber. The lower part of the concrete wall has been eroded to expose the stone below.







### **Outside of Tailrace Wall**

The outside wall of the tailrace consists of a concrete wall over the stone masonry with two circular concrete piers at either end. The walls were part of earlier repairs and the piers more recent repairs. The photo to left was taken during high water and the photo below was taken during low water. The low water image shows bedrock ledges visible at the bottom of the creek. Water flow has caused significant erosion to the bottom of the wall allowing water to flow under/through the wall into the millrace.





### **Breaches In Tailrace**

The stone and earthen section of the tailrace has been breached in two places.

Breach near the north east corner of the mill. It is also filled with debris and trees that have washed into the area.



A second breach has formed further downstream in the tailrace.





### Main Support Timbers West Wall Timber Over Millrace

The main support beneath the west wall over the millrace consists of a wooden timber resting on the masonry at each end and which is supported by a steel beam socketed into the masonry at each end.

(Left and Below) South end of the timber and steel beam resting on and socketed into the stone masonry.





(Left and Below) North end of the timber and steel beam resting on and socketed into the concrete masonry.







# Main Support Timbers Turbine Hurst Frame Section

This section of framing is supported by two main timbers spanning the mill-race (1 and 2). The west end of the secondary timbers rest on the main timber for the west wall. The end of the outer timbers rests on the wall on the north side and the main timber on the south side. The middle timbers are suspended from a metal beam resting on the outside timbers.

The north timber rests on a short timber supported by the masonry wall.

The middle timbers are suspended from a metal beam with rods and metal brackets (blue). The middle timber is also supported by an iron post







### **Basement Timbers—Turbine Hurst Frame Section**

The west end secondary timber posts rest on the outer wall main support timber. This is the section where the turbine hurst frame was located. Some of the timbers (corner posts) were probably part of the hurst frame.

The west end of the basement floor timbers over the turbine box rest on the west main support timber and are held in place with angle brackets.





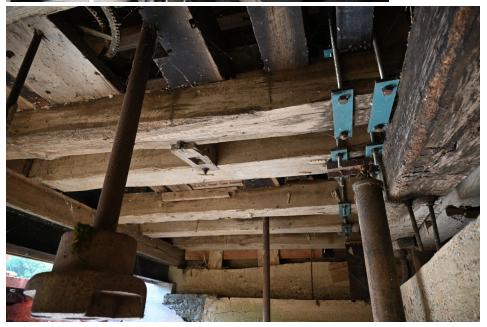


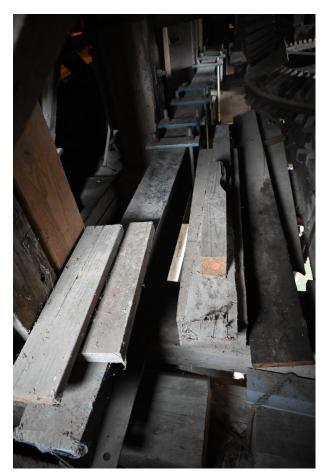
### **Basement Timbers Hurst Frame Section**

(Upper) Fragment of turbine hurst frame at east end that rests above the main timber below. Metal beam, resting on the two side timbers with metal hanger backets next to posts.

(Left) The top timber of the east end of the hurst frame section has been cut so the structure no longer works as a hurst frame.

(Lower) The floor support timbers hang from metal beam with rods and metal brackets. The main support timbers are seen to the left and right of the picture.





The south end of the metal beam resting on the outer timber supported by the main timber.



### **Basement Timbers—Metal Beam**

(Left) The metal beam resting on the outside timbers and supporting the middle timbers with hanging metal brackets.





# Main Support Timbers Extra Supports

The main support timbers pictured are the 2nd (only ends visible), 3rd, and 4th from the west end of the millrace. 2nd and 3rd timbers are above the back wall of the turbine box. Visible in the image are a short central post supporting the 3rd timber. The jack pictured below is directly behind central post. At the far right, the short post supporting outer beam is visible next the stones.



The jack and short post are resting on back wall of the turbine box. A metal post supports the central secondary timber where it hangs from the metal beam above. Main support timber 3 and 4 are seen in the background.



The jack and the post directly behind it support main timbers 2 and 3. Main timbers 4, 5, 6 are visible in the background.



# Main Support Timbers Middle Section

The middle section extends from main timber 3 to 6 (out of site where ladder is resting).

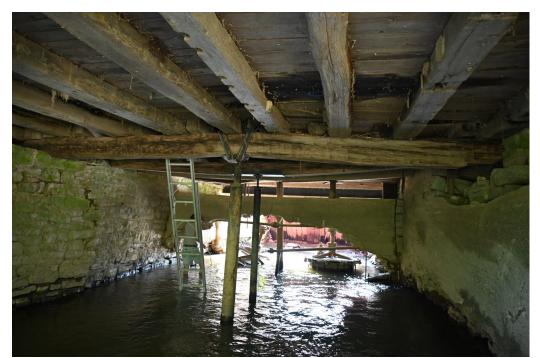
Main timbers (right to left) are 2, 3, 4, and 5 with ends resting on the south wall stone masonry.



Main timbers 4 and 5 with secondary floor timbers over middle section. The masonry has been notched for the timbers and a pier made to support a post.



Main timbers 5 and 6 resting on south masonry wall. Ladder rests on timber 6 which is also supported by a metal post.



# **Main Support Timbers**

Main support timbers 6, 5, 4, 3, and 2 in middle and tailrace sections. The secondary floor timbers visible are in the tailrace section.



North ends of main support timbers 2, 3, 4, and 5 (top edge) are socketed into concrete masonry.



North ends of main support timbers 5 and 6 socketed and supported by loose stones and short timbers.





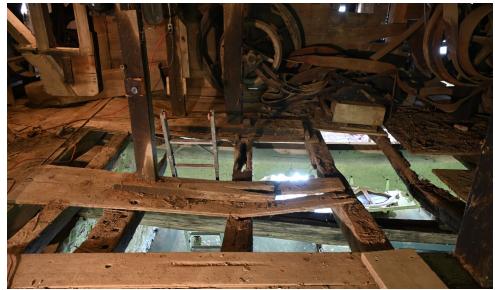
### **Timbers Middle Section of Millrace**

(Top) Main support timbers in middle section of millrace resting on south wall. Main timbers 2, 3, 4, 5, 6 (right to left) are visible. Timbers 5 and 6 are supported by metal posts.

Post resting on middle section of stone wall for tailrace and water wheel gear pit.



Main support timber 6 with post resting on it. The secondary timbers for the floor in both the middle and tailrace sections rest on timber 6 in an alternating pattern.

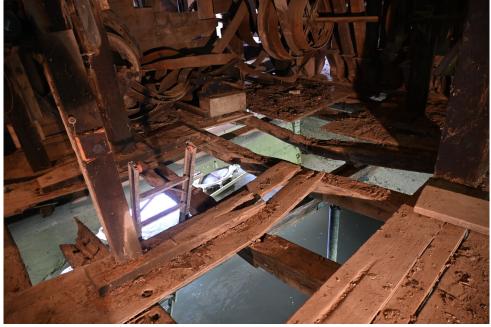




The secondary timbers of the middle section of basement are severely deteriorated. The main support timbers below are supported with metal posts.

The timbers are visibly rotten and the support timbers have deflected and show evidence of damage but several are supported by metal posts. Main timbers 4 and 5 are visible. Timber 6 is under the edge of

the floor in foreground.



Side view looking toward north side of basement and showing millrace below.



Main timbers and secondary timbers of middle section with main timbers (left to right) 2, 3, and 4 socketed in wall and main timbers 5 and 6 supported by timbers and stones.



# Main Support Timbers Tailrace Section

The main support timbers over the tailrace section of the millrace consist of timbers 6 and 7. Both timbers are supported by metal posts set on plates in the millrace. The secondary floor timbers span between the two main timbers.



Main support timber 7 is socketed into the stone wall behind the concrete pier in the north wall. The secondary floor timbers all show evidence they have been recycled.



The main support timber 7 rests on the masonry wall on south side of mill-race. A post from the basement framing sets on the end of the timber.



# Main Support Timbers Tailrace Section

Image shows the length of the south tailrace wall with main support timber 7 and two posts resting upon it.



The metal post and bracket supporting main support timber 7. This carries the load of the east wall above the millrace.



The north end of main support timber 7 socketed in masonry next to concrete pier.



# Basement Floor and Framing Timbers Along North Wall

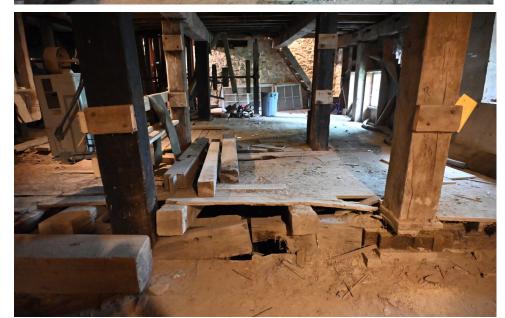
The floor in the middle section of the basement floor has collapsed next to the north wall. The floor and supports have allowed the elevators to push the floor downward on the inside of the floor timber along the wall. This has created a sloping floor making access difficult to the concrete floor next to the hurst frame section.



The floor timbers supporting the ends of the floor boards are resting on this timber which has significant rot and decay.







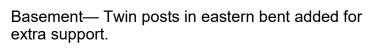
# Basement Timbers Tailrace Section

The support framing above the tailrace section consists of 3 sets of timbers. On the left, the posts supporting the timbers rest upon main support timber 6 and the water wheel gear pit walls with the north end socketed in the masonry. The middle set of timbers, added during modern renovations, is also socketed on the north end w/ posts only supported on the water wheel gear pit walls. The south end is cantilevered. The 3rd timber is socketed on the north end and is supported by one large post and several small posts resting on main timber 7. The south end rests on a concrete section of wall repair.

The timbers and posts resting on main support timber 6.

The posts for the two sets of timbers and posts resting on the water wheel gear pit walls.







Basement— A post support in western bent is supported only by floor boards. This corresponds with the floor section sagging next to the bin scale.



### **Added Support Timbers**

Two additional timber supports were added to east end of the basement over the tailrace and gear pit. One is supported on posts (center) and the other by a combination of posts and concrete.



The ends of both support timbers are socketed into the stone wall on the north end.



South end of the support timber. Most of the timbers in this area show evidence of being recycled from other locations.



### **Additional Support Timber Along Eastern Wall**

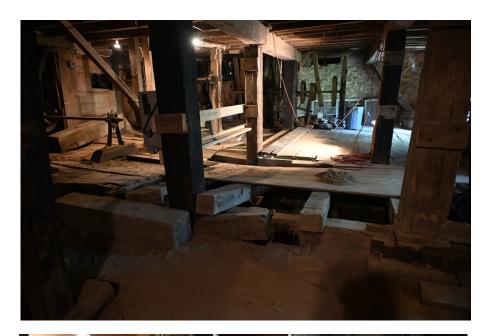
A makeshift support timber was installed along eastern wall to support the floor above. The south end of this timber is supported by a concrete wall addition (left) and the north end is socketed into the masonry wall (below).





Central section of beam is supported in the middle over the stone arch of the tailrace with a series of posts (one large timber and three smaller wooden posts with iron brackets at top). These posts rest on the main timber support at the end of the tailrace below.





# **Basement Flooring**

Basement flooring consists of three sections - section over tailrace (in distance), section over water wheel gear pit (in middle), and mortar/concrete floor (in foreground). This is worst flooring in structure.

View looking north.



View looking south.



Basement floor west end looking through floor into water wheel gear pit.



# Basement Framing Water Wheel Gear Pit

The south side of the basement includes two walls that make up the water wheel gear pit. The northern wall is the south wall of the millrace.

The floor over the gear pit is supported by timbers spanning the pit and resting on timbers and timber fragments. The walls support posts for the east side of the mill.



The cross timbers rest on a jumble of timbers and timber fragments.



Another view of east end of the pit and support timbers.





### **Water Wheel Gear Pit Walls**

The pit is filled with sandy silt and various debris. The walls need significant repairs.

(Top) Looking toward west end of pit.

(Left) North wall toward east end shows an area that has collapsed but it looks like this area was once open and later filled.

(Bottom Left) North wall toward west end.

(Bottom Right) North wall toward middle.







### **Water Wheel Gear Pit Walls**

Northwest corner of pit showing stone masonry.



Southeast corner of pit showing stone masonry walls and concrete wall at end. Concrete is part of repair to wall above.



South wall toward middle.



North Wall Unsupported Post
A post for the north end of west bent is unsupported but sits next to frame wall timber.



Unsupported post on first floor.

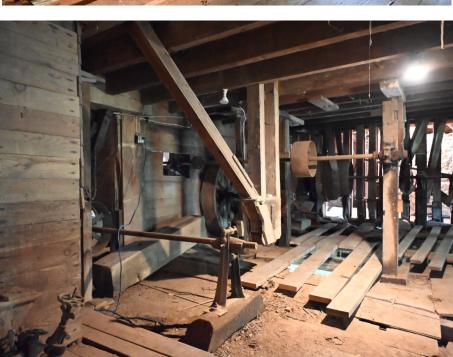
# Bottom End of unsupported post in basement.











### **Shafts and Drive Pulleys**

Three drive shafts and pulleys are located in the basement. The three shafts (Upper right photo going right to left) are for the roller grinders, turbine drive, and auxiliary engine. (Upper left) The auxiliary shaft for the engine. The fact it is floor mounted supports its later installation. (Left) The series of drive pulleys required to operate the three roller mills above. (Lower Left) The shafts from the turbine drive in the center of image are mounted on makeshift posts suggesting the current turbine configuration is more recent.





# **Sagging Floors**

The first floor has a significant slant inward from the walls to the center. This slant is plainly visible in the photographs. (Top) Floor sloping from west wall toward corn grinder and bin scale. (Left) The slope in floor extends along entire west side of building. (Bottom) Slope from north and south walls toward middle of floor.





First Floor—Notched post where floor sagged.



First Floor—Elevator chute with support bracket where floor sagged.

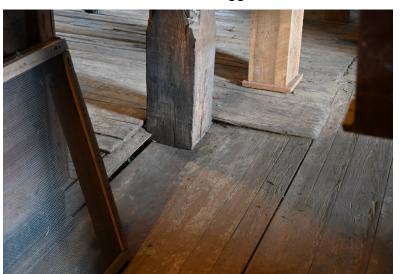


# **Evidence of Sagging Floors**

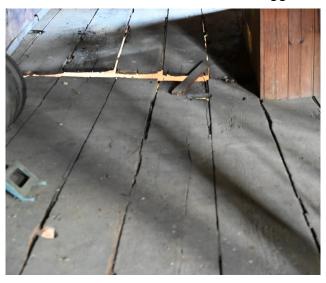
There are several places in the building where the sagging floors have caused issues that are plainly visible.

First Floor—Post where floor collapsed.





Third Floor—Section of floor has sagged.





# **Unsupported Post**

The changes to the timber framing have caused this post on the first floor to not be supported.

Top of post.



Bottom of Post.





**Damaged Rafters** 

A few rafters sustained damage during a previous roof leak and are starting to fail near joints.



This is a typical example of the damage visible on a couple of rafters.



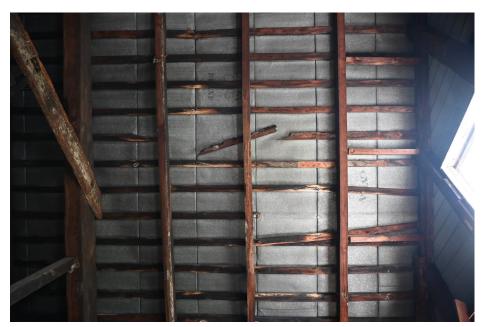


### **Water Damage in Rafters**

This damage is in larger rafter timbers located at truss. Water damage extends length of timber but is worse at joint in bottom of picture.



Some smaller timbers in framing have been replace with metal supports and even a chain.



Some nailer boards have been broken toward the front of the mill.





### A Mortar/Concrete Floor

The south side of the basement has an uneven poured floor of mortar or concrete. It was located under 1.5" - 2" of fine sediment.

### **Knob and Tube Electrical Wiring**

The mill contains early style knob and tube electrical wiring. Examples of the switches and wiring on the first floor. This type of detail provides additional detail to the setting of the mill equipment and could be an effective interpretive tool.



### **Evidence of the Store**

The only remaining evidence of the store are the markings in the floor that reflect where the store walls and shelving once were. Effort should be made to preserve this feature of the mill's past.



# **Damaged Floor Joists**

The various damaged floor joists and timbers should be replaced as funds allow or when larger projects make the process easier.

Some damage is the result of various pests like this termite damaged joist. No evidence of active pest infestation was identified during the survey.



This timber shows extensive damage from powder post beetles.



Timber with evidence of powder post beetle damage and heavily impacted by past operations in the mill.