

Bristol Mills Dam ad hoc Advisory Committee
Minutes of Meeting Tuesday, May 23th, 2017
Bristol Town Hall

Committee members present: James Albright, Pam Allen, Bill Benner, Claire Enterline, Chuck Farrell, James Hatch

Absent: Phil Averill, John Freburger, Abby Ingraham

Also present: Rob Davidson, Joe McLean, Slade Moore, Rick Poland

The meeting was called to order by chair Enterline at 6:02 pm with a quorum present and the Pledge of Allegiance was recited.

There was a motion by Enterline and a second by Allen to approve the minutes of May 11. Benner requested that the last sentence in the second paragraph from the bottom on page 3 be amended. He stated that he did not make the request for the Wright Pierce design. Enterline suggested replacing the sentence with "Enterline would resend the Wright-Pierce design through email." The minutes were approved unanimously with the noted amendment. Albright abstained since he had not attended the last meeting.

Enterline reviewed the agenda. She proposed an amendment to discuss current activities surrounding the fish ladder.

2017 ALEWIVE RUN

Saturday 5/20, 5-6 volunteers installed the leader and filled sand bags to secure the leader so fish couldn't go under. Allen noted they filled 147 bags. Moore noted that one volunteer was 7 year-old J. Crooker.

Moore shared that on Saturday 5/20 volunteers breached beaver dams and blowdown debris on portions of the river below and above the fishladder. He stated this is usually done in the spring to help adult alewives get up the river. Later on when water levels drop and adults are still in the river the process is often repeated so they may exit the river. He noted that beaver dams are usually at the same sites every year.

Later in the season, beaver dams and blowdown debris are breached again to assist the juveniles in exiting the river. Moore stated these efforts are taken because the fish run is very vulnerable. Permission was granted from IFW for all activities.

Albright shared the fish counts he has seen during his shifts. On Sunday 5/21 he counted 5, Monday 5/22 he counted over 60 and Tuesday 5/24 he counted 7-8. He noted other fish species were also present.

Enterline explained the methodology of the count. Four (4) 30-minute intervals are counted each day. The 30-minute interval is randomly selected within certain time slots. Because fish numbers fluctuate throughout the day, results of the count provide a daily average with a slight error estimate. A statistical model is then applied to extrapolate the data. Enterline included that they used a counter a couple of years ago and compared it to the volunteer count. The counter did determine there was not a lot of alewives going up at night. The counter is tuned to not count sticks or debris.

Benner noted he saw groups of 7-8 alewives get to the top of the ladder where they would fall down to the floor of the ladder and then come back to the surface belly up and then shoot down the ladder.

Claire encouraged all committee members to go out and look at the alewives ladder.

OPTIONS FOR DAM

Enterline clarified that the feasibility study is still in an information gathering stage and there were no cost estimates available at this time.

McLean presented his findings. The bathymetric survey provided considerable information about the channel from the boat launch to the existing dam. The shape of the channel appeared as a natural system even though the dam has been in place for a long time. The channel was found abundant with ripply, cascading ledge falls. This type of system made it a great place to put a dam. McLean felt that any structures put in place would occur in this part of the river.

It was determined that the wetland system located above the boat launch held significant ecological resources. McLean explained it would be harder to obtain permits for any work done in that area. Any structures further upstream than the stone arch bridge would most likely present more issues.

Currently, the feasibility study is considering several options for improved fish passage.

1. Do nothing: No dam repair, no fish ladder improvement
2. Repair the existing dam, repair the existing fish ladder
This option was designed in 2015 by Wright-Pierce.
3. Replace dam, install some type of fish passage.
This option is considered a partial modification. It would include some impoundment reduction and additional structure placement to protect water levels.
4. Remove dam, install some type of fish passage.
This option could include a complete replacement of the current dam structure.

Farrell wondered how to measure each factor for each option to get some sort of profile. Benner asked about cost. McLean stated that the cost of the project is increased when trying to preserve resources such as water supply for fire department, recreational activities, maintaining water level, fish passage, etc. He stated there is a lot of cost associated with repairing the dam and improving the fishway. Initially, there may be less cost associated with removal of the dam but the addition of resources causes the total project to increase. The final figures are often within a reasonable percentage of each other. Grant availability usually influences the choices made.

Allen asked about grants. Mclean answered that funding may be available from NOAA, USDA's NRCS, and US FWS. McLean thought that some of the dam work in Sheepscot had been partially funded by NOAA.

Claire noted that Ingraham had stated at the last meeting that if certain resources weren't met in the option then it really wasn't an option.

STEEPPASS FISHWAYS

Claire turned conversation toward the fish design currently on file with the town and the Bronx fish passage.

McLean noted that the Alaskan Steeppass used in the Bronx had a very different habitat surrounding it then the habitat in Bristol. McLean noted the fishway in the Bronx was a result of legislative action in watershed planning.

McLean stated a Steeppass fishway is good for strong swimming fish and on average can move about 25,000 fish. It's 18 inches wide and tends to be very steep. It doesn't have a high capacity to move fish nor can it move a high number of fish. On the other hand, a

Denil fishway can move a bigger variety of fish, weaker swimming fish and more numbers of fish.

Claire noted there are over 100 Steeppasses in use in Maine. Mostly used for 5 foot heights.

Enterline asked if Bill felt comfortable moving from the discussion of Steeppasses.

Benner agreed and stated he was pleased to have the discussion. He noted Steeppasses measure 22 inches not 18.

POOL & WEIR FISHWAYS

Albright asked about a pool and weir system, citing the Damariscotta River alewives' project.

McLean responded that overall pool and weirs tend to be a more complicated fishway. They are sensitive to changing water levels with the upstream end being more stable than the downstream end. Fluctuating water levels in the river may make it harder for alewives to use. He also stated that pool and weirs take more land area than the current Denil ladder.

Farrell noted that many volunteers helped build the ladder at Damariscotta River. He wondered if there is that kind of emotional energy for the Bristol fish ladder.

Hatch noted D. River had parts of usable ladder from the old passage way.

DENIL FISHWAYS

McLean noted that, overall, Denil's are cheaper and easier to operate and maintain. The current Wright-Pierce dam/fishway design on file proposes two Denil ladders. Site preparation for the second ladder would occur when the first ladder was being constructed. A second ladder could be added later. Denil fishways on average can hold about 200,000 fish per season. Two Denil ladders could move up to 500,000 fish. The 2016 alewives' run in Bristol totaled about 100,000 - 125,000 fish.

Enterline noted that this is the only fishway design on the table. There is not enough money for another design.

AESTHETICS

Allen noted that aesthetics are important and do have a dollar value.

Enterline spoke about beautification and the village setting.

Farrell thought aesthetics are really something to consider. He suggested having Wright-Pierce look at it again would be worth the extra money.

McLean suggested facing the fish ladder with natural looking stone.

Farrell thought maybe shrubbery could be used.

McLean noted there's usually a tight budget and functionality is focused on first.

Aesthetics can happen if the money is there.

SLIDE PRESENTATION

McLean presented photos of Bristol's dam during last fall's drawdown and various past projects of Wright-Pierce.

Photos of the dam included the boarded-up penstock area, pipe from penstock area, topography of the river bottom from the dam to the stone arch bridge and a concrete weir located under the first bridge upstream from the dam.

McLean noted that sediment showing when the dam was drawn down would disappear if there was a partial or total removal of the dam. He stated the current dam holds back

12 feet of water. Depth footage removed from lowering dam has to be made up somewhere upriver.

Farrell wondered what would happened to property values between the two bridges. Allen wondered if there would be any benefit between a partial or full replacement of dam on swimming hole.

Davidson pointed out that the drawdown photos of the dam did not look aesthetically pleasing.

Benner suggested leaving the dam in and enhancing fishway.

McLean noted 12 foot tall is hard to replicate in natural-like fishway.

Past Wright–Pierce projects included Sennebec Lake, Patten Stream, and East Branch Lake.

FEASIBILITY STUDY

Enterline met with the Selectmen on May 17 to review the task of the Dam Committee. Selectmen expect a review of the feasibility study with an executive summary. They are not requesting a recommendation/consensus statement but would accept them.

Meeting adjourned 8:10. Next meeting will be held Tuesday, June 13 @ 6pm. Agenda items to include: fire water supply, discussion of what specific options look like.

McLean will attend. June 27th agenda to include a presentation from Selectman Hanna.

Respectfully Submitted,
Rachel Bizarro