**Town of Newmarket  Incorporated December 15, 1727**

**MACALLEN DAM STUDY COMMITTEE**

**Tuesday, March 3, 2015**

**Town Council Chambers**

**Newmarket Town Hall**

**4:00 - 6:00 P.M.**

**Meeting Notes**

**Present:** Peter Wellenberger**,** Dale Pike, Dennis Abbott, Leo Filion, Bob Sheehan, and Bill Arcieri. Richard Barrett was excused. Steve Fournier, Town Administrator, Diane Hardy, Town Planner, and Rick Malasky, Public Works Director, were present.

**1. Review of Meeting Notes**

This was postponed until a later meeting.

**2.   Meeting with Steve Doyon, NH DES Dam Safety Bureau**

Steve Doyon, the Chief Engineer, of the Dam Safety Bureau was invited to attend the meeting to provide some clarification on the Letter of Deficiency and so the committee could obtain some feedback on next steps.

On the option of overtopping, Steve Doyon thought this would be almost as complex as other options given the extent of armoring that would be necessary and the cost. He thought the idea of raising the east and west walls four to six feet, as needed, in order to carry the 10,259 cubic feet per second (cfs) 100 year flood was doable and made sense. If the Town pursues that option, a stability analysis will also be needed to make sure the dam structure can support the wall additions.

Steve Doyon said it was very important for the Town’s engineering consultant to work closely with NH DES throughout the process to assure there are no regulatory glitches at the end. His office is happy to review the draft RFP before it goes out and offer comments and to talk with the prospective consultants regarding the dam’s history.

Diane Hardy, Bill Arcieri, and Leo Filion volunteered to work together to draft a RFP for the consulting engineering services for the committee to review. The RFP will focus on a preliminary stability analysis which looks at the current stability of the dam as well as the feasibility of the options of raising the abutments. The engineering analysis would look at whether the dam and walls structurally can handle the weight. The engineering analysis should focus only on what is necessary to meet the standards with the minimal modifications to the existing dam, without a complete review of all options that we know are not feasible.

 Mr. Doyon thought the Town would be able to complete at least the first stage of this analysis with the funding that will hopefully be approved at the Town Meeting on March 10. He thought the Town was in a good position as: 1) it has already been established that the dam is classified as a “high” hazard dam; 2) the breach analysis has already been done (and will not have to be re-done); and 3) the hydraulic analysis has been completed which has determined the 100 year flood to be 10,250 cubic feet per second. There is a lot of information that has already been gathered and there is no need to duplicate those studies.

Mr. Doyon explained that the dam classification is considered “high” because of the proximity of the Durham Book Exchange which is a habitable structure. Failure of the dam would impact the building’s foundation and could endanger human lives. It did not appear that the classification of the dam could be changed so long as that building is occupied and actively used for warehousing.

It was also noted that there may be aesthetic concerns from the public and the abutters about raising the wall. A visual analysis of what the wall will look like may be needed. The plan could include cleaning up the adjacent areas creating a park that may be part of the package to help sell the public on the project. It was stated that the fish runs draw quite a bit of attention and having a staging area for the public to watch adjacent to the fish ladder would be a great addition.

The Committee talked about possibily removing the three gate structures in order to widen the spillway (from 70 to 95 feet), or replace with a gate structure of a different design. It was noted that gates aren’t supposed to be used in the calculations for passing the 100 year flood. The committee talked about the importance of having gates for maintenance and flood control purposes. It was noted that their removal in full or partially may be part of the design. Leo Filion noted that repairs that were done to the fish ladder during his tenure as plant engineering manager at the Newmarket mills actually helped to stabilize the dam.

Other options were discussed including flexible spillway gates and rubber bladders, such as were installed in Nashua at the Jackson Landing dam in order to allow a low income housing project to proceed. These bladders are automatically controlled from a remote location to raise and lower the water levels behind the impoundment and are quite effective, however, they are not the most aesthetically pleasing to look at.

Dennis Abbott has reviewed the idea of increasing the height of the abutments with the New Hampshire Fish and Game Department. They were generally in support of the idea. They need access to the fish ladders for fish counts when the fish are running and suggested several items to be considered as part of the design.

 Steve Doyon stated that it is important that the Town coordinate its efforts not only with those of surrounding property owners, but resource agencies such as the NH Fish and Game Department and the NH Division of Historical Resources. It was noted that the Town could not be liable for repairs associated with adjacent private properties such as the Selectwood Building, where there may be structural issues associated with the penstocks and adjacent areas.

 You don’t want to do anything that will make upstream flooding worse. Initially, it was assumed that removal of the dam would alleviate flooding. However, the Gomez and Sullivan study identified that the Veteran’s Bridge at Route 108 is a major constriction point, so even removal of the dam would not appreciably effect upstream flooding. There are no immediate plans to replace the bridge.

***Follow-up on Town’s letter of February 9, 2015***

Mr. Doyon had a few questions about the report submitted by the Town. He asked when the Emergency Action Plan (EAP) would be submitted, as it was omitted from the time line. Diane Hardy had provided Mr. Doyon with a revised schedule that showed the plan to be submitted by June 30, 2015. It was noted that the Town submitted the draft EAP documents on March 11, 2011 and NH DES has responded with some comments and suggested revisions that were needed in correspondence dated March 21, 2011. The comments included 1) changing the hazard classification to “High”; 2) updating 100 year storm data based on follow-up work by Wright Pierce; 3) updating dam’s breach analysis; 4) update inundation mapping; 5) updating training and testing to once every “two” years, and 6) updating some addresses for emergency contacts. Rick Malasky indicated that he would update the EAP with the new information. The memo indicated that the March 10, 2011 plan that was submitted was acceptable, but should be reviewed and updated with correct addresses. Steve Doyon asked Rick Malasky, as an interim measure, to provide a statement of how his department responds in flooding events. This is what we do…who we notify, how we mobilize if there is an impeding flood, who we warn and communicate with and various emergency management protocols on sandbagging and other measures.

**4. Staff and Committee Reports**

The warrant article for appropriating $50,000 for the Macallen Dam Capital Reserve Fund is the Town Meeting Ballot. Voting will take place at the Newmarket Town Hall Auditorium on Tuesday, March 10, 2015. Funding, if approved, will not be available until July 1, 2015.

**5. Next Meeting**

 Once the Request for Proposals is in a draft form ready for the committee’s review, Diane Hardy will get it out to the entire community members. She will then contact members to find out their availability and schedule the next meeting, using the “doodle” meeting scheduler.

**6. Adjourn**

The meeting was adjourned at 5:48 p.m.