



# TOWN OF NEW LONDON, NEW HAMPSHIRE

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## BOARD OF SELECTMEN MEETING MINUTES March 15, 2012

### **PRESENT:**

Mark Kaplan, Chair, Board of Selectmen  
Tina Helm, Selectman  
Peter Bianchi, Selectman  
Kimberly Hallquist, Town Administrator

### **ALSO PRESENT:**

Dave Kidder, NH Representative  
Peter Stanley, Planning & Zoning Administrator  
Howard Hoke, New London Resident  
Jim Wheeler, Budget Committee Chair  
Doug MacMichael, New London Resident  
Rick Anderson, New London Resident  
Richard Lee, Public Works Director  
Jud Donaghy, New London Resident  
Maureen Prohl, New London Resident  
Terry Dancy, New London Resident  
Dick Clayton, New London Resident  
Steve Doyon, Jeff Blaney and Jim Gallagher, State Dam Bureau  
Patricia McIlvaine and Joe McLean, Wright-Pierce  
Sean Carroll, *Intertown Record*

Chair Kaplan opened the meeting at 2:00pm. He asked those from the State and from Wright-Pierce to identify themselves to those at the meeting, all present stated their name. Chair Kaplan noted the meeting was called to discuss the options before them for the dam modifications that are being imposed upon the Town due to the dam's classification of "high hazard". He asked the people from the Dam Bureau if they had read the reports from Wright-Pierce. Mr. Gallagher noted that they have not seen the recent reports prepared by Wright-Pierce.

Chair Kaplan explained that the re-classification (and needed modifications) of the Pleasant Lake Dam came as a shock to the Town and the Board would like an explanation from the State as to why the Town is now required to modify the dam to be able to withstand a 250-year storm, after it had been previously classified as "significant hazard" and thus required to withstand a 100-year storm. He pointed out that the Town is spending 5.4 million dollars for wastewater treatment plant upgrades, and now requiring what could be more than another half million dollars for the dam is a lot to ask of taxpayers.

Ms. McIlvaine said the information provided at the last Board of Selectmen's meeting had not been forwarded to the State, it was prepared for the Town's use. They developed that information after completing the breach analysis, to give the Board a rough idea of what to expect in the way of dam modifications. They incorporated the changes in requirements in the models they presented at the prior

meeting. Ms. Helm asked if the breach analysis had been sent to the Town, as she did not receive a copy. Mr. Lee recalled that he has a copy, and perhaps it had been emailed to them as well. Ms. Helm asked if the high hazard classification came after the breach analysis. Ms. McIlvaine noted that the breach analysis was done after the re-classification in an effort to determine whether it was worth trying to bring the hazard classification back down to "Significant" from "High." It was Wright-Pierce's opinion, after consulting with the Dam Bureau that a change in classification or a waiver of the regulations would not be possible, based on the data collected for the breach analysis.

Chair Kaplan asked if they could lower the water in the lake instead of upgrading the dam. If so, how many inches would they have to go down to satisfy the State's requirement? Mr. McLean noted that the option of lowering the lake level was briefly discussed at the last presentation but not in much detail as it was not seen as a very likely option, given the number of residences on the lake. It was noted that they have done some preliminary work to see how low the lake would have to be for it to not top the dam. It appeared that about 1.5 feet of water would go over the top of the dam in a two and a half times a 100-year storm event. To reduce the threat, the water level would need to be lowered 3 to 5 feet.

Mr. Gallagher noted that a thorough look was done at potential damage that could be done downstream from the Pleasant Lake Dam. They have new knowledge since flooding that has occurred in 2005-2007 around the State. Since that time, the State is "taking a harder look" at the downstream areas that could be affected. The High Hazard classification is made when it is determined that dam failure would cause a foot of water to inundate residential structures downstream from the breach. This could very well cause a loss of life. Design standards for a High Hazard dam are different than those for a Significant Hazard dam. It was explained that the storm event wasn't really a 250-year storm event, but two and a half times a 100-year storm, which came out to be a flood that could occur from a rain fall of 10- 11 inches in 24 hours. He stressed that it's a lot of water, but not unheard of, pointing out that 8 inches of rain fell in some areas during Tropical Storm Irene last August.

Mr. Bianchi asked if NH has ever had a rain event of 2.5 times a 100 year flood. Mr. Gallaher confirmed that it has, and pointed to the 2005 flood in Alstead, NH which caused five deaths and had more than 10" of rain. It is not unheard of. It was noted that other states have higher design standards than New Hampshire. Mr. Gallagher noted that the State is sympathetic about the town's financial issues and appreciated that the Town has been attentive to the issue as soon as the letter of deficiency was received by the Town. Mr. Gallagher explained that NH tries to strike a "reasonable balance, not a "Noah's Ark flood"

Chair Kaplan asked how much time the Town had to do the project. Mr. Gallagher said that they would like to see progress within the foreseeable future. He noted that nearly 40% of the dams owned by the State of New Hampshire also have inadequate spillway capacities and are being addressed as they can. The State hopes to have them fixed within 10 years.

Mr. Bianchi said if they had to lower the lake 5 feet, the pipe that allows water to leave the lake would be above the water. Mr. Lee said that they would need to open the gates of the dam all the way. Mr. Bianchi wanted to have clarification of how much rainfall a two and a half times a 100-year storm, and what the frequency of these storms could be. Previously they were told that 16 inches in 24 hours would be the amount of rain to fall to be considered a two and a half times a 100-year storm and now he is hearing the State say it is 10 -11 inches in 24 hours. Mr. McLean noted that there are various ways to state the rate and amount of water that must fall to be considered 2.5 times a 100 year flood – his calculations were based on 6 inches of water which is generally considered a 100 year flood amount, then 2.5 times that is roughly 15-16 inches.

Mr. Anderson wondered if there were any dams that the State owned that had been upgraded yet. Mr. Gallagher noted that some have been upgraded. Mr. Anderson wondered if there were other towns that had upgraded their dams and if there had been any methods to do so in a less-expensive way. Mr. Blaney noted that there had been towns that have done so, and pointed out that the City of Manchester just completed modifications to one of its smaller dams at a cost of about \$100,000. Ms. Helm noted her concern that the Town was forced to be responsible for the areas all the way down to Salisbury. She asked what experience there had been in the past for collaboration between all the towns involved downstream from a possible breach, given that a lot of the impact they are concerned about is downstream. Mr. Gallagher noted that the burden and responsibility is put upon the dam owner, not the downstream property owners. There are approximately 2,600 dams in the state and of those,  $\frac{3}{4}$  are owned by private people or companies, and those owners are responsible for the safety of the dam, just as a municipality is. He noted that he is aware of some areas where a precinct is formed so the people benefiting from the dam pay for the modifications.

Mr. Stanley asked if the State is appropriating money to take care of its own dams. It was noted that about \$3 million dollars has been appropriated for the repair of about 9 or 10 dams. It was noted that they were not high hazard dams. Mr. Stanley heard that the dam that failed in Alstead was an earthen dam and was not constructed to be a dam. He wondered if there were any other dams like the Pleasant Lake Dam, which was built from rock and was quite "rugged" that had been shown to fail in a 100+ year storm event. Mr. Gallagher said that they have had "over-topping" failures in New Hampshire. Mr. Blaney noted that a dam in Hollis did. Mr. Stanley wondered why they would have to raise the dam to have a foot and a half of freeboard and not OK to have water go over the top as long as it is sufficiently armored. If it can't erode, what is the problem? Mr. Stanley said every model they were shown would cause them to lose the boat launch. If there is a reasonable alternative that makes the dam safe and doesn't involve the loss of access to the lake, it would be a lot less expensive proposal.

Mr. McLean explained that their preliminary plans do not show the dam height raised at all, but it is extended as a way to fortify and stabilize the area of the dam. He noted the reason for the boat launch to be closed is because it is a weak point in the structure and would act as a spillway in a high water situation. When they get into a more refined design, they could accommodate a ramp that would be reconfigured. The preliminary plans were drawn from a cost prospective (least costly options) and as such the plans showed the removal of the boat ramp. Mr. Stanley said if the area was suitably armored, what would it matter if the water went out of the launch area.

Ms. Prohl wondered why the water wouldn't go out the beach area and down the road. She felt that area was lower than the boat launch area. Mr. McLean said water would likely go over the beach and flood down the road but it would act as more of a storage area for the water. The road dips in that location, comes higher than the dam and comes back down. Mr. Bianchi said from the beach there is a stone wall that goes from the beach in front of the picnic area. That stone wall is 2' +/- from the crest of the dam. Water would go over the road and would reach the crest of the hill if water went 1 1/2' above the dam. It would cross the road in front of the post office and into the culvert and catch basins.

Mr. McLean said that they have some data that doesn't support this theory but more field topography would be done, should they be asked to go further with this analysis. He said that should this actually be the case (flooding occurring in the beach area and into the road) then they would be talking about an even worse problem than they had anticipated. Mr. Stanley noted that the dam is owned by the Town, but the effects of a storm event that would cause such flooding would be the responsibility of many residents whose land was not owned by the Town. He didn't feel it was the Town's responsibility to control the overall depth of the water throughout the lake.

Ms. Helm asked if there was any funding available for these projects. Mr. Gallagher reported that there is currently no State funding, the money he mentioned earlier was funding to fix state dams only, but he suggested that there has been talk recently that there may be federal money to assist municipally owned dams that are high hazard. These grants are only in the very preliminary talking stages, so it could be several years before they are available, if in fact the grant program is ever created. Chair Kaplan asked if the State would ever take over the Pleasant Lake Dam, if it was offered. Mr. Gallagher noted that that decision would be up to the legislature, not the Dam Bureau. NH Representative Dave Kidder noted that he thought it very unlikely.

Ms. Prohl asked if there was some way to mitigate downstream damage without building up the dam to such a height. If they can identify where the wetlands were or damage to homes would be, could they reduce the probability and still be within the guidelines. It was noted that the homes in the area downstream would need to be removed. Ms. Helm thought this was a good question by Ms. Prohl and wondered if perhaps land in these flood plains could be turned into conserved land or used for things other than residential homes. Mr. Doyon suggested that this is an area where towns could collaborate, agreeing on zoning and conservation initiatives so that residential structures are never built in the areas that would result in changing the classification of a dam to high. Mr. Gallagher noted that he has seen instances where property in flood plain has been used for things such as ball fields, which is a low impact use that would not be considered the same hazard as a residence.

Ms. McIlvaine said that in their modeling, they found two homes in New London that were in the flood plain. There was a suggestion of purchasing and removing the homes, but homes built in the other communities within the flood plain would cause the dam to move to a high hazard classification again. It was a ripple effect and the only way to avoid it would be to purchase all the property in the flood plain, which is very unlikely. Mr. Bianchi noted that a storm event of the magnitude being discussed, even if the dam held, would cause a lot of damage downstream. Mr. Gallagher explained that the dam classification is based on incremental flooding, that's what they are talking about. If the dam wasn't there, such a rain event would not cause the kind of water being discussed that results from a dam breach – a huge amount of water all at once. Mr. Donaghy pointed out that the hazard classification has nothing to do with the current condition of the dam. Mr. Gallagher agreed. Mr. McLean noted that when thinking about incremental flooding, it may be helpful to consider a bowl being filled by water coming out of a faucet. The water going in doesn't create a problem, or even when it over flows, but if the bowl is tipped upside down, a large amount of water rushes out at once.

Chair Kaplan asked if the dam wasn't there and there was a two and half-times a 100-year storm, there would be damage all the way to Salisbury. If the dam was built 8' high and nothing could get by it, there would still be damage downstream. How do they relate the damage that would take place with and without the dam present? Mr. Gallagher noted that the State is only concerned at this point with the dam at issue to make sure it is modified in accordance with its classification.

Mr. Wheeler said he was intrigued about the thought of the flooding at the beach acting as a spillway, and understood that more analysis was needed. He wondered if enough water would be found to move out of areas such as the beach, could it move the classification from "High" back down to "significant." Mr. Gallagher explained that the classification is based on the development downstream (potential for loss of life) and the dam could still fail even if it wasn't over-topped. There was some discussion as to the options in order to meet the requirements of a High Hazard dam. More detail is needed and more analysis should be done to determine the best approach.

Mr. Bianchi said that Wright-Pierce has fulfilled their contract with New London with the exception of one EAP test. They have given them an idea of what a feasibility study would cost. He wondered if that

should be the next step in trying to solve the problem. Ms. Helm asked how much study and how many plans would they need to submit to the state before they learn if their deadline could be extended or if they had to get everything done in a specific amount of time. Mr. Gallagher informed the Board that the next step is to go through an engineering study and come up with a plan. She wondered if they had to go out to bid at that point to prove that they were moving forward. Mr. Gallagher noted that this is a decision for the Town, and not the State. Ms. Helm noted that the Town has a grant that they are slated to begin using for a project in August 2013 (the Elkins Transportation Enhancement Project), which is the same timeline the State has indicated that the dam was to be repaired in. She thought it would be helpful to know if the improvement of the dam could be extended out in order for the projects to be completed as necessary and not negated. Mr. Gallagher assured the Board that if they write a letter to the State outlining what they feel to be a reasonable proposal of how the Town will go about bringing the dam into compliance, the State will have no problem approving a delay.

Mr. Dancy said that they are at a point where a decision needs to be made. How much information do they need to get before the State is satisfied with their solution on how to upgrade the dam. Mr. McLane said they have put a feasibility study proposal to the Town. This study would find the most reasonable and cost-effective solution to the problem, in consultation with the State, and then the application to modify the dam would be submitted for State approval. Only then could work start on the dam.

Mr. Bianchi said that the quotes they have for a feasibility study are expensive and didn't think they would be able to get funding until May of 2013. Before they can get the project completed, it wouldn't be until probably 2014 or 2015. Mr. Gallagher said they understand about Town Meeting approval, etc. If they keep the State informed of their plans and let them know that they are moving forward, they would entertain an extension for the project completion. He suggested a letter that would inform the State of the timeline for the following steps: (1) Requests for proposals for the feasibility study, (2) Request the money at the May 2013 Town Meeting, (3) Plan & Specifications in 2014 and (4) construction in 2015/2016, as being reasonable. Mr. Bianchi asked when would the town need a permit – Mr. Gallagher noted that permitting would come after the town decides how it will fix the dam, based on the feasibility study results. Mr. Gallagher stressed in looking at requests for delay, the State looks at the threat level of the dam. He observed that the Pleasant Lake Dam is not an immediate threat, if it was, they would not even consider a delay. Since it is not an immediate threat, they are more than willing to work with the Town on a reasonable plan to get the dam fixed.

Mr. Stanley felt the Town should start this year with some contribution to the capital reserve, however limited it may be. He felt they should move forward with more analysis, and they may find there is an issue elsewhere on the lake that the Town doesn't have any control over at all. He believed that most people didn't believe failure of the dam was imminent. As a taxpayer he didn't want to see them getting too anxious about this, but thought they should plan to resolve the problem and move forward.

Mr. Anderson thought it was healthy to talk about the economic choices (purchasing the homes in the flood plain, restructuring the dam, and lowering the lake level) but also wanted to come back to the issue of lowering the lake. He felt lowering the level of the lake would have an economic impact on the houses around the lake, and on the town as well as there are some substantial homes built on the lake. Ms. Helm agreed with Mr. Anderson. Mr. Stanley said that lowering the lake level could be part of an emergency action plan and would not affect the property values as it would be a temporary lowering. Mr. Anderson agreed and noted that it has been done in the past, and it helps the property owners in those emergency situations.

Mr. Dancy wondered if they could exclude the idea that they would not raise the height of the dam because they have already said there are alternative ways for water to get out. Mr. McLean said that none

of the models they gave had an increased height of the dam. There was just a cap put on top of the current dam.

Ms. Helm asked if communities beyond Salisbury will be affected by a breach of the dam. Mr. McLane said they stopped their analysis at a flood control reservoir in Salisbury (Black Water River Reservoir). It should go no further than Salisbury.

Mr. Gallagher summarized by stating that the State would need a letter proposing the timeline the Town would like to work within. The letter should also reference the letter of deficiency of the Pleasant Lake Dam that has been issued to the Town. The Board of Selectmen said that this would be forthcoming.

**IT WAS MOVED (Tina Helm) AND SECONDED (Peter Bianchi) to adjourn the meeting.  
THE MOTION WAS APPROVED UNANIMOUSLY.**

The meeting adjourned at 3:25pm.

Respectfully submitted,

Kristy Heath, Recording Secretary  
Town of New London