

**Members:**

- ✓ = present
  
- ✓ Bob Robbins (Chair) – Hudson
- ✓ Kathryn Nelson (Vice Chair) -- Nashua
- ✓ Karen Archambault (Secretary) -- Nashua
  - Jim Barnes (Treasurer) – Hudson
  - Glenn McKibben – Litchfield
  - George May - Merrimack

**Associate Members:**

Mildred Mugica – Nashua

**Also in attendance:**

Geoff Daly, corridor resident and potential member, Nashua  
Lance Johnson, corridor resident, Hudson  
Stan Kazlouskas, corridor resident and former member, Hudson  
David Scaer, corridor resident and Nashua Country Club manager, Hudson  
Rick Suter, corridor resident, Hudson

The meeting was called to order at 7:08pm downstairs in the media wing of the Nashua Library. Bob welcomed the visitors present and explained to them that LMRLAC has a presence on the NRPC Web site ([www.nashuarpc.org](http://www.nashuarpc.org)) under the Conservation section. Kath offered to forward copies of the LAC application forms to Stan to rejoin the LAC. Kath also mentioned that the application forms are available on the LMRLAC portion of the NRPC Web site.

**Meeting Minutes**

Minutes from the meeting of July 23, 2009 were accepted.

**Attendance**

Kath indicated she had heard from Jim, who is attending a Benson's committee meeting and would not be able to attend the LAC meeting. George had also sent word that he would miss the meeting. Hank Sennott from Enel North America had also contacted Kath to state that he would be unable to make the meeting to discuss the Boott Mill hydropower dam in Lowell and wished to reschedule for the October LMRLAC meeting.

**Technical and Review Session - Fluvial Geomorphic Assessment (Merrimack River)**

Geoff summarized the presentation given on September 17, which covered a preliminary fluvial geomorphic assessment of a portion of the Merrimack River adjacent to and north of the Thoreau's Landing condominium complex in Nashua. Geoff briefly summarized the erosion that has taken place over the past several years at the site, and highlighted the fact that 219 trees have been lost to erosion on the site since 2005. Geoff also mentioned that Camp, Dresser, and McKee (CDM) had prepared a report in 2006 indicating the site would be a nice location for a model project for protecting a site against further erosion.

Geoff indicated that the condominium association has retained the firm Vanasse Hangen Brustlin (VHB) for a preliminary exploration of what needs to be done to protect the site and how to go about it. Geoff explained that he is discussing the project this evening as a resident of Thoreau's Landing and not as a representative of the association.

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Geoff explained that the report is in a preliminary state and will be completed in a few weeks. Geoff passed along information to Bob to sign up for a code/password so LMRLAC members could have access to review the report when it is available.

Bob pointed out that it is the nature of rivers to change over time. One side of a river will scour and the sediment will be deposited elsewhere. Bob expressed doubts that scouring could be controlled. Geoff explained that the study of fluvial geomorphology (how landforms are shaped by rivers) has progressed to a better understanding of the forces and process. Geoff stated that a mathematical model for the process exists that was demonstrated at the session. Geoff highlighted the approach taken in the Netherlands (in Delft), which involves compressed straw bales in the shorter term and structures in the longer term, to absorb the river's energy without distributing it elsewhere.

Kath mentioned the Passaconaway Golf Course (in Litchfield) which implemented a project 8-10 years ago, with an approach that was considered state of the art at the time. The project involved gabions – metal cages – to hold rocks in place. However, the gabions at Passaconaway have since rusted and fallen apart, leaving the rocks as riprap. Riprap is now out of favor, as it does not absorb energy and causes turbulence.

Stan mentioned that he felt that wave action from increased boat traffic on the river over the past ten to fifteen years causes erosion. Others mentioned the change in river level due to the dam work in Lowell. Geoff and Kath read from a summary of the report, which mentioned both boat traffic and changing river levels due to the dam as contributing factors, but not primary factors, in the erosion on the site.

Kath asked how close the erosion is to the nearest structure. Geoff replied that the closest threatened structure is now 22 feet from the eroded bank.

Lance and Rick both live along the river on the Hudson site and indicated they have lost land to the river as well. Members also discussed a site in Hudson where the backyard collapsed and the property owner needed to hire an engineer to put in a retaining wall, with an estimated 30 feet lost. Stan commented that he believed trees had been cut on the site prior to the collapse. Stan also suggested that he believed the tree cutting work on that site may have predated the original Shoreland Protection Act.

Bob mentioned that we should remind the public on how to report observed shoreland violations, and that LMRLAC is a resource – and a point of contact – for people needing assistance in reporting violations.

Stan mentioned that after the 1936 floods the Army Corps of Engineers had recommended putting metal objects such as automobiles along the river bank to stabilize it – that was best practice at the time. Now many of those objects are exposed on the bank but removal of that debris would destabilize the bank.

Geoff mentioned that deep-rooted plants will be used in the Thoreau's Landing project to protect the slope.

Members briefly discussed the Nashua CSO near the Nashua Country Club, and the status of the repairs there to address erosion a couple of years ago. Members wondered whether plantings had been incorporated into that site yet, and discussed getting an update on the state of the site.

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Kath asked whether the proposed work would be confined to the Thoreau's Landing property or extend beyond it, and how it would tie in to the bank. Geoff indicated the plan is to confine it to the property and it's still being looked at. Kath mentioned there is a conservation easement held by the City along the property. The easement runs from the confluence up to Greeley Park, and some of it is now under water. Kath indicated the easement does not go away but is considered land under water.

Geoff quoted from the FERC license for Boott Hydro Dam, article 19, which states in part that reasonable measures must be taken to prevent soil erosion and to control sedimentation. As such, Geoff pointed out that Enel North America (the dam owner) will be interested in the project. Geoff mentioned that a representative from Enel North America had been at the session and stated that dredging is required from time to time to address sedimentation at the dam.

Geoff mentioned that VHB will handle the paperwork and that there is a lot of work to do before there is a plan to present to the LAC or other organizations. Members thanked Geoff for the information.

### **DES Alteration of Terrain – Litchfield**

Bob brought out plans and paperwork for an Alteration of Terrain at 22 Charles Bancroft Highway in Litchfield (just above the Hudson line). The owner, K&M Developers, is applying to complete the remaining 36 units of the complex named Annandale on the River. The application is to disturb 479,998 square feet. LMRLAC has until November 2 to comment on the application.

Bob pointed out that the cover letter sent with the plans specifically referred to contacting LMRLAC regarding the project.

Members briefly discussed whether to invite an engineer in to discuss the project at the October meeting, and decided against waiting for the October meeting to pursue the discussion. Members also briefly discussed whether to hire someone to come to the next LMRLAC meeting to discuss erosion with the project engineer, and ultimately decided against it.

From the plans, three proposed homes appear to fall, in whole or in part, within the 150' Comprehensive Shoreland Protection Act (CSPA) Natural Woodland buffer zone. A fourth unit is within the 250' protected shoreland area. Kath read from the application package cover letter that a Shoreland Permit is not required for the project due to vested rights (a project under construction, or well into the planning phase, prior to implementation of the updated CSPA in 2008). The project adds 122,272 square feet of impervious surface to the site. Kath also read from the letter that there is no disturbance within the 100-year floodplain. There is a trail easement indicated on the plan and it appears to be located at the top of the bank.

Kath stated and Bob concurred that the project should conform to the existing CSPA.

Geoff suggested that LMRLAC can point to erosion events in the past five years as a reason to follow the new CSPA regulation. Kath mentioned that the comment letter can point to the VHB fluvial geomorphic assessment study as providing a justification for following the current CSPA regulation.

Bob pointed out that the plan does not appear to incorporate any low impact development (LID) techniques. Kath mentioned that LID is encouraged, but not required, by DES.

Bob summarized the LID approach he had taken with his driveway (porous pavers with appropriate drainage underneath). Bob and Kath agreed that LID is easier to apply in a

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residential setting rather than in an industrial setting. In industrial settings, there is the added complication of such things as heavy trucks, which can cause compaction on the site. Members discussed how LID techniques are low-maintenance. Geoff commented that a site with LID could use it as a 'green' selling point.

Geoff stated his major concern is the effect the proposed project would have on the river embankment.

Kath will generate a letter to the applicant (and will c.c. DES) to comment on the project; discussing concerns about erosion, following the current CSPA, and incorporating LID into the design. Kath also plans to include the Litchfield Conservation Commission via Joan McKibben and the Litchfield Planning Board via Steve Wagner on distribution.

### **DES SOP 801**

Kath mentioned DES Standard Operating Procedure 801, issued in August, which establishes "a procedure by which the Department of Environmental Services (DES) notifies the appropriate local river management advisory committee (LAC) when State action is being considered that will affect a designated river." The procedure specifies basic notification to the LACs for Groundwater Protection Act programs, Water Pollution and Waste Disposal, Dams, Mills, and Flowage, Hazardous Waste Management, and Solid Waste Management; and comprehensive notification and communication for permit applications for Alteration of Terrain permits, CSPA Shoreland permits, Wetlands Bureau permits, and 401 Water Quality Certification programs. This procedure expands notification to the LACs and defines deadlines for comment periods.

Bob summarized the purpose of the LACs: that the LAC exists to represent a variety of interests in the four member communities: conservation, homeowners, recreation, agricultural, water use and to express concerns relative to those interests on activities/proposed development within the corridor.

Meeting adjourned 8:45pm.

The next regular meeting is scheduled for Thursday, October 22 at 7pm at the Nashua Public Library.

Respectfully submitted,  
Karen Archambault  
secretary