

**Planning Board
Board Room, Municipal Building- 7:30 pm
April 10, 2007**

In Attendance:

Members: Nancy Collier, Bill Dietrich, Judith Esmay, Jim Hornig, Michael Mayor, Kate Connolly, Charles Faulkner

Alternates:

Selectmen Alternate: Bill Baschnagel

Staff: Vicki Smith, Jonathan Edwards

Others: See attached sheet

1. Discussion with Peter Kulbacki, Director of Public Works, about storm water management in Hanover:

Peter Kulbacki recounted a brief history of the stormwater drainage system. Most of it is over than 30 years old, some is 50 years old, and some is over 100 years old. Many drains were installed in conjunction with highway projects or when subdivisions were developed. Parts of the drainage system have been replaced as failures occur, as sinkholes develop, and as roads are rebuilt. The use of salt on the roads has affected both the concrete and metal culverts, but the highway department is trying de-icers instead of salt and culverts made of substances that are stronger than PVC and easier to install. These new culverts are also less expensive and are more salt-tolerant and not as easily corroded by other de-icers.

Mr. Kulbacki stated the Public Works Department anticipates the need to apply for a National Pollution Discharge Elimination System Permit (NPDES Phase II). The Town has a permit for discharging wastewater, but Phase II applies to storm water and the water quality of run off from urbanized areas.

Sewer and stormwater systems are separate systems in Hanover. Initially all storm drainage and sewage were combined, but stormwater was separated when the town started treating wastewater. The stormwater system has been little modified although some has been replaced. Catch basins are cleaned out at least once or twice a year. Streets are swept at least once a week in the summer so the catch basins don't get overwhelmed with garbage or other debris.

Mr. Edwards asked if there were any parts of Town in which closed drainage systems should replace open drainage systems, and Mr. Kulbacki said that troubles arose in high density areas with open drainage.

In answer to an inquiry about the effect of landscape on drainage, Mr. Kulbacki said that roads can really affect drainage. Problems arise with roads whose grades are as gentle as five percent but increase with an increase in grade.

Mr. Kulbacki pointed out the major drainage corridors on a Town map, explaining features of each area: the sizes of pipes and catch basins and the sites into which sub-basins drained. ESMAY asked if all the pipes were mapped. Mr. Kulbacki stated they knew where they all were, but are still in the process of mapping them. Changes to catchment areas were discussed. COLLIER asked if the areas were public or private; Mr. Kulbacki stated they were all public except the ones that go through the campus, but any that come out on a public road are the responsibility of the Town. There was discussion about water quality of the effluent that ends up in the river.

Mr. Edwards asked about the installation of a Rivercrest drainage system and its treatment of stormwater before it is added to the river. Mr. Kulbacki stated Rivercrest stormwater will have a considerable distance

to travel. It should certainly be treated; he is less concerned with its quantity as with its quality, since it may carry sediment, heavy metals, oils, bacteria, and the like into the Connecticut River.

Mr. Kulbacki discussed open and closed drainage systems and where each is appropriately installed. Open systems are preferable. Closed drainage systems are ordinarily designed to handle a ten year event.

Mr. Kulbacki said the sewer system follows the brooks because that is how it was done back when they were first put in. He explained the current pump stations, their locations, and the areas of town each serves. The water system doesn't follow the drains quite the same way. The backbone of the system was put in the 1890's and is still in pretty good shape. Replacement is indicated in certain areas, the water system remains relatively stable with preventive maintenance.

HORNIG asked what happens during power outages. Mr. Kulbacki stated there are back up generators and alarm systems in place for this.

CONNOLLY asked if there was a specific replacement schedule. Mr. Kulbacki stated the department targets projects based on hydraulic and physical conditions and location. This work must be done prior to paving. The Town is not staffed for this at present; staff is sufficient only for maintenance. Some of these pipes will last 40 more years, but the hydraulics will worsen. There are about 10 water main breaks a year in the Town system.

COLLIER asked about the water tanks in Town and if this is where the pressure comes from. Mr. Kulbacki described all four storage tanks and the area each serves.

Mr. Kulbacki was asked if the runoff from Grasse Road I and II contributed in any way to the Reservoir Road washout. He said any development contributes to stormwater problems, but that the problem had less to do with development than that one culvert was plugged from debris that had washed down into it. If there had been no development, Reservoir Road would still have washed out.

Mr. Kulbacki stated that most drainage systems are designed for low duration storms, but there should be provisions made for larger storms such as 25 or 50 year events. He stated the department has been looking at new standards for future developments.

Mr. Kulbacki encouraged the investment of more time and thought in low impact development. System design should be tailored to each situation and should always include consideration of maintenance. The problem is ensuring maintenance; Town enforcement of a private maintenance program is difficult. Baschnagel asked if there was a way for the Town to pass an ordinance to enforce the rules of private maintenance and the authority to inspect them. Mr. Edwards observed that the Town has an interest in environmental stability and public health. Ms. Smith said that often a condition of approval is requiring the homeowner to submit an annual report on how they maintained their storm water system, but that it is difficult to follow up. Board members reflected on the involvement of Mr. Kulbacki during the design concept phase of projects so he can inform the Board of potential drainage problems. Mr. Kulbacki agreed: the earlier his involvement the better.

Barbara McIlroy stated some towns have established a storm water utility with dedicated funds for drainage maintenance and improvements. She offered examples of different ways of structuring long term management and maintenance of stormwater systems. Mr. Kulbacki said the challenge is to design a system so well that it does not require extra staff and funding to maintain it.

2. Update on Reservoir Road Re-construction:

Mr. Kulbacki presented the most current design for the rehabilitation of Reservoir Road. He described a number of the design features. Board members discussed the expected cost and various materials that might be used.

3. Other Business:

There will be no meeting on April 17th.

CONNOLLY announced that Mr. Edwards had distributed by email the draft stormwater regulations. Selectboard members have received a revised copy. She noted some confusion over which constitutes the latest draft, due perhaps to the submission of the regulations to a variety of groups for review and comment.

April 24th meeting subjects:

- A Site Plan Waiver Request
- Wetlands policies for the Wetland Committee
- Rural Committee update

Land Protection

HORNIG said that John and Lise Richardson are conserving their 200+ acres of land and that they are negotiating a conservation easement with the Upper Valley Land Trust. He stated the cost for land protection assistance is about \$20,000 with the Conservation Fund tentatively covering half of the cost and the Conservation Council covering the remainder.

HORNIG stated that Sam Doyle is selling some of his land to neighbors. These neighbors have already met with the State Fish and Game Department so the prospects for continued good stewardship of the land are good. Ms. Smith discussed another conservation project with on the east side of Moose Mountain that involves approximately ten other land owners.

4. Adjourn: Meeting adjourned at 9:40 pm.

Respectfully submitted,

Erin Hammond, Recording Secretary
Judith Esmay, Clerk