

## **Five Highland Lake Leadership Team recommendations for consideration for the Town of Falmouth:**

- a. **Initiate shoreline photography as a town wide Code Enforcement tool**
- b. **Require 3<sup>rd</sup> Party review of all non individual home development within lake watersheds**
- c. **Require follow-up BMP inspections within lake watersheds**
- d. **Require minimum manure management requirements for large farm animals within the watershed**
- e. **Require all development beyond individual homes to meet stormwater phosphorus budget standards of exporting no more than 0.02 lbs/acre/year. This is now the same as what is required for projects submitted to the DEP and all developments on the Windham side of the lake.**

### Discussion

#### **Photograph all the lake shorelines for baseline for shoreline development:**

Windham is already using this technology on Sebago Lake through photographs taken by the Portland Water District. The first round of photographs would create a baseline, while subsequent surveys would determine if there were violations. This information would stay with the Code Offices for their use only, and be used for the review of permits and as an enforcement tool. This has been successful in making staff time more efficient where this has been used. The Lakes Environmental Association (LEA) does this already and has been for years in western Maine lakes.

#### **Require 3<sup>rd</sup> Party Review of all major developments within great pond watersheds.**

This is intended to close any loopholes as well as enhance third party reviews in both towns. The HLLT recommends that the Towns of Falmouth and Windham adopt mandatory third party review of all storm water plans including phosphorus mitigation plans for all subdivisions within the Great Pond watershed of their respective communities. To ensure that third party reviews are effective, HLLT further recommends that the towns determine the qualifications reviewers must possess to conduct the reviews and to develop a specific scope of work for conducting the reviews.

#### **Establish manure policies for both Towns**

The State threshold for manure management is 50,000 lbs, or 50 horses. Even a few horses can be very significant phosphorus sources for a lake. The ordinance for manure policies for five or more large animals should include manure storage in an area with a roof and designed to prevent any stormwater flow into or out of the storage area. Additionally, appropriate BMP's would be required for field paddock areas to prevent the movement of phosphorus to great ponds.

**BMP inspection discussion for both subdivision BMPs and 319 grant BMPs to determine status and whether maintenance is recommended**

It was learned through the DEP staff that DEP leadership considers following up on required five-year BMP recertifications to be lower priority, and when the reminders are sent out, those who don't respond see no follow-up. The concept is that if required inspections aren't being followed up at the DEP level, it is water bodies at the local level that suffer the consequences.

There are two kinds of BMP's, those overseen by the State/Town, and those built with EPA 319 grants. The latter have no follow-up at all, and should be subject to some periodic review as well to assure that the protections that were expected by the original design are long lasting for the health of the respective great pond.

**Require all development greater than single homes to meet a stormwater phosphorus budget standard of 0.020 lbs/acre/year.** The current standard in Falmouth is 0.53 lbs/acre/year. In 2017, the DEP reviewed the standards for Highland Lake and the water quality. From this review, it became clear that the previous standard of 0.027 was not restricting phosphorus export to the lake enough to keep from further deteriorating the phosphorus levels in the lake. The DEP dropped the level to the 0.020 level, and Windham followed suit for minor subdivisions as well.

## Stormwater Management Plans Third Party Review Checklist

1. All wetlands on the site are identified and delineated.
2. Characterization of pre- and post-construction soils is complete and accurately reflected in stormwater calculations.
3. Characterization of pre- and post-construction ground cover and topography is complete and accurately reflected in stormwater calculations.
4. All impermeable surfaces are accurately represented in pre- and post-construction stormwater calculations.
5. Calculations for time of concentration accurately reflect conditions observed on the ground.
6. Sheet flow through buffers is consistent with post-construction land use, topography, and ground cover.
7. All developed areas are included in the phosphorus export calculations.
8. Structural BMPs are appropriate for the site given topography and soils.
9. Pretreatment for structural BMPs is sized for annual sediment loading.
10. Structural BMPs are designed for maintainability and longevity.
11. Setbacks from streams and wetlands are adequate.
12. Stream channels receiving post-construction runoff from the site have been evaluated to determine whether the timing and volume of runoff will exacerbate streams already impacted by existing development.
13. Any criteria, such as post-construction impervious area, used to establish thresholds for permitting review are checked for accuracy to ensure the appropriate regulatory reviews are performed.
14. During construction, developed areas are monitored to ensure they reflect site design and that criteria such as post-construction impervious area do not exceed that allowed per the permit.
15. Construction is phased to minimize the area of exposed soil at any one time, and erosion and sediment control BMPs employed during construction are adequate for mitigating sediment in runoff from all exposed areas.