



## *Vernal Pool Considerations: Will Your Project Be Affected?*

### Inside this issue:

<i>Alteration of Terrain Update</i>	2
<i>GIS Aids in Prime Wetland Inventory</i>	2
<i>Proper Construction Planning Saves Money</i>	3
<i>Army Corps Gets Tough on "No Net Loss"</i>	3
<i>Staff Biography- Heather Storlazzi Ward</i>	3
<i>GES Opens Concord Office</i>	4

Vernal pools are small basins that flood during the spring and dry out completely or nearly completely during the course of the growing season. Vernal pools are of significance as they provide critical habitat to a variety of reptile and amphibian species including Blanding's turtles, wood frogs and spotted salamanders, among others. Threats to vernal pools are numerous and include disturbances such as interruptions to hydrology, removal of forest canopy cover, and introduction of nutrients and sediments.

Although the State of New Hampshire does not have specific legislation regarding vernal pools, most, but not all of these ephemeral features fall

under DES jurisdiction and are regulated as wetlands.

More importantly, many communities have local ordinances on the books that stipulate buffers of up to 100' for documented vernal pools. In Maine, recent legislation has created a 250' "no disturbance" buffer around documented vernal pools meeting threshold conditions. Additional restrictions may also be applied. This legislation takes effect in 2007.

There are several ways to determine whether a ponded area is functioning as a vernal pool. The most common method is an analysis of amphibian egg masses during the spring breeding season (late March until mid-June). Additional methodologies include the



*A typical vernal pool following snow-melt and spring rains.*

detailed analysis of dormant invertebrates during the dry period of the year. It is imperative to have definitive documentation of vernal pool status as the local approval process is underway. Significant delays have occurred when the brief analysis period has passed and questions regarding these temporary habitats remain.

### GES Staff Directory (603) 778-0644

- Jim Gove— Principal x11
- Randall Shuey (Concord) (603) 369-3909
- Heather Storlazzi Ward x16
- Eric Fontaine x13
- Luke Hurley x14
- Jeff Cantara x18
- James Walden x15
- Administrative x0

#### E-Mail Addresses:

firstinitialsurname@gesinc.biz  
or info@gesinc.biz

## *GES Certified as Sediment and Erosion Control Experts*

Five GES staff members have recently been recognized as Certified Professionals in Sediment and Erosion Control (CPESC). A CPESC is a recognized specialist in soil erosion and sediment control. This process, sponsored by the Soil and Water Conservation

Society and the International Erosion Control Association, in cooperation with the American Society of Agronomy, insures that individuals holding this designation have been certified in a variety of well established as well as innovative erosion and sediment con-

trol techniques that can be readily incorporated into SWPPP plans or as needed during construction inspections and monitoring in the field. For more information on the CPESC program, or to begin the CPESC process yourself, contact Randall Shuey at (603) 369-3909.



*Projects disturbing more than 100,000 sq.ft. require an Alteration of Terrain Permit in New Hampshire.*

**“There is an emphasis on realistic construction sequencing that must be supported by measures other than a simple perimeter silt fence.”**

## *Alteration of Terrain Rules Update Expected*

CONCORD— The Department of Environmental Services is in the process of adopting new Alteration of Terrain Rules. These have been certainly overdue, given the current state of the art in new water quality renovation measures and upgraded construction site erosion control techniques. Former rules were directed to the protection of surface water quality. The new rules have added protection of ground water quality. Where

the former rules were primarily focused on control of rate of runoff, the new rules have expanded to include control of the quality of the runoff. This leads to consideration of a number of infiltration/renovation measures, including the use of bio retention areas, infiltration basins, gravel wetlands and even porous pavement. Further, there is an emphasis on construction sequencing that is realistic and that must be supported by

measures other than a simple perimeter silt fence. There is even a section of construction measures for winter work, and what will be allowed as stabilization techniques. DES is still taking comments on the new rules, and has just completed a series of meetings with stakeholders that included the construction industry, natural resource scientists, developers and other regulators. The expectation is that the new rules will go to the public hearing this summer.

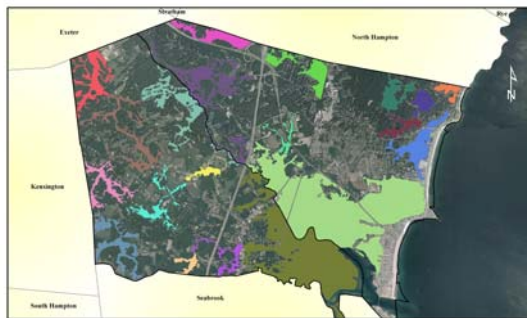
### PROJECT SPOTLIGHT

## *GES Completes Seacoast Prime Wetland Study*

GES recently completed a comprehensive wetland inventory and Prime Wetland Assessment for the municipalities of Hampton and Hampton Falls. The mapping and functional assessment, funded by the New Hampshire Estuaries Project, was completed using extensive Geographic Information Systems (GIS) analysis.

A geographic information system (GIS) is a system for managing spatial data and associated attributes. In the strictest sense, it is a computer system capable of integrating, storing, editing, analyzing, and displaying geographically referenced information. In a more generic sense, GIS is a "smart map" tool that allows users to create interactive queries, analyze the spatial information, and edit data. It is often used in conjunction with high-

resolution aerial photos. Existing soils, wetland, wildlife, road, population and other cultural data maintained in GIS format by the state of New Hampshire were also incorporated into the project.



*Wetland complexes in Hampton and Hampton Falls mapped using GIS.*

Because existing natural resources data and aerial photos are increasingly available for communities throughout New Hampshire, Maine, Vermont and Mas-

sachusetts, GIS is emerging as a powerful tool for cost-effective natural resources management as well as less traditional uses such as preliminary land evaluations, regional alternatives analyses and landscape scale mitigation searches. “The USDA has recently released 2003 color aerial photos for New England. These show much of the development that has occurred in recent years. Also the detail on some of these photos is incredible. When you combine these images with county soil surveys or forest cover data, the wetlands seem to leap out off the page” says Gove Environmental Services GIS Coordinator Jeff Cantara. “The GIS system is increasingly CAD compatible, so we have been able to incorporate these maps into the drawings of the engineers we partner with”.

## Demonstrating the Value of Proper Construction Project Planning

GES is proud to announce a new service to our clients. In conjunction with John W. Deering, we are now offering the development of “Constructability Plans” presenting Work Zones, Phasing, Sequence, Methods and Scheduling. This initiative can reduce costs and offer compliance both environmentally and financially.

There have been many discussions lately about limiting construction sites to a certain open acreage. This may seem like a good idea in that it limits potential environmental exposure and makes sure that the contractor keeps the project under control. However, it also has the potential to seriously hamper a project both environmen-

tally and financially. This is especially true with projects that rely on some source materials being recycled and manufactured on site.

GES and their team of Jim Gove, Randall Shuey and Jack Deering have worked with several projects recently where they have been able to put together a constructability plan that demonstrates to regulators that a larger envelope is critical to the successful completion of a project. It allows the Owner/Developer to engage a contractor to a more efficient schedule that will control the disturbance and the site. It also allows the project to be completed in a timelier manner, therefore minimizing the exposure. In order to develop

this type of plan, GES has retained John W. Deering, a special consultant for land use and development. Mr. Deering has employed this approach on his own projects and other projects throughout the northeast and mid-Atlantic states. Currently, the state of Pennsylvania is using this process that Mr. Deering authored and he is facilitating the pilot program for them. This is being conducted in close coordination with the State of Pennsylvania DEP, Bureau of Watershed Management.

The project team looks forward to discussing the implementation of this process on your next project. Please contact Randall Shuey at 603-369-3909 for further information.

...however, it also has the potential of seriously hampering a project both environmentally and financially.

## Corps Enforces “No Net Loss” in New England

The United States Army Corps of Engineers has oversight on all wetlands permits in New Hampshire through both the State Programmatic General Permit (SPGP) and the more intensive “Individual” permits. Recently, the New England district was designated last in

enforcement of the “No Net Loss” policy for wetlands first initiated under the George H. W. Bush administration and later expanded by Clinton. Expect to see increased demand for wetland restoration and creation components associated with USACE Individual

permits as New England works to comply with directives from Washington. “Large projects without creation or restoration components will experience major difficulties obtaining federal wetlands permits” noted an Army Corps regulator in May.



*Constructing a wetland for mitigation in Hillsborough. GES designed the wetland as wildlife habitat.*

## Staff Biography—Heather Storlazzi Ward

Heather Storlazzi Ward has been working within the ecological and wetland science profession since 1995 and has been working at GES for more than seven years. As a New Hampshire Certified Wetland Scientist and Certified Professional in Sediment and Erosion Control, she is responsible for

the management of wetland permitting and wetland mitigation projects. Heather conducts wetland delineations, functional analysis and impact assessments, mitigation design and monitoring, sediment and erosion control inspections and provides assistance with conservation easement implemen-

tation. She also prepares federal and state permit applications, throughout northern New England. She coordinates with local, state and federal regulators and provides documentation for avoidance and minimization in project design and assists in the preparation of both onsite and off site alternatives analyses.





Visit GES online at  
[www.gesinc.biz](http://www.gesinc.biz)

## *Focused on Diligence, Responsiveness and Quality*

Address Label Here

*GES is an environmental consulting firm based in Stratham, in the heart of the seacoast area of New Hampshire. Our projects emanate in an approximately 200-mile radius from the central office, from New Hampshire to Maine through to Vermont and Massachusetts. We are also proud to announce the recent opening of our satellite office in Concord, New Hampshire.*

*GES utilizes classic and innovative field and technological analysis to assist clients ranging from home owners to large municipalities and school administrative units, from small surveying firms to large multinational corporations, and from regulatory officials and management bodies to those seeking regulatory and legal relief, among other entities.*

*Our purpose is to assist with and advance the highest quality balance between development and surrounding ecosystems, particularly wetlands, and to do so in both a cost-effective and beneficial manner to all.*

## *GES Announces Opening of Concord Office*

Gove Environmental Services has opened an office at 20 Warren Street in Concord. This downtown location provides us with the ability to better respond to projects in the Lakes Region, western parts of New Hampshire and Vermont in a cost effective and timely manner.

The office is managed by Randall Shuey who has been with GES for 12 years. Randall Shuey is a Certified Soil Scientist, Certified Wetland Scientist and Certified Professional in Erosion and Sediment Control. He is also an approved trainer for the CPESC program and has provided erosion and sediment control training through-

out New England.

The Concord office will offer the same wetland and soil services as our Stratham office. In addition, it will focus on providing recommended construction scheduling that will minimize disturbance and provide erosion and sediment control measures that will support the schedule of construction activities. Mr. Shuey will also focus on the design and implementation of storm water quality systems.



*A stream restoration project in Exeter, NH designed by Randall Shuey of the GES Concord office.*

### What We Do

- Wetland Delineation and Permitting
- HISS and Site Specific Soil Mapping and Analysis
- Environmental Design
- Wetland Restoration and Mitigation
- GIS Analysis
- Wildlife and EIA Assessments
- Stormwater, Sediment and Erosion Control
- Construction Monitoring
- Municipal Review