

# Maine Lands Review

The newsletter of Boyle Associates, Environmental Consultants

## President's Message - Jim Boyle

Happy New Year 2008! We have prepared this newsletter for our clients and colleagues to give you an update on our company and to highlight some important reminders for the coming months. Despite the apparent leveling out of the residential housing market and hints at a possible recession in 2008, our workload is as high as it has ever been. Our staff is busy providing services to our clients within the development, construction, engineering, and utility industries. Thus far, it appears that 2008 will be at least as busy as 2007, as we help our clients work with evolving environmental regulations at the local, state and federal levels.

Our land use consulting services include wetland and stream delineations, vernal pool surveys, shoreland zoning assessments, significant wading bird and waterfowl habitat reviews, real estate acquisition, septic system site evaluations, environmental inspections, environmental permit preparation and acquisition, and wetland mitigation sequencing and design. Being one of the last small, independent environmental consultation companies working in Southern Maine allows us to maintain close relationships with our clients and the regulatory community and allows our team of environmental professionals the flexibility to adapt to changing conditions in the market and in regulation.

## Boyle Associates welcomes 2 new members!

Rodney Kelshaw is a Professional Wetland Scientist, Licensed Site Evaluator and Wildlife Biologist. He joined the Boyle Associates team in April 2007 and brings several years of wetland consulting experience including delineation, functional assessment and mitigation design. In addition, Rod has experience in septic design, environmental/erosion and sedimentation inspection, biological resource inventory, GPS and CAD mapping, facilitating project planning and resource impact analysis. Rod is based out of our Dedham satellite office, allowing Boyle Associates to better respond to projects in the central, midcoast and, Downeast regions of Maine. Rodney can be reached at 207.944.6776 or at rkelshaw@boyleassociates.net.

Tom Diemer joined Boyle Associates in October 2007. Prior to joining Boyle Associates, Tom was a Biological Science Technician at Wind Cave National Park in South Dakota. While there, he specialized in exotic plant management, which consisted of invasive species control and native plant management. Tom provides Boyle Associates with GPS, GIS and CAD proficiency. He holds a degree in Geography (Minor in Geology) from Minnesota State University Mankato, which complements his main role at Boyle Associates as GIS and Environmental Technician. Tom can be reached at 207.781.2094.

## Don't forget to review your project sites for vernal pools!

*"A vernal pool, also referred to as seasonal forest pool, is a natural, temporary to semipermanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer" (NRPA CH. 335).*

In September 2007, the Maine DEP began protecting "significant vernal pools" and their surrounding habitat as "Significant Wildlife Habitat" (SWH). Any work inside of SWH requires stringent permitting, avoidance measures, and oftentimes setbacks. This habitat designation extends 250 feet from the upland edge of the

*(Continued on page 2)*



Environmental Consultants  
5 Fundy Road  
Falmouth, Maine 04105  
Phone: 207.781.2094  
Fax: 207.781.2064  
[www.boyleassociates.net](http://www.boyleassociates.net)

significant vernal pool. Whether or not a pool meets the criteria for listing as a significant vernal pool depends on the abundance of breeding indicator species (wood frogs, spotted salamanders and blue-spotted salamanders); the presence of fairy shrimp; or observed use by state-listed rare, threatened or endangered species. During the breeding season, biologists must count egg masses in order to determine the abundance of breeding individuals. Depending on weather and ice-out; in southern Maine, vernal pool indicator species generally lay eggs between April and late-May. The Maine DEP generally requires that wetlands identified as potential vernal pools outside of the breeding season must be treated as though they are significant pools unless proven otherwise.

Furthermore, the US Army Corps of Engineers, through its Programmatic General Permit with the State of Maine, regulates vernal pools and upland habitats within 500 feet of the pools. The Corps does not assign any 'significance' criteria to pools, and instead generally relies on evidence of use by indicator and/or rare or threatened species.

The best way to avoid potentially costly and stringent regulation on non-significant pools, and for wetlands that may appear to be vernal pools but do not provide habitat for indicator or special species, is to conduct breeding season surveys of the pools. These surveys consist of relatively quick visits to the pools to check for evidence of breeding indicator species. New rules for identifying significant vernal pools are currently under review in the state legislature. Call one of our biologists today to schedule a review of your proposed development sites during the breeding season.

---

### **Waterfowl, Wading Bird & Shorebird Habitat: REGULATORY OVERVIEW**

The State of Maine has a vast shoreline, a multitude of lakes, ponds, wetlands and countless rivers and streams. These aquatic environments and associated riparian areas provide crucial habitat for migratory shorebirds, wading birds and waterfowl. For decades the State has recognized the importance of these areas and has studied, surveyed and mapped them to better understand their individual and overall values. Those habitats defined and mapped by the Maine Department of Inland Fisheries and Wildlife (DIFW) as having high or moderate value are listed as Significant Wildlife Hab-

tat (SWH) and activities taking place in, on or over these areas were regulated under the Natural Resources Protection Act (NRPA). The Maine Department of Environmental Protection (DEP) has regulatory authority over these areas under the NRPA and Chapter 335: Significant Wildlife Habitat. SWH is regulated if it has been mapped by the DIFW or is within any other protected natural resource. The DEP began regulating activities "in, on or over" valuable waterfowl and wading bird habitat and shorebird feeding and roosting areas on June 8, 2006. Additional modifications to these regulations were effective June 14, 2007.

There are two categories of significant wading bird and waterfowl habitats (WWH): "high and moderate value WWH" and "shorebird nesting, feeding, and staging areas." High and moderate value waterfowl and wading bird habitat is divided into two subcategories: inland and tidal. Shorebird habitats are also divided into two subcategories: feeding areas and roosting areas.

### **High and Moderate Value WWH**

An inland habitat is an inland wetland complex, and a 250-foot wide upland zone surrounding the wetland, that through a combination of dominant wetland type, wetland diversity, wetland size, wetland type interspersion, and percent open water meets DIFW guidelines; or is an inland wetland complex that has documented outstanding use by waterfowl or wading birds. A new provision, added in 2007, is that on *great ponds* only the upland area that is within 250 feet of the freshwater wetland is included as part of this bird habitat regardless of mapping.

Tidal Habitats are only subtidal or intertidal areas and does not include an additional upland buffer. However, DEP maintains a permit requirement for activities located within 75' of any coastal wetland. The tidal habitats have been classified because they were previously rated by the DIFW, documented outstanding use by waterfowl or wading birds or use by rare species of waterfowl or wading birds. They include certain aquatic beds, reefs, emergent wetlands or mudflats.

### **Shorebird Nesting, Feeding and Staging Areas**

High or moderate value shorebird nesting, feeding, and staging areas are significant wildlife habitats. Maine feeding and staging areas provide migrating shorebirds with the food resources to acquire the large fat re-

serves necessary to fuel their transoceanic migration to wintering areas. These staging areas include areas where the birds feed and rest. Shorebirds feed constantly in the intertidal area to build up reserves for their long migration. When the tide is high, they rest (or “roost”) just above the high tide mark. Buffers near these feeding and roosting areas are a critical part of the habitat because they protect the birds from disturbance so they can prepare for their long migratory flights. **A shorebird feeding area** includes the intertidal area used for feeding and a 100-foot buffer area. **A shorebird roosting area** includes the intertidal area used for feeding, the roosting area, and a 250-foot buffer area. This buffer area is measured from the edge of the roosting area, and includes nearby upland areas. To date, the DIFW has not adopted a definition of nesting area habitat, and therefore no criteria are presently included in this regulation.

### **Challenging a WWH Designation**

Currently, all wading bird and waterfowl habitats (including buffers) that are subject to NRPA jurisdiction as significant wildlife habitat are mapped on GIS data layers available from the DIFW and the Department of Environmental Protection (DEP). An individual may voluntarily submit documentation to the DEP or the DIFW regarding the value of a shorebird nesting, feeding or staging area. Documentation must be completed by an individual who has experience and training in either wetland ecology or wildlife ecology and therefore has qualifications to identify and document a high or moderate value shorebird nesting, feeding or staging area, or field verified by DIFW. Following review of such documentation, DIFW may modify the boundary of a high or moderate value shorebird nesting, feeding or staging area depicted on the applicable GIS data layer. A landowner will receive written confirmation of such documentation from the department. Boyle Associates staff has the qualifications to inventory areas for WWH designation and has experience working with DIFW staff on making changes to current published mapping. Please contact Boyle Associates with questions related to WWH or for mapping requests.

---

### **In-lieu-fee Mitigation Program Gets Going**

The in-lieu-fee (ILF) mitigation program allows applicants to pay a fee in-lieu of designing a specific com-

pensatory mitigation project for environmental impacts permitted by the DEP and/or the U.S. Army Corps (Corps) (including but not limited to impacts to wetlands). In Maine, an in-lieu fee agreement has recently emerged between the DEP, the Corps and The Nature Conservancy (TNC). During the course of normal permit oversight, the DEP and the Corps will first determine if the applicant has avoided and minimized impacts as much as possible, then determine if in-lieu-fee is the preferred alternative for mitigation of impacts. ILF payments are paid into the “Natural Resources Mitigation Fund” (Fund), which is used to restore, enhance, create, or preserve other resource systems within the same biophysical region as the impacted resources. The goals of the ILF Mitigation Program are to: increase the extent and quality of mitigation projects in the state; reduce the extent of cumulative adverse impacts to aquatic resources protected; and to provide applicants greater flexibility in compensation projects.

TNC is in charge of establishing and disseminating monies from the Fund. TNC acts as a “passive recipient” of funds from the DEP and will not be involved in DEP or Corps regulatory decisions nor determine the amount of compensatory mitigation required. TNC allocates the funds to prioritized projects in various biophysical regions of the state. Proposals may be submitted to TNC by members of the review or approval committees, state or federal agencies, local and state conservation organizations, and/or private citizens. TNC prioritizes the projects and payments based on long term goals of preserving and restoring high-value and at-risk wetlands and natural communities.

The Review Committee will assess proposals based on site suitability, biophysical region, likelihood of mitigation project success, environmental benefit of ILF funds expended, relative value of the natural resource type(s) involved, and for preservation, the relative threat of development of the proposed project site. Projects that rate high on these values will be forwarded to the “Natural Resources Mitigation Fund Approval Committee.” The Review Committee will be comprised of representatives from the DEP, the Corps, the Maine Department of Inland Fisheries and Wildlife (DIFW), the Maine Department of Conservation (DOC), the Maine State Planning Office (SPO), the Maine Department of Transportation (DOT), the Maine Department of Marine Resources (DMR), TNC, and two po-

sitions to be filled on staggered three-year terms with representatives from quasi-government or non-governmental organizations. The Approval Committee will be comprised of the Commissioners or their designees from the DEP, the DMR, the DOC, the DIFW, and designated representatives of the Corp, the U.S. Fish and Wildlife Service, and the Environmental Protection Agency.

For more information check out [www.maine.gov](http://www.maine.gov) and type “in lieu fee” in the search box in the upper right hand corner of the homepage.

---

### **New England District Office of the U.S. Army Corps releases new Wetland Mitigation Guidelines**

On December 18, 2007 the U.S. Army Corps of Engineers (Corps) issued a Public Notice (PN) entitled “Addendum to New England District Compensatory Mitigation Guidance: Compensation for Impacted Aquatic Resource Functions.” The PN provides updated compensatory mitigation ratio guidance, including an establishment of standard guidelines, or ratio “rules of thumb”, for compensatory mitigation. For the first time, the Corps has provided applicants with a range of ratios that can be used when deciding how much mitigation is required in order to compensate for impacts to different types of wetland communities (e.g. PFO, PSS or PEM). According to the Corps, the presented ratios are primarily designed to mitigate for direct resource impacts, and additional mitigation may be required for secondary or indirect impacts. The PN stresses that the Corps will maintain flexibility to increase (and less often, to decrease) the ratios on a project-by-project basis in order to achieve the most appropriate mitigation for each specific project.

The recommended compensatory mitigation ratios are based on: complexity of system impacted; likelihood of mitigation success; degree to which functions are replaced; and temporal loss for certain functions (water quality renovation etc.). The types of mitigation, in order of Corps preference, are restoration, creation, enhancement, and preservation. The following table provides the recommended ratios that are meant to serve as a starting point for mitigation planning purposes.

Mitigation Type \ Wetland Type	Restoration	Creation	Enhancement	Preservation
Herbaceous Wetlands	2:1	2:1 to 3:1	3:1 to 10:1	15:1
Shrub Wetlands	2:1	2:1 to 3:1	3:1 to 10:1	15:1
Forested Wetlands	2:1 to 3:1	3:1 to 4:1	5:1 to 10:1	15:1
Open Water	1:1	1:1	proj. specific	proj. specific
Submerged Aquatic Vegetation	3:1 to 5:1	proj. specific	proj. specific	proj. specific
Streams (linear feet)	2:1	n/a	3:1 to 5:1	10:1 to 20:1
Mudflats	2:1	2:1	proj. specific	proj. specific
Uplands	at least 10:1	n/a	proj. specific	15:1

According to the addendum, upland buffers that serve to protect wetland restoration, creation, and enhancement areas will generally receive mitigation credit. A 100-foot wide upland buffer is recommended adjacent to wetland restoration, enhancement, and creation sites and a 25-foot buffer is recommended adjacent to stream banks for stream restoration and enhancement projects.

Similar to the pre-existing guidelines, in-kind mitigation; replacing functions of an impacted emergent wetland for example, with another emergent wetland is generally preferred over out-of-kind. Out-of-kind mitigation may be allowed for greatly degraded systems or where it would provide a more positive effect for the overall watershed. For example, depending on the functions of the impacted wetland, impacts to a highly degraded emergent wetland system may be better compensated for through creation, restoration or enhancement of a nearby forested or shrub wetland system.

The range in mitigation ratios is based on the quality and level of impacted functions. It is important that the watershed, landscape position and wetland functionality of the mitigation site are appropriate. Compensation should take place in an area where there is a high likelihood of success in replacing the impacted functions, taking into account aquatic habitat diversity, connectivity and a natural balance of wetlands and uplands. Furthermore, compensation should not be located in landscape positions that would be detrimental to the compensation site.

For more information, or if you would like to discuss mitigation needs or existing or proposed wetland mitigation projects, please call Rich Jordan or Heather Storlazzi Ward at 207.781.2094, or Rod Kelshaw at

207.944.6776. For more information on the New England District of the U.S. Army Corps of Engineers, visit them on the web at: [www.nae.usace.army.mil/](http://www.nae.usace.army.mil/).

---

### **Boyle Associates Project Updates:**

*Bangor Hydroelectric Company/Emera Energy's Northeast Reliability Interconnect 345 kV Transmission Line from Orrington to Baileyville:* Boyle Associates provided Maine DEP Third Party Environmental Inspection (3PI) oversight on the 90-mile transmission corridor. Construction on the project wrapped up November 2007. The new utility line went into service in December 2007.

*Central Maine Power Company Section 163: 115 kV Transmission Line Rebuild from Kennebunk to Saco:* Boyle Associates is providing Maine DEP 3PI oversight on this approximately 14-mile project in York County. This project is scheduled to be in service by fall of 2008. Boyle Associates is working with company and client environmental inspectors from CMP and TRC, and the contractor Hawkeye Company.

*Bangor Hydroelectric Company/Emera Energy's Hancock County Reliability Project (HCRP) 115 kV Transmission Line from Ellsworth to Trenton:* Boyle Associates is providing Maine DEP 3PI oversight on this approximately 14-mile project in Hancock County, Maine. This project includes construction of the new transmission line, construction of a new substation and rebuild 2.3 miles of Line 11, an existing 34.5 kV transmission line that is co-located with the new proposed line. This project is scheduled to take place during the winter and spring months of 2008.

*Three Diamonds Realty's Haigis Parkway Professional Center in Scarborough:* Boyle Associates provided environmental consultation services for the proposed 12-lot commercial subdivision project including wetland delineation and functional assessment, Tier III NRPA permit application, and wetland mitigation sequencing and design. Boyle Associates worked with Landscape Architects from Mitchell Associates and Engineers from Gorrill-Palmer and Sebago Technics on the project. The Larrabee Farms Wetland Mitiga-

tion Project in Scarborough was identified as the best option for wetland mitigation and a compensation plan was completed that includes 3.5 acres of wetland creation and nearly 15 acres of preservation. Permit applications were submitted in early January 2008 to the Maine DEP and U.S. Army Corps of Engineers.

*Central Maine Power Company's Maine Power Reliability Project:* As a subcontractor to TRC Environmental Solutions (subcontracting to Cianbro), Boyle Associates helped conduct wetland and vernal pools assessments on over 300 miles of CMP-owned utility corridors during the 2007 field season. This work gave our staff the chance to locate, investigate and gather important data on hundreds of natural and man-made vernal pool habitats, as well as wetlands throughout the state.

*R.J. Grondin & Son's Larrabee Farms Wetland Mitigation Project Site in Scarborough:* Boyle Associates is the lead wetland mitigation specialist on the Larrabee Farms project. The Larrabee Farms project site consists of approximately 300 acres of land located in north Scarborough, southeast of the intersection of Route 114 and Beech Ridge Road. The design for the site includes 40 acres of wetland creation potential, with over 200 acres of permanent preservation of upland and wetland buffers along a 1-mile stretch of the Nonesuch River. Wetland creation opportunities include forested, shrub or emergent wetland types, as well as vernal pool habitat creation areas. In 2007, Larrabee Farms provided wetland mitigation for the Maine DOT's Gorham Bypass and the New England Expedition's Gateway at Scarborough projects. Combined, the conservation easements for these projects permanently protect nearly 100 acres of habitat, including uplands, existing wetlands and over 20 acres of created wetlands and vernal pool habitats.

There is plenty of room left at the site for both large and small wetland mitigation projects. For more information, please contact Rich Jordan at Boyle Associates (207.671.2760), or Ken Grondin at R.J. Grondin and Sons (207.854.1147).

## Richard Jordan

---

**Subject:** FW: Maine Lands Review

-----Original Message-----

From: Ladd, Ruth M NAE [mailto:Ruth.M.Ladd@usace.army.mil]

Sent: Monday, February 25, 2008 2:05 PM

To: jboyle@boyleassociates.net

Subject: Maine Lands Review

Hi, Jim -

Thanks for sending me your newsletter. I just wanted to clarify that we don't regulate the upland buffers to vernal pools. We regulate aquatic resources that are jurisdictional under the Clean Water Act (and Rivers and Harbors Act). Once we have jurisdiction, we can look at secondary impacts which may include loss of upland habitat required by wetland/water-dependent species.

I appreciate your spreading of the word about the ILF program and the ratios guidance.

Ruth M. Ladd

Chief, Policy Analysis and Technical Support Branch Regulatory Division New England

District Corps of Engineers

696 Virginia Road

Concord, MA 01742-2751

(978) 318-8818