



MAINE AUDUBON
Testimony in Support of LD 1981,
Resolve, Regarding Legislative Review of Portions of Chapter 335: Significant
Wildlife Habitat, a Major Substantive Rule of the
Department of Environmental Protection
February 14, 2006

Good afternoon, Senator Cowger, Representative Koffman, and members of the Natural Resources Committee. My name is Jody Jones and I am a Wildlife Ecologist and am testifying in support of LD 1981 on behalf of Maine Audubon and its 11,000 members and supporters.

Maine Audubon strongly supports the proposed additions to the Significant Wildlife Habitat Rule. Significant wildlife habitat is one of the resources protected under the Natural Resources Protection Act (NRPA). It includes a number of types of wildlife habitats including high and moderate value waterfowl and wading bird habitat; shorebird nesting, feeding and staging areas; and significant vernal pools.

Last year, at this Committee's urging, the Legislature amended NRPA to eliminate the requirement that significant wildlife habitat be mapped and directed the Department of Inland Fisheries and Wildlife to adopt a rule defining significant vernal pools, high and moderate value waterfowl and wading bird habitat and shorebird nesting, feeding and staging areas. You also directed the Department of Environmental Protection to adopt a rule identifying the criteria used to determine whether an area is significant vernal pool habitat, high and moderate value waterfowl and wading bird habitat or shorebird nesting, feeding and staging areas. The focus was on these three habitat types because DIFW already has extensive information on the ecology and conservation of these habitat types and because these habitats are under constant threat from development and disturbance.

We would like to thank DIFW and DEP for developing the proposed rule before you today and urge you to approve it as have the DIFW's Advisory Council and the Board of Environmental Protection.

Significant Vernal Pools
Ecological Importance of Vernal Pools

Vernal pools are small water bodies that typically fill up in the fall or spring, dry by mid-summer and provide habitat crucial for the survival of a certain segment of Maine's amphibian population. For example:

- They are preferred breeding habitat for fairy shrimp and amphibians such as wood frogs and "mole" salamanders.
- Some provide habitat for threatened and endangered species (spotted and Blanding's turtles, for example).
- Several other wetland-dependent species including moose, mink, raccoon, herons, ducks, and turtles all use vernal pools.
- The invertebrates and amphibians that breed in vernal pools provide an important food source for many forest birds and mammals.

Pool-breeding amphibians breed only once a year, and for a short period of time. The rest of their time is spent in critical *terrestrial* habitat where the adults feed, seek refuge during the summer, and find dry upland forests in which to over winter. Ongoing vernal pool research has shown that the populations of amphibians will decline if critical terrestrial habitat is severely devegetated or hardened during development. Therefore, protection of the critical terrestrial habitat is as important as protection of the vernal pool depression to prevent local extinctions of amphibian populations and maintain biodiversity.

Threats to the resource

- Vernal pools are among the most threatened of freshwater wetlands mostly due to their small size, ephemeral hydrology, largely private ownership and current landuse patterns.
- In parts of southern New England and mid-Atlantic states, where development pressure is great, vernal pool species are already declining.
- In other parts of the wood frog's range, where agricultural development has destroyed vernal pool habitat, the wood frog now is locally extinct.
- One vernal pool species in Maine, the blue-spotted salamander, is a species of special concern in Vermont and Massachusetts and is threatened in Connecticut, all due to loss of habitat.

Vernal pool habitat receives little or no protection under current regulations. A Maine Audubon study evaluating 304 pools in Maine found that 67% of those pools were too small to meet the size of impact requirement for a Tier 1 review (that is, they were < 4300 square feet) and hence required no review. Clearly, the importance of the vernal pool resource to our forest ecosystem processes is not commensurate with the size or protection of this resource.

The rule is reasonable and supported by science

The proposed definition of Significant Vernal Pool is based on our latest knowledge of pool ecology and the nature of Maine vernal pools specifically. It identifies wood frogs, spotted salamanders, blue spotted salamanders, and fairy shrimp as *indicators*, and

establishes egg mass thresholds for each (Blue spotted salamander = 10; spotted salamander = 20, wood frog = 40).

In addition, current scientific research recommends that 750' of forest habitat surrounding the pool be protected in developing landscapes. The proposed rule only includes a 250' portion of the critical terrestrial habitat around the pool. The first 100' around pools are often used as overwintering sites by juveniles; adult salamanders live up to ½ mile and adult wood frogs up to ¾ mile from the breeding pool. The proposed zone of 250' includes only a portion of the breeding population and should be adopted as a minimum.

Vernal pools are already a well recognized wetland resource by consultants, regulators, and even the public and will now be identified and treated like all other wetlands during the permitting process. This means the DEP will work with individual applicants to avoid and minimize impacts to significant vernal pools wherever possible. These professionals confirmed that identification of significant vernal pools according to the proposed criteria was not only feasible, but also consistent with standard professional practice.

Shorebirds, Waterfowl and Wading Birds

Ecological Importance of Shorebird nesting¹, feeding and staging areas

Maine is blessed with a tremendously rich intertidal resource, virtually invisible to most of us. However, shorebirds have been dependant on this resource for thousands of years. We have learned much about the dependency of shorebirds on Maine's rich intertidal habitats. Here are highlights from research conducted in Maine:

- One species of shorebird (semi-palmated plover) nearly doubles their body weight to get ready for migration
- Some shorebirds select a single species of "invertebrate" gorging themselves by eating up to 23,000 individuals in a single tidal cycle
- Different species of shorebirds have different bill characteristics which results in a sort of segregation of their feeding grounds to limit competition.
- Shorebirds generally stay 2-3 weeks in the fall on coastal staging areas, feeding, resting to accumulate the fat reserves for crossing the ocean going as far as Uruguay, Argentina and Chile.

There is one shorebird that deserves special distinction: the **Purple Sandpiper** is the only shorebird to winter in Maine. It is estimated that Maine's coast provides winter habitat for almost half of the entire world population of Purple Sandpipers. Like all of us in this room, these birds choose to stay in Maine, while most of their "cousins" fly to central and South America. Certainly, these hardy non-snowbirds deserve to have their habitats protected.

Threats to the Resource

- Human populations in coastal communities have increased dramatically.

¹ Nesting habitat: no criteria are currently available from DIFW because each species requires individual assessments and management systems which are not yet complete (not done are willet, spotted sandpiper, killdeer, common snipe; done are American woodcock, piping plover, upland sandpiper) so not included in this regulation.

- In Maine, a Department of Economic and Community Development report estimated a 40% increase in population in coastal communities since 1978.
- Shorebirds are extremely susceptible to disturbance and will abandon roosting and feeding sites that have even moderate levels of human activity.

The rule is reasonable and science-based

Identification of these habitats by DIFW was based on standardized, regional surveys initiated in 1981 and completed for the entire coast in 1991 using aerial and ground surveys. This information was updated in 1993 keying in on areas identified from the previous regional surveys and is regularly surveyed today.

These habitats are *rare* and deserve to be protected to ensure shorebirds do not become endangered or threatened in the future. There are 222 sites used by shorebirds for both roosting and feeding; 34 sites used for roosting only and 29 feeding-only sites and all are intertidal. Many of these sites are very small (.004 acres), with the largest one less than 750 acres of intertidal area. Maine has 3500 miles of shoreline with only 78 miles of sandy beach which is one of the preferred habitats utilized by large flocks of migratory shorebirds.

We have an obligation to assure that these few intertidal areas and the associated upland habitats are not degraded or abandoned by the shorebirds that rely on these sites for their very survival. Unabated development or siting of our public access facilities without considering these sites would be like shutting down the grocery stores as well as their gas stations of migratory shorebirds since these birds are self propelled and need these critical staging areas to successfully migrate.

Waterfowl and Wading Bird Habitats

Ecological Importance of Waterfowl and Wading Bird Habitats

Conservation of waterfowl and wading bird habitats in the United States began with duck hunters. There is tremendous overlap between habitats of the game species (i.e. ducks) and the waterbirds such as herons, ibis, bitterns, rails, coots and cranes. The wetlands and adjacent upland habitat are crucial nesting grounds for almost all our waterfowl and wading birds in Maine and function as foraging areas for numerous migratory species as well.

In addition to wildlife values, many wetlands have additional functions that are beneficial to people including the following:

- Wetlands help anchor the shoreline against erosion and protect property from storm surges and flooding; and
- filter pollutants, which helps protect our water quality as well as the water quality in Maine's shellfish beds.
- Economic data from the USFWS indicates that there are 1.8 million people who are waterfowl hunters and they spent \$934 million in 2001.

As you can see, wetlands are among the most valuable features of North America's natural heritage.

Threats to the Resource

- Historical data indicate that since the first settlers arrived, 53 percent of the original 221 million wetland acres found in the contiguous United States have been destroyed

- Approximately 90% of the tidal marshes that existed on the U.S. Atlantic coast prior to 1885 were drained by ditching by 1938.
- Downeast Maine was the only area not extensively ditched along the entire eastern coast of the United States.
- In 1985, the habitat that waterfowl and wading birds depend on for survival was disappearing at a rate of 60 acres every hour. These marshes are preferred nesting habitat for shorebirds and provide a source of nutrients for foraging areas.

Continued human development is a major concern across Maine, including suburbanization radiating outward from population centers and construction of second homes along the seacoast and lakefronts. The activities associated with human development tend to reduce natural habitats for birds, increase disturbance of birds from increased human presence, increase populations of some predators, and lead to increased pollution or spread of invasive species.

The rule is reasonable and science-based

A nationally recognized classification system was used as well as the most up to date information on assessing wildlife values in wetlands. However, this system is heavily biased towards larger wetlands. This bias is appropriate for waterfowl and wading birds but points to the need for simultaneously adopting the rule for vernal pools to ensure all the wetland dependant wildlife do not disappear from Maine.

The 250 foot upland habitat associated with inland wetlands is consistent with other regulatory mandates and absolutely necessary in order to protect *all* the functions with which it is associated. It is particularly needed to provide habitat for nesting and brood rearing of waterfowl and wading birds.

Although we initially supported including a 250' area around the *tidal* as well as freshwater wading bird and waterfowl habitats, we believe the current rule is an excellent step towards conserving these habitats and fully support it.

In closing, we urge you to take the final step in approval of this important rule so the you and future generations will be able to enjoy the excitement of hunting black ducks, hear the eerie clacking of rails at dusk, hear a chorus of spring peepers and wood frogs or finally, stand in awe as thousands of shorebirds undulate across a mudflat. Your support of LD1981 will take the State of Maine a giant step forward in the protection of these important natural resources. Thank you for your consideration.