

## Greater Wells Heath / Johns Swamp Focus Area

Wells, Maine

### *Description:*

The Greater Wells Heath / Johns Swamp focus area includes several large wetland mosaics and the respective adjacent uplands. The most notable of the wetlands is Wells Heath, a 180 acre peatland that may be North America's southern most raised bog. Research is needed to determine if the topography and hydrology of the site are that of a true raised bog. Peat at the center of the heath is ~ 10 feet deep and gradually decreases in depth towards the edges. In the center of the heath, sphagnum moss forms a carpet under low growing shrubs such as leatherleaf, sheep laurel, huckleberry, and rhodora. Cotton grass, pitcher plants, sundews, and reindeer lichens are scattered thinly among the dense shrubs. Stunted larch, pitch pine, and black spruce occur on the open heath but are more dominant on the forested fringe. The heath itself is part of



**Wells Heath**

a larger forested wetland system. Historically, this large forested wetland was contiguous with Johns Swamp, but Swamp John Road now separates the two large undeveloped wetlands. Johns Swamp is fed by water draining out of Wells Heath.

To the southeast of these systems, over the heavily mined Merriland Ridge, is an additional extensive forested upland and wetland mosaic. These forests and swamps make up

the headwaters of the Webhannet River which eventually flows into the Wells Marsh estuary. This area does not have an apparent hydrological connection with the Heath and Johns Swamp, but its proximity and general intactness contribute significantly to the quality of the overall wildlife habitat found in the central portion of the town.

The wetlands and uplands in this focus area support the state threatened spotted turtle. Spotted turtles are generally found only in the southern most part of the state where increasing development contributes to loss of habitat, habitat fragmentation, and an on-going loss of individuals to road kill. Spotted turtles are most frequently associated with complexes of small, acidic wetlands and vernal pools in large, intact forested landscapes. They also use small streams, shrub swamps, forested swamps, wet meadows, and emergent marshes. Although these turtles spend most of their time in the water, they readily travel overland between wetlands during the spring and summer months. Upland habitats are also critical for basking, aestivating (a period of late summer inactivity), and nesting.

Spotted turtles have evolved relatively long adult life spans to offset the long time it takes to reach reproductive maturity and to offset high levels of nest mortality. Because of this unusual life history, spotted turtle populations occur at low densities, and thus populations are highly vulnerable to any human sources of adult mortality. Road mortality and collecting for pets, for example, can be extremely deleterious, as the attrition of just a few individuals every year can lead to the long-term decline and extinction of a local population. The secondary effects of human development – increased predator populations (e.g., dogs, raccoon, skunks), water pollution, filling of small wetlands, and blocking upland travel corridors (roads, rail beds, yards) – also limit populations. Spotted turtles are strictly protected from take (collecting, possession, or killing) by the Maine Endangered Species Act.

Of the wetlands included in this focus area only Wells Heath has been surveyed for rare plants and natural communities. There have been no rare plant or natural community surveys conducted in Johns Swamp or in the Webhannet River headwaters. And there have been no invertebrate surveys conducted at any of these locations. The state rare bog elfin butterfly is closely associated with black spruce bogs in Maine and could occur at Wells Heath. Future ecological surveys of these areas are recommended.

***Rare Species/Natural Community Table for Wells Heath / Swamp John Area:***

Common Name	Latin Name	Status	S-Rank	G-Rank
<b>Exemplary Natural Communities</b>				
Level bog ecosystem		n/a	S4	no rank
<b>Rare Animals</b>				
Spotted turtle	<i>Clemmys guttata</i>	T	S3	G5

\*see last page for explanation of ranks

***Other Resources Mapped by MDIFW:***

Deer Wintering Area

**Conservation Considerations :**

- Natural communities still occurring on the uplands adjacent to the heath and swamps should be conserved as part of the greater wetland ecosystem. Long term preservation of the full compliment of plants and animals found in a high value natural area such as Wells Heath and Johns Swamp will be best achieved by retaining as much of the surrounding natural landscape as possible;
- The integrity of wetlands and the processes and life forms they support including rare plants and animals are dependent on the maintenance of the current hydrology and water quality of the site. Intensive timber harvesting, vegetation clearing, soil disturbance, new roads, and development on buffering uplands can result in greater runoff, sedimentation, and other non-point sources of pollution that can degrade the high quality natural systems that occur here;
- No activities should be permitted that could lead to the loss or degradation of turtle wetlands including filling, dredging, sedimentation, or changing of hydrology unless the activity is approved by MDIFW;
- A minimum 250-foot forested buffer zone should be maintained around target wetlands with known Spotted turtle locations. All wetlands, regardless of size, within 1/4 mile of mapped spotted turtle locations should be considered potential habitat for this wide ranging species, and protected from direct impacts, and buffered by forested upland;
- Impervious surfaces such as yards, buildings, parking lots, and roads should be minimized in the upland landscape within 1/4 mile of turtle wetlands. Natural forest habitat should predominate the landscape. Intensive developments that concentrate human populations and road traffic within 1/4 mile of turtle wetlands should be avoided including subdivisions and service centers;
- Less pervasive is degradation from incidental uses related to the increasing residential development in the area. Upland buffers can also play a major role in protection here. Care needs to be taken that ORV's stay on existing trails and remain out of all wetlands when the ground is not frozen. Existing trails should be reviewed with particular recreation and access needs in mind, and trails closed if they run counter to protection needs. Fragmenting features should be minimized where possible.
- Low-intensity cutting (single tree or small group selection, firewood harvest) is likely compatible with sensitive features as long as operators avoid wetlands. Winter harvests are recommended to minimize impacts to rare plants, animals, and wetland systems. Close adherence to Best Management Practices for forestry activities near vernal pools (see Forestry Endangered and Threatened Species Guide) will ensure the protection of wetland habitats and the amphibian food source they supply;
- Conservation planning for upland features should include setting some areas aside from timber harvesting to allow for the development of some unmanaged forest ecosystems.

***Protection Status:***

The Town of Wells owns a significant portion of the heath, but the majority of the focus area is currently in private non-conservation ownership.

## STATE RARITY RANKS

- S1** Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
- S2** Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- S3** Rare in Maine (on the order of 20-100 occurrences).
- S4** Apparently secure in Maine.
- S5** Demonstrably secure in Maine.

**Note:** **State Ranks** are determined by the Maine Natural Areas Program.

## GLOBAL RARITY RANKS

- G1** Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.
- G2** Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- G3** Globally rare (on the order of 20-100 occurrences).
- G4** Apparently secure globally.
- G5** Demonstrably secure globally.

**Note:** **Global Ranks** are determined by The Nature Conservancy.

## STATE LEGAL STATUS FOR PLANTS

**Note:** State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's endangered and threatened plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

- E** ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future, or federally listed as Endangered.
- T** THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.
- SC** SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.

Visit our web site for more information on rare, threatened and endangered species!  
<http://www.state.me.us/doc/nrimc/mnap/factsheets/mnapfact.htm>