

Memo



NH NATURAL HERITAGE BUREAU

To: Jeremy Susco, U.S. NRC
11555 Rockville Pike
Mailstop: O-11F1
Rockville, MD 20852

From: Melissa Coppola, NH Natural Heritage Bureau

Date: 9/13/2010 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau

NHB File ID: NHB10-2248

Project type: Railroads, Transmission Lines,
Pipelines: Transmission line, etc.

Town: Seabrook, NH

Location: Seabrook Station in Seabrook, NH

cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: This site is within an area flagged for possible impacts on the state-listed *Ligumia nasuta* (eastern pondmussel) in the Great Pond.

Invertebrate Species

	State ¹	Federal	Notes
Eastern Pond Mussel (<i>Ligumia nasuta</i>)	SC	--	Contact the NH Fish & Game Dept (see below).

Natural Community

	State ¹	Federal	Notes
Atlantic white cedar - yellow birch - pepperbush swamp	--	--	Changes to the hydrology of the wetland are the greatest threat facing the cedar swamp. Damming which causes pooling for extended periods can flood and drown existing trees, and drainage that results in lower water levels can lead to invasion by other species that can out compete -- and eventually eliminate -- Atlantic white cedar trees. Increased nutrient input from stormwater runoff could also deleteriously impact this acidic, low-nutrient plant community.
Brackish marsh	--	--	Threats to these communities are primarily alterations to the hydrology of the wetland (such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat) and increased input of nutrients and pollutants in storm runoff.
Emergent marsh - shrub swamp system	--	--	
Herbaceous seepage marsh	--	--	As this wetland is strongly influenced by groundwater seepage, it could be affected by landscape alterations which modify groundwater movement or increase stormwater flow into it.
High salt marsh intertidal flat	--	--	Threats to these communities are primarily alterations to the hydrology of the wetland (such as ditching or tidal restrictions that might affect the sheet flow of tidal waters

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Low salt marsh	--	--	across the intertidal flat) and increased input of nutrients and pollutants in storm runoff.
Poor level fen/bog system	--	--	Level fens are stagnant, and as such are characterized by low nutrient levels, relatively high acidity levels, and accumulations of peat. The primary threats to this community are changes to its hydrology (especially that which causes pooling), increased nutrient input from stormwater runoff, and sedimentation from nearby disturbance.
Red maple - sensitive fern swamp	--	--	These swamps are influenced by groundwater seepage and springs which moderate water fluctuations and maintain conditions favorable for the accumulation of organic matter. The primary threats are changes to the hydrology of the wetland complex, particularly raising or lowering the water levels, and increased nutrient and pollutant input carried in by stormwater runoff.
Swamp white oak floodplain forest	--	--	Threats are primarily changes to the hydrology of the river, land conversion and fragmentation, introduction of invasive species, and increased input of nutrients and pollutants.
Temperate minor river floodplain system*	--	--	Threats are primarily changes to the hydrology of the river, land conversion and fragmentation, introduction of invasive species, and increased input of nutrients and pollutants.

Plant species	State¹	Federal	Notes
Dwarf Glasswort (<i>Salicornia bigelovii</i>)*	E	--	Threats are primarily alterations to the hydrology of the wetland, such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat, activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.
Dwarf Huckleberry (<i>Gaylussacia bigeloviana</i>)	T	--	The primary threats are changes to this species' peatland habitat, including changes to local hydrology, increased nutrient input from stormwater runoff, and sedimentation from nearby disturbance.
Northern Blazing Star (<i>Liatrix novae-angliae</i>)	E	--	Threats to this highly imperilled species are development activities that eliminate its habitat and invasion of its open, grassy habitat by trees and shrubs.
Perennial Glasswort (<i>Salicornia ambigua</i>)	E	--	Primarily vulnerable to changes to the hydrology of its habitat, especially alterations that change water levels. It may also be susceptible to increased pollutants and nutrients carried in stormwater runoff.
Robust Knotweed (<i>Persicaria robustior</i>)	E	--	Threats include changes to local hydrology that would affect its habitat. It grows on river or streambanks, pond or lake shores, and in forested swamps.
Tall Wormwood (<i>Artemisia campestris ssp.</i>)	E	--	This species grows in dry dune systems and is sensitive to disturbances that eliminate

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caudata)

its habitat or disturb the natural dynamics of the dune area.

Vertebrate species

	State ¹	Federal	Notes
Banded Sunfish (<i>Enneacanthus obesus</i>)	SC	--	Contact the NH Fish & Game Dept (see below).
Blanding's Turtle (<i>Emydoidea blandingii</i>)	E	--	Contact the NH Fish & Game Dept (see below).
Common Tern (<i>Sterna hirundo</i>)*	T	--	Contact the NH Fish & Game Dept (see below).
Golden-winged Warbler (<i>Vermivora chrysoptera</i>)*	SC	--	Contact the NH Fish & Game Dept (see below).
Spotted Turtle (<i>Clemmys guttata</i>)	T	--	Contact the NH Fish & Game Dept (see below).
Vesper Sparrow (<i>Pooecetes gramineus</i>)	SC	--	Contact the NH Fish & Game Dept (see below).

¹Codes: "E" = Endangered, "T" = Threatened, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

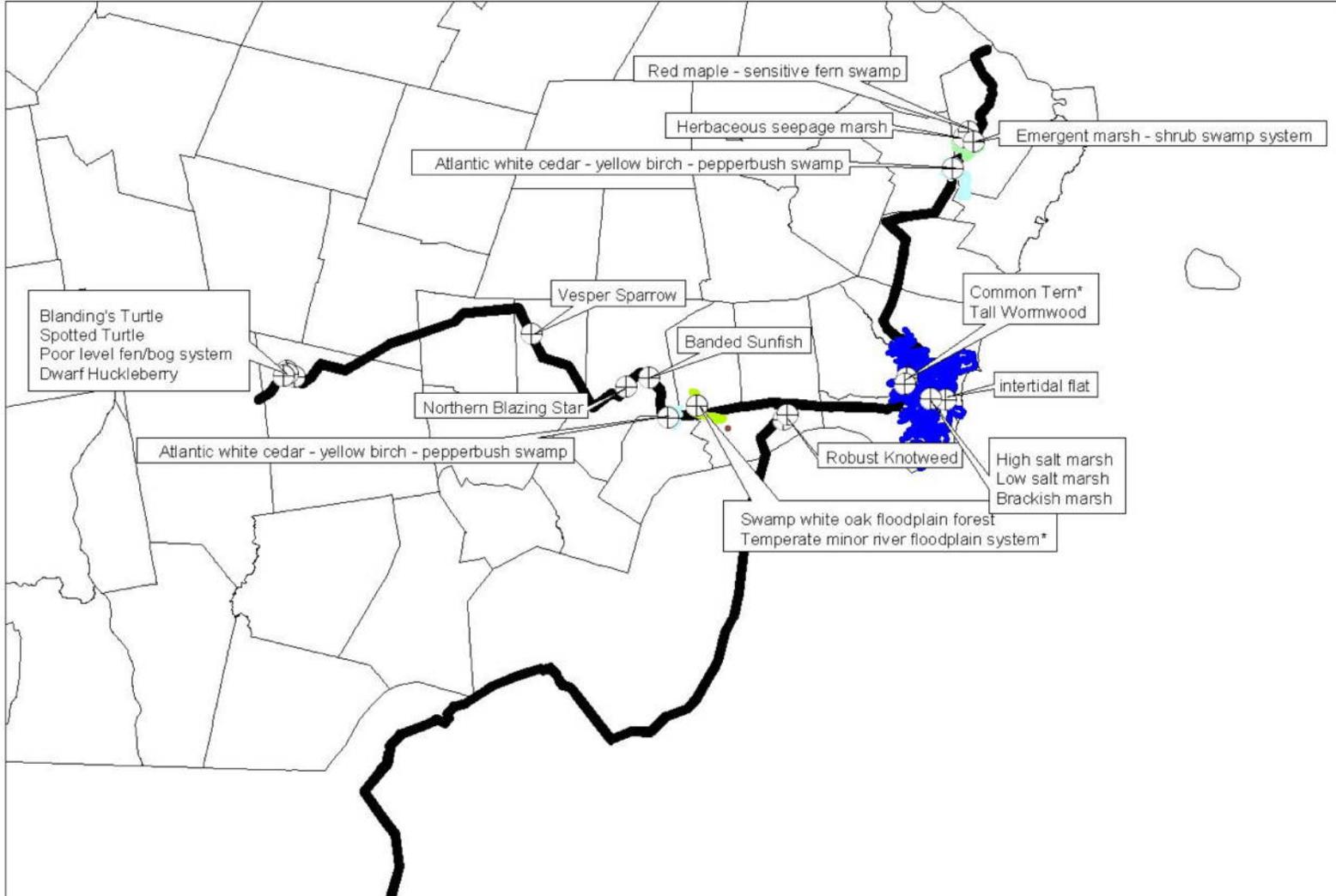
Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. For some purposes, including legal requirements for state wetland permits, the fact that no species of concern are known to be present is sufficient. However, an on-site survey would provide better information on what species and communities are indeed present.



Known locations of rare species and exemplary natural communities

Note: Mapped locations are not always exact. Occurrences that are not in the vicinity of the project are not shown.



*Historical record

New Hampshire Natural Heritage Bureau - Community Record

Atlantic white cedar - yellow birch - pepperbush swamp

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Good quality, condition and lanscape context ('B' on a scale of A-D).
Comments on Rank:

Detailed Description: 1993: *Chamaecyparis thyoides* (Atlantic white cedar) dominates 45-55 acres of the 62-acre wetland. One of largest, but not necessarily best, occurrences in the state; recent cutting has created a young age structure (average dbh = 18 inches). Other species include *Acer rubrum* (red maple), *Betula alleghaniensis* (yellow birch), *Vaccinium corymbosum* (highbush blueberry), *Toxicodendron vernix* (poison sumac), and Sphagnum moss.

General Area: 1993: Water is plentiful with near permanent saturation in most areas. East end of complex is drier, and litter and duff predominate over Sphagnum. Water ph is 4.2-4.8.

General Comments: 2007: Originally the surveysite name contained "(Newton Wetland #4)."

Management 1993: No immediate needs.

Comments:

Location

Survey Site Name: Newton - Kingston Cedar Swamp

Managed By: Bowley Parcel

County: Rockingham

USGS quad(s): Kingston (4207181)

Town(s): Kingston

Lat, Long: 425335N, 0710158W

Size: 111.4 acres

Elevation: 100 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: North on New Boston Road (Route 108) in Newton. The cedar swamp can be reached from the back of Union Cemetery. Proceed downslope (north) for 450 feet. Or, enter from the small parking area on New Boston Road 0.6 miles north of New Boston Road. From Main Street, the east arm of the wetland is 0.5 miles north of New Boston Road. Proceed west for 300 feet.

Dates documented

First reported: 1993-07-06

Last reported: 1993-09-09

Ritter, N. 1993. Field survey to Wetland #4: Newton on September 9.

Sperduto, D. & N. Ritter. 1994. Atlantic White Cedar Wetlands of New Hampshire. Environmental Protection Agency, Boston, MA.

New Hampshire Natural Heritage Bureau - Community Record

Brackish marsh

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Good quality, condition and lanscape context ('B' on a scale of A-D).
Comments on Rank: Rank is for largest area visited (Taylor River). Others were B- (three sites) or C (Seabrook Salt Marsh).

Detailed Description: 1997: A characteristic mix of graminoids includes *Agrostis stolonifera* var. *palustris* (marsh creeping bent-grass), *Spartina patens* (salt-meadow cord-grass), *Juncus gerardii* (salt marsh rush), *Solidago sempervirens* (seaside goldenrod), *Distichlis spicata* (spike-grass), *Juncus arcticus* var. *littoralis* (shore rush), *Elytrigia repens* (quack-grass), *Spartina pectinata* (fresh-water cord-grass, slough-grass), *Carex paleacea* (chaffy salt sedge), *Hierochloa odorata* (sweet grass), *Aster novi-belgii* (New York aster), *Scirpus pungens* (three-square rush), and several other less frequent species. At the Seabrook School area, ephemeral runoff channel/stream entering from west; area dominated by *Lythrum salicaria* (purple loosestrife). Small elevated knoll in middle with *Quercus bicolor* (swamp white oak), *Toxicodendron radicans* (climbing poison ivy), and *Rosa virginiana* (Virginia rose).

General Area: 1997: The Blackwater - Hampton River Estuary contains the majority of the estimated 6200 acres of salt marsh in the state. The Blackwater River portion of the estuary continues south into Salisbury, MA. The estuarine system extends seaward to an imaginary line drawn across Hampton Harbor Inlet and upstream and landward to where ocean-derived salts are less than or equal to 0.5 parts per thousand during the period of average annual low freshwater flow (Cowardin et al. 1979). This estuary is surrounded by moderate levels of residential and commercial development. Several exemplary subtidal and intertidal communities occur in this estuary. Exemplary subtidal communities are **tidal creek bottom** and undifferentiated **saline/brackish subtidal channel/bay bottom**. Exemplary intertidal communities are **brackish marsh**, **coastal shoreline strand/swale**, **saline/brackish intertidal flat**, and high and **low salt marsh**. Exemplary dry Appalachian oak-hickory forest occurs at the site as "salt marsh islands", forested uplands surrounded by salt marsh. Most of the estuary is unaffected by restricted tidal flow. Other areas are described as having an adequate tidal inlet by the USDA Soil Conservation Service (1994). The largest portions of the estuary determined to have inadequate tidal inlets include the Meadow Pond area, the Taylor River - Drakes River area west of the rail road track, and the Browns River west of the rail road track (USDA Soil Conservation Service 1994). In the last four years, several salt marsh restoration projects have begun in this estuary (Ammann, A.P. pers. comm., 1997).

General Comments: 1997: Tidally flooded by salt water only during spring tides and storm surges. Supports a greater diversity of plants and generally flooded less frequently than the robust forb brackish marsh. Elevationally higher, received more freshwater input, and experienced less frequent tidal flooding than the high salt marsh. Occasionally occurs along the upper margins of the high salt marsh where sufficient fresh water runoff or groundwater discharge flows onto the marsh surface. This hydrologic regime supports brackish marsh species and other species most often found in fresh or salt marshes but tolerant of brackish conditions and able to successfully compete in this environment.

Management
Comments:

Location

Survey Site Name: Hampton Harbor
Managed By: ASNH to Properties, Inc. - Pelton

County: Rockingham

USGS quad(s): Hampton (4207087)

New Hampshire Natural Heritage Bureau - System Record

Emergent marsh - shrub swamp system

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Demonstrably widespread, abundant, and secure

Description at this Location

Conservation Rank: Good quality, condition and lanscape context ('B' on a scale of A-D).
Comments on Rank: Despite the compromised condition and context ranks, this is an exemplary system because it is a very large, diverse emergent marsh system with coastal plain affinities.

Detailed Description: 2009: Emergent marsh, seepage marsh, meadow marsh, and shrub thicket communities cover most of Great Bog, a broad, coastal plain basin with very poorly drained marine sediment soil and moderate to deep mucky peat soils (over marine sediments). Sedges and/or cattails dominate the marsh communities, which occupy most of the treeless or sparsely wooded areas of the larger wetland. Shrub thickets are also common but occupy a minority of the system. These various communities cover large areas individually, but also occur together in more complex, fine-scaled mosaics in places. Herbaceous seepage marsh and cattail marsh are apparently the most extensive communities. Herbaceous seepage marshes, described from earlier visits and dominated by *Carex lacustris* (lake sedge), occupy large areas in the western part of Great Bog on Maybid silt loam soil, and possibly occur elsewhere. *Typha latifolia* (common cattail) dominate the cattail marshes in most areas on deeper mucks, but some are dominated by *Typha angustifolia* (narrow-leaved cattail), including the south-central portion of the wetland (south of the upland island in the middle of the wetland). *Carex stricta* (tussock sedge) dominates areas of **tall graminoid meadow marsh** and **mixed tall graminoid - scrub-shrub marsh**, along with various other sedges, grasses, forbs, and medium-height to tall shrubs. Shrub thickets include **alder - dogwood - arrowwood alluvial thicket** and **highbush blueberry - winterberry shrub thicket**. *Ilex verticillata* (winterberry), *Vaccinium corymbosum* (highbush blueberry), *Clethra alnifolia* (sweet pepperbush), *Alnus incana* ssp. *rugosa* (speckled alder) are abundant. *Lyonia ligustrina* (male berry) and *Toxicodendron vernix* (poison sumac) are occasional. Small to large colonies of *Phragmites australis* (common reed) occupy portions of the wetland, including the eastern lobe adjacent to Banefield Rd., which was sprayed with herbicide in September 2009. The marsh and shrub communities extend to the upland margin around most of the periphery, but transition to various swamp communities along the northeast side and discontinuously elsewhere.

General Area: 2009: Great Bog is set in low-relief coastal terrain, surrounded by both dry and mesic Appalachian oak - hickory forests, as well as swamps along subtle drainages that feed into the wetland. A complex mosaic of parent materials in the surrounding landscape include shallow ablation till, outwash sediments, and silt and clay soils of marine origin. Upland forests and swamps occur on the largely undeveloped northeast side. Roads, parking lots, and other residential and industrial development are common close to the wetland in other border areas. Invasive exotic shrubs are common in the upland areas immediately adjacent to the wetland, including vast forest thickets of *Frangula alnus* (alder-buckthorn) on the upland island in the central part of the wetland, through which the powerline corridor runs. These are perhaps the most extensive, old, and impenetrable thickets of alder-buckthorn this surveyor has seen, covering dozens of acres. Eighty percent or more cover of alder-buckthorn was common, with very little or no other vegetation in the understory. Other portions of this upland island were more open old fields with remnant orchard trees. Numerous other invasives are present, including *Rosa multiflora* (multiflora rose), *Berberis thunbergii* (Japanese barberry), and *Celastrus orbiculatus* (Asian bittersweet).

General Comments:
Management
Comments:

Location

Survey Site Name: Great Bog
Managed By: Great Bog

County: Rockingham
Town(s): Portsmouth
Size: 349.3 acres

USGS quad(s): Portsmouth (4307017)
Lat, Long: 430243N, 0704754W
Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2009: Accessed site from railroad tracks that cross Banefield Rd.

Dates documented

First reported: 2009-09-29

Last reported: 2009-09-29

New Hampshire Natural Heritage Bureau - Community Record

Herbaceous seepage marsh

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Rare or uncommon

Description at this Location

Conservation Rank: Good quality, condition and lanscape context ('B' on a scale of A-D).
Comments on Rank: A very large seepage marsh in a compromised landscape context.

Detailed Description: 2002: The northern portion of the seepage marsh is characterized by dense swards of *Carex lacustris* (lake sedge) (50%) accompanied by *Typha latifolia* (common cat-tail, 10%), *Toxicodendron radicans* (climbing poison ivy, 5-10%), *Thelypteris palustris* var. *pubescens* (marsh fern, 5-10%), *Onoclea sensibilis* (sensitive fern, 5%), and scattered sapling *Acer rubrum* (red maple, 1-5%). Numerous other herbs are present in low abundance. This area grades further south into sparse woodland areas with more red maple (20-40 ft. tall, including many dead snags), but still more marshy than swampy. A soil sample was very well decomposed muck over silty muck. 1989: The hybrid cattail *Typha* x *Glauca* dominates open areas with extremely abundant *Lysimachia thyrsiflora* (tufted loosestrife). State record *Carex trichocarpa* (hairy-fruited sedge) occurs at the marsh-swamp ecotone.

General Area: 2002: The seepage marsh is the dominant community in the central and western portions of Great Bog, and bounded to the west by the large seepage swamp, to the north by railroad tracks, to the NW by swamp white oak swamp, to the west by the highway and disturbed emergent marsh, and to the south by powerlines and upland areas. While surrounded by development, Great Bog is so large that it is actually one of the largest and least developed tracts of land in Portsmouth. 1989: Borders the red maple swamp forests that the Great Bog largely consists of.

General Comments: 1989: Further field work and a field form is needed.

Management

Comments:

Location

Survey Site Name: Great Bog
Managed By: Hospital Corporation of America

County: Rockingham
Town(s): Portsmouth
Size: 128.6 acres

USGS quad(s): Portsmouth (4307017)
Lat, Long: 430251N, 0704822W
Elevation: 40 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Great Bog. South and east of crook in powerline right-of-way. Best approach to portion of site visited in 2002 (without pulling over on I-95) is from north via the railroad tracks just south of crossing of Rte. 33 and I-95. Park in vicinity of Rte. 33 crossing of railroad tracks, at industrial complex on Griffen Rd to south of Rte. 33 (closest but dense shrub border along railroad track) or at railroad bridge by Greenland and Borthwick Streets just north of Rte. 33 (easiest). Proceed southwest on railroad tracks. The seepage swamp is located to the south just past the industrial complex (0.25 miles from Rte. 33); the seepage marsh is found further along past the seepage swamp (open area with few trees ca. 0.45 miles from Rte. 33); and the swamp white oak swamp is found where trees pick up again south of the RR tracks closer to the highway crossing (0.7 miles from Rte. 33).

Dates documented

First reported: 1989-05-30
Last reported: 2002-09-27

Sperduto, Dan. 2002. Field survey to Great Bog on September 27.

Sperduto, Daniel, and Stephanie Neid. 2003. Exemplary Bogs and Fens in New Hampshire: Part II. Prepared for the Environmental Protection Agency by the NH Natural Heritage Bureau. Concord, NH.

New Hampshire Natural Heritage Bureau - Community Record

High salt marsh

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Rare or uncommon

Description at this Location

Conservation Rank: Excellent quality, condition and lanscape context ('A' on a scale of A-D).
Comments on Rank: These ranks are for the entire estuary.

Detailed Description: 2006: Community observed and photographed. 1997: In addition to *Spartina patens* (salt-meadow cord-grass) and *Juncus gerardii* (salt marsh rush), other common plants on the high marsh included smooth cord-grass (short form) and *Distichlis spicata* (spike-grass). *D. spicata* formed pure stands in wetter, more poorly drained areas, or mixed with *S. patens*, growing at similar elevations on the high marsh. *J. gerardii* dominated landward of salt meadow-grass in narrow vegetative zones with decreased tidal flooding and soil water salinity, beginning at about mean spring high water. This zone had the highest species richness within the high marsh and included *Solidago sempervirens* (seaside goldenrod), *Panicum virgatum* (switch-grass), *Hierochloa odorata* (sweet grass), *Carex hormathodes* (necklace sedge), *Festuca rubra* (red fescue), *Aster novi-belgii* (New York aster), *Elytrigia repens* (quack-grass), *Spartina pectinata* (fresh-water cord-grass), and *Potentilla anserina* (silverweed).

General Area: 1997: At Hampton Harbor, the mean tidal range is 8.3 feet with spring tides averaging 9.5 feet. Here, the high marsh rises from ca. 4 feet above mean sea level at its lower end to 5 feet above mean sea level at the landward limit of the salt marsh rush zone. The Blackwater - Hampton River Estuary contains the majority of the estimated 6200 acres of salt marsh in the state. The Blackwater River portion of the estuary continues south into Salisbury, MA. The estuarine system extends seaward to an imaginary line drawn across Hampton Harbor Inlet and upstream and landward to where ocean-derived salts are less than or equal to 0.5 parts per thousand during the period of average annual low freshwater flow (Cowardin et al. 1979). This estuary is surrounded by moderate levels of residential and commercial development. Several exemplary subtidal and intertidal communities occur in this estuary. Subtidal communities include the undifferentiated **saline/brackish subtidal channel/bay bottom** and **tidal creek bottom**. Other intertidal communities are **brackish marsh**, **coastal shoreline strand/swale**, **saline/brackish intertidal flat**, and **low salt marsh**. Exemplary **dry Appalachian oak-hickory forest** occurs at the site as "salt marsh islands", forested uplands surrounded by salt marsh. Most of the estuary is unaffected by restricted tidal flow. Other areas are described as having an adequate tidal inlet by the USDA Soil Conservation Service (1994). The largest portions of the estuary determined to have inadequate tidal inlets include the Meadow Pond area, the Taylor River - Drakes River area west of the rail road track, and the Browns River west of the rail road track (USDA Soil Conservation Service 1994). In the last four years, several salt marsh restoration projects have begun in this estuary (Ammann, A.P. pers. comm., 1997).

General Comments:

Management Comments: 1997: Marsh ditched heavily; greenhead boxes present.

Location

Survey Site Name: Hampton Harbor
Managed By: ASNH to Properties, Inc. - Pelton

County: Rockingham
Town(s): Hampton
Size: 3448.9 acres

USGS quad(s): Hampton (4207087)
Lat, Long: 425407N, 0704957W
Elevation: 4 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Large area more or less framed by Rte. 1 to the west, Rte. 101 to the north, Rte. 1A to the east, and the Massachusetts state line to the south. Occurs behind barrier beaches, along inland bays, and other areas protected from high-energy wave action.

Dates documented

First reported: 1997-07-05

Last reported: 2006-08-17

Kimball, Ben and Pete Bowman. 2006. Field survey to The Sands on August 17.

Nichols, William F. 2000. Ecological Assessment of Selected Towns in New Hampshire's Coastal Zone. Prepared by NH Natural Heritage Inventory. Concord, NH.

New Hampshire Natural Heritage Bureau - Community Record

intertidal flat

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Rare or uncommon

Description at this Location

Conservation Rank: Excellent quality, condition and lanscape context ('A' on a scale of A-D).
Comments on Rank: Ranks are for an area at Seabrook School Salt Marsh.

Detailed Description: 1997: No details.

General Area: 1997: The Blackwater - Hampton River Estuary contains the majority of the estimated 6200 acres of salt marsh in the state. The Blackwater River portion of the estuary continues south into Salisbury, MA. The estuarine system extends seaward to an imaginary line drawn across Hampton Harbor Inlet and upstream and landward to where ocean-derived salts are less than or equal to 0.5 parts per thousand during the period of average annual low freshwater flow (Cowardin et al. 1979). This estuary is surrounded by moderate levels of residential and commercial development. Several exemplary subtidal and intertidal communities occur in this estuary. Subtidal communities include the undifferentiated *saline/brackish subtidal channel/bay bottom* and *tidal creek bottom*. Other intertidal communities are *brackish marsh*, *coastal shoreline strand/swale*, and high and *low salt marsh*. Exemplary dry Appalachian oak-hickory forest occurs at the site as "salt marsh islands", forested uplands surrounded by salt marsh. Most of the estuary is unaffected by restricted tidal flow. Other areas are described as having an adequate tidal inlet by the USDA Soil Conservation Service (1994). The largest portions of the estuary determined to have inadequate tidal inlets include the Meadow Pond area, the Taylor River - Drakes River area west of the rail road track, and the Browns River west of the rail road track (USDA Soil Conservation Service 1994). In the last four years, several salt marsh restoration projects have begun in this estuary (Ammann, A.P. pers. comm., 1997).

General Comments: 1997: Extensive areas of this community type were found within the Blackwater - Hampton River Estuary. Intertidal sand and mud flats are gently sloping, sparsely vegetated, habitats. The substrate, exposed completely at extra low spring tide, ranges in composition from sands to muds and silts. Benthic diatoms and other microalgae occurring in this environment are important contributors to the primary productivity of the total estuarine system (Sickley 1989). Macroalgae is typically uncommon across the exposed substrate. Characteristic invertebrates found in New Hampshire's intertidal mudflats include polychaete worms (including *Nereis virens*, *Nephtys caeca*, *Clymenella tortquata*, and *Scoloplos* spp.) and mollusks (including soft-shelled clam [*Mya arenaria*], Baltic *Macoma* [*Macoma balthica*], gem shell [*Gemma gemma*], and swamp *Hydrobia* [*Hydrobia minuta*]) (NAI 1973). Arthropods are also well represented and include green crabs (*Carcinus maenus*), rock crabs (*Cancer irroratus*), flat-clawed hermit crabs (*Pagurus pollicaris*), and horseshoe crabs (*Limulus polyphemis*). During the diurnal (twice daily) tidal flooding several species of fish and other aquatic species feed on the benthos and epibenthic algae. This community also provides important foraging habitat for shorebirds and other animals when the intertidal flat is exposed. The diverse variety of primary foods (microalgae, phytoplankton, and detritus) available to consumers supports the high productivity found on intertidal flats. The substrate is composed of sand or silt and clay rich in organic matter. Vascular plants are sparse to more typically absent.

Management
Comments:

Location

Survey Site Name: Hampton Harbor
Managed By: Hampton Beach State Park

County: Rockingham
Town(s): Hampton
Size: 1183.7 acres

USGS quad(s): Hampton (4207087)
Lat, Long: 425405N, 0704917W
Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Large area more or less framed by Rte. 1 to the west, Rte. 101 to the north, Rte. 1A to the east, and the Massachusetts state line to the south. Occurs between estuarine marshes or other coastal communities landward and subtidal communities seaward and includes tidal creek channels exposed at low tide.

Dates documented

First reported: 1997-07-05 Last reported: 1997-10-08

Nichols, Bill. 1997. Field survey to Blackwater River Salt Marsh on July 5.

Nichols, William F. 2000. Ecological Assessment of Selected Towns in New Hampshire's Coastal Zone. Prepared by NH Natural Heritage Inventory. Concord, NH.

New Hampshire Natural Heritage Bureau - Community Record

Low salt marsh

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Rare or uncommon

Description at this Location

Conservation Rank: Excellent quality, condition and lanscape context ('A' on a scale of A-D).
Comments on Rank: These ranks are for the entire estuary.

Detailed Description: 1997: No details.

General Area: 1997: The Blackwater - Hampton River Estuary contains the majority of the estimated 6200 acres of salt marsh in the state. The Blackwater River portion of the estuary continues south into Salisbury, MA. The estuarine system extends seaward to an imaginary line drawn across Hampton Harbor Inlet and upstream and landward to where ocean-derived salts are less than or equal to 0.5 parts per thousand during the period of average annual low freshwater flow (Cowardin et al. 1979). This estuary is surrounded by moderate levels of residential and commercial development. Several exemplary subtidal and intertidal communities occur in this estuary. Subtidal communities include the undifferentiated *saline/brackish subtidal channel/bay bottom* and *tidal creek bottom*. Other intertidal communities are *brackish marsh*, *coastal shoreline strand/swale*, *saline/brackish intertidal flat*, and *high salt marsh*. Exemplary dry Appalachian oak-hickory forest occurs at the site as "salt marsh islands", forested uplands surrounded by salt marsh. Most of the estuary is unaffected by restricted tidal flow. Other areas are described as having an adequate tidal inlet by the USDA Soil Conservation Service (1994). The largest portions of the estuary determined to have inadequate tidal inlets include the Meadow Pond area, the Taylor River - Drakes River area west of the rail road track, and the Browns River west of the rail road track (USDA Soil Conservation Service 1994). In the last four years, several salt marsh restoration projects have begun in this estuary (Ammann, A.P. pers. comm., 1997).

General Comments:
Management
Comments:

Location

Survey Site Name: Hampton Harbor
Managed By: ASNH to Properties, Inc. - Pelton

County: Rockingham	USGS quad(s): Hampton (4207087)
Town(s): Hampton	Lat, Long: 425407N, 0704957W
Size: 3448.9 acres	Elevation: 4 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Large area more or less framed by Rte. 1 to the west, Rte. 101 to the north, Rte. 1A to the east, and the Massachusetts state line to the south. Occurs behind barrier beaches, along inland bays, and other areas protected from high-energy wave action.

Dates documented

First reported: 1997-07-05	Last reported: 1997-10-08
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Nichols, Bill. 1997. Field survey to Blackwater River Salt Marsh on July 5.

Nichols, William F. 2000. Ecological Assessment of Selected Towns in New Hampshire's Coastal Zone. Prepared by NH Natural Heritage Inventory. Concord, NH.

New Hampshire Natural Heritage Bureau - System Record

Poor level fen/bog system

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Rare or uncommon

Description at this Location

Conservation Rank: Fair quality, condition and/or lanscape context ('C' on a scale of A-D).
Comments on Rank:

Detailed Description: 1992: Population of *Gaylussacia dumosa* var *bigeloviana* was found in the fen community.
General Area: he classic fen sequence of floating mat, open peat, low heath, tall heath, dwarf spruce and larch, and shrub swamp is found in this wetland complex. The lag varies from 20 to over 200 feet wide, although the low and high heath zones are not always well developed. The dominant plant in the low heath where the dwarf huckleberry was found was leatherleaf. Dwarf black spruce and larch are scattered throughout this zone. The shrub swamp further back from the pond is dominated by mountain holly, winterberry holly, and high bush blueberry.

General Comments:
Management
Comments:

Location

Survey Site Name: Lower Shields Pond
Managed By:

County: Rockingham	USGS quad(s): Derry (4207183)
Town(s): Derry	Lat, Long: 425503N, 0711927W
Size: 41.8 acres	Elevation: 380 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Take Rte 28BYP north from Derry Village traffic circle ca 2 miles to Shields Pond Road on the right. Go ca. 0.5 mile to culverted creek. There is a path beyond the powerlines that you hike to from the west side of the stream.

Dates documented

First reported: 1992-09-11	Last reported: 1992-09-11
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Royte, Josh and John Lortie. 1992. Field survey to Lower Shields Pond on September 11.

New Hampshire Natural Heritage Bureau - Community Record

Red maple - sensitive fern swamp

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Good quality, condition and lanscape context ('B' on a scale of A-D).

Comments on Rank: This is a fairly mature and very large example in a compromised landscape context. This part of Great Bog is less influenced by hydrologic alterations than portions nearer the outlet to the west.

Detailed Description: 2002: Two seepage swamp associations were observed at the north end of the seepage swamp system. Area 1 occurs further east (ie along border of development to the east) and has a denser *Acer rubrum* (red maple) cover (60-70%) and a sparse shrub layer. It is dominated by *Carex stricta* (tussock sedge; 35%), *Calamagrostis canadensis* (blue-joint; 15-20%), and *Onoclea sensibilis* (sensitive fern), with lesser quantities of *Carex lacustris* (lake sedge) and *Toxicodendron radicans* (climbing poison ivy). Area 2 is a classic red maple/lake sedge seepage swamp, with all the species of Area 1 present in lower abundance, less dense red maple (40%), a dominant layer of *Carex lacustris* (lake sedge; 60%) and sensitive fern (5%), and a denser shrub layer consisting mostly of *Vaccinium corymbosum* (highbush blueberry; 30%) and *Ilex verticillata* (winterberry; 5%). *Ulmus americana* (American elm) is occasional in the subcanopy. 1989: *Acer rubrum* (red maple) dominates. Understory dominants include *Carex stricta* (tussock sedge), *Alnus serrulata* (smooth alder), *Onoclea sensibilis* (sensitive fern), *Symplocarpus foetidus* (skunk cabbage). *Lysimachia thyrsoiflora* (tufted loosestrife) also occurs here.

General Area: 2002: The seepage swamp is the dominant community in eastern portion of Great Bog, and bounded to the west by the large seepage marsh, to the north by railroad tracks, to the south by powerlines and upland. While surrounded by development, Great Bog is so large that it is actually one of the largest and least developed tracts of land in Portsmouth.

General Comments: 1989: Further field work needed.

Management
Comments:

Location

Survey Site Name: Great Bog
Managed By: City of Portsmouth Land

County: Rockingham
Town(s): Portsmouth
Size: 100.0 acres

USGS quad(s): Portsmouth (4307017)
Lat, Long: 430303N, 0704807W
Elevation: 55 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Great Bog. North and west of powerline right-of-way. Best approach to portion of site visited in 2002 (without pulling over on I-95) is from north via the railroad tracks just south of crossing of Rte. 33 and I-95. Park in vicinity of Rte. 33 crossing of railroad tracks, at industrial complex on Griffen Rd to south of Rte. 33 (closest but dense shrub border along RR track) or at RR bridge by Greenland and Borthwick Streets just north of Rte. 33 (easiest). Proceed southwest on RR tracks. The seepage swamp is located to the south just past the industrial complex (0.25 miles from Rte. 33); the seepage marsh is found further along past the seepage swamp (open area with few trees ca. 0.45 miles from Rte. 33); and the swamp white oak swamp is found where trees pick up again south of the RR tracks closer to the highway crossing (0.7 miles from Rte. 33).

Dates documented

First reported: 1989-05-30

Last reported: 2002-09-27

Sperduto, Dan. 2002. Field survey to Great Bog on September 27.

Sperduto, Daniel, and Stephanie Neid. 2003. Exemplary Bogs and Fens in New Hampshire: Part II. Prepared for the Environmental Protection Agency by the NH Natural Heritage Bureau. Concord, NH.

New Hampshire Natural Heritage Bureau - Community Record

Swamp white oak floodplain forest

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Excellent quality, condition and lanscape context ('A' on a scale of A-D).
Comments on Rank:

Detailed Description: 1998: The low terrace floodplain forest is dominated by *Quercus bicolor* (swamp white oak), *Acer rubrum* (red maple), and *Carya ovata* (shagbark hickory), with *Fraxinus americana* (white ash) and *Ulmus americana* (American elm) in the understory. *Onoclea sensibilis* (sensitive fern) and *Osmunda cinnamomea* (cinnamon fern) are dominant in the herb layer. The terrace sits distinctly lower than the surrounding landscape (by 2-4 meters) and buffers the meandering river course. Vines and shrub species (e.g. *Toxicodendron radicans* (climbing poison ivy), *Viburnum lentago* (nannyberry), and *Viburnum dentatum* var. *lucidum* (northern arrowwood)) fill in natural gaps and edges. Soils are not particularly enriched (pH=5.2), but they are dark, very fine sandy loams that may have some coastal influence (i.e. silt from marine sedimentation). A fair amount of dead wood was scattered throughout the floodplain, with a large recent blowdown oak adjacent to the observation plot. River is entrenched by 1-2 meters within a steep silty bank, yet flooding and depositional processes appear to be active, with some meanders cutting more deeply, and others about to be cut off. Microtopographic variation is slight on this mostly flat terrace.

General Area: 1998: Housing and other development appear to encroach from all sides, but not actually into the low terrace. The wetland complex seems to be fairly large and wide, but above the flooded zone, there appears to be considerable human disturbance and fragmentation. Just downstream of the surveyed area, the Richard Sargent Management area provides a buffer along and upslope of the floodplain.

General Comments: 1998: From aerial photographs, the low terrace floodplain forest appears to extend well beyond the surveyed property. This is an excellent example of swamp white oak floodplain, but landowner patterns and development may threaten its integrity over the long term.

Management Comments: 1998: Monitor landowner patterns and adjacent fragmentation

Location

Survey Site Name: Powwow River
Managed By: Welch Parcel

County: Rockingham	USGS quad(s): Kingston (4207181)
Town(s): East Kingston	Lat, Long: 425357N, 0710038W
Size: 193.3 acres	Elevation: 80 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: From Kingston, take Rte. 107A south to Rte. 108 south in East Kingston. Turn left into CWR Timber Management and Realty dirt driveway/timber yard. Park and hike east on logging roads to floodplain terrace. An alternate route is to access the natural community directly from Chase Rd. at Smith Corner.

Dates documented

First reported: 1998-09-02	Last reported: 1998-09-02
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Bechtel, Doug. 1998. Field survey to Powwow River on September 2.

Nichols, William F., Daniel D. Sperduto, Douglas A. Bechtel, and Katherine F. Crowley. 2000. Floodplain Forest Natural Communities along Minor Rivers and Large Streams in New Hampshire. Prepared by NH Natural Heritage. Concord, NH.

New Hampshire Natural Heritage Bureau - System Record

Temperate minor river floodplain system

Legal Status

Federal: Not listed
State: Not listed

Conservation Status

Global: Not ranked (need more information)
State: Rare or uncommon

Description at this Location

Conservation Rank: Historical records only - current condition unknown.

Comments on Rank: Unique coastal plain river with large exemplary wetland.

Detailed Description: 1986: Dominated by *Acer rubrum* and *Quercus bicolor* (dominant only on coastal plain in NH) w/some *Carya ovata* (shagbark hickory). Vines abound; *Toxicodendron radicans* (poison ivy), *Smilax rotundifolia* (bullbrier), *Vitis* spp. (grape). Dense vegetation, swamp extends to regularly inundated alluvial areas.

General Area: 1986: Narrow river that drains large area in flat coastal plain area; seems to result in frequent flooding of narrow, swampy floodplain.

General Comments: 1986: Historic station for *Lygodium palmatum* (climbing fern); swamp has very dense physiognomy, natural & undisturbed.

Management

Comments:

Location

Survey Site Name: Pow Wow River

Managed By: Welch Parcel

County: Rockingham

USGS quad(s): Exeter (4207088)

Town(s): East Kingston

Lat, Long: 425357N, 0710038W

Size: 191.7 acres

Elevation: 95 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Pow Wow River. SW corner of Exeter quad. Along river west of Chase Road.

Dates documented

First reported: 1986

Last reported: 1986-06-23

Korpi, J. and F. Brackley. 1986. Field survey to Chase Hill on August 4.

New Hampshire Natural Heritage Bureau - Plant Record

Dwarf Glasswort (*Salicornia bigelovii*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Historical records only - current condition unknown.
Comments on Rank: Sub-population of a large "A-" population.

Detailed Description: 1982: 25 or more plants in 5x2 area directly east of *Salicornia virginica*. Plants just starting to flower.

General Area: Flat, full sun, damp but above main area of inundated marsh with *Salicornia virginica*.

General Comments:

Management

Comments:

Location

Survey Site Name: RR Tracks
Managed By: Landing + Vicinity Marsh

County: Rockingham	USGS quad(s): Hampton (4207087)
Town(s): Hampton Falls	Lat, Long: 425437N, 0705110W
Size: 2.8 acres	Elevation: 10 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Hampton Falls. RR tracks site. drive to east end of Depot Rd. Go south along RR tracks to Hampton Falls River. Site on west side of RR tracks just north of Hampton Falls River.

Dates documented

First reported: 1982	Last reported: 1982-08-17
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Dunlop, Deb. New England College, Botany Department, Box 30, Henniker, NH 03242. 603/428-2233.

Nichols, William F. 2000. Ecological Assessment of Selected Towns in New Hampshire's Coastal Zone. Prepared by NH Natural Heritage Inventory. Concord, NH.

New Hampshire Natural Heritage Bureau - Plant Record

Dwarf Huckleberry (*Gaylussacia bigeloviana*)**Legal Status**

Federal: Not listed
 State: Listed Threatened

Conservation Status

Global: Apparently secure but with cause for concern
 State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Good quality, condition and lanscape context ('B' on a scale of A-D).
 Comments on Rank:

Detailed Description: 1992: Ca. 200 plants seen, 60 percent with mature fruit and dispersing seed, 30 percent in leaf. Growing at the bottom of a slope in wet-mesic condition. May be more plants scattered through the leatherleaf.

General Area: 1992: The huckleberry was found on a low heath mat that rings a portion of the shallow water pond. The classic fen sequence of floating mat, open peat, low heath, tall heath, dwarf spruce and larch, and shrub swamp, is found in this wetland complex. The dominant plant in the low heath where the the dwarf huckleberry was found was *Chamaedaphne calyculata*. Dwarf *Picea mariana*, and *Larix laricina* are scattered throughout this zone. The shrub swamp further back from the pond is dominated by *Nemopanthus mucronata*, *Ilex verticillata*, and *Vaccinium corymbosum*.

General Comments:
 Management
 Comments:

Location

Survey Site Name: Lower Shields Pond
 Managed By:

County: Rockingham	USGS quad(s): Derry (4207183)
Town(s): Derry	Lat, Long: 425503N, 0711927W
Size: 41.8 acres	Elevation: 370 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Take Rte 28BYP north from Derry Village traffic circle ca. 2 miles to Shields Pond Road on the right. Go ca. 0.5 mile to culverted creek. There is a path beyond the powerlines that you hike to from the west side of the stream.

Dates documented

First reported: 1992-09-11 Last reported: 1992-09-11

Royte, Josh and John Lortie. 1992. Field survey to Lower Shields Pond on September 11.

New Hampshire Natural Heritage Bureau - Plant Record

Northern Blazing Star (*Liatris novae-angliae*)**Legal Status**

Federal: Not listed
 State: Listed Endangered

Conservation Status

Global: Rare or uncommon
 State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Excellent quality, condition and lanscape context ('A' on a scale of A-D).
 Comments on Rank: A large population for NH.

Detailed Description: 2004: 41 plants counted. Flowering rate is high (40% in flower, 10% in immature fruit). Population appears to be thriving. Plants on north side of highway are more vigorous than those on the south. 2003: Ca. 20 scattered plants observed, ca. 6 flowering.

General Area: 2004: Powerline corridor and highway margin. Dominant associated species include *Lotus corniculatus* (birdsfoot-trefoil), *Ionactis* [*Aster*] *linariifolius* (stiff-leaved aster), *Schizachyrium scoparium* (little bluestem), and *Carex pensylvanica* / *lucorum* (Pennsylvanian / distant sedge). 2003: Mowed area under powerline. Dry sandy/gravel on a SE-facing slope. Growing with *Quercus velutina* (black oak), *Pinus strobus* (white pine), *Comptonia peregrina* (sweet fern), *Vaccinium angustifolium* (lowbush blueberry), *Rumex acetosella* (red sorrel), and *Rubus pensilvanicus* (Pennsylvania dewberry).

General Comments: 2004: All suitable habitat in the immediate area was searched.
 Management: 2004: Area kept clear by maintenance crews. Some ATV use. Recommend keeping
 Comments: competing vegetation cut low (controlled burn?).

Location

Survey Site Name: Powwow River, west of
 Managed By:

County: Rockingham
 Town(s): Kingston
 Size: 1.7 acres

USGS quad(s): Kingston (4207181)
 Lat, Long: 425436N, 0710353W
 Elevation: 140 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Under powerlines on both sides of Rte. 125, ca. 200 feet SW of the intersection with Rte. 111 (a relatively recent intersection, not yet on topo map). Three distinct areas of population concentration.

Dates documented

First reported: 2003-08-30 Last reported: 2004-09-10

Kane, Chris. 2004. Field survey to Powwow River on September 10.

New Hampshire Natural Heritage Bureau - Plant Record

Perennial Glasswort (*Salicornia ambigua*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Not ranked (need more information)
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Fair quality, condition and/or lanscape context ('C' on a scale of A-D).
Comments on Rank:

Detailed Description: 1997: At least two large mats in a 5-10 square-meter area. 1982: 50 or more stalks in 15x10 foot area, plants just starting to flower. Plants appear vigorous.

General Area: 1997: Gulf of Maine Salt Marsh. 1982: Flat, wet, full sun, with *Spartina patens* (salt-meadow cord-grass). Salt Marsh.

General Comments:
Management
Comments:

Location

Survey Site Name: Hampton Falls River
Managed By: Landing + Vicinity Marsh

County: Rockingham	USGS quad(s): Hampton (4207087)
Town(s): Hampton Falls	Lat, Long: 425437N, 0705110W
Size: 2.8 acres	Elevation: 10 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Hampton Falls. "Birmins" [Brimers?] Salt Marsh. Take Depot Ave to railroad tracks, go south on tracks 1/8 mile. Plants on west side of tracks at base of banking in salt marsh.

Dates documented

First reported: 1982-08-17 Last reported: 1997-09-19

Nichols, Bill. 1997. Field survey to Hampton Falls River Salt Marsh on September 19.

Nichols, William F. 2000. Ecological Assessment of Selected Towns in New Hampshire's Coastal Zone. Prepared by NH Natural Heritage Inventory. Concord, NH.

New Hampshire Natural Heritage Bureau - Plant Record

Tall Wormwood (*Artemisia campestris ssp. caudata*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 1997: Common (11-50 plants) on railroad tracks leading down to salt marsh to east. 1982: Numerous plants scattered along railroad bed on both sides. Specimens at NHA, NEBC (1916, 1982).

General Area: 1997: Open habitat on railroad banks.

General Comments:

Management

Comments:

Location

Survey Site Name: Hampton Falls River

Managed By: ASNH Hampton Falls Saltmarsh - Swain

County: Rockingham

USGS quad(s): Hampton (4207087)

Town(s): Hampton Falls

Lat, Long: 425449N, 0705102W

Size: 2.8 acres

Elevation: 10 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Railroad tracks, north of Hampton Falls River in Hampton Harbor salt marsh.

Dates documented

First reported: 1916

Last reported: 1997-09-19

Nichols, Bill. 1997. Field survey to Hampton Falls River Salt Marsh on September 19.

Nichols, William F. 2000. Ecological Assessment of Selected Towns in New Hampshire's Coastal Zone. Prepared by NH Natural Heritage Inventory. Concord, NH.

New Hampshire Natural Heritage Bureau - Animal Record

Banded Sunfish (*Enneacanthus obesus*)**Legal Status**

Federal: Not listed
State: SC

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Rare or uncommon

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2005: Area 8997: 2 observed. 1938: Powwow River: Specimen collected.
General Area: 2005: Area 8997: Freshwater - Pond. 1938: Powwow River: Vegetation abundant;
Potamogeton sp., *Ceratophyllum* sp., pickerel weed. Deep sluggish still water stream.

General Comments:
Management
Comments:

Location

Survey Site Name: Powwow River
Managed By: Powwow Pond Access

County: Rockingham USGS quad(s): Exeter (4207088)
Town(s): Kingston Lat, Long: 425455N, 0710248W
Size: 2.4 acres Elevation: 95 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2005: Area 8997: Powwow Pond at New Boston Rd. 1938: Powwow River: 0.25 miles above T2, Merrimack watershed. 1.5 miles west of South Hampton.

Dates documented

First reported: 1938 Last reported: 2005

Bailey, R. M. 1938. New Hampshire Fish and Game. Field Notes, Coll. Blanks Corr. to STA. M-107, M1 to STA. M11-10, M160. Field data files.

New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Apparently secure but with cause for concern
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2005: Area 11511: 1 adult turtle observed 30 yards from a medium to large vernal pool.
General Area: 2005: Area 11511: Near medium to large vernal pool. Meadows and little woods.
General Comments:
Management
Comments:

Location

Survey Site Name:
Managed By:

County: Rockingham	USGS quad(s): Derry (4207183)
Town(s): Derry	Lat, Long:
Size: 7.7 acres	Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2005: Area 11511: About 200 yards from powerline off Paul Avenue.

Dates documented

First reported: 2005-04-18	Last reported: 2005-04-18
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New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status

Federal: Not listed
 State: Listed Endangered

Conservation Status

Global: Apparently secure but with cause for concern
 State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
 Comments on Rank:

Detailed Description: 2008: Area 11543M: 2 adults seen.
 General Area: 2008: Area 11543M: Beaver pond. On a log in the water.
 General Comments:
 Management
 Comments:

Location

Survey Site Name:
 Managed By:

County: Rockingham	USGS quad(s): Derry (4207183)
Town(s): Derry	Lat, Long:
Size: 30.8 acres	Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2008: Area 11543M: Intersection of powerlines off Scenic Drive and Paul Avenue.

Dates documented

First reported: 2008-05-14	Last reported: 2008-05-14
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New Hampshire Natural Heritage Bureau - Animal Record

Blanding's Turtle (*Emydoidea blandingii*)

Legal Status

Federal: Not listed
 State: Listed Endangered

Conservation Status

Global: Apparently secure but with cause for concern
 State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
 Comments on Rank:

Detailed Description: 2006: Area 11689M: 1 young individual female seen on 2006-05-18. 1 adult seen on 2006-05-20.

General Area: 2006: Area 11689M: Near vernal pool.

General Comments:

Management

Comments:

Location

Survey Site Name:

Managed By:

County: Rockingham

USGS quad(s): Derry (4207183)

Town(s): Derry

Lat, Long:

Size: 30.8 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2006: Area 11689M: Vernal pool near beaver pond at powerline between Paul Avenue & Scenic Drive.

Dates documented

First reported: 2006-05-18

Last reported: 2006-05-20

New Hampshire Natural Heritage Bureau - Animal Record

Common Tern (*Sterna hirundo*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Historical records only - current condition unknown.
Comments on Rank: 2007: No records from this site since 1978.

Detailed Description: 1978: At least 2 nests. 1969: 10 adults, 1 chick observed. 1966: Ca. 10 birds present, 1 nest with 2 eggs. 1964: 10 birds nesting.

General Area:

General Comments:

Management

Comments:

Location

Survey Site Name: Hampton Falls RR Station

Managed By: Former Dodge Marsh

County: Rockingham

USGS quad(s): Hampton (4207087)

Town(s): Hampton Falls

Lat, Long: 425444N, 0705105W

Size: 2.8 acres

Elevation: 5 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Hampton Falls Railroad station, Route 1, then East on Depot Ave.

Dates documented

First reported: 1964

Last reported: 1978

New Hampshire Natural Heritage Bureau - Animal Record

Spotted Turtle (*Clemmys guttata*)

Legal Status

Federal: Not listed
State: Listed Threatened

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Good quality, condition and lanscape context ('B' on a scale of A-D).
Comments on Rank:

Detailed Description: 2006: Area 11884: 1 gravid (2 eggs) female killed on road. Area 11687M: 1 young individual seen on 2006-04-28. 1 4" long young individual seen on 2006-04-30. 1 adult seen on 2006-05-19. 1997: 1 adult observed.

General Area: 2006: Area 11687M: Powerline near beaver pond. 1997: Small brook, outflow of Rainbow Pond.

General Comments: 1997: Observed by Joel and Ron Miller.

Management
Comments:

Location

Survey Site Name: Rainbow Pond
Managed By:

County: Rockingham
Town(s): Derry
Size: 11.0 acres

USGS quad(s): Derry (4207183)
Lat, Long:
Elevation: 395 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2006: Area 11884: Cul-de-sac on Paul Avenue. Area 11687M: Off Paul Avenue & Scenic Drive powerline intersection. 1996:[From Derry Village rotary, take Rte. 28 Bypass north about 2 miles. Turn right onto Shields Pond Road. Access outlet stream by taking the 5th left.]

Dates documented

First reported: 1997-06-21 Last reported: 2006-07-13

New Hampshire Natural Heritage Bureau - Animal Record

Vesper Sparrow (*Pooecetes gramineus*)

Legal Status

Federal: Not listed
State: SC

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Not ranked
Comments on Rank:

Detailed Description: 2001: 10 seen, age and sex unknowns (Obs_id 1190).
General Area: 2001: Habitat not clear - birds in powerline corridor so probably a mix of open areas and shrubs (Obs_id 1190).
General Comments: 2001: Total of 10 birds includes some presumed to be juveniles, but exact breakdown of adults and young was not made by the observer (Obs_id 1190).

Management
Comments:

Location

Survey Site Name: Coburn Hill, Powerlines West of
Managed By: Danville Town Forest

County: Rockingham	USGS quad(s): Sandown (4207182)
Town(s): Danville	Lat, Long: 425624N, 0710810W
Size: 84.1 acres	Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2001: Powerlines near Ticker Town Road (class 6). [From intersection of Sandown Rd. travel the powerlines southwest to junction of 2 more powerlines. Go southwest, past wetland area about 1.1 miles.] (Obs_id 1190).

Dates documented

First reported: 2001-07-24	Last reported: 2001-07-24
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