

# NH DOT – Route 106

**File No.:** 199300836

**City and State:** Gilmanton, NH

**General Impacts:** 8.7 acres POW, PSS, PFO

**Functions and Values Lost:** (From Wetland Mitigation Report)

Surface Water Quality

Wildlife Habitat

Groundwater Recharge

Floodflow Alteration

**Year(s) Mitigation Constructed:** October 1999

**Size and Type of Mitigation as Proposed:**

8.3 acres POW, PEM, PSS

64.7 acres preservation

**Proposed Functions and Values of Mitigation:** (From Wetland Mitigation Report)

Surface Water Quality

Wildlife Habitat (including turtle nesting area)

Groundwater Recharge

Floodflow Alteration

Fish Habitat

Recreation

Visual Quality/Aesthetics

**Mitigation Special Condition(s):**

5. Mitigation: The final draft mitigation plan (Wetland Mitigation Report Rocky Pond – Site 9) must be submitted to and approved by the Army corps of Engineers, New England Division, Regulatory Division not less than 30 days before initiating construction of the mitigation site but not later than 30 July 1997.

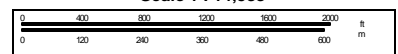
6. The approved final mitigation plan referred to in special condition No. 5 entitled “Wetland Mitigation Report Rocky Pond-Site 9” is incorporated into this permit as special condition no. 6.

**Remarks:**

None

**Directions:**

Take route 93 north to Route 393 east to Route 106 north. Pass the Loudon International Speedway on the right. Cross Ames Road then Loudon Ridge Road on the right (across from Rocky Pond on the left). The site is at the north end of Rocky Pond.





MITIGATION SITE FIELD DATA FORM

Site Name: NHDOT Route 106 File No. 199300836

City/Town: Gilmanton State: NH Waterbody: Rocky Pond

Monitor(s): Ruth Ladd, Keith Wright, Kathleen McKee, Rebecca Lacey (NEIWPC) Date: 7-17-02

Was site constructed? yes

Is site wetland? yes

Size of proposed wetland: 8.3 acres

Actual size of wetland: TBD

Landscape position: flat plain surrounded by forested upland

Lat/Long Points: 43.40712N 71.45409W

Saved GPS Waypoint name: RTE106

GPS Tracking Log Name: N/A

Perimeter: TBD

Surrounding land use: Forest, wetland forest, pond

Is wetland function compromised by surrounding land use? No

Plant health: Vigorous, but the ash trees are not healthy.

Invasive species: Lythrum salicaria (trace) Elaeagnus sp., Lotus corniculatus

Wildlife use: Goldfinch, dragonflies, spring peeper, kingbird, frog spp., deer scat, Eastern tailblue butterfly, red admiral butterfly, yellow swallowtail butterfly, ducks, starling, woodchuck holes, chipmunks, small, unidentified fish, pickerel (10" observed)

**Plants:**

**“Vernal pool”:**

- Carex lurida*
- Juncus effusus*
- Phalaris arundinacea*
- Sambucus canadensis*
- Scirpus validus*
- Trifolium pratense*
- Verbena hastata*
- Viburnum dentatum*

**Hillside seep**

- Betula populifolia*
- Carex lurida*
- Carex sp. (ovales)*
- Eupatorium perfoliatum*
- Juncus effusus*
- Lysimachia terrestris*
- Scirpus cyperinus*
- Solidago sp.*
- Spiraea tomentosa*
- Spiraea tomentosa*
- Verbena hastata*

**Northwest Corner (“E”)**

- Abies balsamea*
- Acer rubrum*
- Acer rubrum*
- Alisma sp.*
- Alnus rugosa*
- Alnus rugosa*
- Betula populifolia*
- Carex lurida*
- Carex vulpinoidea*
- Elaeagnus sp.*

*Eleocharis* sp.  
*Equisetum* sp.  
*Euthamia graminifolia*  
*Fraxinus* sp.  
*Glyceria* sp.  
*Juncus effusus*  
*Lotus corniculatus*  
*Lythrum salicaria*  
*Mimulus* sp.  
*Onoclea sensibilis*  
*Phalaris arundinacea*  
*Potentilla* sp.  
*Scirpus atrovirens*  
*Scirpus cyperinus*  
*Scirpus* sp.  
*Scirpus validus*  
*Solidago rugosa*  
*Tsuga canadensis*  
*Typha latifolia*  
*Verbena hastata*  
*Viburnum dentatum*

#### **Area by road**

*Alnus rugosa*  
*Carex lurida*  
*Carex* sp. (ovales)  
*Carex vulpinoidea*  
*Chamaedaphne calyculata*  
*Elaeagnus* sp.  
*Eleocharis* sp.  
*Juncus effusus*  
*Lotus corniculatus*  
*Lythrum salicaria*  
*Onoclea sensibilis*  
*Phalaris arundinacea*  
*Scirpus atrovirens*  
*Scirpus validus*  
*Trifolium pratense*  
*Typha latifolia*

#### **C Pond**

*Acer rubrum*  
*Carex lurida*  
*Cornus amomum*  
*Elaeagnus* sp.  
*Eleocharis* sp.  
*Iris versicolor*  
*Juncus effusus*

*Lotus corniculatus*  
*Lythrum salicaria*  
*Mimulus* sp.  
*Polygonum sagittatum*  
*Scirpus cyperinus*  
*Viburnum dentatum*  
**Deep Marsh (Area B)**  
*Pontederia cordata*  
*Potamogeton* sp.  
*Sparganium* sp.

#### **Shallow Marsh/Wet Meadow**

*Asclepias incarnata*  
*Asclepias* sp.  
*Agrostis gigantea*  
*Bidens* sp.  
*Brasenia schreberi*  
*Carex crinita*  
*Carex lurida*  
*Carex* sp. (ovales)  
*Carex* spp.  
*Cephalanthus occidentalis*  
*Dulichium arundinaceum*  
*Elaeagnus* sp.  
*Eleocharis* sp.  
*Eupatorium perfoliatum*  
*Euthamia graminifolia*  
*Fraxinus pennsylvanica*  
*Galium* sp.  
*Juncus effusus*  
*Lotus corniculatus*  
*Lyonia ligustrina*  
*Lysimachia* sp.  
*Lythrum salicaria*  
Nettle sp.  
*Onoclea sensibilis*  
*Phalaris arundinacea*  
*Phleum pratense*  
*Salix* sp.  
*Scirpus cyperinus*  
*Scirpus* sp.  
*Scirpus validus*  
*Solidago graminifolia*  
*Solidago rugosa*  
*Sparganium microcarpon*  
*Spiraea latifolia*  
*Typha latifolia*  
*Verbena hastata*

**Soils Data:**

DEPTH	HORIZON	MATRIX	REDOX	COMMENTS
0 – 3.5”	A	10YR 3/3	start within root mat - 1” of surface, 5-10%	medium loamy sand, roots
3.5 – 8	A2	10YR 3/2	“	“
8 – 11	Bw	10YR 4/6		coarse, cobbly loamy sand, up to 5” cobbles, 30-50%
11+	C	10YR 5/6		coarse sandy gravel

dry area

DEPTH	HORIZON	MATRIX	REDOX	COMMENTS
0 – 4”	A	10YR 3/3	none	loamy sand, rocks
4 – 16	C	10YR 5/6		medium sand, rocks
16+				too rocky to go deeper

**Sketch approximate mitigation site, noting areas and types of wetlands, waters, other features, landscape position, landmarks, etc., and data and photo point(s)**

See file.

**Overall Description of site:**

N. shoreline of Rocky Pond – 7.5 acres of upland, 3.4 acres of shallow marsh, 0.65 acre of open water. Sixty-five acres were purchased to protect several large existing wetland systems along 2 tributaries to Rocky Pond that flow through eastern 1/3 of the parcel, and an unnamed perennial stream which flows east to west through the central portion of the parcel. Watershed of Rocky Pond is 480 acres which includes Clough Pond and the headwaters of the Soucook River.

“E” Pond is six inches deep. There is a natural wetland adjacent to “E” Pond; water flows from the pond to the wetland although a wide, shallow riprapped overflow channel was constructed on the south end of the area.

Well #4 had water 2 feet 4 inches from surface yet 20 feet away there is a saturated area despite no noticeable change in elevation. The site also has three shallow ponds. Boulders are scattered throughout the site, as were old root masses. Pondered water was quite clear.

Two groundwater seeps were evident on slopes north and northeast of the constructed wetlands. The northwesternmost seep included several species including *Juncus effusus* and *Drosera rotundifolia* plants.

There are very abrupt transitions from wetland to upland due to the coarse substrate which has very limited capillarity and the limited organics in areas upslope of the very wet portions of the site (at least saturated to the surface during the summer).

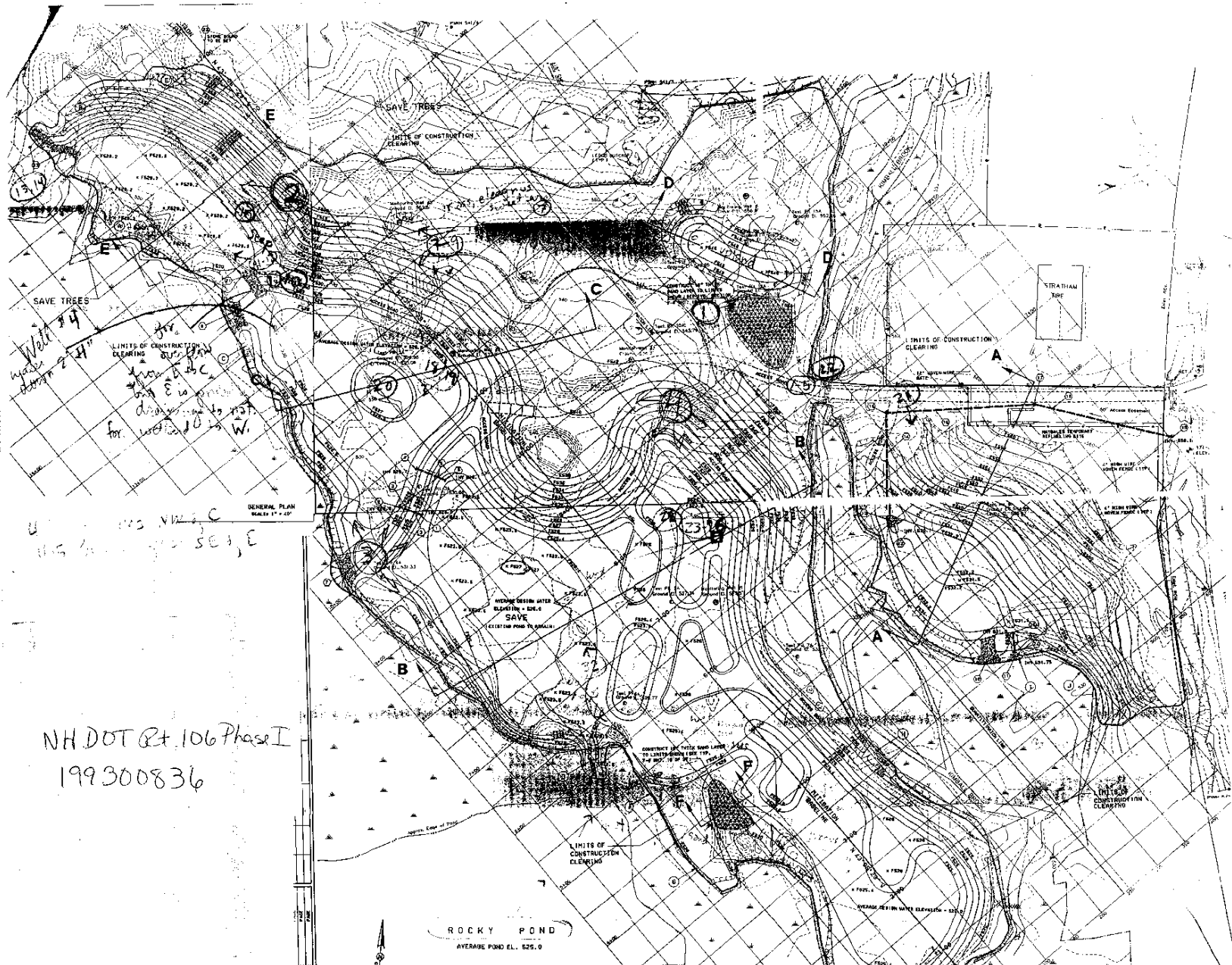
Volunteer shrubs are coming in nearest the surrounding wetlands. Most planted shrubs are surviving with alders, in particular, thriving.

**Comments, problems, recommendations:**



- The area that was supposed to have a vernal pool had no water in it and was covered with vegetation.
- Some of the planted trees had died but were providing perches for birds.
- Volunteer tree species emerging include *Alnus rugosa*, *Betula populifolia*, and *Acer rubrum*.
- No problems noted with ATVs.
- Excellent viewscape from bedrock outcrops
- Good interspersions of small open water areas with marsh and early-successional shrubby areas.
- Proximity to lake, stream, and other wetlands enhances wildlife functions.

















# Wetland Function-Value Evaluation Form

199300836, NHDOT rt.

Total area of wetland 8.3 ac Human made? yes Is wetland part of a wildlife corridor? yes or a "habitat island"? \_\_\_\_\_  
 Adjacent land use forest, wetland, lake, stream Distance to nearest roadway or other development 500 feet  
 Dominant wetland systems present PEM Contiguous undeveloped buffer zone present 90%  
 Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? high and middle  
 How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. 106  
 Latitude 43.40712N Longitude 71.45409W  
 Prepared by: RL Date 7-17-02  
 Wetland Impact:  
 Type \_\_\_\_\_ Area \_\_\_\_\_  
 Evaluation based on:  
 Office \_\_\_\_\_ Field X  
 Corps manual wetland delineation completed? Y X N \_\_\_\_\_

Function/Value	Suitability		Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
	Y	N			
 Groundwater Recharge/Discharge	X				both recharge and discharge; side slope seeps, sandy soils
 Floodflow Alteration	X		1,6,7,9,15,18		
 Fish and Shellfish Habitat	X		9,10,12		fish observed
 Sediment/Toxicant Retention	X				dense herbaceous vegetation, however little organic soils for transformation
 Nutrient Removal	X		1,3,5,8,9,11	X	dense vegetation
 Production Export	X		1,2,4,6,7,8,9,10,12		there is a connection to an adjacent lake
 Sediment/Shoreline Stabilization		X			connection to lake is very small
 Wildlife Habitat	X		1,3,4,5,6,7,8,11,13,17,18,21	X	especially good for wading birds, waterfowl, and amphibians
 Recreation	X		5,6,7,10,11		birdwatching
 Educational/Scientific Value		X			
 Uniqueness/Heritage		X			
 Visual Quality/Aesthetics	X		1,2,3,4,5,7,9,11,12		good overlook from bedrock outcrops
<b>ES</b> Endangered Species Habitat		X			none known
Other					

Notes:

\* Refer to backup list of numbered considerations.



NH00003406

Gilmanton, NH

7/17/02



Southeasternmost area (Area A) (closest to Rt. 106) looking southwest, west, and northwest from northeast slope. Remainder of site is behind line of trees in the distance.



View of slope at north end of site, central portion.  
There are several seepage wetlands along it (yellow-green areas)





Looking southeast, south, and west from just north of the rock outcrop (center of photo) which is north of Area B. Rocky Pond is in the distance on the left. Southeastern area (Area A) is off the photo to the left.



Seepage wetland not in the design. This one is located north of the cell (Area C) between the large central area (Area B) and the westernmost area (Area E).



Looking west across the northwesternmost area (Area E).





Looking southeast and south at the pool at the northeast corner of Area B.  
A pickerel was observed among the pickerelweed.



Looking north across Area B from near the connection to Rocky Pond along the southwest side of the site.



USGS 5 km SE of Belmont, New Hampshire, United States 12 Apr 1998



0 200M

0 200yd

Image courtesy of the U.S. Geological Survey  
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