

# **River Woods Health Care**

**File No.:** 199010690

**City and State:** Exeter, NH

**General Impacts:** 0.85 acre forested

**Functions and Values Lost:** Wildlife Habitat

**Year(s) Mitigation Constructed:** July 1993

**Size and Type of Mitigation as Proposed:** 0.21 acre creation, 1.56 acres restoration and enhancement of open water, deep marsh, shallow marsh, and wet meadow, and preservation of 66 acres of upland and wetland on-site.

**Proposed Functions and Values of Mitigation:**

Flood Water Storage  
Water Quality Renovation  
Wildlife Habitat

**Mitigation Special Condition(s):**

6. Wetland restoration and mitigation shall be performed as described in the attached "Revised Wetland Mitigation Plan, Riverwoods at Exeter, NH, Route 111, Exeter, New Hampshire", pgs. 13-17, dated, "June 1991", prepared by NH Soil Consultants, Inc., Gove Soil Sciences, Inc. and Kimball Chase Co., Inc.
7. A monitoring program shall be conducted for five years following completion of the mitigation areas, by a qualified environmental scientist whose qualifications have been reviewed and approved by the Corps of Engineers, Regulatory Division, Waltham, Massachusetts.
8. Status reports on the progress of the mitigation effort shall be completed following each monitoring site visit and sent to the Corps of Engineers, Regulatory Division, Waltham, Massachusetts for review and inclusion in the permit file.
9. An annual monitoring report compiling the findings of all site visits in a given year shall be submitted to the Corps of Engineers, Regulatory Division, Waltham, Massachusetts, on or before December 1 of each year of monitoring. These reports shall include the following information:
  - (a) Plant species composition and density.
  - (b) Permanent stations shall be established at the mitigation area, and near wetland impact areas, for the purpose of conducting vegetation analyses and maintaining a photographic log of the mitigation effort and the adjacent

undisturbed wetlands. Photographs of the mitigation area shall be included with the monitoring reports.

- (c) General health and vigor of the vegetation shall be visually assessed.
- (d) The ability of the treatment swales and the mitigation area to trap sediment and renovate stormwater shall be visually assessed.
- (e) Wildlife usage of the mitigation areas shall be documented. Reports shall include the dates and times of the observations. Include information obtained by visual or auditory observation, and wildlife sign (i.e., browse marks, tracks, scat).
- (f) The reports shall note successes and any failures, with recommended means to rectify failures.

10. The mitigation/restoration shall be considered successful, if after the end of five growing seasons the following conditions are met:

- (a) The herbaceous and emergent areas shall have 75% or greater aerial cover of herbaceous species, with no bare soil patches exceeding 100 square feet in size.
- (b) In the mitigation area, the species purple loosestrife, *Lythrum salicaria*, and common reed, *Phragmites australis*, shall not exceed 10% of the total species composition and shall not dominate (greater than 50%) any areas larger than 10 square feet.
- (c) Shrub areas shall have 50% or greater shrub canopy cover.

11. Tree and shrub planting annual mortality shall not exceed 25%. Mortality shall be determined during the early spring of each year of monitoring and plants shall be replaced to 75% of the number originally planted at that time.

12. If the mitigation measures are unsuccessful, the permittee shall coordinate with the Corps of Engineers, Regulatory Division, Waltham, Massachusetts, to develop a Corps approved remedial plan. Remedial measures may include, but are not limited to, replanting with different species, relocating plantings to a more suitable location within the mitigation areas, changing soil composition and depth, changing the elevation of the wetland surface, changing the hydraulic regime and undertaking further hydrological and biological analysis.

13. The permittee shall place approximately 66 acres of land on-site (outside the building development envelope indicated on the attached plans) into a conservation easement. The deed and the organization to whom the deed is granted shall be reviewed and accepted by the Corps of Engineers, Regulatory Division, Waltham, Massachusetts, prior to commencement of any work within Corps jurisdiction.

**Remarks:**

None

**Directions:**

Take I-95 north into New Hampshire. Take exit 2, Route 101 west, towards Exeter/The Hamptons. Take exit 12, which is Route 111, Exeter/North Hampton. Turn left at the end of the ramp onto Route 111 west (High Street). Continue through center of Exeter. At the Bandstand, note your mileage and turn sharp left, still on Route 111. At Exeter Inn (red brick building on left), keep right at the “Y” intersection and continue on Route 111 for 1.8 miles to a blinking yellow light. Turn left onto River Woods Drive. Pass two houses on the right, and turn right at the River Woods sign. Visitor parking is on the left. The mitigation site is on the right upon entering the campus.







## MITIGATION SITE FIELD DATA FORM

Site Name: Riverwoods Health Care File No.: 199010690

City/Town: Exeter State: NH Waterbody: Exeter River Watershed

Monitor(s): Paul Minkin, Keith Wright Date: 6-13-02

Was site constructed? yes

Is site wetland? yes

Size of proposed wetland: 1.77 acres (creation, restoration, and enhancement)

Actual size of wetland: 1.77 acres

Landscape position: floodplain of the Exeter River

Lat/Long Points: N42.57 W70.59

Saved GPS Waypoint name: none

GPS Tracking Log Name: N/A

Perimeter: TBD

Surrounding land use:  
Residential, industrial park, river

Is wetland function compromised by surrounding land use?  
Possible lawn fertilizer inputs. Land use also disrupts unbroken natural border.

Plant Health:  
Good

Invasive Species:  
*Lythrum salicaria*

Wildlife Use:  
American toad, green frog, bullfrog, swallows, red-winged blackbird, blue heron

### Plants:

#### In scrub shrub:

*Asteraceae* sp.  
*Carex vulpinoidea*  
*Cornus amomum*  
*Potentilla* sp.  
*Scirpus atrovirens*  
*Solidago* sp.  
*Viburnum dentatum*

#### In the restored marsh:

*Acer rubrum*  
*Carex* spp. (6)  
*Equisetum* sp.  
*Eupatorium perfoliatum*  
*Iris* sp.  
*Juncus effusus*  
*Lythrum salicaria*  
*Onoclea sensibilis*  
*Pontederia cordata*  
*Salix* sp.  
*Scirpus atrovirens*  
*Scirpus cyperinus*  
*Spiraea* sp.  
*Typha latifolia*  
*Vicia* sp.

#### In the created marsh:

*Asteraceae* sp.  
*Carex* sp. (ovales)  
*Carex* sp.  
*Carex vulpinoidea*  
*Cornus amomum*  
*Galium* sp.  
*Glyceria* sp.  
*Juncus* sp.  
*Juncus effusus*  
*Lycopus* sp.  
*Lythrum salicaria*  
*Onoclea sensibilis*  
*Salix* sp.

**Soil data:**

Soils data not collected at this site.

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

See original file.

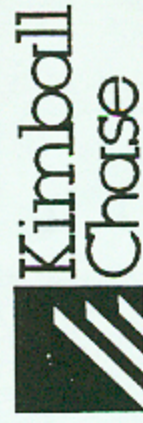
**Overall Description of site:**

None

**Comments, problems, recommendations:**

The created marsh was wetter than the restored marsh (depths of 3-5 inches versus 6-8 inches). It was impossible to visually detect a border between the created and restored wetlands.





MITIGATION AREAS

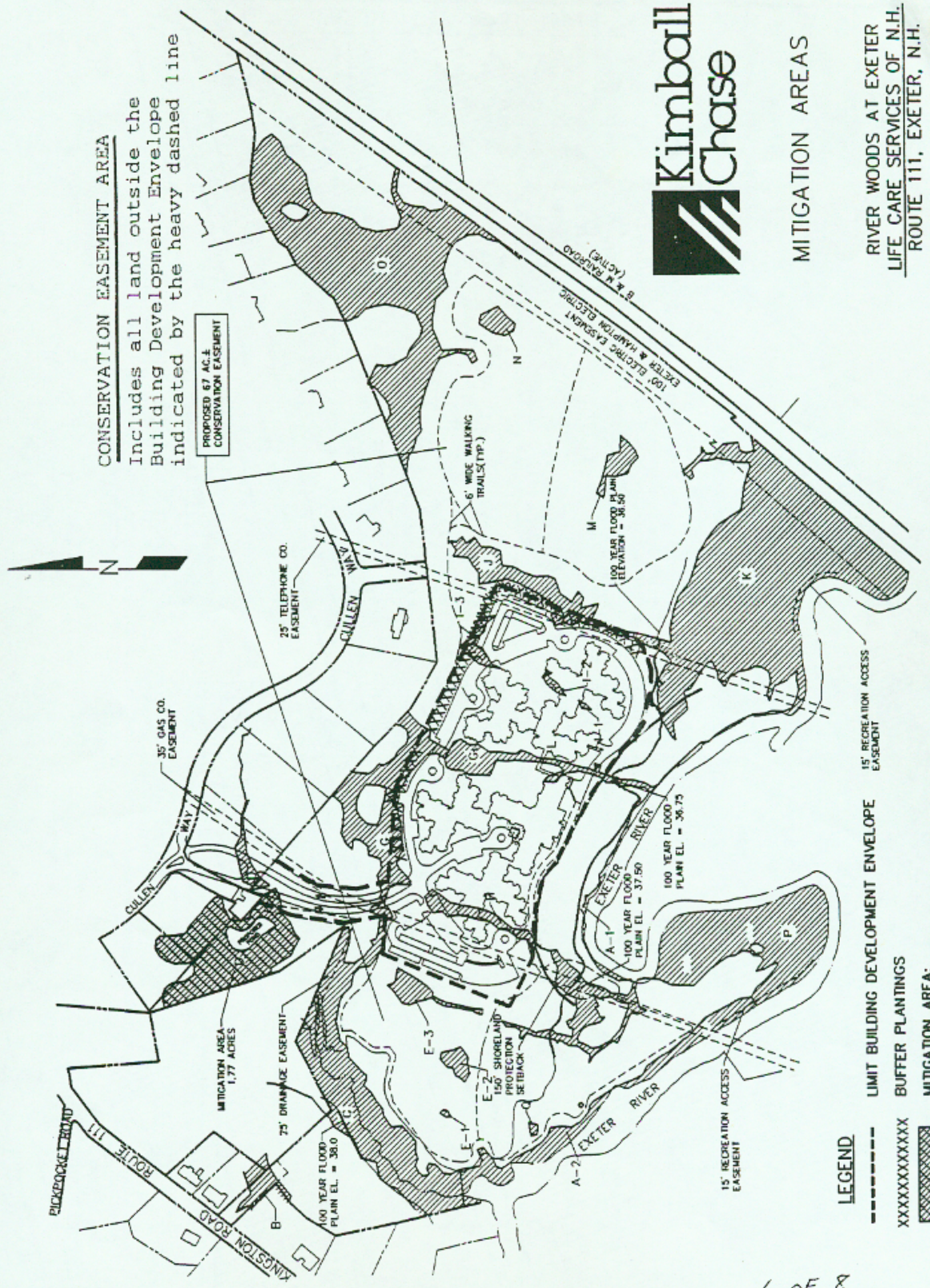
RIVER WOODS AT EXETER  
LIFE CARE SERVICES OF N.H.  
ROUTE 111, EXETER, N.H.

REV 2/92 FEBRUARY 1991 SCALE: 1" = 400'

CONSERVATION EASEMENT AREA

Includes all land outside the  
Building Development Envelope  
indicated by the heavy dashed line

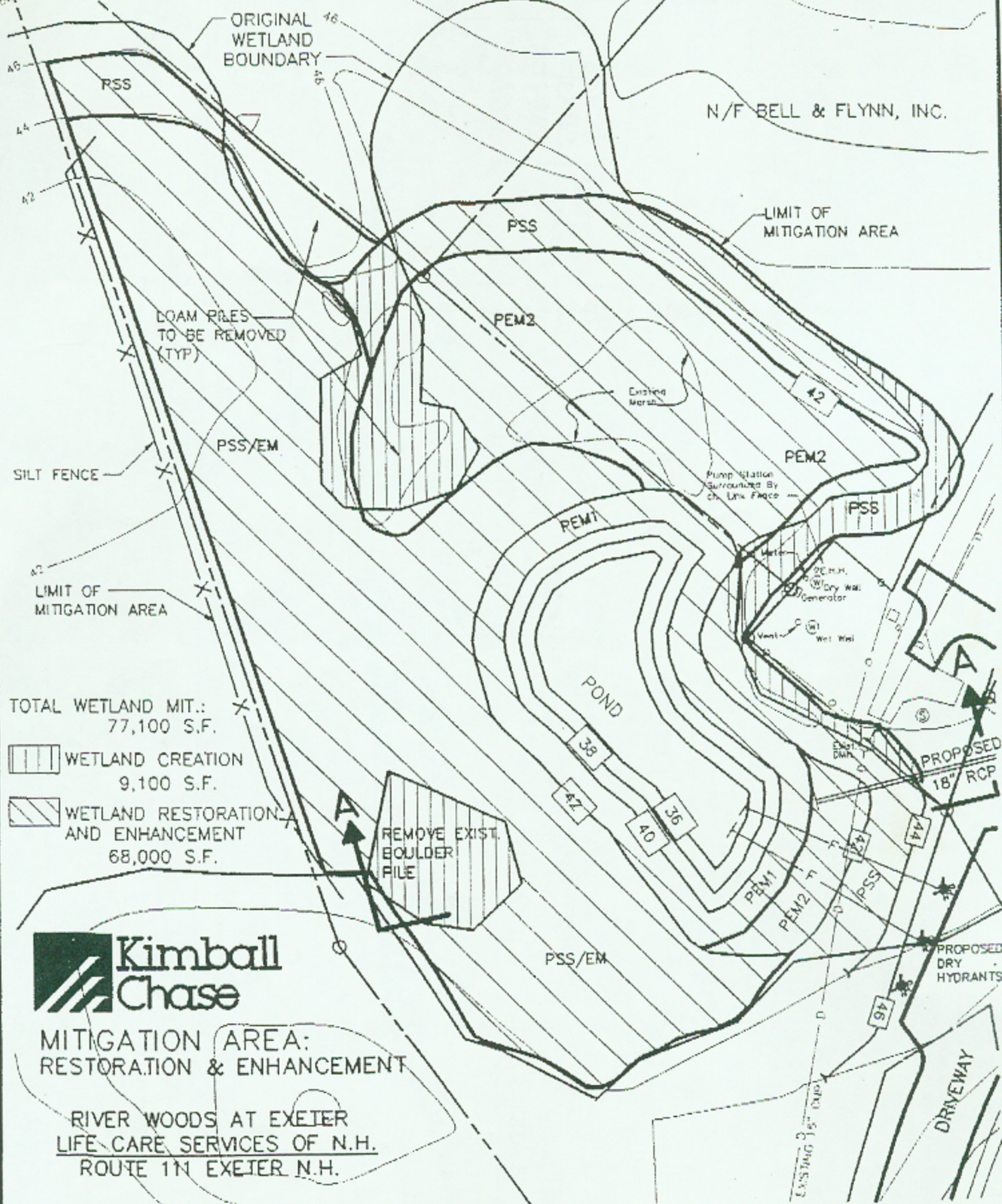
PROPOSED 67 AC.±  
CONSERVATION EASEMENT



LEGEND

- LIMIT BUILDING DEVELOPMENT ENVELOPE
- XXXXXXX BUFFER PLANTINGS
- MITIGATION AREA:  
RESTORATION & ENHANCEMENT
- WETLANDS
- 15' RECREATION ACCESS EASEMENT
- 100 YEAR FLOOD PLAIN EL. = 36.75
- 100 YEAR FLOOD PLAIN EL. = 37.50
- EXETER RIVER
- 150' SHORELINE PROTECTION SETBACK
- 75' DRAINAGE EASEMENT
- MITIGATION AREA 1.77 ACRES
- 35' GAS CO. EASEMENT
- 25' TELEPHONE CO. EASEMENT
- 6' WIDE WALKING TRAIL (TYP.)
- 100' ELECTRIC EASEMENT EXETER & HAMPTON ELECTRIC
- B & N ROAD (ACR)



















# Wetland Function-Value Evaluation Form

Total area of wetland 1.77 Human made? yes Is wetland part of a wildlife corridor? yes or a "habitat island"? no  
 Adjacent land use wetland, field, residential, small road Distance to nearest roadway or other development 20 feet  
 Dominant wetland systems present PEM Contiguous undeveloped buffer zone present 75%  
 Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? middle  
 How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

199010690, River Woods  
 Wetland I.D. Health Care  
 Latitude N42 57.884 Longitude W70 58.990  
 Prepared by: PM Date 6-13-02  
 Wetland Impact:  
 Type \_\_\_\_\_ Area \_\_\_\_\_  
 Evaluation based on:  
 Office \_\_\_\_\_ Field X  
 Corps manual wetland delineation  
 completed? Y \_\_\_\_\_ N X

Function/Value	Suitability Y N		Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge					unknown, more information needed
 Floodflow Alteration	X		5,6,9,18		densely vegetated marsh, downslope from residences
 Fish and Shellfish Habitat		X			adjacent area might be suitable for small warm water fish
 Sediment/Toxicant Retention	X		1,2,5,9	X	retain lawn chemicals from upslope
 Nutrient Removal	X		3,4,8,9,10	X	retain nutrients from upslope
 Production Export	X		2,4,7,9		dense vegetation
 Sediment/Shoreline Stabilization	X		2,3,5,15		indistinct shoreline grading to open water
 Wildlife Habitat	X		3,5,6,7,8,11,13,14,17,19,20,21	X	toad, green frog, bullfrog, swallows, red-winged blackbird, great blue heron
 Recreation	X		5,11,12		adjacent to retirement community
 Educational/Scientific Value		X			
 Uniqueness/Heritage		X			
 Visual Quality/Aesthetics	X		2,7,8,9,12		adjacent to retirement community
<b>ES</b> Endangered Species Habitat		X			none known at site
Other					

Notes:

\* Refer to backup list of numbered considerations.

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Exeter, NH  
6/13/02





USGS 3 km SW of Exeter, New Hampshire, United States 11 Apr 1998



0 200M

0 200yd

Image courtesy of the U.S. Geological Survey  
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