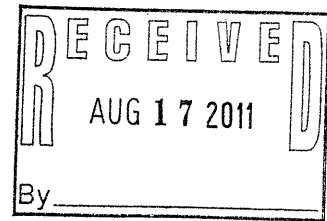


WEST ENVIRONMENTAL INC.



48 Stevens Hill Road, Nottingham, NH 03290
 603-734-4298 ♦ Fax 603-734-4316 ♦ mark@westenv.net



Dori Wiggin
 NHDES Wetlands Bureau
 222 International Drive, Suite 175
 Portsmouth, NH 03801

July 15th, 2011

Re: NH Method Wetland Evaluation Forms and Results for Prime Wetland Candidate 006 Sagamore Creek Headwaters, Portsmouth, NH

Dear Dori:

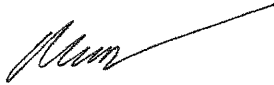
At your request, West Environmental, Inc. (WEI) completed the Data Sheets and Summary Sheet for the NH Method Wetland Evaluation for Prime Wetland Candidate 006 (see attached). This 48.5 acre wetland is located at the headwaters of Sagamore Creek and feeds into the largest salt marsh complex in Portsmouth. This wetland was compared to the other 20 wetlands evaluated by Gove Environmental Services, Inc. (GES) in 2002. It is the eighth (8th) largest wetland system within the City and ranks seventh for nine of the functions and values and eighth for three of them. The table below shows the comparative ranking of this wetland to the other wetlands in the Citywide Wetlands Inventory prepared by CLD and GES. March 2003.

<u>Functional Value</u>	<u>Rank</u>
Ecological Integrity	7th
Wetland Wildlife Habitat	7th
Finfish Habitat:	
A. Rivers & Streams	7th
B. Ponds & Lakes	-
Educational Potential	7th
Visual/Aesthetic Quality	14th
Water-based Recreation	-
Flood Control Potential	7th
Ground Water Use Potential	7th
Sediment Trapping	8th
Nutrient Attenuation	8th
Shoreline Anchoring and Dissipation of Erosive Forces	8th
Urban Quality of Life:	
B: Wetland Wildlife Habitat	8th
C: Educational Opportunity	7th
D: Visual/Aesthetic Quality	16th
E: Water-based Recreation	-
Historical Site Potential	7th
Noteworthiness	7th

Prime Wetland Candidate 006 Sagamore Creek Headwaters
Page 2

This completes our submittal and we look forward to your approval of our request to designate prime wetlands in Portsmouth. Please call our office if you have any questions.

Sincerely,
West Environmental, Inc.

A handwritten signature in black ink, appearing to read 'M. West', with a long horizontal stroke extending to the right.

Mark C. West, President
NH Certified Wetland Scientist

Cc: Peter Britz, Environmental Planner

SUMMARY SHEET FOR THE N.H. METHOD

Wetland name or code 006 Total area of wetland 48.5 acres
 County Rochingham Town Portsmouth Date June 2011
 Investigator(s) Mark West

A Functional Value	B FVI From Data Sheets	C Size of Evaluation Area (Acres)	D Wetland Value Units B x C	Raw
1. Ecological Integrity	0.75	48.5	36.4	7
2. Wetland Wildlife Habitat	0.635	48.5	30.8	7
3. Finfish Habitat:				
Part A - Rivers and Streams	0.46	1.5	.69	7
Part B - Ponds and Lakes	0	0	0	
4. Educational Potential	0.62	24	14.88	7
5. Visual/Aesthetic Quality	.67	8	5.36	14
6. Water-based Recreation	0	-	0	-
7. Flood Control Potential	1.0	48.5	48.5	7
8. Ground Water Use Potential	0.75	48.5	36.4	7
9. Sediment Trapping	0.62	48.5	30.0	8
10. Nutrient Attenuation	0.55	48.5	26.675	E
11. Shoreline Anchoring and Dissipation of Erosive Forces	0.83	0.80	.66	8
12. Urban Quality of Life				
B: Wetland Wildlife Habitat	0.70	48.5	34	8
C: Educational Opportunity	0.75	24	18	7
D: Visual/Aesthetic Quality	0.72	8	5.76	16
E: Water-based Recreation	0.57	0	0	
13. Historical Site Potential	0.77	10	7.7	7
14. Noteworthiness	1.0	48.5	48.5	7

Wetland Name/Code: 006

**Functional Value 1
ECOLOGICAL INTEGRITY**

NEEDED FOR THIS EVALUATION:

- Zoning map
- SCS soils map
- N.H. Water Quality Report to Congress 305(b)
- USGS topographic map or recent aerial photograph
- A method to calculate area (Dot grid, planimeter, etc.)
- Ruler or scale
- Map wheel (Optional)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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QUESTIONS TO ANSWER IN THE OFFICE:

1. Percent of wetland having very poorly drained soils or Hydric A soils and/or open water.
2. Dominant land use zoning of wetland (see town zoning map). Use current land use if different from what is zoned.

- | | |
|--------------------------------------------------------|-----|
| a. More than 50 percent | 1.0 |
| b. From 25 to 50 percent | 0.5 |
| c. Less than 25 percent | 0.1 |
| | |
| a. Agriculture, forestry, or similar open space zoning | 1.0 |
| b. Rural residential | 0.5 |
| c. Commercial/industrial, high density residential | 0.1 |

QUESTIONS TO ANSWER IN THE FIELD:

3. Water quality of the water-course, pond, or lake associated with the wetland.
4. Ratio of the number of occupied buildings within 500 feet of the wetland edge to the total area of the wetland (acres).
5. Percent of original wetland filled.
6. Percent of wetland edge bordered by a buffer of woodland or idle land at least 500 feet in width.
7. Level of human activity **WITHIN WETLAND** as evidenced by litter, bike trails, roads, residences, etc.

- | | |
|------------------------------------------------------------------------------------------|-----|
| a. High: Minimal pollution. Actual water quality meets or exceeds Class A or B standards | 1.0 |
| b. Medium: Moderate pollution. Actual water quality is below Class B standards | 0.5 |
| | |
| a. Less than 1 bldg: 10 acres (<0.10) | 1.0 |
| b. From 1 bldg: 10 acres to 1 bldg: 2 acres (0.10-0.50) | 0.5 |
| c. More than 1 bldg: 2 acres (>0.5) | 0.1 |
| | |
| a. Less than 10 percent | 1.0 |
| b. From 10 to 50 percent | 0.5 |
| c. More than 50 percent | 0.1 |
| | |
| a. More than 80 percent | 1.0 |
| b. From 20 to 80 percent | 0.5 |
| c. Less than 20 percent | 0.1 |
| | |
| a. Low level: Few trails in use and/or sparse litter | 1.0 |
| b. Moderate level: Some used trails, roads, etc. | 0.5 |
| c. High level: Many trails, roads, etc. within wetland | 0.1 |

Continued on next page...

Functional Value 1
ECOLOGICAL INTEGRITY
 (continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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QUESTIONS TO ANSWER IN THE FIELD (continued):

8. Level of human activity IN UPLAND within 500 feet of the wetland edge as evidenced by litter, bike trails, roads, residences, etc.		a. Low level: Few trails in use and/or sparse litter b. Moderate level: Some trails, scattered residences, etc. c. High level: Many trails, roads, etc. within upland	1.0 0.5 0.1
9. Percent of wetland plant community presently being altered by mowing, grazing, farming, or other activity. (Include areas now dominated by phragmites or purple loosestrife).		a. Less than 10 percent b. From 10 to 50 percent c. More than 50 percent	1.0 0.5 0.1
10. Percent of wetland actively being drained for agriculture or other purposes.		a. Less than 10 percent b. From 10 to 50 percent c. More than 50 percent	1.0 0.5 0.1
11. Number of public road and/or railroad crossings per 500 feet of wetland (measured along long axis of wetland).		a. None b. One or fewer c. Two or more	1.0 0.5 0.1
12. Long-term stability.		a. Wetland appears to be naturally occurring, not impounded by dam or dike b. Wetland appears to be somewhat dependent on artificial diking by dam, road, fill, etc.	1.0 0.5

AVERAGE FVI FOR FUNCTIONAL VALUE 1 = Average of column D = 0.75

EVALUATION AREA FOR FUNCTIONAL VALUE 1 = Total area of wetland = 48.5 acres.

Wetland Name/Code: 006

NEEDED FOR THIS EVALUATION:

- USGS topographic map
- Land use map and/or recent aerial photographs
- Ruler or scale
- A method to calculate area (Dot grid, planimeter, etc.)
- N.H. Water Quality Report to Congress 305(b)

**Functional Value 2
WETLAND WILDLIFE HABITAT**

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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QUESTIONS TO ANSWER IN THE OFFICE:

1. Ecological integrity.

Average FVI from Functional Value 1

0.75

2. Area of shallow permanent open water (less than 6 feet deep) including streams in or adjacent to wetland.

- a. More than 3 acres
- b. From 0.5 to 3 acres
- c. Less than 0.5 acre

1.0

0.5

0.1

QUESTIONS TO ANSWER IN THE FIELD:

3. Water quality of the watercourse, lake, or pond associated with the wetland.

FVI from Question V.1.3

0.5

4. Wetland diversity.

- a. Three or more wetland classes present
- b. Two wetland classes present
- c. One wetland class present

1.0

0.5

0.1

5. Dominant wetland class.

- a. Emergent marsh and/or shallow open water
- b. Forested and/or scrub-shrub wetland
- c. Scrub-shrub saturated (bog) or wet meadow

1.0

0.5

0.1

6. Interspersion of vegetation classes and/or open water.

- a. At least two wetland classes highly interspersed. Areas of each class scattered within wetland like a patchwork quilt
- b. Moderate interspersion of wetland classes
- c. Low degree of interspersion. Each wetland class is more or less contiguous and separate from the other classes.

1.0

0.5

0.1

Continued on next page...

NEEDED FOR THIS EVALUATION:

Functional Value 2
WETLAND WILDLIFE HABITAT
(continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
7. Wetland juxtaposition.		a. Wetland connected to other wetlands within a 1 mile radius by perennial stream or lake b. Wetland connected to other wetlands within a 1 to 3 mile radius by perennial stream or lake, OR other unconnected wetlands are present within a 1 mile radius c. Wetland not hydrologically connected to other wetlands within 3 miles and no other unconnected wetlands within 1 mile	1.0 <u>0.5</u> 0.1
8. Number of islands or inclusions of upland within wetland.		a. Two or more b. One c. None	<u>1.0</u> 10.5 0.1
9. Wildlife access to other wetlands (overland). Travel lanes should be 50-100 feet wide.		a. Free access along well vegetated stream corridor, woodland, or lakeshore b. Access partially blocked by roads, urban areas, or other obstructions c. Access blocked by roads, urban areas, or other obstructions	1.0 <u>0.5</u> 0.1
10. Percent of wetland edge bordered by upland wildlife habitat (brush, woodland, active farmland, or idle land) at least 500 feet in width.		a. More than 40 percent b. From 10 to 40 percent c. Less than 10 percent	<u>1.0</u> 0.5 0.1

AVERAGE FVI FOR FUNCTIONAL VALUE 2 = Average of column D = 0.635

EVALUATION AREA FOR FUNCTIONAL VALUE 2 = Total area of wetland = 48.5 acres.

Wetland Name/Code: 006

NEEDED FOR THIS EVALUATION:

- N.H. Water Quality Report to Congress 305(b)
- USGS topographic map
- Recent aerial photographs
- Anadromous Fish Run information
- Fish stocking information

Functional Value 3
FINFISH HABITAT
Streams and Rivers

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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PART A - STREAMS AND RIVERS NOTE: If investigation reveals no year-round stream is present, enter zero for this Functional Value (Column "D" on summary sheet) and proceed to Part B.

Name of stream (if applicable) Sagamore Creek.

QUESTIONS TO ANSWER IN THE OFFICE:

- | | | |
|--------------------------------------------------|-----------------------------------------------|------------|
| 1. Dominant land use in watershed above wetland. | a. Woodland, wetland, or abandoned farmland | 1.0 |
| | b. Active farmland or rural residential | <u>0.5</u> |
| | c. Urban and heavily developed suburban areas | 0.1 |

QUESTIONS TO ANSWER IN THE FIELD:

- | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 2. Water quality of the watercourse associated with the wetland. | FVI from Question V.1.3 | <u>0.5</u> |
| 3. Barrier(s) to anadromous fish (such as dams, beaver dams, water falls, road crossings, etc.) along the stream reach associated with the wetland. | a. No barrier(s) present, or if present equipped with fish ladders or other provisions for fish passage, OR waterbody is beyond the range of anadromous fish | 1.0 |
| | b. Artificial barrier(s) present without provision for fish passage, AND river/stream is within range of anadromous fish | <u>0.1</u> |
| 4. Stream width (bank to bank). | a. More than 50 feet | 1.0 |
| | b. From 2 to 50 feet | <u>0.5</u> |
| | c. Less than 2 feet | 0.1 |

Continued on next page...

Functional Value 3
FINFISH HABITAT
 Streams and Rivers
 (continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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PART A - STREAMS AND RIVERS (continued)
QUESTIONS TO ANSWER IN THE FIELD (continued):

5. Available shade.		a. Woodland, scrubland, or other tall vegetation provides shade to all or significant portions of the stream (>50% cover)	1.0
		b. Portions of the stream bank unvegetated, OR vegetation too low (<6') to provide shade (25-50% cover)	0.5
		c. Major portions of stream bank vegetation too low (<6') to provide shade, OR unvegetated (<25% cover)	0.1
6. Physical character of stream channel associated with wetland.		a. Stream is in a natural channel, either a meandering low gradient (less than 0.2 %) stream, OR moderate to high (0.2% or higher) gradient stream with pools and riffles	1.0
		b. Portions of stream recently modified, OR stream formerly channelized but has regained some natural channel features through the onset of meandering, the regrowth of instream vegetation, or the addition of cover objects such as rocks or snags	0.5
		c. Stream has recently been channelized, OR stream is confined in a nonvegetated chute or pipe	0.1

Continued on next page...

Wetland Name/Code: 006

Functional Value 3
FINFISH HABITAT
Streams and Rivers
(continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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PART A - STREAMS AND RIVERS (continued):

QUESTIONS TO ANSWER IN THE FIELD (continued):

- 7. Abundance of cover objects.
 - a. Abundant: More than 70% of water area contains cover objects such as submerged logs, undercut banks, and floating or submerged vegetation (might be seasonal) 1.0
 - b. Moderately abundant: From 30 to 70% of water area contains cover objects 0.5
 - c. Scarce: Less than 30% of the water area contains cover objects 0.1

- 8. Spawning areas.
 - a. Low gradient, slow moving stream with abundant areas of grass and low growing emergent vegetation present which are flooded for several weeks in the spring, OR a medium or high gradient stream with abundant areas of gravel suitable for spawning 1.0
 - b. Moderate amount of spawning areas present 0.5
 - c. Few spawning areas present 0.1

AVERAGE FVI FOR FUNCTIONAL VALUE 3, PART A = Average of column D for Part A = 0.46

EVALUATION AREA FOR PART A: FUNCTIONAL VALUE 3 = Area of stream or river associated with wetland = 1.5 acres.

NEEDED FOR THIS EVALUATION:

**Functional Value 3
FINFISH HABITAT
Lakes and Ponds**

- USGS topographic map
- Recent aerial photograph
- Water Quality Report to Congress 305(b)
- Anadromous Fish Run information
- A method to calculate area (Dot grid, planimeter, etc.)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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PART B - LAKES AND PONDS **Note:** If no lake or pond is present enter zero for this Function (Column "D" on summary sheet) and proceed to next Functional Value.

ALL QUESTIONS TO BE ANSWERED IN THE FIELD:

1. Dominant land use in watershed above wetland.	FVI for Question V.3.1A	_____
2. Water quality of pond or lake associated with wetland.	FVI from Question V.1.3	_____
3. Barrier(s) to anadromous fish (such as dams, beaver dams, waterfalls, road crossings).	a. No barrier(s) present, or if present equipped with fish ladders or other provisions for fish passage, OR waterbody is beyond range of anadromous fish	1.0
	b. Artificial barrier(s) present without provision for fish passage, and river/stream is within range of anadromous fish	0.1
4. Total area of pond or lake, including areas of rooted, submerged, and emergent vegetation.	a. More than 100 acres	1.0
	b. From 10 to 100 acres	0.5
	c. Less than 10 acres	0.1
5. Abundance of cover objects.	a. Abundant: More than 70% of area visible from shore contains cover objects such as submerged logs, rocks, etc.	1.0
	b. Moderate: From 30% to 70% of area visible from shore contains cover objects	0.5
	c. Scarce: Less than 30% of area visible from shore contains cover objects	0.1
6. Percent of pond or lake having rooted submerged or emergent vegetation.	a. From 15 to 50%	1.0
	b. More than 50% or less than 15%	0.1

AVERAGE FVI FOR FUNCTIONAL VALUE 3, PART B = Average of column D for Part B = 0.0

EVALUATION AREA FOR PART B: FUNCTIONAL VALUE 3 = Area of pond or lake associated with wetland = 0 acres.

NEEDED FOR THIS EVALUATION:

- USGS topographic map
- Land use map or recent aerial photograph
- Ruler or scale
- Method to calculate area (Dot grid or planimeter)
- Knowledge of any management activities by local nature centers, sanctuaries, scouting groups, garden clubs, etc.

**Functional Value 4
EDUCATIONAL POTENTIAL**

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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Location of potential educational site: North of Banfield Rd

QUESTIONS TO ANSWER IN THE OFFICE:

1. Ecological integrity.	Average FVI from Functional Value 1	<u>0.75</u>
2. Wetland wildlife habitat.	Average FVI from Functional Value 2	<u>0.635</u>
3. Proximity of potential educational site to schools.	a. Within safe walking distance	<u>1.0</u>
	b. Within 20 minutes drive	<u>0.5</u>
	c. More than 20 minutes drive	0.1
4. Presence of a nature preserve or wildlife management area.	a. Wetland within an organized nature preserve or wildlife management area	1.0
	b. Wetland in a conservation easement or district but not under active management	0.5
	c. Area not under such management, or areas closed because of the presence of rare plants or other environmental considerations	<u>0.1</u>

QUESTIONS TO ANSWER IN THE FIELD:

5. Proximity of potential educational site to other plant communities.	a. Upland forest or abandoned farmland in various stages of secondary succession within a short walk to potential educational site	<u>1.0</u>
	b. Potential educational site is not within a short walk to other plant communities	0.1
6. Off-road parking at potential educational site suitable for school buses.	a. Wetland within walking distance, or a suitable parking area is in close proximity to the educational site	<u>1.0</u>
	b. Moderate expense required to develop parking area within close proximity to the educational site	0.5
	c. Parking within close proximity of the educational site not available, or expensive to develop because of traffic flow, soil suitability, or other problems	0.1

Continued on next page...

Functional Value 4
EDUCATIONAL POTENTIAL
 (continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
QUESTIONS TO ANSWER IN THE FIELD (continued):			
7. Number of wetland classes accessible or potentially accessible for study at potential educational site.		a. Three or more classes b. Two classes c. One class	1.0 0.5 0.1
8. Access to perennial stream at potential educational site.		a. Direct access available b. Water access not available but feasible to develop c. Perennial stream not present, or access not feasible	1.0 0.5 0.1
9. Access to pond or lake at potential educational site.		a. Direct access available b. Access not available but feasible to develop c. Pond or lake not present, or access not feasible	1.0 0.5 0.1
10. Student safety.		a. No known safety hazards such as busy roads, steep embankments, railroad trestle, etc. within potential educational site b. One or more safety hazards present which could be overcome at moderate expense c. Obvious safety hazards which would be difficult and/or expensive to overcome	1.0 0.5 0.1
11. Public access to potential educational site.		a. Public access prohibited or controlled. Interference with study area or equipment unlikely b. Some public access by general public, but at a level which will not greatly interfere with the study area c. Unlimited public access that cannot easily be controlled and which would be likely to interfere with study area or equipment	1.0 0.5 0.1

Continued on next page...

Wetland Name/Code: 006

Functional Value 4
EDUCATIONAL POTENTIAL
(continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
12. Visual/aesthetic quality of potential educational site.		a. Undisturbed and natural. No aesthetic detractors such as litter, abandoned cars, land fills, road noise, etc. or if such detractors are present, they could be easily corrected b. Limited disturbance. Minor detractors present and difficult to correct c. Severe disturbance. Major detractors present which would be difficult to correct	1.0 0.5 0.1
13. Handicap accessibility.		a. Yes b. No	1.0 0.0

AVERAGE FVI FOR FUNCTIONAL VALUE 4 = Average of column D = 0.62

EVALUATION AREA FOR FUNCTIONAL VALUE 4 = AREA* of potential educational site = 24 acres.

* AREA - May represent the entire wetland, or if the wetland is quite large it is possible that only a portion of it will be used (that which is visible, accessible, etc.)

NEEDED FOR THIS EVALUATION:

**Functional Value 5
VISUAL/ AESTHETIC QUALITY**

- USGS topographic map
- Land use map or recent aerial photograph
- Ruler or scale
- Method to measure area (Dot grid or planimeter)
- Ability to make an on-site assessment of the best, most useable viewing area(s)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
------------------------------	--------------------------------------	-----------------------------	--------------------------------------

ALL QUESTIONS TO BE ANSWERED IN THE FIELD:

Location of primary viewing site(s): Peverly Hill Road looking west

1. Number of wetland classes visible from primary viewing location(s).		a. Three or more classes b. Two classes c. One class	1.0 0.5 0.1
2. Dominant wetland class visible from primary viewing location(s).		a. Low growing wetlands such as marshes, bogs, and open water, or scrub-shrub having vegetation <3ft. in height b. Wet meadow c. Forested, scrub-shrub	1.0 0.5 0.1
3. Noise level at primary viewing location(s).		a. Low: Birds, wildlife and other naturally occurring sounds predominate b. Moderate: Some traffic or other noise audible c. Loud: Continuous traffic, factories, or similar noise	1.0 0.5 0.1
4. Odors present at primary viewing location(s).		a. Natural odors only (Note: some natural odors may be unpleasant) b. Unnatural odors present at certain times such as auto exhaust or a sewage treatment plant c. Unnatural odors distinct, more or less continuous and noticeably unpleasant	1.0 0.5 0.1
5. Approximate extent of open water visible from primary viewing location(s).		a. More than 3 acres of open water, or more than 300 feet of a stream b. From 1 to 3 acres of open water, or 100-300 feet of a stream c. Less than 1 acre of open water, or less than 100 feet of a stream	1.0 0.5 0.1

Continued on next page...

Functional Value 5
VISUAL/ AESTHETIC QUALITY
 (continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
------------------------------	--------------------------------------	-----------------------------	--------------------------------------

ALL QUESTIONS TO BE ANSWERED IN THE FIELD (continued):

6. General appearance of the wetland and surrounding land use(s) visible from primary viewing location(s).	a. Undisturbed and natural. No visual detractors present such as litter, abandoned cars, etc., or if such are present, they can be easily corrected. 1.0 b. Limited disturbance in and/or around wetland. Minor visual detractors present and difficult to correct. <u>0.5</u> c. Severe detractors present and difficult to correct. <u>0.1</u>
7. Landform contrast.	a. Wetland provides dramatic visual contrast with surrounding topography. 1.0 b. Wetland provides some visual contrast with surrounding topography. <u>0.5</u> c. Wetland provides little or no visual contrast with surrounding topography. 0.1
8. Dominant surrounding land use visible from primary viewing location(s).	a. Woodland, agricultural land, and/or well-landscaped residential or commercial areas. <u>1.0</u> b. Other residential and commercial areas of ordinary visual quality. 0.5 c. Urban and built up areas of low visual quality. <u>0.1</u>
9. Area of wetland dominated by flowering trees or shrubs, OR trees or shrubs which turn vibrant colors in the fall.	a. More than 5 acres. <u>1.0</u> b. From 1 to 5 acres. <u>0.5</u> c. Less than 1 acre. <u>0.1</u>
10. Wetland wildlife habitat.	Average FVI from Functional Value 2 <u>0.635</u>

Continued on next page...

Wetland Name/Code: 006

Functional Value 5
VISUAL/ AESTHETIC QUALITY
(continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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AVERAGE FVI FOR FUNCTIONAL VALUE 5 = Average of column D = 0.67

EVALUATION AREA FOR FUNCTIONAL VALUE 5 = Total area of wetland visible* from primary viewing location(s) = 8 acres.

*Visible - You may need to measure this area from the wetland base map as it may only be a percentage of the actual wetland size.

Wetland Name/Code: 006

NEEDED FOR THIS EVALUATION:

- N.H. Water Quality Report to Congress 305(b)
- Fish stocking information
- Anadromous Fish Run information
- Familiarization with watercourse through the seasons
- USGS topographic map, aerial photographs, or other means (including a field walk), to assess the length of canoeable stream

Functional Value 6
WATER-BASED RECREATION IN
WATERCOURSE ASSOCIATED WITH
THE WETLAND
 (Canoeing, Non-powered Boating, Fishing, Hunting and Wildlife Observation)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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NOTE: If no year round stream, pond or lake is present, enter zero for this Functional Value (Column "D" on the summary sheet) and proceed to the next Functional Value.

Evaluation area(s) Not present

QUESTIONS TO ANSWER IN THE OFFICE:

- Fishing.
 - Wetland located on state stocked and/or frequently fished stream or lake 1.0
 - Wetland located on stream or lake which is used occasionally for fishing 0.5
 - Wetland located on stream or lake which is seldom used for fishing because of poor water quality, lack of access, insufficient depth, etc. 0.1
- Hunting.
 - Wetland is in an area where hunting is permitted 1.0
 - Wetland is in an area where hunting is prohibited 0.1

Average FVI from Functional Value 2 0.635

QUESTIONS TO ANSWER IN THE FIELD:

- Water quality of watercourse, pond, or lake associated with wetland. (Previously determined in V.1.3). FVI from Question V.1.3 0.5

Continued on next page...

Functional Value 6
WATER-BASED RECREATION IN
WATERCOURSE ASSOCIATED WITH
THE WETLAND

(Canoeing, Non-powered Boating, Fishing, Hunting
 and Wildlife Observation)
 (continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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QUESTIONS TO ANSWER IN THE FIELD (continued):

5. Canoe and boat passage (average annual accessibility).		a. Watercourse is at least 10 feet wide and one foot deep and is free of obstructions for canoeing and/or nonpowered boating	1.0
		b. Watercourse contains some year-round and/or seasonally exposed obstructions and/or shallow areas which hinder the use of canoes or nonpowered boats	0.5
		c. Watercourse is too small and shallow and/or contains obstructions which prohibit the use of canoes and/or nonpowered boats	0.1
6. Off-road public parking at potential recreation site.		a. Wetland within walking distance, or a suitable parking area is in close proximity to the recreational site	1.0
		b. Moderate expense required to develop parking area within close proximity to the recreational site	0.5
		c. Parking within close proximity of the recreational site not available, or expensive to develop because of traffic flow, soil suitability, or other problems	0.1
7. Access to water at potential recreation site for canoeing or fishing (good site to launch a boat or stand to cast and fish).		a. Direct access to water available or easily developed	1.0
		b. Direct access to water would require moderate expense to develop.	0.5
		c. Direct access would require major expense to develop	0.1

Continued on next page...

Wetland Name/Code: 096

Functional Value 6
WATER-BASED RECREATION IN
WATERCOURSE ASSOCIATED WITH
THE WETLAND
(Canoeing, Non-powered Boating, Fishing,
Hunting and Wildlife Observation)
(continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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QUESTIONS TO ANSWER IN THE FIELD (continued):

8. Visual/aesthetic quality of potential recreation site.

Average FVI for Functional Value 5 0.67

AVERAGE FVI FOR FUNCTIONAL VALUE 6 = Average of column D = 0.22

EVALUATION AREA FOR FUNCTIONAL VALUE 6 = Area of wetland evaluated for water-based recreation* = 48.5 acres.

*This may be all or part of the wetland. Birding, hunting, fieldwalks may use entire wetland.

NEEDED FOR THIS EVALUATION:

- A method to calculate area (Dot grid, planimeter, etc.)
- USGS topographic map and recent aerial photographs
- Ability to delineate a watershed (see Appendix E)
- Ability to understand elevations on a topographic map or site plan
- Tape measure or rope for measuring distance

Functional Value 7

FLOOD CONTROL POTENTIAL**TO BE COMPLETED IN THE OFFICE:**

- Determine the area of the wetland in acres (WA). 48.5 acres. e.g. 2 acres
- Determine the area of the watershed above the outlet of the wetland in acres (DA). 230 acres. e.g. 50 acres
- Determine the Wetland Control Length (WCL) in feet. 20 feet. e.g. 6 feet
- Calculate the FVI for Flood Control Potential:

Step 1 Ratio A = $\frac{\text{Area of watershed above outlet of wetland (DA)}}{\text{Area of Wetland (WA)}} = \frac{230}{48.5} = \underline{4.7}$ e.g. $\frac{50}{2} = 25$

Step 2 Ratio B = $\frac{\text{Area of watershed above outlet of wetland (DA)}}{\text{Wetland Control Length (WCL)}} = \frac{230}{20} = \underline{11.5}$ e.g. $\frac{50}{6} = 8$

- Read horizontally to the right from the appropriate Ratio B value to the column heading that most closely approximates the computed Ratio A value. Your answer, found at this intersection, is the FVI for this Functional Value. Following the example given above, where Ratio B = 8.0 and Ratio A = 25, the FVI would be 0.5.

RATIO B = $\frac{DA}{WCL}$	RATIO A = $\frac{DA}{WA}$				
	Ratio A < 10 FVI	10 < Ratio A < 20 FVI	20 < Ratio A < 50 FVI	50 < Ratio A < 100 FVI	Ratio A > 100
0.1	0.0	0.0	0.0	0.0	0.0
0.2	0.1	0.0	0.0	0.0	0.0
0.4	<u>0.3</u>	0.0	0.0	0.0	0.0
0.8	<u>0.5</u>	0.3	0.0	0.0	0.0
1.0	0.6	0.3	0.0	0.0	0.0
2.0	0.8	0.5	0.1	0.0	0.0
4.0	1.0	0.7	0.3	0.1	0.0
8.0	<u>1.0</u>	0.9	<u>0.5</u>	0.2	0.0
16.0	1.0	1.0	0.7	0.3	0.1
32.0	1.0	1.0	0.9	0.6	0.2
64.0	1.0	1.0	1.0	0.8	0.4
128.0	1.0	1.0	1.0	0.9	0.7
256.0	1.0	1.0	1.0	1.0	1.0

Note: FVI values of zero indicate the wetland has the potential to reduce a flood flow by 10% or less. FVI values of 1.0 indicate the wetland has the potential to reduce flood flows by 80% or more. Intermediate FVI values are interpolated between these two extremes.

FVI FOR FUNCTIONAL VALUE 7 (from table) = 1.0

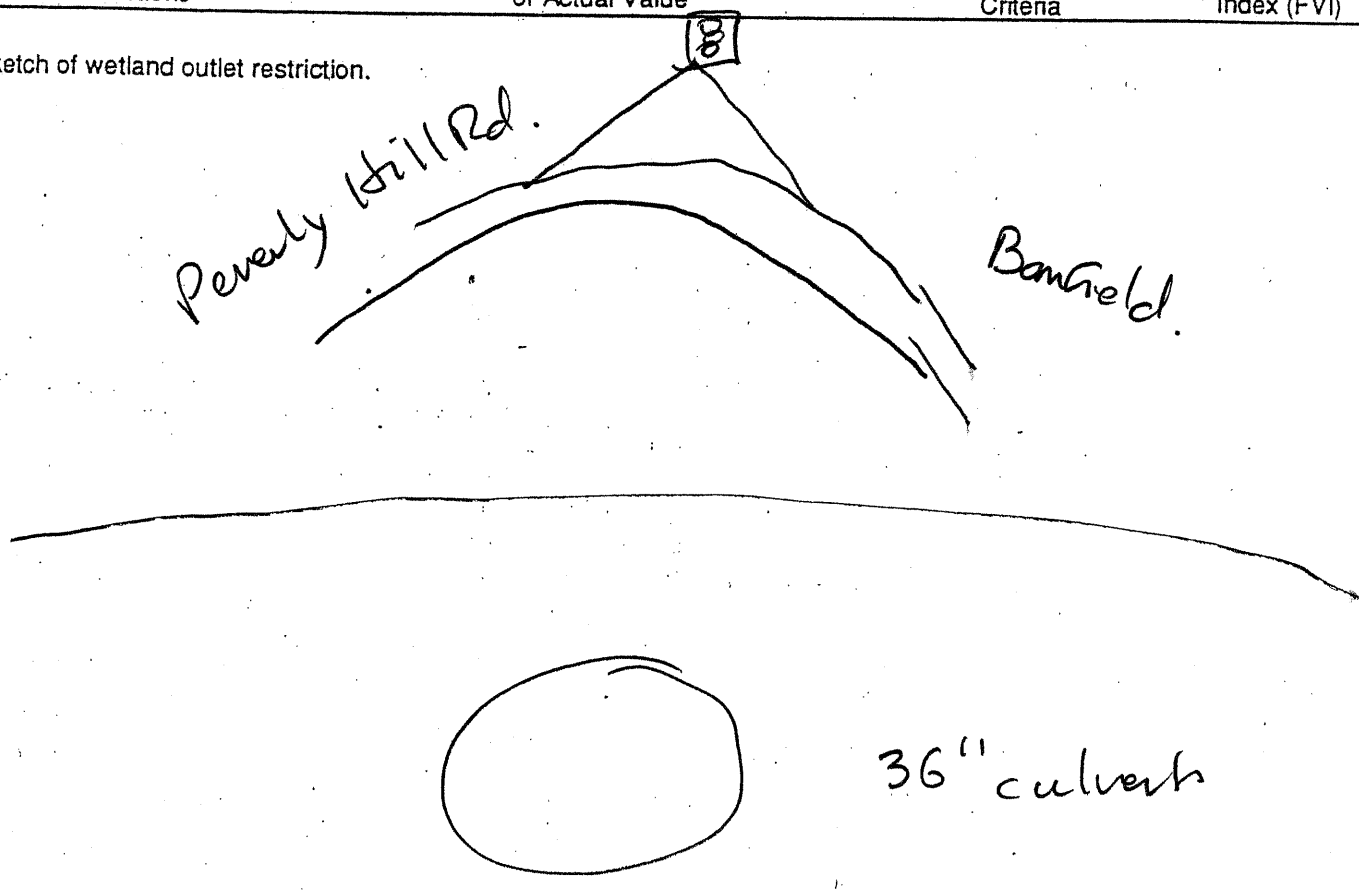
EVALUATION AREA FOR FUNCTIONAL VALUE 7 = AREA OF WETLAND 48.5 acres.

Continued on next page...

Functional Value 7
FLOOD CONTROL POTENTIAL

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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6. Sketch of wetland outlet restriction.



NEEDED FOR THIS EVALUATION:

**Functional Value 8
GROUND WATER USE POTENTIAL**

- DES Well Inventory and Water User maps
- DES Ground Water Availability maps (Reconnaissance Maps) (early 1970's)
- DES Stratified Drift Aquifer Maps(when available)
- Surficial Geology maps
- SCS soils maps
- NH Water Quality Report to Congress 305(b)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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NOTE: Evaluate this Function only if the wetland is upstream of, or overlying an aquifer. Otherwise, proceed to Functional Value 9.

QUESTIONS TO ANSWER IN THE OFFICE: (Some field verification may be necessary.)

1. Existing public or private water supply wells.	<ul style="list-style-type: none"> a. Public or private water supply well(s) located <0.5 miles downstream of wetland 1.0 b. Public or private water supply well(s) located 0.5 to 1 mile downstream of wetland <u>0.5</u> c. No public or private water supply well(s) within 1 mile downstream of wetland 0.1
2. Potential public or private water supply.	<ul style="list-style-type: none"> a. Stratified drift aquifer located <0.5 miles downstream of wetland <u>1.0</u> b. Stratified drift aquifer located 0.5 to 1 mile downstream of wetland 0.5 c. No stratified drift aquifer within 1 mile downstream of wetland 0.1
3. Ground water quality of the stratified drift aquifer.	<ul style="list-style-type: none"> a. Meets NH DES drinking water quality standards <u>1.0</u> b. Requires treatment to meet drinking water standards 0.5 c. Classified as saline or otherwise unsuitable for drinking water 0.1

QUESTION TO ANSWER IN THE FIELD:

4. Water quality of watercourse, pond, or lake associated with wetland.	FVI from Question V.1.3 <u>0.5</u>
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AVERAGE FVI FOR FUNCTIONAL VALUE 8 = Average of column D = 0.75
 EVALUATION AREA FOR FUNCTIONAL VALUE 8 = Total area of wetland = 48.5 acres.

NEEDED FOR THIS EVALUATION:

- USGS topographic map
- Land use map or recent aerial photographs
- A method to calculate area (Dot grid, Planimeter, etc.)
- Knowledge or familiarity with the extent and type of current development in the study area
- Ability to calculate average slope (See Appendix F)

**Functional Value 9
SEDIMENT TRAPPING**

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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PART A - OPPORTUNITY FOR SEDIMENT TRAPPING

QUESTION TO ANSWER IN THE OFFICE:

1. Average slope of watershed above wetland.	a. Steep: Greater than 8% b. Moderate: From 3 to 8% c. Low: Less than 3%	1.0 0.5 <u>0.1</u>
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QUESTION TO ANSWER IN THE FIELD:

2. Potential sources of excess sediment in the watershed above the wetland.	a. Extensive areas of active cropland, construction sites, eroding road banks, ditches, and similar areas b. Some areas of active cropland, a few construction sites, and similar areas c. Land use in watershed predominantly forested, abandoned farmland or otherwise undeveloped	1.0 0.5 <u>0.1</u>
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AVERAGE FVI FOR FUNCTIONAL VALUE 9, PART A = Average of Column D for Part A = 0.1

PART B - OVERALL POTENTIAL FOR SEDIMENT TRAPPING BY WETLAND

QUESTIONS TO ANSWER IN THE OFFICE:

1. Opportunity for sediment trapping.	Average FVI from Part A above	<u>0.1</u>
2. Effective floodwater storage of wetland.	FVI from Functional Value 7	<u>1.0</u>

QUESTIONS TO ANSWER IN THE FIELD:

3. Wetland location in relation to an intermittent or perennial stream or a lake.	a. Wetland forms a buffer more than 50 ft. wide between upland and stream or lake b. Wetland forms a buffer from 20 to 50 ft. wide between upland and stream or lake c. Wetland forms a buffer less than 20 ft. wide, or wetland not bordering a stream or lake	1.0 0.5 <u>0.1</u>
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Part B continued on next page...

Functional Value 9
SEDIMENT TRAPPING
 (continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
4. Dominant wetland class bordering a stream or lake.		a. Scrub-shrub or dense stands of cattails or phragmites b. Forested c. Other types, or wetland does not border a stream or lake	1.0 <u>0.5</u> 0.1
5. Areas of impounded open water (including beaver dams).		a. Wetland contains permanently impounded open water greater than 5 acres in size b. Wetland contains permanently impounded open water from 0.5 to 5 acres in size c. Wetland contains permanently impounded open water less than 0.5 acres in size, or wetland does not contain open water	1.0 <u>0.5</u> 0.1

AVERAGE FVI FOR FUNCTIONAL VALUE 9, PART B = Average of Column D for Part B = 0.62 = Average FVI for Sediment Trapping.

EVALUATION AREA FOR FUNCTIONAL VALUE 9 = Total area of wetland = 48.5 acres.

NEEDED FOR THIS EVALUATION:

- USGS topographic map
- Land use map or recent aerial photographs
- Knowledge or familiarity with the area regarding extent and type of current development
- Ability to delineate a watershed (See Appendix E)

**Functional Value 10
NUTRIENT ATTENUATION**

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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PART A - OPPORTUNITY FOR NUTRIENT ATTENUATION

ALL QUESTIONS TO BE ANSWERED IN THE OFFICE:

1. Opportunity for sediment trapping.
2. Potential sources of excess nutrients in watershed above wetland.

- Average FVI for Part A of FV 9 0.1
- a. Large areas of active cropland, pastureland, or urban land. Many dairies or other livestock operations, sewage treatment plants, or numerous on-site septic systems within 100 feet of stream 1.00
 - b. Watershed contains some areas of active cropland, pastureland, or urban land. A few dairies or other livestock operations or a few on-site septic systems within 100 feet of the stream 0.5
 - c. Watershed predominantly forested or otherwise undeveloped 0.1

AVERAGE FVI FOR FUNCTIONAL VALUE 10, PART A = Average of Column D for Part A = 0.1

PART B - OVERALL POTENTIAL FOR NUTRIENT ATTENUATION

QUESTIONS TO ANSWER IN THE OFFICE:

1. Opportunity for nutrient attenuation.
2. Overall potential for sediment trapping in the wetland.

- Average FVI for Part A (above) 0.1
- Average FVI for Part B of FV 9 0.62

QUESTIONS TO ANSWER IN THE FIELD:

3. Dominant wetland class. (Refer to Question V.2.4).

- a. Floating aquatic plants, emergent (marsh), forested, or scrub/shrub, except bogs 1.0
- b. Bogs 0.1

Continued on next page...

Functional Value 10
NUTRIENT ATTENUATION
 (continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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4. Wetland hydroperiod.

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| a. Wetland contains permanently impounded open water > 5 acres in size | 1.0 |
| b. Wetland contains permanently impounded open water from 0.5 to 5 acres in size, OR more than 5 acres of the wetland are flooded or ponded annually during a portion of the growing season | <u>0.5</u> |
| c. Above criteria are not met (e.g. the wetland has predominantly saturated soil conditions and is rarely ponded or flooded during the growing season.) | |

AVERAGE FVI FOR FUNCTIONAL VALUE 10, PART B = Average of Column D for Part B = 0.55 = Average FVI for Nutrient Attenuation.
 EVALUATION AREA FOR FUNCTIONAL VALUE 10 = Total area of wetland = 48.5 acres.

NEEDED FOR THIS EVALUATION:

- USGS topographic map
- Recent aerial photograph
- Ruler or scale

**Functional Value 11
SHORELINE ANCHORING AND
DISSIPATION OF EROSION
FORCES**

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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ALL QUESTIONS TO BE ANSWERED IN THE FIELD:

1. Wetland morphology.	<ul style="list-style-type: none"> a. No distinct shoreline or bank evident between waterbody and wetland or upland. Wetland grades from aquatic bed and/or marsh (emergent vegetation) landward to shrub swamp or wooded swamp 1.0 b. Distinct shoreline or bank evident between waterbody and wetland or upland. Shoreline or bank presently showing minimal signs of erosion 0.5 c. Distinct shoreline or bank evident between waterbody and wetland or upland. Shoreline or bank presently showing signs of severe erosion 0.1
2. Width of wetland bordering watercourse, lake, or pond.	<ul style="list-style-type: none"> a. More than 10 feet 1.0 b. From 3 to 10 feet 0.5 c. Less than 3 feet 0.1
3. Vegetation density (shrubs or emergents) of wetland bordering watercourse, lake, or pond.	<ul style="list-style-type: none"> a. High: More than 90 percent ground cover 1.0 b. Moderate: From 70-90 percent ground cover 0.5 c. Low: Less than 70 percent ground cover 0.1

AVERAGE FVI FOR FUNCTIONAL VALUE 11 = Average of column D = 0.83

EVALUATION AREA FOR FUNCTIONAL VALUE 11 = $\frac{L \times 10 \text{ feet}}{43,560 \text{ sq. ft./acres}}$ = 0.80 acres.

Where: L = Length of shoreline (streams, lake, or pond) within wetland in feet.
 (Shoreline of stream = length of stream x 2 (number of banks)).
 10 feet = The minimum width of the wetland assumed to be actually anchoring the shore.
 43,560 sq. ft. = one acre

NEEDED FOR THIS EVALUATION:

- USGS topographic map
- Land use map or recent aerial photographs
- Town zoning map
- NH Water Quality Report to Congress 305(b)

**Functional Value 12
URBAN QUALITY OF LIFE**

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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NOTE: Do not complete parts B through E unless it is established that the wetland is in an urban setting. The criteria for this is an FVI of at least 0.5 for Part A of this Functional Value or other evidence that the wetland is in an urban setting.

PART A: PRESENCE OF AN URBAN SETTING

ALL QUESTIONS TO BE ANSWERED IN THE FIELD:

1. Dominant land use within 0.5 miles of wetland.	a. Commercial/industrial/ transportation use or high density residential (quarter acre lots) use b. Rural residential use (2 acre lots) c. Agriculture, forestry, or similar open space zoning	1.0 0.5 0.1
2. Rate of development within 0.5 miles of wetland.	a. Area rapidly developing or already predominantly developed for above uses b. Moderate development presently occurring c. Very little development likely to occur in the foreseeable future	1.0 0.5 0.1

AVERAGE FVI FOR FUNCTIONAL VALUE 12, PART A = Average of Column D for Part A = 0.3

PART B: WETLAND WILDLIFE HABITAT IN AN URBAN SETTING

ALL QUESTIONS TO BE ANSWERED IN THE FIELD:

1. Area of shallow permanent open water (less than 6.6 feet deep) including streams. (Refer to Question V.2.2).	a. 0.5 acres or more b. Less than 0.5 acres	1.0 0.1
2. Wetland diversity. (Refer to Question V.2.4).	a. Two or more wetland classes present b. One wetland class present	1.0 0.1
3. Dominant wetland class.	FVI from Question V.2.5	<u>0.5</u>
4. Interspersion of vegetation and/or open water.	FVI from Question V.2.6	<u>0.5</u>

Continued on next page...

NEEDED FOR THIS EVALUATION:

**Functional Value 12
URBAN QUALITY OF LIFE
(continued)**

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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PART B: WETLAND WILDLIFE HABITAT (continued)

5. Stream corridor vegetation (within 15 feet on each side of stream).		a. Wetland borders a stream and >75% of the stream corridor is in shrubs, trees, and herbaceous vegetation for a distance of 1000 feet upstream and downstream of wetland	1.0
		b. Wetland borders a stream and between 25% and 75% of stream corridor is in shrubs, trees, and herbaceous vegetation for a distance of 1000 feet upstream and downstream of wetland	<u>0.5</u>
		c. Less than 25% of the stream corridor is in shrubs, trees, and herbaceous vegetation for a distance of 1000 feet upstream and downstream of the wetland, OR wetland not bordering a stream	<u>0.1</u>

AVERAGE FVI FOR FUNCTIONAL VALUE 12, PART B = Average of Column D for Part B = 0.70

EVALUATION AREA FOR PART B FUNCTIONAL VALUE 12 = Total area of wetland = 48.5 acres.

PART C: EDUCATIONAL OPPORTUNITY IN AN URBAN SETTING

QUESTION TO ANSWER IN THE OFFICE:

1. Proximity of potential educational site to schools.	FVI from Question V.4.3	<u>0.5</u>
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QUESTIONS TO ANSWER IN THE FIELD:

2. Off road parking at potential educational site suitable for school buses.	FVI from Question V.4.6	<u>1.0</u>
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3. Student safety.	FVI from Question V.4.10	<u>1.0</u>
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NEEDED FOR THIS EVALUATION:

Functional Value 12
URBAN QUALITY OF LIFE
(continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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PART C - EDUCATIONAL OPPORTUNITY (continued)

4. Access to perennial stream or lake at potential educational site (Refer to Questions V.4.8 and V.4.9).		a. Direct access available b. Water access not available but feasible to develop c. Perennial stream or lake not present or access not feasible to develop	1.0 <u>0.5</u> 0.1
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AVERAGE FVI FOR FUNCTIONAL VALUE 12, PART C = Average of Column D for Part C = 0.75

EVALUATION AREA FOR PART C FUNCTIONAL VALUE 12 = Area of potential educational site = 24 acres.

PART D - VISUAL/ AESTHETIC QUALITY IN AN URBAN SETTING

ALL QUESTIONS TO BE ANSWERED IN THE FIELD:

1. Number of wetland classes visible from primary viewing location(s). (Refer to Question V.5.1).	a. Two or more classes b. One class	<u>1.0</u> 0.1
2. Dominant wetland class visible from primary viewing location(s).	FVI from Question V.5.2.	<u>1.0</u>
3. Approximate extent of open water visible from primary viewing location(s). (Refer to Question V.5.5).	a. More than 0.5 acre or 200 feet of stream b. Less than 0.5 acre or 200 feet of stream	1.0 <u>0.1</u>
4. Area of wetland dominated by flowering trees or shrubs, OR trees or shrubs which turn vibrant colors in the fall. (Refer to Question V.5.9).	a. More than 1 acre b. Less than 1 acre	<u>1.0</u> 0.1

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Functional Value 12
URBAN QUALITY OF LIFE
 (continued)

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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PART D - VISUAL/ AESTHETIC QUALITY IN AN URBAN SETTING (continued)

5. General appearance of the wetland visible from primary viewing location(s).	a. No major detractors (such as litter) or detractors could be removed b. Some detractors present which could not easily be removed c. Major detractors which could not easily be removed	1.0 0.5 0.1
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AVERAGE FVI FOR FUNCTIONAL VALUE 12, PART D = Average of Column D for Part D = 0.72

EVALUATION AREA FOR PART D FUNCTIONAL VALUE 12 = Total area visible from primary viewing location(s) = 8 acres.

PART E - WATER-BASED RECREATION IN STREAM OR LAKE ASSOCIATED WITH A WETLAND IN AN URBAN SETTING

ALL QUESTIONS TO BE ANSWERED IN THE FIELD:

1. Water quality of the water-course, pond, or lake associated with the wetland.	FVI from Question V.1.3.	<u>0.5</u>
2. Opportunities for wildlife observation.	Average FVI from Part B of this Functional Value	<u>0.70</u>
3. Hazard(s) which may limit public use.	a. No major hazards present such as railroad trestles, cellar holes, etc., OR hazards easily corrected. b. Existing hazards moderately difficult to correct c. Major hazards which would be difficult and/or expensive to correct	1.0 0.5 0.1

AVERAGE FVI FOR FUNCTIONAL VALUE 12, PART E = Average of Column D for Part E = 0.57

EVALUATION AREA FOR PART E FUNCTIONAL VALUE 12 = Area of wetland evaluated for water-based recreation = 0 acres.

NEEDED FOR THIS EVALUATION:

**Functional Value 13
HISTORICAL SITE POTENTIAL**

- USGS topographic map
- Recent aerial photographs
- Research of town historical map(s)/ town history
- National Register of Historical Places
- Local knowledge of historical sites

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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ALL QUESTIONS TO BE ANSWERED IN THE FIELD:

1. Proximity of potential site to nearest perennial water-course.		a. 0 to 50 yards	1.0
		b. 51-100 yards	0.5
		c. > 100 yards	0.1
2. Visible stone or earthen foundations, berms, dams, standing structures, etc.		a. Yes	1.0
		b. No	0.0
3. Existence of mill pond at site.		a. Presence of pond or pond site AND remains of dam	1.0
		b. Presence of pond or pond site OR , remains of dam	0.5
		c. No apparent remains of pond or of dam	0.1
4. Presence of historical buildings.		a. Yes	1.0
		b. No	0.0

AVERAGE FVI FOR FUNCTIONAL VALUE 13 = Average of Column D = 0.77

AVERAGE FVI FOR FUNCTIONAL VALUE 13 = 1.0 If the site has known or documented historical significance.

EVALUATION AREA FOR FUNCTIONAL VALUE 13 = Area of potential site for Historical Significance = 10 acres.

NEEDED FOR THIS EVALUATION:

**Functional Value 14
NOTEWORTHINESS**

- List of federal and/or state endangered or threatened species
- Knowledge of any management activities by local nature centers, land protection groups, scouting programs, garden clubs, etc.
- Completed evaluations for all other wetlands in the study area

A Evaluation Questions	B Computations or Actual Value	C Evaluation Criteria	D Functional Value Index (FVI)
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ALL QUESTIONS TO BE ANSWERED IN THE OFFICE:

1. Wetland contains critical habitat for a state or federally listed threatened or endangered species.	a. Yes b. No	1.0 <u>0.0</u>
2. Wetland is known to be a study site for scientific research.	a. Yes b. No	1.0 <u>0.0</u>
3. Wetland is a national natural landmark or recognized by NHNHI as an exemplary natural community.	a. Yes b. No	1.0 <u>0.0</u>
4. Wetland has local significance because it ranks among the highest number of WVU's within the study area for one or more Functional Values.	a. Yes b. No	1.0 <u>0.0</u>
5. Wetland has local significance because it has biological, geological, or other features which are locally rare or unique.	a. Yes b. No	<u>1.0</u> <u>0.0</u>
6. Wetland is known to contain an important archaeological site.	a. Yes b. No	1.0 <u>0.0</u>
7. Wetland is hydrologically connected to a state or federally designated river.	a. Yes b. No	1.0 <u>0.0</u>

AVERAGE FVI FOR FUNCTIONAL VALUE 14 = 1.0 if the FVI for any question is equal to 1.0, otherwise the average FVI for FUNCTIONAL VALUE 14 is 0.0 = 1.0

EVALUATION AREA FOR FUNCTIONAL VALUE 14 = Total area of wetland = 48.5 acres.