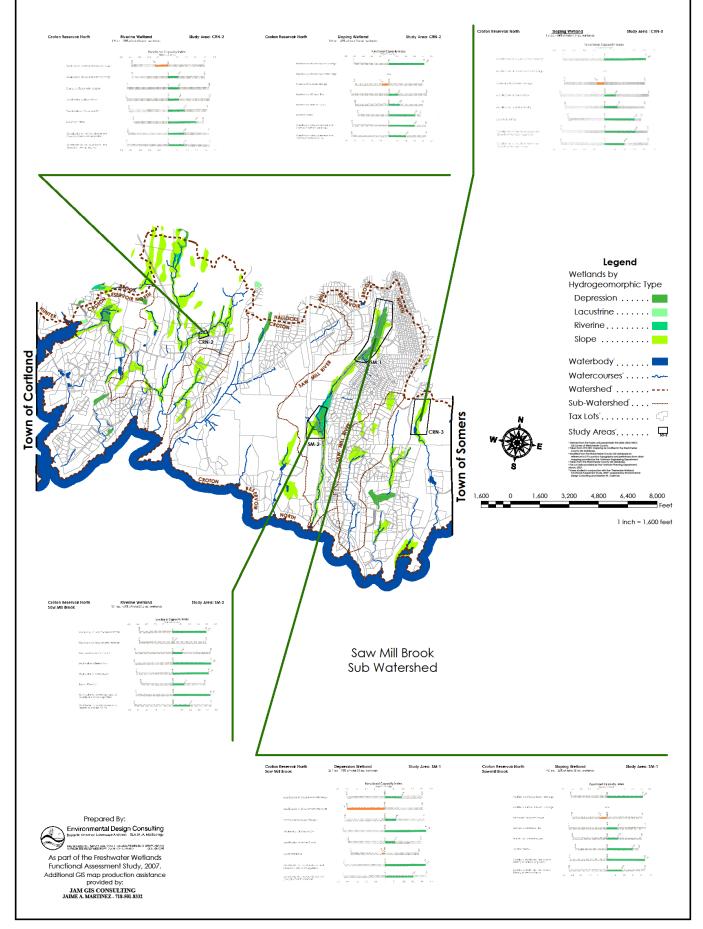
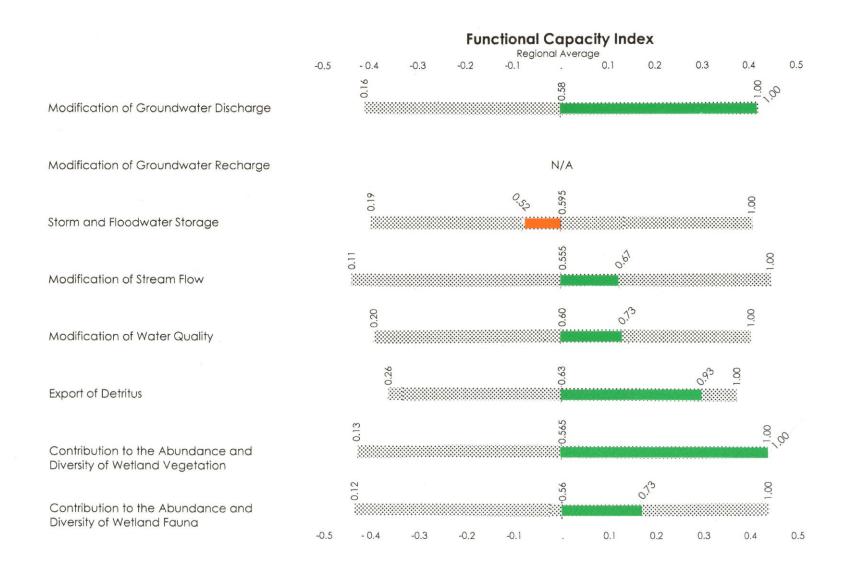
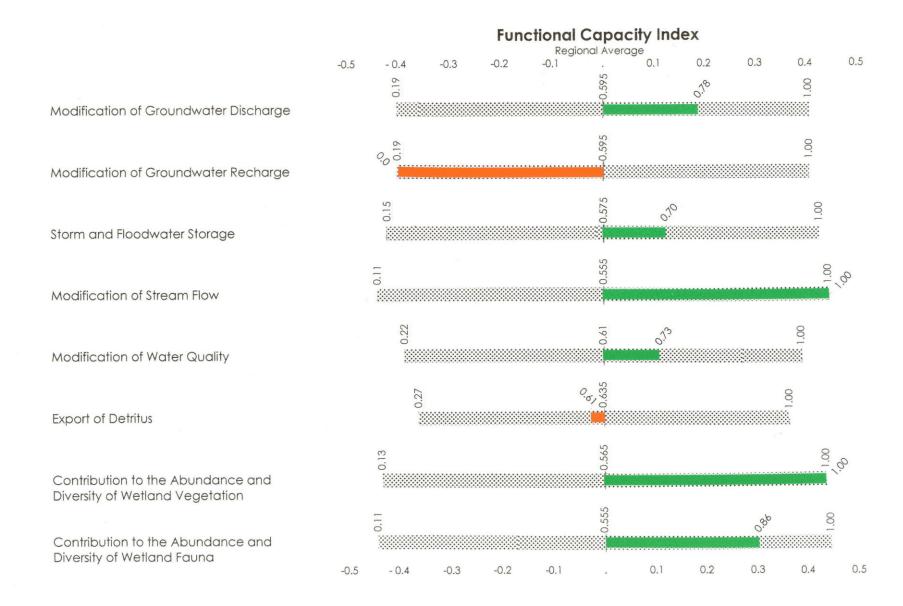
Town of Yorktown, New York Wetland Functional Assessment Study Croton Reservoir North Watershed



9.0 ac. - 26% of total 35 ac. wetlands



26.1 ac. - 75% of total 35 ac. wetlands



WETLAND INVENTORY DATA

DEPUESION 74% (26 at)

Documented habitat for state or federal listed

Regionally scarce wetland category Historic/archaeologic

species

		DA DINITO ALL	LILYA	OACE DIEEE	11/16	DIE	660
Project Number:	YOU THOUSE	-/-			AND DE	PRES	dow 74%
Project Number: _	(11)		_ Da	te:	10 3	OTH	
Wetland Number: _	SM-1		-				
Aerial Photo Number							
USGS Quadrangle:	WOHERAN LAK	E					
Field Investigators:	BD						
	PART 1 -	CHARACTER	IZAT	TION of WETLAN	D		
SURFAC	E WATER FLOW VEC	TORS		PLAN	T SPECIES		
Condition	Percent/Acreage				>	M M	1
→ / ←	74% 26 x		6k	MUPLE LY DAMOOD WY DOWNOOD			
	CO 10 1 1 4C	Slope	-	LTI FLOTH BOX			
VVV		Flat	-	IPLE LOUSESTRIF			
1		Extensive Peatland	Ske	JUL CABBAGE			
		- Cattand	BUR	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.			
			- word of the later of the late	EPING WILLOW			
		7		LICENTUS PLACE			
		Lacustrine Fringe	GRI	THE RESERVE THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER, THE OW			
			Pols	SOU LY	.00000		
		Riverine	- COMPANIES OF A PARTY OF THE P	EN HOH			
			NAME AND ADDRESS OF	ENOOD	00000		
	VEGETATION TYPES		-	SOOL SUDGE			
			and the section of the section of	WILKAN ELM			
Туре	Percent/Acreage			AGMITES	00000		
		SOIL TYPES	Or	ICUTAL BITTERSWEET	r00000		
Forested Wetland Evergreen			markette	ALU ROSE			
Needle-leaved	-	Histosol • Fibric	SAMPLE	UEL WELD			
Deciduous Broad-leaved	25%	• Fibric .	annesdistres.	ILEBUSH VECT BIRCH			
Needle-leaved		Sapric	Sandania de Cartes de la Carte	MARO GRELLE			
Scrub Shrub		Mineral	mental posture	LANDIA CREEPER			
Evergreen		Hydric Soil	ARI	eas Arum	00000		
Broad-leaved		• Gravelly - Sandy	TE	ILLIUM			
Needle-leaved Deciduous	7	· Silty 🔲	- management of the later of th	PAULSE BARBURRY	00000		
Broad-leaved	35	· Clayey		POWWOD VIBURIUM		COL	
Needle-leaved	***************************************		OW FW	Obligate Wetland Facultative Wetland		COM	Occasional
Emergent Wetland	30	GEOLOGY	F	Facultative Wedand		C	Canopy
Persistent Non-persistent	20	Surficial:	FU	Facultative Upland		S	Sapling
	10		DOM	Obligate Upland Dominant		TS LS	Tall Shrub Low Shrub
Aquatic Bed	10	Bedrock:				Н	Herb
Total	100	Deditor.		PDE-EMP	TIVE STATE	C	

Comments:

Public ownership Wildlife management

Fisheries management

Designated State or Federal protected wetland

area

area

WETLAND INVENTORY DATA (continued)

PART 2 - CHARACTERIZATION of MODEL VARIABLES

LANDSCAPE VARIABLES	Microrelief of Wetland Surface:	Number of Types & Relative Proportions:
Size: Small (<10 acres) Modium (10-100 acres) Large (>100 acres)	Pronounced >45 cm Well Developed 15-45 cm Poorty Developed <15 cm Absent Inlet/Outlet Class:	Number of Types Evenness of Distribution Actual #
Wetland Juxtaposition: Connected Upstream and Downstream Only Connected Above Onicy Connected Below Other Wetlands Nearby but not Connected Wetland Isolated Fire Occurence and Frequency: Natural: Predictable Frequency Natural: Sporadic Frequency	No indev/No Outlet No indev/Intermittent Outlet No indev/Perennial Outlet Intermittent Indev/No Outlet Intermittent Inlet/Intermittent Outlet Intermittent Outlet/Perennial Outlet Perennial Inlet/No Outlet Perennial Inlet/Intermittent Outlet Perennial Inlet/Perennial Outlet Perennial Inlet/Perennial Outlet	Vegetation Density/Dominance: Sparse (0-20%) Code Low Density (20-40%) Medium Density (40-60%) High Density (60-80%) Very High Density (80-100%)
Human-caused; Predictable Human-caused; Sporadic Rare Event No Evidence	Nested Piezometer Data: Recharge Discharge Horizontal Flow	Vegetative Interspersion: High (small groupings, diverse and interspersed) Moderate (broken irregular rings) Low (large patches, concentric rings)
Regional Scarce (>5% of total wetland area of region) Scarce (<5% of total wetland area of region) Watershed Land Use: > 50% urbanized 25-50% urbanized 0-25% urbanized	Relationship of Wetlands' Substrate Elevation to Regional Plezometric Surface: Piez. Surface Above or at Substrate clev. Piez. Surface below Substrate clev. Not Available Evidence of Sedimentation:	Number of Layers and Percent Cover: Number of Layers
HYDROLOGIC VARIABLES	No Evidence Observed Sediment Observed on Wetland Substrate	7. short shrub: 8. tall shrub:
Surface Water Level Fluctuation of Wetland: High Fluctuation Low Fluctuation Never Inundated Frequency of Overbank Flooding: Return Interval > 5 yrs. Return Interval 2.5 yrs. Return Interval 1.2 yrs. No Overbank Flooding PH: Acid <5.5 Circumneutral 5.5-7.4 Alkaline >7.4 No Water Surficial Geologic Deposit Under Wetland Low Permeability Stratified Deposits High Permeability Stratified Deposits	Fluvaquent Soils Evidence of Seeps and Springs: No Seeps or Springs Soeps Observed Perennial Spring Intermittent Spring SOIL VARIABLES Soil Lacking: Histosol: Fibric Hemic Sapric Mineral Hydric Soil: Gravelly	9. sapling: 10. tree: Piant Species Diversity: Low 1-2 plots sampled Medium 3-4 plots sampled High 5 or more plots sampled Proportion of Animal Food Plants: Low (5-25% cover) Medium (25-30% cover) High (>50% cover) Cover Distribution: Continuous Cover Small Scattered Patches 1 or More Large Patches; Parts of Site Open Solitary, Scattered Stems
Glacial Till Wetland Land Use:	Sandy Silty Clayey	Dead Woody Material: Abrundant (>50 of wetland surface) Moderately Abrundant (25-50% of surface)
High Intensity (ie. agriculture) Moderate Intensity (ie. forestry) Low Intensity (ie. peen space)	VEGETATION VARIABLES	Low Abrundance (0-25% of surface) Interspersion of Cover and Open Water:
Wetland Water Regime: Wet: Perm Flooded, Intermittently Exposed, Semiperm. Flooded Drier: Seasonally Flooded, Temporarily Flooded. Saturated Basin Topographic Gradient: High Gradient >2% Low Gradient <2% Degree of Outlet Restriction: Restricted Outflow Unrestricted Outflow No Outflow Ratio of Wetland Area to Watershed Area: High >10%	Vegetation Lacking: Dominant Wetland Type: Forested - Evergreen - Needle-leaved Forested - Deciduous - Broad-leaved Forested - Deciduous - Needle-leaved Scrub Shrub - Evergreen - Broad-leaved Scrub Shrub - Evergreen - Needle-leaved Scrub Shrub - Deciduous - Broad-leaved Scrub Shrub - Deciduous - Needle-leaved Emergent - Persistent Emergent - Non-persistent Aquatic Bed	26-75% Scattered or Peripheral >75% Scattered or Peripheral (25% Scattered or Peripheral 100% Cover or Open Water Stream Sinuosity: Highly Convoluted (index 1.50 or >) Moderately Convoluted (index 1.25-1.50) Straight/Slightly Irreg. (index) 1.10-1.25 Presence of Islands: Several to Many One or Few Absent
low <10%		

6M-1 (35 ac) DETRESSION ZC.1 ac (74%)

SLOPE 9.0 ac (26%)

2.9.1 Modification of Ground Water Discharge

		WEIGHTS				
VARIABLES	CONDITIONS HGM TYPES:	D	S	R	E	
Indicators of Disfunction Inlet/Outlet Class	perennial inlet/no outlet	0	0	0	0	
Nested Piezometer Data	 recharge condition 	0	0	0	0	
 Relationship to Regional Piezo- metric Surface 	 wetland substrate elevation above piezometric surface 	0	0	0	0	
Direct Indicators of Function • Presence of Springs and Seeps	 evidence of perennial seeps or springs 	18	15	15	18	
Nested Piezometer Data	discharge condition	18	15	15	18	
 Relationship to Regional Peizometeric Surface 	 wetland substrate elevation below piezometric surface 	18	15	15	18	
Inlet/Outlet Class	• no inlet/perennial outlet	18	15	15	18	
Primary Variables • Microrelief of Wetland Surface	 pronounced well developed poorly developed absent 	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0	
Inlet/Outlet Class	 perennial inlet/perennial outlet intermittent inlet/perennial outlet all other classes 	3 2 0	3 2 0	0 0 0	3 2 0	
• pH	alkaline circumneutral acid no water present	3 0 0	3 2 0 0	3 2 0 0	3 2 0 0	
Surficial Geologic Deposit Under Wetland	 high permeability stratified deposits low permeability stratified deposits glacial till 	3 2 D	3 2 1	3 2 1	3 2 1	
• Wetland Water Regime	 wet; permanently flooded, intermittently exposed, semipermanently flooded 	3	0	3	3	
	 drier; seasonally flooded, temporarily flooded, saturated 	1	0	-1	1	

2.9.1 Modification of Ground Water Discharge (Continued)

			WEIG	HTS	
VARIABLES	CONDITIONS HGM TYPES:	D	S	R	E
Soil Type	histosol mineral hydric soil	3	3	3	3
		14	-	-	_
	Total Score:				
	Model Range:	3-18	2-15	3-15	3-18
	Functional Capacity Index:	Total Score 4 18 0.78	$\frac{15}{15} = 1.0$	15	- 18
	Index Range:	0.19-1.0	0.16- 1.0	0.22-	0.19

Note: This model can be applied to both year long and seasonal discharge wetlands.

If the wetland is seasonally fluctuating between recharge and discharge, then reduce the above score by one half (1/2), because the wetland only functions in a discharge mode for roughly half the year.

2.9.2 Modification of Ground Water Recharge

						V	VEIGI	HTS	
VARIABLES	CONDITIONS HGM TYPES:		D	L		EP	R	F	
Indicators of Disfunction Inlet/Outlet Class	•	no inlet/perent	nial outlet; intermit- nnial outlet	0					0
Nested Piezometer Data	•	discharge cond	lition	0	0		0	0	0
Relationship to Regional Piezo- metric Surface	•	wetland substr	ate elevation above ric surface	0	0		0	0	0
Presence of Seeps and Springs		presence of see	eps or springs	0	0		0	0	0

				,	WEIGH	TS	
VARIABLES	CONDITIONS	HGM TYPES:	D	L	EP	R	F
Direct Indicators of Function Inlet/Outlet Class	perennial inlet.	no outlet	21				21
Nested Piezometer Data	• recharge condi	tion	21				21
Relationship to Regional Peizometeric Surface	wetland substra piezometric su	ate elevation below	21				21
Primary Variables • Microrelief of Wetland Surface	. P. I. P. I.		6				-
Microrellet of Wetland Surface	Poorly Develo	pea	3 2 1	3 2	1	3 2	3
	Well Develope	d	2	2	2	2	2
	 Pronounced 		1	1	3	1	1
Inlet/Outlet Class	 Perennial Inlet All Other Class 	/Intermittent Outlet ses	3	0	0	0	3
• pH	• Acid		3	3	3	3	3
	 Circumneutral 		3 2 1 0	3 2	3 2	2	2
	• Alkaline		1	1	1	1	1
	No water prese	ent	0	0	0	0	0
 Surficial Geologic Deposit Un- 	Glacial Till		3	1	1	1	3
der Wetland		lity Stratified Depos-	2	2	2	2	2
	 its High Permeabilits 	lity Stratified Depos-	1	3	. 3	3	1
Surface Water Level Fluctuation	High Fluctuation	on	3	3	0	3	3
of the Wetland	 Low Fluctuation 	on	3	3 2	Ö	2	2
	 Never Inundate 	ed	1	1	0	1	1
Wetland Water Regime	Drier: Season	ally Flooded, Tem-	3	3	0	3	3
	porarily Flood	ently Flooded, Inter-	1	1	0	1	1
	mittently Expo	sed, Semiper-	_	_	_	_	_
Soil Type	Gravelly or Sa	ndy Mineral Hydric	3	3	0	3	3
	 Silty or Clavey 	Mineral Hydric	2	2	0	2	2
	 Sapric Histoso Fibric or Hemi 	c Histosol	3 2 1 0	1	0	0	0
		Total Score:	0				1985
		Model Range:	4- 21	4-18	2-12	4-18	4-21
				-0			
	Funct	ional Capacity Index:	To-	0,0			
			Sco	18	12	18	21
			tal Sco re 21	10	12	10	21
			21				
		Index Range:	0.1	0.22-	0.16-	0.22-	0.19
		9	9-	1.0	1.0	1.0	1.0
			1.0				

Note: This model should be applied to both year long and seasonal recharge wetlands.

If the wetland is seasonally fluctuating between recharge and discharge, then reduce the above score by one half (1/2), because the wetland only functions in a recharge mode for roughly half the year.

				WEIGHTS			
VARIABLES	CONDITIONS HGM TYPES:	D	S	L	EP	R	F
Indicators of disfunction	none						
Direct Indicators of Function	no outlet	27	21				30
Primary Variables							
 Inlet/Outlet Class 	 perennial inlet/intermittent outlet 	3	3	0	0	0	3
	intermittent inlet/intermittent outlet	2	2	0	0	0	2
	 no inlet/intermittent outlet 	1	1	0	0	0	1
	non inlet/perennial outlet	1	1	0	0	0	1
	• intermittent inlet/perennial outlet	(1)	0	0	0	0	1
	 perennial inlet/perennial outlet 	1	1	0	0	0	1
Degree of Outlet	• restricted	(3)	0	0	0	0	3
Restriction	• unrestricted	0	0	0	0	0	0
Basin Topographic	• law andians	5	~	0			
Gradient	low gradienthigh gradient	3	1	0	3	3	3
			0				
Wetland Water Regime	 Drier: seasonally flooded, temporarily flooded, saturated 	3	(3)	3	0	3	3
	• Wet: permanently flooded, intermit-	1	1	1 .	0	1	1
	tently exposed, semipermanently flooded	0		•		•	*
Surface Water Level	high fluctuation	3	0	3	0	3	2
Fluctuation of the	low fluctuation	(2)	0	2	0	2	3 2
Wetland	• never inundated	2	0	0	0	0	0
W Clarks	level mundated	U	U	U	0	U	U
 Ratio of Wetland Area to 	• large	3	3	3	0	3	3
Watershed Area	• small	0	<u>3</u>	1	0	1	1
Microrelief of Wetland	 pronounced 	(3)	3	3	3	3	3
Surface	well developed	2	2	2	2	2	2
3411400	poorly developed	1	2	1	1	1	1
	absent	0	0	0	0	0	0
• Frequency of Overbank	overbank flooding absent	0	0	0	0	0	0
Flooding	return interval of >5 yrs	0	0	1	0	0	0
Tooding	• return interval of 2-5 yrs	0	0	2	0	2	2
	• return interval of 1-2 yrs	0	0	3	0	3	3
					U	,	,
Vegetation	• high/very high	2	3	3	3	3	3
Density/Dominance	• moderate	2	2	2	2	2	2
	• sparse/low		1	1	1	1	1
	 no vegetation 	0	0	0	0	0	0

2.9.5 Modification of Water Quality

		WEIGHTS					
VARIABLES	CONDITIONS HGM TYPES:	D	S	L	EP	R	F
ndicators of disfunction	none						
Direct Indicators of Function	evidence of sedimentation	18	15	12	12	12	18
Primary Variables		_					
Wetland Land Use	low intensity	(3)	(3)	3	3	3	3
	 moderate intensity 	3	2	2	2	2	2
	high intensity	1	1	1	1	1	1
Degree of Outlet	restricted outflow	3	0	0	0	0	3
Restriction	• no outlet	2	0	0	0	0	2
	 unrestricted outflow 	1	0	0	0	0	1
Inlet/Outlet Type	• no outlet	3	3	0	0	0	3
- med outlet type	• intermittent outlet		2	0	0	0	2
	perennial outlet	2	2	0	0	0	1
Dominant Wetland Type	forested wetland	3	(3)	3	3	3	3
2 Dominant Wenand Type	scrub-shrub	2	2	2	2	2	2
	• emergent wetland	12	2	2 2	2	2	2
	aquatic bed	3 2 2 1	2 2 0	0	0	0	0
	no vegetation	- 0	0	0	0	0	0
Cover Distribution	forming a continuous cover	3	(3)	3	3	3	3
	 growing in small scattered patches 	3	2	2	2	2	2
	• one or more large patches	1	1	1	1	1	1
	 solitary scattered stems 	1	1	1	1	1	1
	 no vegetation 	0	0	0	0	0	0
Soil Type	histosol or clayey soil	3 2	3	3	3	3	3
	• silty soil	2	2	2	0	2	2
	 sandy or gravelly soil 	1	0	1	0	1	1
	Total Score:	14	ū	-	-	_	_
	Model Range:	4-18	3-15	2-12	1-12	2-12	4-1
	Functional Capacity Index:	Total	190	B			
	r unonomin Capacity Index.	Score	=01/20	0.1		- Contract	
	V	18	15	12	12	12	18
	Index Range:	0.22-	0.20-	0.16-	0.8-	0.16-	0.2
		1.0	1.0	1.0	1.0	1.0	1.0

				WEI	GHTS		
VARIABLES	CONDITIONS HGM TYPES:	D	S	L	EP	R	F
Indicators of disfunction	no outlet	0	0		0		0
Direct Indicators of Function	none						
Primary Variables Wetland Land Use	 moderate intensity low intensity high intensity 	3 2 1	3 2	3 2 1	3 2 1	3 2 1	3 2 1
Degree of Outlet Restriction	 unrestricted outflow restricted outflow 	3	0	0	0	0	3
Inlet/Outlet Class	perennial outlet intermittent outlet	3	3	0	0	0	3
Wetland Water Regime	 drier: seasonally flooded, temporarily flooded, saturated wet: permanently flooded, intermittently exposed, semipermanently flooded 	3	1	3	0	3	3
Vegetation Den- sity/Dominance	 high/very high medium sparse/low no vegetation 	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0
Soil Type	mineral hydric soilhistosol	3	1	3	3	3	3
	Total Score:	11	4				
	· Model Range:	5-18	4-15	3-12	2-10	3-12	5-1
	Functional Capacity Index:	Total Score	15	12	10	12	18
	Index Range:	0.27- 1.0	0.26-	0.25- 1.0	0.20- 1.0	0.25- 1.0	0.2

2.9.7 Contribution to Abundance and Diversity of Wetland Vegetation (This model is identical for all HGM types)

VARIABLES	IABLES CONDITIONS			
Indicators of Disfunc	tion	no vegetation		0
Direct Indicators of I	Function	none		
Primary Variables		high diversity		(5)
•	Plant	medium diversity		3
	Species Diversity	low diversity		1
	Vegetation	• high/very high		(5)
	Density/Do	• medium		3
	minance	• sparse/low		1
	Wetland	connected upstream and downstream		(5)
	Juxtapositio	 connected above or below 		3
	n	 other wetlands nearby but not connected (400 m or closer) 		1
		• isolated		0
		- Isolated		15
			Total Score:	
			Model Range:	2-15
			Functional Capacity Index:	= Total Score 15
			Index Range:	0.13-1.0

2.9.8 Contribution to Abundance and Diversity of Wetland Fauna

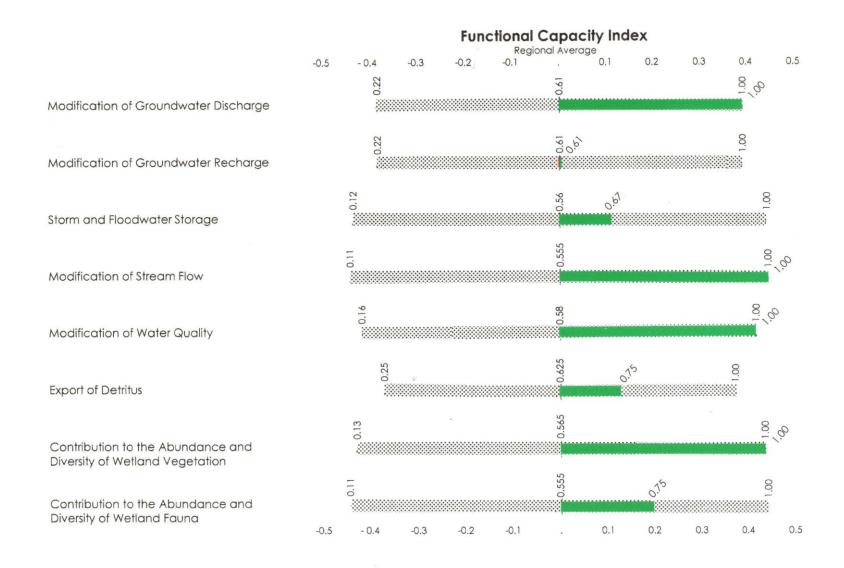
(This model is identical for all HGM types except Slope Wetlands for which "Interspersion of Vegetation Cover and Open Water" does not apply))

VARIABLES	CONDITIONS		WEIGHTS
Direct Indicators of Disfunction	none		
Direct Indicators of Function	none		
Primary Variables			
Watershed Land Use	 low intensity (0-25% urbanized) 		3 2
	 moderate intensity (25-50% urbanized) 		2
	 high intensity (>50% urbanized) 		. 0
Wetland Land Use	• low intensity		3 2 1
Totalia Lano Goo	• moderate intensity		2
	• high intensity		1
Wetland Water Regime	• wet: permanently flooded, intermittently		(3)
Wethand Water Regime	exposed, semipermanently flooded		
	• drier: seasonally flooded, temporarily		
	flooded, saturated		
Microrelief of Wetland Surface	• pronounced		3
• Microreller of Wettand Surface	well developed		2
	poorly developed		(1)
	• absent		2
Number of Wetland types and Relative	• 5 or more types		3 2 1 0
Proportions	• 3-4 types		2
Troportions	• 1-2 types		1
	• no vegetation		0
	• even distribution		3
	 moderately even distribution 		2
	 highly uneven distribution 		3 2 1 0
	• no vegetation		0
Vegetation Interspersion	• high interspersion		3 2
	• moderate interspersion		(2)
	 low interspersion 		1
	• no vegetation		0
Number of Layers and Percent Cover	• 5 or more layers	*	3
	• 3-4 layers		2
	• 1-2 layers		1
	• no vegetation		0
	• layers well developed (>50% cover)		3
	 layers with moderate cover (26-50% 		2
	cover)		1
	 layers poorly distinguishable (<25% 		0
	cover)		0
	 no vegetation 		0

2.9.8 Contribution to Abundance and Diversity of Wetland Fauna (Continued)

VA	ARIABLES	CONDITIONS		WEIGHTS
	Interspersion of Vegetation Cover and	• 26-75% scattered or peripheral		3
	Open Water	 >75% scattered or peripheral 		2
		< < 25% scattered or peripheral		1
		• 100% cover or open water		
		• no vegetation		0
	Size	• large (>100 acres)		3
		medium (10-100 acres)		2
		• small (< 10 acres)		(1)
	Wetland Juxtaposition	other wetlands within 400 m and		3
	•	connected above or below		
		other wetlands within 400 m but not		1
		connected		
		• wetland isolated		0
		•		31 24
	Slope Wetlands:	All Other HGM Type	s: Total Score:	21 -
	Model Range: 4-33		Model Range:	4-36
Fu	nctional Capacity Index = Total Score 7	4 = 0.73	Functional Capacity Index =	Total Score 31 0.8
	Index Range: 0.12-1.0		Index Range	0.11-1.0

18.1 ac. - 69% of total 21.6 ac. wetlands



WETLAND INVENTORY DATA 40 PEPERSION 13% 3 AL

Project Number: YORKTOWL	Date:	
Wetland Number: 5M-Z Aerial Photo Numbers:	* WETLAND CLASSES COMPRIZING LES 25% OF TOTAL WETLAND AREA AL	is this
USGS Quadrangle: MOHEMAH LAKE & OSSIMIN Field Investigators: BD	(G. ASSESSED SEPARATELY	
Field Investigators:		

PART 1 - CHARACTERIZATION of WETLAND

SURFA	CE WATER FLOW VECT	rors	PLANT	r species
Condition	Percent/Acreage 13%	Depressional DS Slope Flat S Extensive Peatland Lacustrine Fringe S Riverine S D	PLANT RED MARIE AMBRICAN ELM MULTIFLORA BOSE SMOOTH ALDETE BUTBRINGT HICKORY GREEN ASH TULIF POPLAR JAPANISH BARBURY PHIZAM SPHAGNUM MOSS HORNBURM SWEET BIRCH HIGHBUSH BLUERODRY RIVER EIRCH	SPECIES
	VEGETATION TYPES	5	WINTERBETTEY PUSSY WILLOW WINGED EUDNYMUS AMERICAN BETCH	
Type Forested Wetland Evergreen Needle-leaved Deciduous Broad-leaved Needle-leaved Scrub Shrub Evergreen Broad-leaved Needle-leaved Deciduous Broad-leaved Needle-leaved Emergent Wetland Persistent Non-persistent Aquatic Bed	50% 45%	SOIL TYPES Histosol Fibric Hemic Sapric Mineral Hydric Soil Gravelly Sandy Silty Clayey GEOLOGY Surficial:	CHENTMAS FEELI CHENTMAS BUSH CHENTMAS CHENT CHENTMAS CHENTMAS CHENTMAS CHENTM	COM Common OCC Occasional C Canopy S Sapling TS Tall Shrub H Herb
Total	100	Bedrock:	PRE-EMP	TIVE STATUS
Comments:			Public ownership Wildlife management area Fisheries management area Designated State or Federal protected wetla	Documented habitat fo state or federal listed species Regionally scarce wetland category Historic/archaeologic area

WETLAND INVENTORY DATA (continued)

PART 2 - CHARACTERIZATION of MODEL VARIABLES

LANDSCAPE VARIABLES	Microrelief of Wetland Surface:	Number of Towns & Publish P
Size: Small (<10 acres) Medium (10-100 acres) Large (>100 acres)	Pronounced >45 cm Well Developed 15-45 cm Poorly Developed <15 cm Absent Inlet/Outlet Class:	Number of Types & Relative Proportions: Number of Types Evenness of Distribution Actual # Even Distribution Actual # Moderately Even Distribution Highly Uneven Distribution
Wetland Juxtaposition: Connected Upstream and Downstream Only Connected Above Only Connected Below Other Wetlands Nearby but not Connected Wetlands Nearby but not Connected Wetlands Prequency: Natural; Predictable Frequency Natural; Sporadic Frequency Human-caused; Predictable Human-caused; Sporadic Rare Event No Evidence Regional Scarcity: Not Scarce (>5% of total wetland area of region) Scarce (<5% of total wetland area of region) Watershed Land Use: > 50% urbanized 25-50% urbanized 0-25% urbanized HYDROLOGIC VARIABLES	No Inter/No Outlet No Inter/Intermittent Outlet No Inter/Intermittent Outlet Intermittent Inter/No Outlet Intermittent Inter/Intermittent Outlet Intermittent Inter/Intermittent Outlet Perennial Inter/No Outlet Perennial Inter/No Outlet Perennial Inter/Perennial Outlet Perennial Inter/Perennial Outlet Perennial Inter/Perennial Outlet Perennial Inter/Perennial Outlet Nested Plexometer Data: Recharge Discharge Discharge Horizontal Flow Not Available Relationship of Wetlands' Substrate Elevation to Regional Plexometric Surface: Piez. Surface Above or at Substrate elev. Piez. Surface Above or at Substrate elev. Not Available Evidence of Sedimentation: No Evidence Observed Sediment Observed on Wetland Substrate	Vegetation Density/Dominance: Sparse (0-20%) Low Density (20-40%) Medium Density (40-60%) High Density (60-80%) Very High Density (80-100%) Vegetative Interspersion: High (small groupings, diverse and interspersed (10 moderate (broken irregular rings) Low (large patches, concentric rings) Number of Layers % Cover (10 moderate (broken irregular rings) Sumber of Layers % Cover (10 moderate (broken irregular rings) 1
Surface Water Level Fluctuation of Wetland: High Fluctuation Low Fluctuation Never Inundated Frequency of Overbank Flooding: Return Interval > 5 yrs. Return Interval 2-5 yrs.	Fluvaquent Soits Evidence of Seeps and Springs: No Seeps or Springs Seeps Observed Perennial Spring Intermittent Spring	Plant Species Diversity: Low 1-2 plots sampled Medium 3-4 plots sampled High 5 or more plots sampled
Return Interval 1-2 yrs. No Overbank Flooding pH: Acid <5.5 Circumneutral 5.5-7.4 Alkaline >7.4 No Water Surficial Geologic Deposit Under Wetland Low Permeability Stratified Deposits High Permeability Stratified Deposits Glacial Till Vetland Land Use: High Intensity (ie. agriculture) Moderate Intensity (ie. forestry) Low Intensity (ie. open space) Vetland Water Regime: Wet: Perm Flooded, Intermittently Exposed, Semiperm. Flooded Drier: Seasonally Flooded, Temporarily Flooded, Saturated asin Topographic Gradient: High Gradient >2% Low Gradient <2% Low Gradient <2% egree of Outlet Restriction: Rastricted Outflow Unrestricted Outflow No Outflow atio of Wetland Area to Watershed Area:	Soil Lacking: Histosol:	Proportion of Animal Food Plants: Low (5-25% cover) Medium (25-50% cover) High (>50% cover)
High >10%		

Modification of Ground Water Discharge 2.9.1

SM-Z RIPELINE 18 ac (69%)

* SLOPE 5 ac (13%)

* DEPRESSION 3 ac (13%)

* WETLAND CLASSES COMPRISING LESS THAN

TEE 25% OF WETLAND AREA ARE NOT ASSESSED

SEPARATEUX.

		26	THERED		
		WEIGHTS			
VARIABLES	CONDITIONS HGM TYPES:	D	S	B	E
Indicators of Disfunction Inlet/Outlet Class	perennial inlet/no outlet	0	^	-	
	perennal interno outlet	0	0	0	0
Nested Piezometer Data	 recharge condition 	0	0	0 .	0
 Relationship to Regional Piezo- metric Surface 	 wetland substrate elevation above piezometric surface 	0	0	0	0
Direct Indicators of					
Function • Presence of Springs and Seeps	 evidence of perennial seeps or springs 	18	15	13	18
Nested Piezometer Data	discharge condition	18	15	15	18
 Relationship to Regional Peizometeric Surface 	wetland substrate elevation below piezometric surface	18	15 ·	15	18
Inlet/Outlet Class	• no inlet/perennial outlet	18	15	15	18
Primary Variables					
 Microrelief of 	• pronounced	3	3	3	2
Wetland Surface	well developed	2	2	2	3 2
*	 poorly developed 	1	ī	1	1
	• absent	0	0	Ô	Ô
Inlet/Outlet Class	perennial inlet/perennial outlet	3	3	0	2
	 intermittent inlet/perennial outlet 	2	2	0	3 2
	 all other classes 	ō	Õ	0	ő
• pH	• alkaline	3	3	3	3
	• circumneutral	2	2	2	2
	• acid	ō	ō	Õ	ō
	no water present	0	ŏ	Ö	0
 Surficial Geologic 	high permeability stratified deposits	3	3	3	3
Deposit Under	 low permeability stratified deposits 	2	3 2 .	2	3 2
Wetland	• glacial till	1	1	1	1
·				- 10	
Wetland Water Regime	 wet; permanently flooded, intermittently exposed, semipermanently flooded 	3	0	3	3
	 drier; seasonally flooded, temporarily flooded, saturated 	1	0	1	1

		AND THE RESERVE OF THE PERSON	WEI	GHTS	
VARIABLES	CONDITIONS HGM TYPES:	D	S	R	E
Soil Type	• histosol	3	3	3	3
	 mineral hydric soil 	1	1	1	1
		-	-	-	-
	Total Score:				
	Model Range:	3-18	2-15	3-15	3-18
	Functional Capacity Index:	Total			
	4	Score	_	15 1	.0_
	:	18	15	15	18
	Index Range:	0.19-1.0	0.16-	0.22-	0.19
			1.0	1.0	1.0

Note: This model can be applied to both year long and seasonal discharge wetlands.

If the wetland is seasonally fluctuating between recharge and discharge, then reduce the above score by one half (1/2), because the wetland only functions in a discharge mode for roughly half the year.

2.9.2 Modification of Ground Water Recharge

					WEIGH	ITS	
VARIABLES	CONDITIONS HGM TYPES:		D	L	EP	R	F
Indicators of Disfunction				A CONTRACTOR OF THE PARTY OF TH		5-W-121-30-31	
Inlet/Outlet Class	no inlet/perent tent inlet/perent	nial outlet; intermit- nnial outlet	0				0
Nested Piezometer Data	discharge cond	lition	0	0	0	0	0
 Relationship to Regional Piezo- metric Surface 	 wetland substr or at piezomet 	ate elevation above ric surface	0	0	0	0	0
Presence of Seeps and Springs	• presence of se	eps or springs	0	0	0	0	0

				WEIG	HTS	
VARIABLES	CONDITIONS HGM TYPES	: D	L	EP	R	F
Direct Indicators of Function Inlet/Outlet Class	perennial inlet/no outlet	21				21
 Nested Piezometer Data 	 recharge condition 	21				21
Relationship to Regional Peizometeric Surface	 wetland substrate elevation below piezometric surface 	21				21
Primary Variables Microrelief of Wetland Surface	 Poorly Developed Absent Well Developed Pronounced 	3 3 2 1	3 3 2 1	1 1 2 3	3 3 22	3 3 2
Inlet/Outlet Class	Perennial Inlet/Intermittent Outlet All Other Classes	3 0	0	0	0	3 0
• рН	Acid Circumneutral Alkaline No water present	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0
 Surficial Geologic Deposit Under Wetland 	Glacial Till Low Permeability Stratified Deposits	3 2	. 2	1 2	2	3 2
	 High Permeability Stratified Deposits 	1	3	3	3	1
Surface Water Level Fluctuation of the Wetland	High Fluctuation Low Fluctuation Never Inundated	3 2 1	3 2 1	0 0 0	3 2	3 2 1
Wetland Water Regime	Drier: Seasonally Flooded, Temporarily Flooded, Saturated	3	3	0	3	3
	• Wet: Permanently Flooded, Intermittently Exposed, Semipermanently Flooded	1	1	0	1_	1_
Soil Type	 Gravelly or Sandy Mineral Hydric Silty or Clayey Mineral Hydric Sapric Histosol Fibric or Hemic Histosol 	3 2 1 0	3 2 1 0	0 0 0 3	3 2 0	3 2 1 0
	Total Score:				11	
	Model Range:	4- 21	4-18	2-12	4-18	4-21
	Functional Capacity Index:	To- tal Sco re 21	18	12	118	21
	Index Range:	0.1 9- 1.0	0.22- 1.0	0.16- 1.0	0.22- 1.0	0.19-

Note: This model should be applied to both year long and seasonal recharge wetlands.

If the wetland is seasonally fluctuating between recharge and discharge, then reduce the above score by one half (1/2), because the wetland only functions in a recharge mode for roughly half the year.

				WE	IGHTS		
VARIABLES	CONDITIONS HGM TYPES:	D	S	L	EP	R	F
Indicators of disfunction	none						
Direct Indicators of Function	no outlet	27	21				30
Primary Variables		59 () (Med. (III)					
 Inlet/Outlet Class 	 perennial inlet/intermittent outlet 	3	3	0	0	0	3
	intermittent inlet/intermittent outlet	2	.2	0	0	0	2
	 no inlet/intermittent outlet 	1	1	0	0	0	1
	 non inlet/perennial outlet 	1	1	0	0	0	1
	 intermittent inlet/perennial outlet 	1	1	0	0	0	1
	 perennial inlet/perennial outlet 	1	1	0	0	0	1
Degree of Outlet	• restricted	3	0	0	0	0	3
Restriction	• unrestricted	0	0	0	0	0	0
Basin Topographic	low gradient	3	3	0	3	3	3
Gradient	• high gradient	1	1	0	0	0	1
• Wetland Water Regime	Drier: seasonally flooded, temporarily flooded, saturated	3	3	3	0	3	3
	• Wet: permanently flooded, intermit-	1	1	1 .	0	1	1
	tently exposed, semipermanently flooded						
Surface Water Level	 high fluctuation 	3	0	3	0	3	3
Fluctuation of the	low fluctuation	2	0	2	0	(2)	2
Wetland	• never inundated	0	0	0	0	0	0
Ratio of Wetland Area to	• large	3	3	3	0	3	3
Watershed Area	• small	1	1	1	0	1	1
Microrelief of Wetland	 pronounced 	3	3	3	3	3	3
Surface	well developed	2	2	2	2	(2)	2
	poorly developed	1	1	1	1	1	1
	• absent	0	Ô	0	0	Ô	0
• Frequency of Overbank	 overbank flooding absent 	0	0	0	0	0	0
Flooding	• return interval of >5 yrs	0	0	1	0	1	1
	• return interval of 2-5 yrs	0	0	2	0	2	2
	• return interval of 1-2 yrs	0	0	3	0	3	3
 Vegetation 	high/very high	3	3	3	3	(3)	3
Density/Dominance	• moderate	2	2	2	2	2	2
	• sparse/low	1	1	1	1	1	1
•	- Sparscriow						1

2.9.3 Storm and Flood-Water Storage (Continued)

					WEI	GHTS		
VARIABLES	CONDITIONS HGM TYPES:		D	S	L	EP	R	F
Dead Woody Material	abundant		3	3	3	3	3	3
	 moderately abunda 	ant	2	2	2	3 2	2	2
	• sparse		1	1	1	1	2	1
	• absent		0	0	0	0	0	0
			-	-		_	16	_
		Total Score:						
		Model Range:	4-27	4-21	2-21	0-12	3-24	4-30
	Funct	ional Capacity Index:	Total				16 =	0.67
			Score 27	21	21	12	24	30
		Index Range:	0.15-	0.19-	0.09-	0-1.0	0.12-	0.13

2.9.4 Modification of Stream Flow

(This model is identical for all HGM types)

	VARIAB	LES	CONDITIONS			WEIGHTS	
Indicators	of Disfuncti	on	no outlet	no outlet			0
Direct Ind	icators of Fu	inction	none				
Primary V	'ariables						
Storm and Function	Flood Wate Model Scor	r Storage	Modific Discharge	ation of Gro Function M	undwater fodel Score		
High"	3	x	High	3 .	=	0	
Mod	2	X	High	3	=	6 3	
wow	1	X	High	3	=	3	
ligh	3	X	Mod	2	=	6	
Mod	2	X	Mod	2	=	2 3	
wow	1	X	Mod	2	=	2	
High Mod	3	X	Low	1	=	2	
Low	1	X X	Low	1	=	ī	
					Total Score:		
•					Model Range:	1-9	
				Functiona	al Capacity Index:	Total Score 9 = 1.0	
					Index Range:	0.11-1.0	

^{*}High = FCI of 0.67-1.0, Mod = FCI of 0.34-0.66, Low = FCI of 0-0.33 for the Storm and Flood Water Storage and Modification of Ground Water Discharge Function Model Scores.

				WE	IGHTS		
VARIABLES	CONDITIONS HGM TYPES:	D	S	L	EP	R	F
ndicators of disfunction	none						
Direct Indicators of Function	evidence of sedimentation	18	15	12	12	12	18
Primary Variables				-			
Wetland Land Use	 low intensity 	3	3	3	3	3	2
	 moderate intensity 	2	2	2	2		3
	• high intensity	1	1	1	1	2	2
Degree of Outlet						0	
Restriction	• restricted outflow	3	0	0	0	0	3
Restriction	no outlet unrestricted outflow	2	0	0	0	0	2
	 unrestricted outflow 	1	0	0	0	0	1
 Inlet/Outlet Type 	• no outlet	3	3	0	0	0	3
	• intermittent outlet	2	2	0	0	0	2
	• perennial outlet	1	1	0	0	0	1
Dominant Wetland Type	forested wetland	3	3	3	2	3	2
-,,-	scrub-shrub	2	2	2	2		3
	emergent wetland	2	2	2	2	2 2	2
	aquatic bed	1	0	0			2
	• no vegetation	.0	0	0	. 0	0	0
Cover Distribution	• forming a continuous cover		•			•	
Joseph Distribution	growing in small scattered patches	3 2	3	3	3	3.	3
	one or more large patches	1	2	2	2	2	2
	solitary scattered stems	1	1	1	1	1	1
*	no vegetation	0	0	1	0	0	0
- 0 1 0						0	0
Soil Type	 histosol or clayey soil 	3	3	3	3	3	3
	• silty soil	2	2	2	0	2	2
	 sandy or gravelly soil 	1	1	1	0	1	1
		_	-		=	12	-
	Total Score:					1-	
	Model Range:	4-18	3-15	2-12	1-12	2-12	4-18
	Functional Capacity Index:	Total Score 18	- 15	12	12	12 12	18
	Index Range:	0.22-	0.20-	0.16- 1.0	0.8-	0.16- 1.0	0.22

2.9.6 Export of Detritus

				WEIGHTS					
VARIABLES	CONDITIONS	HGM TYPES:	D	S	L	EP	R	F	
Indicators of disfunction	no outlet		0	0		0		0	
Direct Indicators of Function	none								
Primary Variables									
Wetland Land Use	 moderate intensity 		3	3	3	3	3	3	
	• low intensity		2	2	2	2	2	2	
	 high intensity 		1	1	1	1	1	1	
Degree of Outlet	 unrestricted outfloy 	w	3	0	0	0	0	3	
Restriction	 restricted outflow 		1	0	0	0	0	1	
Inlet/Outlet Class	• perennial outlet		3	3	0	0	0	3	
	• intermittent outlet		1	1	0	0	0	1	
Wetland Water Regime	• drier: seasonally floor temporarily floor		3	3	3	0	3	3	
	 wet: permanently intermittently exsemipermanently 	flooded, rposed,	1	1	1	1	1	1	
 Vegetation Den- 	 high/very high 		3	3	3	3	3	3	
sity/Dominance	• medium		2	2	2	2	2	2	
	 sparse/low 		1	1	1	1	1	1	
	 no vegetation 		0	0	0	0	0	0	
Soil Type	• mineral hydric soil		3	3	3	3	3	3	
	• histosol		1	1	1	1	0	1	
			-	-	-	-	9	******	
		Total Score:							
		- Model Range:	5-18	4-15	3-12	2-10	3-12	5-1	
	Function	onal Capacity Index:	Total Score 18	- 15	12	10	$\frac{9}{12} = 0$,15 18	
		Index Range:	0.27-	0.26-	0.25- 1.0	0.20-	0.25-	0.2	

2.9.7 Contribution to Abundance and Diversity of Wetland Vegetation (This model is identical for all HGM types)

VARIABLES		CONDITIONS		WEIGHTS
Indicators of Disfunc	ction	no vegetation		0
Direct Indicators of I	Function	none		
Primary Variables		high diversity		3
•	Plant	medium diversity		
	Species Diversity	low diversity		1
•	Vegetation	• high/very high		(3)
	Density/Do	• medium		3
	minance	• sparse/low		1
	Wetland	 connected upstream and downstream 		3
	Juxtapositio	 connected above or below 		3
	n	 other wetlands nearby but not connected (400 m or closer) 		1
		• isolated		0
			Total Score:	
			Model Range:	2-15
•			Functional Capacity Index:	= Total Score 15
			Index Range:	0.13-1.0

2.9.8 Contribution to Abundance and Diversity of Wetland Fauna

(This model is identical for all HGM types except Slope Wetlands for which "Interspersion of Vegetation Cover and Open Water" does not apply))

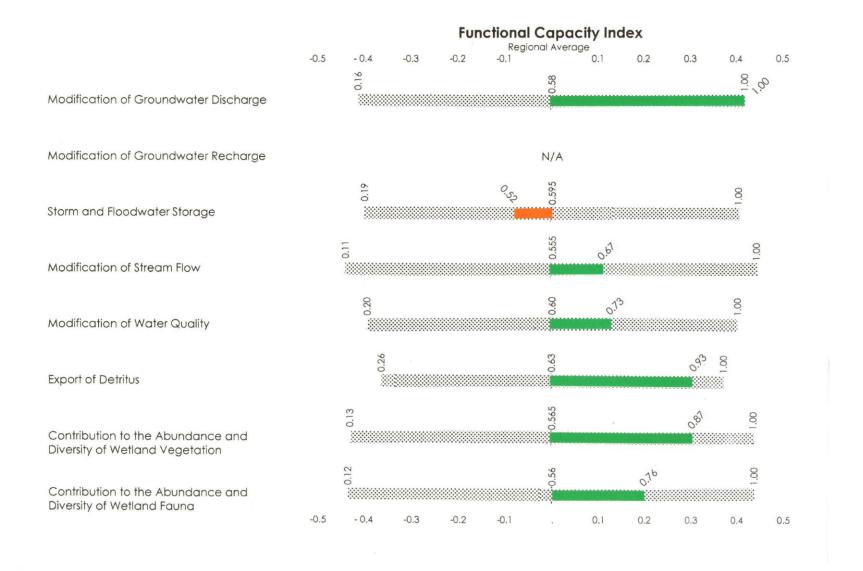
VARIABLES	CONDITIONS		WEIGHTS
Direct Indicators of Disfunction	none		
Direct Indicators of Function	none	A STATE OF THE STA	
Primary Variables			
Watershed Land Use	 low intensity (0-25% urbanized) 		3
	 moderate intensity (25-50% urbanized) 		0
	 high intensity (>50% urbanized) 		. 1
Wetland Land Use	low intensity		3
Titalia Lana Osc	• moderate intensity		2
	• high intensity		1
Wetland Water Regime	• wet: permanently flooded, intermittently		3
	exposed, semipermanently flooded		
	• drier: seasonally flooded, temporarily		
	flooded, saturated		0
Microrelief of Wetland Surface	 pronounced 		3
Wilciotener of Wedana Surface	• well developed		3
	poorly developed		1
*	• absent		0
Number of Wetland types and Relative	• 5 or more types		3
Proportions	• 3-4 types		2
rioportions	• 1-2 types		. 1
	• no vegetation		0
	• even distribution		3
	moderately even distribution		2
	 highly uneven distribution 		1
	• no vegetation		0
Vegetation Interspersion	• high interspersion		3
	• moderate interspersion		0
	• low interspersion		1
	• no vegetation		0
Number of Layers and Percent Cover	• 5 or more layers		3
	• 3-4 layers		2
	• 1-2 layers		1
	• no vegetation		0
	• layers well developed (>50% cover)		3
	• layers with moderate cover (26-50%		2
	cover)		1
	 layers poorly distinguishable (<25% cover) 		0
	• no vegetation		0
	and vegetation		

2.9.8 Contribution to Abundance and Diversity of Wetland Fauna (Continued)

VARIABLES	CONDITIONS		WEIGHTS
Interspersion of Vegetation Cover and	• 26-75% scattered or peripheral		3
Open Water	 >75% scattered or peripheral 		2
	< <25% scattered or peripheral		1
	• 100% cover or open water		0
	• no vegetation		0
• Size	• large (>100 acres)		3
	 medium (10-100 acres) 		3
	• small (< 10 acres)		7
Wetland Juxtaposition	other wetlands within 400 m and		3
	connected above or below		
	other wetlands within 400 m but not		1
	onnected wetland isolated		0
	• wetland isolated		U
			27
Slope Wetlands:	All Other HGM Types:	Total Score:	
Model Range: 4-33		Model Range:	4-36
Functional Capacity Index = Total Score		Functional Capacity	Total Score 27 = Di
33	* *	Index =	36
Index Range: 0.12-1.0		Index Range	0.11-1.0

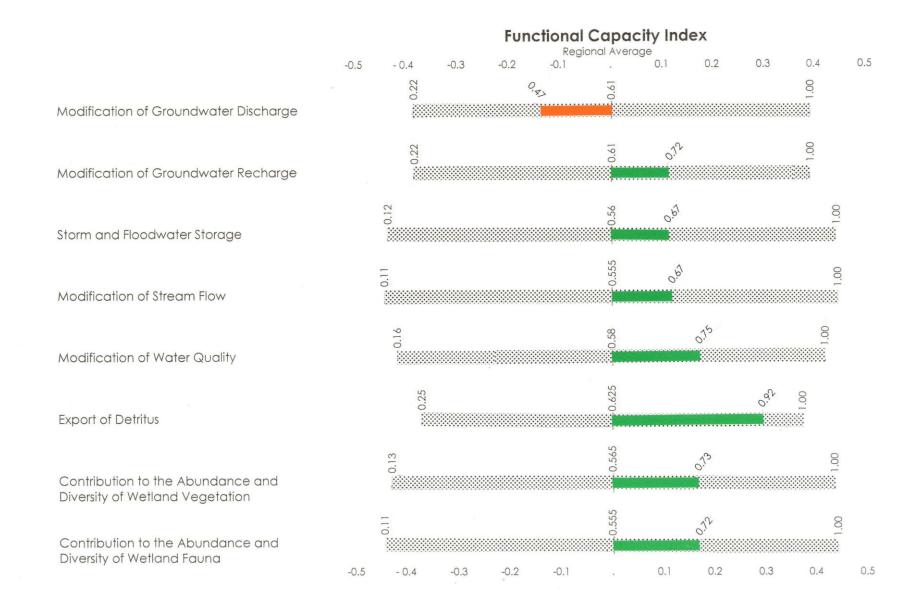
Sloping Wetland

1.6 ac. - 47% of total 3.4 ac. wetlands



Study Area: CRN-2

1.8 ac. - 53% of total 3.4 ac. wetlands



WETLAND INVENTORY DATA PINER 1.80ec = 54% SLOPE 1.55 = 46%

Project Number: YORKTOWN	Date: Total 3.36 ac
Wetland Number: <u>CPN-2</u>	
USGS Quadrangle: MONEGAN LAKE	
Field Investigators: BD	

PART 1 - CHARACTERIZATION of WETLAND

SURFA	CE WATER FLOW VEC	TORS	PLAN	T SPECIES
Condition	Percent/Acreage	Depressional Slope Flat Extensive Peatland Lacustrine	PHEAGMITES JAPANESE BAPRISPES WINGED EVONYMUS HONEY SIXKLE PRIVET FLACK BONDY TOLIP POPLAR WHITE ASY JAPANESE POSE RED MAPLE SWIET BIRCH	** 1 2 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	54%	Fringe Riverine	PUSH SPICE BUSH L/LITTER BETEY ROYAL FERN CHESTMAS FEEN	
*	VEGETATION TYPES		SPHAGNUM MOSS	
Type	Percent/Acreage		DELECTION BLUEBORRY	
Forested Wetland Evergreen Needle-leaved Deciduous Broad-leaved Needle-leaved Scrub Shrub Evergreen Broad-leaved Needle-leaved Deciduous Broad-leaved Needle-leaved Emergent Wetland Persistent Non-persistent	40%	Histosol Fibric Hemic Sapric Mineral Hydric Soil Gravelly Clayey GEOLOGY Surficial:	OW Obligate Wetland FW Facultative Wetland F Facultative Upland OU Obligate Upland DOM Dominant	COM Common OCC Occasional C Canopy S Sapling TS Tall Shrub LS Low Shrub
Aquatic Bed	THE PERSON	Bedrock:	DOM Dominate	H Herb
Total			PRE-EMP	TIVE STATUS
Comments:			Public ownership Wildlife management area Fisheries management area Designated State or Federal protected wetla	Documented habitat fo state or federal listed species Regionally scarce wetland category Historic/archaeologic area

WETLAND INVENTORY DATA (continued)

PART 2 - CHARACTERIZATION of MODEL VARIABLES

LANDSCARE VARIABLES	Microrellel of Welland Surface:	1
Size: Small (<10 acres) Medium (10-100 acres) Large (>100 acres) Wetland Juxtaposition:	Pronounced >45 cm Well Developed 15-45 cm Poorly Developed <15 cm Absent Inlet/Outlet Class:	Number of Types & Relative Proportions: Number of Types
Connected Upstream and Downstream Only Connected Above Only Connected Below Other Wetlands Nearby but not Connected Wetland Isolated Fire Occurence and Frequency: Natural; Predictable Frequency Natural; Sporadic Frequency Human-caused; Predictable Human-caused; Sporadic Rare Event No Evidence Regional Scarcity: Not Scarce (<5% of total wetland area of region) Scarce (<5% of total wetland area of region) Watershed Land Use: > 50% urbanized 25-50% urbanized 0-25% urbanized HYDROLOGIC VARIABLES	No Inter/No Outlet No Inter/Intermittent Outlet No Inter/Intermittent Outlet Intermittent Inter/No Outlet Intermittent Inter/Intermittent Outlet Intermittent Inter/Intermittent Outlet Perennial Inter/Intermittent Outlet Perennial Inter/Intermittent Outlet Perennial Inter/Intermittent Outlet Perennial Inter/Perennial Outlet Perennial Inter/Perennial Outlet Nested Plezometer Data: Recharge Discharge Horizontal Flow Not Available Relationship of Wetlands' Substrate Elevation to Regional Plezometric Surface: Piez. Surface Above or at Substrate elev. Piez. Surface below Substrate elev. Not Available Evidence of Sedimentation: No Evidence Observed Sediment Observed Sediment Observed	Vegetation Density/Dominance: Sparse
Surface Water Level Fluctuation of Wetland: High Fluctuation Low Fluctuation Never Inundated Frequency of Overbank Flooding: Return Interval > 5 yrs.	Fluvaquent Soits Evidence of Seeps and Springs: No Seeps or Springs Seeps Observed Perennial Spring Intermittent Spring	9. sapling: 10. tree: Plant Species Diversity: Low 1-2 plots sampled Medium 3-4 plots sampled High 5 or more plots sampled
Return Interval 2-5 yrs. Return Interval 1-2 yrs. No Overbank Flooding	SOIL VARIABLES Soil Lacking:	Proportion of Animal Food Plants: Low (5-25% cover) Medium (25-50% cover)
pH: Acid <5.5 Circumneutral 5.5-7.4 Alkaline >7.4 No Water Surficial Geologic Deposit Under Wetland Low Permeability Stratified Deposits High Permeability Stratified Deposits Glacial Till Wetland Land Use:	Histosol: Fibric Hemic Sapric Mineral Hydric Soil: Gravelly Sandy Siity Clayey	High (>50% cover) Cover Distribution: Continuous Cover Small Scattered Patches 1 or More Large Patches; Parts of Site Open Solitary, Scattered Stems Dead Woody Material: Abrundant (>50 of wetland surface)
High Intensity (ie. agriculture) Moderate Intensity (ie. forestry) Low Intensity (ie. open space)	VEGETATION VARIABLES Vegetation Lacking:	Moderately Abrundant (25-50% of surface) Low Abrundance (0-25% of surface) Interspersion of Cover and Open Water:
Wetland Water Regime: Wet: Perm Flooded, Intermittently Exposed, Semiperm. Flooded Drier: Seasonally Flooded, Temporarily Flooded, Saturated Basin Topographic Gradient:	Dominant Wetland Type: Forested - Evergreen - Needle-leaved Forested - Deciduous - Broad-leaved Forested - Deciduous - Needle-leaved Scrub Shrub - Evergreen - Broad-leaved	26-75% Scattered or Peripheral >75% Scattered or Peripheral <25% Scattered or Peripheral 100% Cover or Open Water Stream Sinuosity: Highly Convoluted (index 1.50 or >)
High Gradient >2% Low Gradient <2% Degree of Outlet Restriction: Restricted Outflow Unrestricted Outflow No Outflow	Scrub Shrub - Evergreen - Needle-leaved Scrub Shrub - Deciduous - Broad-leaved Scrub Shrub - Deciduous - Needle-leaved Emergent - Persistent Emergent - Non-persistent Aquatic Bed	Moderately Convoluted (index 1.25-1.50) Straight/Slightly Irreg. (index) 1.10-1.25 Presence of Islands: Several to Many One or Few Absent
Ratio of Wetland Area to Watershed Area: High >10%		Ausent Ausent

CRH-Z RIVERINE 1,80 ac (54%) 5COTE 1.55 ac (46%) Total 3,36 ac

2.9.1 Modification of Ground Water Discharge

				WEIGHTS					
VARIABLES	CONDITIONS HGM TYPES	D	S	R	E				
Indicators of Disfunction Inlet/Outlet Class	perennial inlet/no outlet	0	0	0	0				
 Nested Piezometer Data 	• recharge condition	0	0	0	0				
 Relationship to Regional Piezo- metric Surface 	 wetland substrate elevation above piezometric surface 	0	0	0	0				
Direct Indicators of Function Presence of Springs and Seeps	 evidence of perennial seeps or springs 	18	15	15	18				
Nested Piezometer Data	discharge condition	18	15	15	18				
 Relationship to Regional Peizometeric Surface 	wetland substrate elevation below piezometric surface	18	15	15	18				
• Inlet/Outlet Class	 no inlet/perennial outlet 	18	15	15	18				
Primary Variables Microrelief of Wetland Surface	 pronounced well developed poorly developed absent 	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0				
Inlet/Outlet Class	 perennial inlet/perennial outlet intermittent inlet/perennial outlet all other classes 	3 2 0	3 2 0	0 0	3 2 0				
• pH	alkaline circumneutral acid no water present	3 2 0 0	3 2 0 0	3 0 0	3 2 0 0				
 Surficial Geologic Deposit Under Wetland 	 high permeability stratified deposits low permeability stratified deposits glacial till 	3 2 1	3 2 1	3 2	3 2 1				
• Wetland Water Regime	 wet; permanently flooded, intermittently exposed, semipermanently flooded 	3	0	3	3				
	 drier; seasonally flooded, temporarily flooded, saturated 	1	0		1				

		WEIGHTS					
VARIABLES	CONDITIONS HGM TYPES:	D	S	R	E		
Soil Type	histosol	3	3	3	3		
	mineral hydric soil	1	1	1	1		
	:	-	-	7	-		
	Total Score:			,			
	Model Range:	3-18	2-15	3-15	3-18		
	Functional Capacity Index:	Total			11		
		Score	15=1	7=0	14.0		
	:	18	15	15	18		
	Index Range:	0.19-1.0	0.16-	0.22-	0.19		
	Yes a second second		1.0	1.0	1.0		

Note: This model can be applied to both year long and seasonal discharge wetlands.

If the wetland is seasonally fluctuating between recharge and discharge, then reduce the above score by one half (1/2), because the wetland only functions in a discharge mode for roughly half the year.

2.9.2 Modification of Ground Water Recharge

				WEIGHTS					
VARIABLES	CONDITIONS HGM TYPES:		D	L	EP	R	F		
Indicators of Disfunction Inlet/Outlet Class	no inlet/perent tent inlet/perer	nial outlet; intermit-	0				0		
Nested Piezometer Data	discharge conc	lition	0	0	0	0	0		
 Relationship to Regional Piezo- metric Surface 	wetland substr or at piezomet	ate elevation above ric surface	0	0	0	0	0		
Presence of Seeps and Springs	 presence of se 	eps or springs	0	0	0	0	0		

					WEIGH	ITS	
VARIABLES	CONDITIONS	HGM TYPES:	D	L	EP	R	F
Direct Indicators of Function Inlet/Outlet Class	• perennial inlet/	no outlet	21				21
Nested Piezometer Data	• recharge condi	tion	21				21
 Relationship to Regional Peizometeric Surfacé 	wetland substra piezometric sur	ate elevation below rface	21				21
Primary Variables							
Microrelief of Wetland Surface	Poorly Develop Absent	ped	3 2	3 2	1	3	3 2
	Well Develope	d	2	2	1 2	3	2
	 Pronounced 		1	ī	3	1	ĩ
Inlet/Outlet Class	Perennial Inlett All Other Class	/Intermittent Outlet	3	0	0	0	3
• pH	• Acid		3	3	3	3	3
- P	• Circumneutral		3 2 1	2	2	(2)	3 2 1
	 Alkaline 		1	1	1	(2)	1
	No water prese	ent	0	0	0	0	0
 Surficial Geologic Deposit Under Wetland 	Glacial Till Low Permeabil its	ity Stratified Depos-	3 2	1 2	1 2	1	3 2
		lity Stratified Depos-	1	3	3	3	1
Surface Water Level Fluctuation	High Fluctuation	n	3	3	0	3	3
of the Wetland	 Low Fluctuation 	n	2	2	Ö	3	3 2 1
	 Never Inundate 	d	1	1	0	4	1
• Wetland Water Regime	Drier: Seasona porarily Floode	ally Flooded, Tem-	3	3	0	(3)	3
	 Wet: Permane 	ntly Flooded, Inter-	1	1	0	1	1
	mittently Expor	sed, Semiper- led	_	-			_
Soil Type	Gravelly or Sar	ndy Mineral Hydric Mineral Hydric	3	3 2	0	3 2	3 2
	• Silty or Clayey	Mineral Hydric	2	2	0	2	2
	Fibric or Hemi	c Histosol	0	0	0	0	0
		Total Score:				19	
		Model Range:	4- 21	4-18	2-12	4-18	4-2
	Functi	onal Capacity Index:	To- tal Sco re 21	18	12	13 = 1	21
		Index Range:	0.1 9- 1.0	0.22-	0.16- 1.0	0.22- 1.0	0.19

Note: This model should be applied to both year long and seasonal recharge wetlands.

If the wetland is seasonally fluctuating between recharge and discharge, then reduce the above score by one half (1/2), because the wetland only functions in a recharge mode for roughly half the year.

		WEIGHTS					
VARIABLES	CONDITIONS HGM TYPES:	D	S	L	EP	R	F
ndicators of disfunction	none	101.40					
Direct Indicators of Function	no outlet	27	21				30
Primary Variables							
Inlet/Outlet Class	 perennial inlet/intermittent outlet 	3	3	0	0	0	3
	intermittent inlet/intermittent outlet	2	(2)	0	0	0	2
	 no inlet/intermittent outlet 	1	1	0	0	0	1
	 non inlet/perennial outlet 	1	1	0	0	0	1
	• intermittent inlet/perennial outlet	1	1	0	0	0	1
	 perennial inlet/perennial outlet 	1	1	0	0	0	1
Degree of Outlet	• restricted	3	0	0	0	0	3
Restriction	• unrestricted	0	0	0	0	(O)	0
Noati iction							
Basin Topographic	• low gradient	3	3	0	3	3	3
Basin Topographic Gradient	• high gradient	1	(1)	0	0	(I)	1
Gradient	- mgn gradiem	12	-				
- Wat - 1 Wat - Desires	• Drier: seasonally flooded,	(3)	(3)	3	0	(3)	3
 Wetland Water Regime 	temporarily flooded, saturated	1.50	0	-			
	Wet: permanently flooded, intermit-	1	1	1 .	0	(1)	1
	tently exposed, semipermanently						
	flooded						
a C. C. Wester I and	high fluctuation	3	0	3	0	3	3
Surface Water Level		2	0	2	0	2	2
Fluctuation of the	 low fluctuation never inundated 	(0)	0	0	0	0	0
Wetland	• never inundated	0	0				
Ratio of Wetland Area to	• large	3	3	3	0	3	3
Watershed Area	• small	1	(Î)	1	0	1	1
watershed Area	- Sittati						
Microrelief of Wetland	pronounced	3	3	3	3	3	3
Surface	well developed	2	2	2	2	2	2
Surface	poorly developed	1	1	1	1	1	1
	absent	0	0	0	0	0	0
	- ausein						
Frequency of Overbank	overbank flooding absent	0	0	0	0	0	0
Flooding	• return interval of >5 yrs	0	0	1	0	1	1
Flooding	• return interval of 2-5 yrs	0	0	2	0	2	2
	• return interval of 1-2 yrs	0	90	3	0	(3)	3
	- iouin moral of 1 a jio		6				
 Vegetation 	• high/very high	3	3	3	3	3	3
Density/Dominance	• moderate	2	2	2	2	2	2
Delisity/Dollinance	• sparse/low	1	1	1	1	1	1
	• no vegetation	0	0	0	0	0	0
	- 110 vegetation	0	0	-	2000	11000	

2.9.3 Storm and Flood-Water Storage (Continued)

	CONDITIONS HGM TYPES:		WEIGHTS					
VARIABLES			S	L	EP	R	F	
Dead Woody Material	abundant moderately abundant sparse absent	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0	
	Total Score	- : -	11		_	16	-	
	Model Range Functional Capacity Index		4-21	2-21	0-12	3-24	4-30	
	runctional Capacity index	Score 27	$\frac{11}{21} = 1$	21	12	1 <u>C</u> =	30	
	Index Range	: 0.15- 1.0	0.19- 1.0	0.09- 1.0	0-1.0	0.12- 1.0	0.13	

2.9.4 Modification of Stream Flow

(This model is identical for all HGM types)

	VARIABI	LES		CO	NDITIONS		WEIGHTS
Indicators	of Disfunctio	n	no outlet				0
Direct Ind	icators of Fur	nction	none				
Primary V	ariables						
Storm and Function	Flood Water Model Score	Storage	Modific Discharge	ation of Gro	indwater odel Score		
High Mod Low High Mod Low High Mod	3 2 1 3 2 1 3 2	x x x x x x x	High High Mod Mod Mod Low Low	3 3 3 2 2 2 1 1	= = = = = = = = = = = = = = = = = = = =	963642332	
Low	1	X	Low	1	Total Score:	1	
*					Model Range:	1-9	6-=0.67
				Functiona	I Capacity Index:	Total Score	6/4 = 0.67
					Index Range:	0.11-1.0	

^{*}High = FCI of 0.67-1.0, Mod = FCI of 0.34-0.66, Low = FCI of 0-0.33 for the Storm and Flood Water Storage and Modification of Ground Water Discharge Function Model Scores.

2.9.5 Modification of Water Quality

			WEIGHTS				
VARIABLES	CONDITIONS HGM TYPES:	D	S	L	EP	R	F
Indicators of disfunction	none						
Direct Indicators of Function	evidence of sedimentation	18	15	12	12	12	18
Primary Variables							
Wetland Land Use	 low intensity 	3	3	3	3	(3)	3
	• moderate intensity	2	2	2	2	3	2
	• high intensity	1	1	1	1	1	1
Degree of Outlet	• restricted outflow	3	0	0	0	0	3
Restriction	 no outlet 	2	0	0	0	0	2
110011011011	• unrestricted outflow	1	0	0	0	0	1
Inlet/Outlet Type	• no outlet	3	3	0	0	0	3
- Inco Gallet Type	• intermittent outlet	2		0	0	0	2
	perennial outlet	1	D	0	0	0	1-
Dominant Wetland Type	forested wetland	3	3	3	3	3	3
	scrub-shrub	2	2	2	2	2	2
	emergent wetland	2	2	2	2	2	2
	aquatic bed	1	0	0	0	0	0
	 no vegetation 	- 0	0	0	0	0	0
Cover Distribution	• forming a continuous cover	3	(3)	3	3	3	3
	growing in small scattered patches	2	2	2	2	2	2
	one or more large patches	1	1	1	1	1	1
	 solitary scattered stems 	1	1	1	1	1	1
*	• no vegetation	0	0	0	0	0	0
Soil Type	 histosol or clayey soil 	3	3	3	3	3	3
•	silty soil	2	2	2	0	2	2
	 sandy or gravelly soil 	1	1	1	0	1	1
		-	TE	-	-	9	-
	Total Score:						
	Model Range:	4-18	3-15	2-12	1-12	2-12	4-18
	Functional Capacity Index:	Total Score 18	11/20	12	12	9=0	TS 18
	Index Range:	0.22-	0.20- 1.0	0.16-	0.8-	0.16-	0.22

2.9.6 Export of Detritus

	CONDITIONS HGM TYPES:		WEIGHTS					
VARIABLES			S	L	EP	R	F	
Indicators of disfunction	no outlet	0	0		0		0	
Direct Indicators of Function	none							
Primary Variables								
Wetland Land Use	 moderate intensity 	3	3	3	3	3	3	
	• low intensity	2	2	2	2	2	2	
	• high intensity	1	1	1	1	1	1	
Degree of Outlet	unrestricted outflow	3	0	0	0	0	3	
Restriction	• restricted outflow	1	0	0	0	0	1	
a Yeley(Outlet Class	perennial outlet	3	3	0	0	0	3	
Inlet/Outlet Class	• intermittent outlet	3	3	0	0	0	1	
Wetland Water Regime	drier: seasonally flooded,	3	3	3	0	3	3	
	temporarily flooded, saturated	1	1	1	1	1	1	
	 wet: permanently flooded, intermittently exposed, semipermanently flooded 	•	,				•	
Vegetation Den-	high/very high	3	(3)	3	3	(3)	3	
sity/Dominance	• medium	2	2	2	2	2	2	
Sity/Dominance	• sparse/low	1	1	1	1	1	1	
	no vegetation	0	0	0	0	0	0	
Soil Type	mineral hydric soil	3	3	3	3	3	3	
our Type	• histosol	1	1	1	1	1	1	
		_	17	_	-	π		
	Total Score							
	- Model Range	5-18	4-15	3-12	2-10	3-12	5-18	
	Functional Capacity Index	: Total	0	40		11 40	90	
		Score 18	17 15	12	10	12	18	
	Index Range	: 0.27-	0.26-	0.25-	0.20-	0.25-	0.27	

2.9.7 Contribution to Abundance and Diversity of Wetland Vegetation (This model is identical for all HGM types)

VARIABLES		CONDITIONS		WEIGHTS
Indicators of Disfund	ction	no vegetation		0
Direct Indicators of	Function	none		
Primary Variables		high diversity		5
•	Plant	 medium diversity 		(3)
	Species Diversity	low diversity		(I)
	Vegetation	high/very high		5
	Density/Do	• medium		3
	minance	• sparse/low		1
	Wetland	 connected upstream and downstream 		3
	Juxtapositio	connected above or below		3
	n	other wetlands nearby but not		1
		connected (400 m or closer)		
		• isolated		13
			Total Score:	
			Model Range:	2-15
			Functional Capacity Index:	2-15 = Total 13 Score 15
			Index Range:	0.13-1.0

2.9.8 Contribution to Abundance and Diversity of Wetland Fauna
(This model is identical for all HGM types except Slope Wetlands for which "Interspersion of Vegetation Cover and Open Water" does not apply))

VARIABLES	CONDITIONS	WEIGHTS
Direct Indicators of Disfunction	none	
Direct Indicators of Function	none	
Primary Variables		3
Watershed Land Use	low intensity (0-25% urbanized)	2
	• moderate intensity (25-50% urbanized)	. 1
	• high intensity (>50% urbanized)	
a West and Lond Hop	• low intensity	3
Wetland Land Use	moderate intensity	2
	• high intensity	1
Wetland Water Regime	 wet: permanently flooded, intermittently 	3
	exposed, semipermanently flooded	
	 drier: seasonally flooded, temporarily 	1)
	flooded, saturated	U)
	•	3
 Microrelief of Wetland Surface 	pronounced well developed	2
	poorly developed	1
	absent	0
*	ausein	
 Number of Wetland types and Relative 	• 5 or more types	3 (2) (1) 0
Proportions	• 3-4 types	(2)
Toportions	• 1-2 types	(1)
	• no vegetation	0
	• even distribution	3
	moderately even distribution	3 2 (1)
	highly uneven distribution	(1)
	• no vegetation	0
	a Lish interconnection	3
 Vegetation Interspersion 	 high interspersion moderate interspersion 	3
	low interspersion	1
	• no vegetation	0
		3
 Number of Layers and Percent Cover 	• 5 or more layers	2
	• 3-4 layers	1
	• 1-2 layers	0
	• no vegetation	
	• layers well developed (>50% cover)	3
	• layers with moderate cover (26-50%	2
	cover)	1
	 layers poorly distinguishable (<25% 	0
	cover)	0
	• no vegetation	0

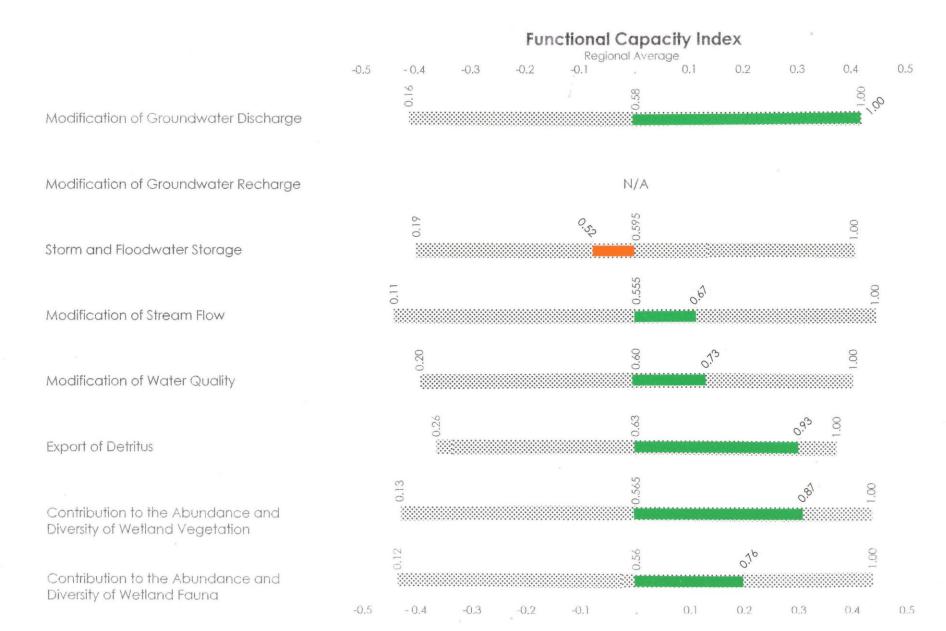
2.9.8 Contribution to Abundance and Diversity of Wetland Fauna (Continued)

VARIABLES	CONDITIONS	WEIGHTS	
Interspersion of Vegetation Cover and	• 26-75% scattered or peripheral	3 2	
Open Water	>75% scattered or peripheral	1	
	• <25% scattered or peripheral	,	
	100% cover or open water no vegetation	1	
	no vegetation		
• Size	• large (>100 acres)	3	
	• medium (10-100 acres)	2	
	• small (< 10 acres)	•	
Wetland Juxtaposition	other wetlands within 400 m and connected above or below	3	
	other wetlands within 400 m but not	1	
	connected		
	wetland isolated	0	
		23 26	
Slope Wetlands:	All Other HGM Types:	Total Score:	
Model Range: 4-33		Model Range: 4-36 Functional Capacity Index = 36	=0,6
Eupotional Capacity Index - Total Coors		Functional Capacity Total Score	
Functional Capacity Index = Total Score 33		Index = 36	56
Index Range: 0.12-1.0		Index Range 0.11-1.0	

Sloping Wetland

1.6 ac. - 84% of total 1.9 ac. wetlands

Study Area: CRN-3



	W	ETLAND INV	ENTORY DATA	
Wetland Number:	MOHEGIAH LA	LE	Date:	
Field Investigators:		CHARACTER	IZATION of WETLAN	
SURFAC	E WATER FLOW VEC	TORS	PLAN	T SPECIES
Condition	Percent/Acreage 83% (1.6 ac) 17% (0.32ac)	Depressional Slope Flat Extensive Peatland Lacustrine Fringe Riverine	Ancebush Loseet Birch Multiflora Rose Botternot Mustad Agric American Elm White Ash Green Ush Green Ush Honey south Chaplack Hickory Red Maple Grape Black Locust Black Locust Black Locust	
	VEGETATION TYPES		Japanese Barberry	
Type Forested Wetland Evergreen Needle-leaved	Percent/Acreage	SOIL TYPES Histosol	Sugar Maple Bittersweet Poison Ly River Birch	
Deciduous Broad-leaved Needle-leaved Scrub Shrub Evergreen Broad-leaved Needle-leaved	100%	• Fibric Hemic Sapric Mineral Gravelly Sandy Silty	Skunk Cabbage Pussy Willow Gray Birch High bush Bluchery Summersweet Llether Bengitive Fred Red Oak	

Deciduous · Clayey Broad-leaved Needle-leaved Emergent Wetland Persistent Non-persistent GEOLOGY Surficial: Aquatic Bed Bedrock: 100% Total Comments:

SIL	e made		
OW FW	Obligate Wetland Facultative Wetland	COM	Common Occasional
F	Facultative	c	Canopy
FU	Facultative Upland	S	Sapling
OU	Obligate Upland	TS	Tall Shrub
DOM	Dominant	LS	Low Shrub
		. н	Herb
	PRE-EN	MPTIVE STATUS	

Public ownership Wildlife management	 Documented habitat for state or federal listed
area	species
Fisheries management	Regionally scarce
	Control Company of the Company of th

area wetland category Historic/archaeologic Designated State or Federal protected wetland

WETLAND INVENTORY DATA (continued)

PART 2 - CHARACTERIZATION of MODEL VARIABLES

LANDSCAPE VARIABLES	Microrelief of Wetland Surface:	1 W
Size: Small (<10 acres) Medium (10-100 acres) Large (>100 acres)	Proneunced >45 cm Well Developed 15.45 cm Poorly Developed <15 cm Absent	Number of Types & Relative Proportions: Number of Types
Wetland Juxtaposition: Connected Upstream and Downstream Only Connected Above	Inlet/Outlet Class: No Inlet/No Outlet No Inlet/Intermittent Outlet	3 2 2 1
Only Connected Below Other Wetlands Nearby but not Connected Wetland Isolated Fire Occurence and Frequency: Natural; Predictable Frequency Natural; Sporadic Frequency Human-caused; Predictable Human-caused; Sporadic Rare Event No Evidence Regional Scarcity: Not Scarce (>5% of total wetland area of region) Scarce (<5% of total wetland area of region) Watershed Land Use: > 50% urbanized 25-50% urbanized 0-25% urbanized	No Inlet/Perennial Outlet Intermittent Inlet/No Outlet Intermittent Inlet/No Outlet Intermittent Inlet/Intermittent Outlet Intermittent Inlet/Intermittent Outlet Perennial Inlet/No Outlet Perennial Inlet/Intermittent Outlet Perennial Inlet/Perennial Outlet Perennial Inlet/Perennial Outlet Nested Plezometer Data: Recharge Discharge Horizonial Flow Not Available Relationship of Wetlands' Substrate Elevation to Regional Plezometric Surface: Piez. Surface Above or at Substrate elev. Piez. Surface below Substrate elev. Not Available Evidence of Sedimentation:	Vegetation Density/Dominance: Sparse (0-20%) Low Density (20-40%) Medium Density (40-60%) High Density (60-80%) Very High Density (80-100%)
HYDROLOGIC VARIABLES Surface Water Level Fluctuation of Wetland: High Fluctuation	No Evidence Observed Sediment Observed on Wetland Substrate Fluvaquent Soils Evidence of Seeps and Springs:	7. short shrub: 8. tall shrub: 9. sapling: 10. tree: Plant Species Diversity:
Low Fluctuation Never Inundated Frequency of Overbank Flooding: Return Interval > 5 yrs.	☐ No Seeps or Springs ☐ Seeps Observed ☐ Perennial Spring ☐ Intermittent Spring	Low 1-2 plots sampled Medium 3-4 plots sampled High 5 or more plots sampled
Return Interval 2-5 yrs. Return Interval 1-2 yrs. No Overbank Flooding	SOIL VARIABLES	Proportion of Animal Food Plants:
pH: Acid <5.5 Circumneutral 5.5-7.4 Alkaline >7.4 No Water Surficial Geologic Deposit Under Wetland Low Permeability Stratified Deposits High Permeability Stratified Deposits Glacial Till Wetland Land Use:	Soil Lacking: Histosol: Fibric	Medium (25-50% cover) High (>50% cover) Cover Distribution: Continuous Cover Small Scattered Patches 1 or More Large Patches; Parts of Site Open Solitary, Scattered Stems Dead Woody Material: Abrundant (>50 of wetland surface)
High Intensity (ie. agriculture) Moderate Intensity (ie. forestry) Low Intensity (ie. open space)	VEGETATION VARIABLES Vegetation Lacking:	Moderately Abrundant (25-50% of surface) Low Abrundance (0-25% of surface) Interspersion of Cover and Open Water:
Wetland Water Regime:	Dominant Wetland Type: Forested - Evergreen - Needle-leaved	26-75% Scattered or Peripheral >75% Scattered or Peripheral <25% Scattered or Peripheral 100% Cover or Open Water Stream Sinuosity: Highly Convoluted (index 1.50 or >) Moderately Convoluted (index 1.25-1.50) Straight/Slightly Irreg. (index) 1.10-1.25 Presence of Islands: Several to Many One or Few Absent

Modification of Ground Water Discharge assessed separately)

2.9.1

			WEIGHTS				
VARIABLES	CONDITIONS HGM TYPES:	D S		R	E		
Indicators of Disfunction Inlet/Outlet Class	perennial inlet/no outlet	0	0	0	0		
Nested Piezometer Data	• recharge condition	0	0	0	0		
 Relationship to Regional Piezo- metric Surface 	 wetland substrate elevation above piezometric surface 	0	0	0	0		
Direct Indicators of Function Presence of Springs and Seeps	 evidence of perennial seeps or springs 	18	15	15	18		
Nested Piezometer Data	discharge condition	18	15	15	18		
 Relationship to Regional Peizometeric Surface 	wetland substrate elevation below piezometric surface	18	15 .	15	. 18		
 Inlet/Outlet Class 	• no inlet/perennial outlet	18	15	15	18		
Primary Variables • Microrelief of Wetland Surface	 pronounced well developed poorly developed absent 	3 2 1 0	3 2 1	3 2 1 0	3 2 1 0		
Inlet/Outlet Class	 perennial inlet/perennial outlet intermittent inlet/perennial outlet all other classes 	3 2 0	3	0 0 0	3 2 0		
• pH	alkaline circumneutral acid no water present	3 2 0 0	3 2 0 0	3 2 0 0	3 2 0 0		
 Surficial Geologic Deposit Under Wetland 	 high permeability stratified deposits low permeability stratified deposits glacial till 	3 2 1	3 2	3 2 1	3 2 1		
Wetland Water Regime	 wet; permanently flooded, intermittently exposed, semipermanently flooded 	3	0	3	3		
	 drier; seasonally flooded, temporarily flooded, saturated 	1	0	1	1		

(continued)

2.9.1 Modification of Ground Water Discharge (Continued)

			WEIGHTS					
VARIABLES	CONDITIONS HGM TYPES:	D	S	R	E			
Soil Type	• histosol	3	3	3	3			
	 mineral hydric soil 	1	1	1	1			
		_	***	-	-			
	Total Score:							
	Model Range:	3-18	2-15	3-15	3-18			
	Functional Capacity Index:	Total						
		Score	15 4.0	_				
		18	15	15	18			
	Index Range:	0.19-1.0	0.16-	0.22-	0.19			
			1.0	1.0	1.0			

Note: This model can be applied to both year long and seasonal discharge wetlands.

If the wetland is seasonally fluctuating between recharge and discharge, then reduce the above score by one half (1/2), because the wetland only functions in a discharge mode for roughly half the year.

2.9.2 Modification of Ground Water Recharge

					WEIGH	TS	
VARIABLES	CONDITIONS HGM TYPES:		D	L	EP	R	F
Indicators of Disfunction							
Inlet/Outlet Class	 no inlet/perent tent inlet/perent 	nial outlet; intermit- nnial outlet	0				0
Nested Piezometer Data	discharge cond	lition	0	0	0	0	0
Relationship to Regional Piezo- metric Surface	 wetland substr or at piezomet 	ate elevation above ric surface	0	0	0	0	0
Presence of Seeps and Springs	• presence of sec	eps or springs	0	0	0	0	0

(continued)

				,	WEIGH	ITS	
VARIABLES	CONDITIONS	HGM TYPES:	D	L	EP	R	F
Oirect Indicators of Function Inlet/Outlet Class	perennial inlets	/no outlet	21				21
Nested Piezometer Data	• recharge condi	tion	21				21
 Relationship to Regional Peizometeric Surface 	wetland substra piezometric su	ate elevation below rface	21				21
rimary Variables							
Microrelief of Wetland Surface	 Poorly Develop Absent 	ped	3	3 2	1	3	3
	Well Develope	ed	3 2	2	2	2	2
	 Pronounced 		1	ī	3	ī	ī
Inlet/Outlet Class	Perennial InletAll Other Class	/Intermittent Outlet	3	0	0	0	3
• pH	• Acid		3	3	3	3	3
	 Circumneutral 		2	2	2	3 2	2
	• Alkaline	All and	1	1	1	1	1
	No water prese	ent	0	0	0	0	0
 Surficial Geologic Deposit Un- 	Glacial Till		3	1	1	1	3
der Wetland		lity Stratified Depos-	2	,2	2	2	2
	 its High Permeabilits 	ility Stratified Depos-	1	3	. 3	3	1
Surface Water Level Fluctuation	High Fluctuation	on	3	3	0	3	3
of the Wetland	 Low Fluctuation 	on	2	2	0	2	2
	Never Inundate	ed	1	1	0	1	1
Wetland Water Regime	Drier: Season porarily Flood	ally Flooded, Tem-	3	3	0	3	3
	• Wet: Permane	ently Flooded, Inter-	1	1	0	1	1
	mittently Expo	sed, Semiper-	-	_	_	-	-
Soil Type	Gravelly or Sa	ndy Mineral Hydric	3	3	0	3	3
7-7	 Silty or Clavey 	Mineral Hydric	2	2	0	2	2
	Sapric Histoso Fibric or Hemi		0	0	0	0	0
		Total Score:					
		Model Range:	4- 21	4-18	2-12	4-18	4-2
	Funct	ional Capacity Index:	To- tal Sco re 21	18	12	18	21
		Index Range:	0.1 9- 1.0	0.22-	0.16- 1.0	0.22-	0.1

Note: This model should be applied to both year long and seasonal recharge wetlands.

If the wetland is seasonally fluctuating between recharge and discharge, then reduce the above score by one half (1/2), because the wetland only functions in a recharge mode for roughly half the year.

				W	EIGHTS	3	
VARIABLES	CONDITIONS HGM TYPES	: D	S	L	EP	R	F
Indicators of disfunction	none						
Direct Indicators of Function	no outlet	27	21				30
Primary Variables • Inlet/Outlet Class	 perennial inlet/intermittent outlet intermittent inlet/intermittent outlet no inlet/intermittent outlet non inlet/perennial outlet intermittent inlet/perennial outlet perennial inlet/perennial outlet 	3 2 1 1 1 1	3 2 1 1	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	3 2 1 1 1
 Degree of Outlet Restriction Basin Topographic Gradient 	 restricted unrestricted low gradient 	3 0	0 0 3	0 0	0 0	0 0	3 0
Wetland Water Regime	 high gradient Drier: seasonally flooded, temporarily flooded, saturated Wet: permanently flooded, intermit- 	3	0	3	0 0	3	3
 Surface Water Level Fluctuation of the Wetland 	tently exposed, semipermanently flooded high fluctuation low fluctuation never inundated	3 2 0	0 0 0	3 2 0	0 0 0	3 2 0	3 2 0
Ratio of Wetland Area to Watershed Area	large small	3	3	3	0	3	3
 Microrelief of Wetland Surface 	 pronounced well developed poorly developed absent 	3 2 1 0	3 2 0	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0
 Frequency of Overbank Flooding 	 overbank flooding absent return interval of > 5 yrs return interval of 2-5 yrs return interval of 1-2 yrs 	0 0 0 0	0 0 0	0 1 2 3	0 0 0	0 1 2 3	0 1 2 3
Vegetation Density/Dominance •	 high/very high moderate sparse/low no vegetation 	3 2 1 0	3 2 1 0	3 2 1 0		3 2 1 0	3 2 1 0

2.9.3 Storm and Flood-Water Storage (Continued)

				WEIGHTS					
VARIABLES	CONDITIONS HGM TYPES:	D	D ®		EP	R	F		
Dead Woody Material	abundant		3	3	3	3	3	3	
	 moderately abunda 	nt	2	2	2	2	2	2	
	• sparse		1	10	1	1	1	1	
	• absent		0	0	0	0	0	0	
			_	T	-	_	-	-	
		Total Score:		1,					
		Model Range:	4-27	4-21	2-21	0-12	3-24	4-30	
	Functi	onal Capacity Index:	Total	11=0	52				
			Score 27	21	21	12	24	30	
		Index Range:	0.15-	0.19-	0.09-	0-1.0	0.12-	0.13	

2.9.4 Modification of Stream Flow

(This model is identical for all HGM types)

	VARIABLI	ES		CON	VDITIONS	WEIGHTS
Indicators	of Disfunction		no outlet			0
Direct Ind	icators of Func	tion	none			
Primary V	'ariables					
Storm and Function	Flood Water S Model Score	torage	Modific Discharge	ation of Grou	ndwater odel Score	
High Mod Low High Mod Low High Mod Low	3 2 1 3 2 1 3 2	x x x x x x x x	High High Mod Mod Mod Low Low Low	3 3 2 2 2 2 1 1	= = = = = = = = = = = = = = = = = = = =	9 8 3 6 4 2 3 2 1
•					Total Score: Model Range:	1-9
				Functiona	Capacity Index:	Total 6 = 0,67
					Index Range:	0.11-1.0

^{*}High = FCI of 0.67-1.0, Mod = FCI of 0.34-0.66, Low = FCI of 0-0.33 for the Storm and Flood Water Storage and Modification of Ground Water Discharge Function Model Scores.

2.9.5 Modification of Water Quality

		WEIGHTS						
ARIABLES	CONDITIONS HGM TYPES:	D	(8)	L	EP	R	F	
ndicators of disfunction	none							
Firect Indicators of Function	evidence of sedimentation	18	15	12	12	12	18	
rimary Variables								
Wetland Land Use	 low intensity 	3	(3)	3	3	3	3	
	moderate intensity	2	2	2	2	2	2	
	 high intensity 	1	1	1	1	1	1	
Degree of Outlet	• restricted outflow	3	0	0	0	0	3	
Restriction	no outlet	2	0	0	0	0	2	
	 unrestricted outflow 	1	0	0	0	0	1	
Inlet/Outlet Type	• no outlet	3	3	0	0	0	3	
	• intermittent outlet	2	0	0	0	0	2	
	• perennial outlet	1	0	0	0	0	1	
Dominant Wetland Type	forested wetland	3	3	3	3	3	3	
	scrub-shrub	2	2	2	2	2	2	
	• emergent wetland	2	2	2	2	2	2	
	aquatic bed	1	0	0	0	0	0	
	• no vegetation	. 0	0	0	0	0	0	
Cover Distribution	• forming a continuous cover	3	3	3	3	3	3	
33.31 2.31.133.1131	 growing in small scattered patches 	2	2	2	2	2	2	
	one or more large patches	1	1	1	1	1	1	
	solitary scattered stems	1	1	1	1	1	1	
*	• no vegetation	0	0	0	0	0	0	
Soil Type	histosol or clayey soil	3	3	3	3	3	3	
	• silty soil	2	2	2	0	2	2	
	 sandy or gravelly soil 	1	0	1	0	1	1	
		_	TT	-	-	_	-	
	Total Score:							
	Model Range:	4-18	3-15	2-12	1-12	2-12	4-	
	Functional Capacity Index:	Total Score	11=	0.13	_	_		
		18	15	12	12	12	18	
	Index Range:	0.22-	0.20-	0.16-	0.8-	0.16-	0.:	

2.9.6 Export of Detritus

				WEI	GHTS		
VARIABLES	CONDITIONS HGM TYPES:	D	S	L	EP	R	F
ndicators of disfunction	no outlet	0	0		0		0
Direct Indicators of Function	none						
• Wetland Land Use	 moderate intensity low intensity high intensity 	3 2 1	3 2	3 2 1	3 2 1	3 2 1	3 2 1
Degree of Outlet Restriction	 unrestricted outflow restricted outflow 	3	0	0	0	0	3
• Inlet/Outlet Class	perennial outlet intermittent outlet	3	3	0	0	0	3
Wetland Water Regime	 drier: seasonally flooded, temporarily flooded, saturated wet: permanently flooded, intermittently exposed, semipermanently flooded 	3	1	3	0	1	3
Vegetation Den- sity/Dominance	 high/very high medium sparse/low no vegetation 	3 2 1 0	3) 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0	3 2 1 0 .
Soil Type	mineral hydric soil histosol Total Score:	3 1	3 1 1	3 1	3 1 —	3 1	3 1 —
	- Model Range:		4-15	3-12	2-10	3-12	5-1
	Functional Capacity Index:	Total Score 18	15	12	10	12	18
	Index Range:	0.27-	0.26- 1.0	0.25- 1.0	0.20- 1.0	0.25- 1.0	0.2

2.9.7 Contribution to Abundance and Diversity of Wetland Vegetation (This model is identical for all HGM types)

VARIABLES		CONDITIONS		WEIGHTS
Indicators of Disfunction		no vegetation		0
Direct Indicators of F	unction	none		
Primary Variables	Plant Species Diversity	 high diversity medium diversity low diversity 		3
•	Vegetation Density/Do minance	high/very highmediumsparse/low		(\$) 3 1
•	Wetland Juxtapositio n	connected upstream and downstream connected above or below other wetlands nearby but not		5 3
		connected (400 m or closer) isolated		0 13
			Total Score:	*
			Model Range:	2-15
*			Functional Capacity Index:	= Total Score 13 = 0
			Index Range:	0.13-1.0

2.9.8 Contribution to Abundance and Diversity of Wetland Fauna
(This model is identical for all HGM types except Slope Wetlands for which "Interspersion of Vegetation Cover and Open Water" does not apply))

VARIABLES	CONDITIONS	WEIGHTS
Direct Indicators of Disfunction	none	
Direct Indicators of Function	none	
Primary Variables		
Watershed Land Use	 low intensity (0-25% urbanized) 	3 2
	 moderate intensity (25-50% urbanized) 	2
	 high intensity (>50% urbanized) 	. 1
Wetland Land Use	• low intensity	(3)
Trettaile Laile Coo	moderate intensity	3 2
	• high intensity	1
Wetland Water Regime	• wet: permanently flooded, intermittently	3
	exposed, semipermanently flooded	
	drier: seasonally flooded, temporarily	
	flooded, saturated	0
Microrelief of Wetland Surface	• pronounced	3
	• well developed	2
	poorly developed	3 2 D
	• absent	0
Number of Wetland types and Relative	• 5 or more types	3 2 1
Proportions	• 3-4 types	2
	• 1-2 types	1
	• no vegetation	0
	• even distribution	3
	 moderately even distribution 	2
	 highly uneven distribution 	10
	• no vegetation	0
Vegetation Interspersion	high interspersion	(3)
· regetation interspersion	moderate interspersion	3
	• low interspersion	1
	• no vegetation	0
Number of Layers and Percent Cover	• 5 or more layers	(3)
	• 3-4 layers	2
	• 1-2 layers	1
	• no vegetation	0
	• layers well developed (>50% cover)	3
	• layers with moderate cover (26-50%	2
	cover)	1
	 layers poorly distinguishable (<25% cover) 	0
	• no vegetation	0
	- no regulation	0

2.9.8 Contribution to Abundance and Diversity of Wetland Fauna (Continued)

VARIABLES	CONDITIONS		WEIGHTS
Interspersion of Vegetation Cover	and • 26-75% scattered or peripheral		3
Open Water	 >75% scattered or peripheral 		2
	< <25% scattered or peripheral		1
	• 100% cover or open water		1
	• no vegetation		0
• Size	• large (>100 acres)		3
	medium (10-100 acres)		2
	• small (<10 acres)		
Wetland Juxtaposition	 other wetlands within 400 m and connected above or below 		3
	other wetlands within 400 m but not		1
	connected		
	 wetland isolated 		0
			- Company
			25
Slope Wetlands:	All Other HGM Types:	Total Score:	
Model Range: 4-33	0.76	Model Range:	4-36
Functional Canacity Index = Total Sci	ore 25 # 0'	Functional Capacity	Total Score
Model Range: 4-33 Functional Capacity Index = Total Sci 33		Index =	36
Index Range: 0.12-1.0		Index Range	0.11-1.0