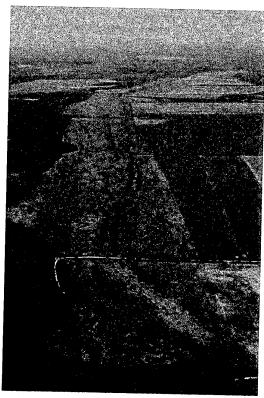
Privateer Farms Mitigation Site Fact Sheet

Location: Cataloguing unit 03030005 of the Cape Fear River Basin, Cumberland and Bladen Counties

<u>Mitigation Provided</u>: Restoration of 402.5 acres of riparian wetlands, enhancement of 25 acres of riparian wetlands, and restoration of 34,005 feet of stream

Site Overview: The Privateer Farms project restored 402.5 acres of riparian wetlands, enhanced 25 acres of riparian wetlands, and restored 34,005 feet of Harrison Creek, making it one of the largest ecosystem restoration projects in the Southeast. Stream flows from larger storms now spread onto the floodplain, which reduces the energy of the water and results in less erosion of stream banks. Structures placed within the streambed control its grade, reduce stress on stream banks, and create a more diverse habitat for fish and other aquatic organisms. Riparian wetlands were restored by reconnecting Harrison Creek with its original floodplain. The restoration of stream and wetland hydrology was particularly challenging given the low gradient of the site and extensive ditching of the existing agricultural fields. Historical aerial photography, detailed elevation data, information on nearby intact streams and wetlands, and other resources were used to mimic the original site hydrology.

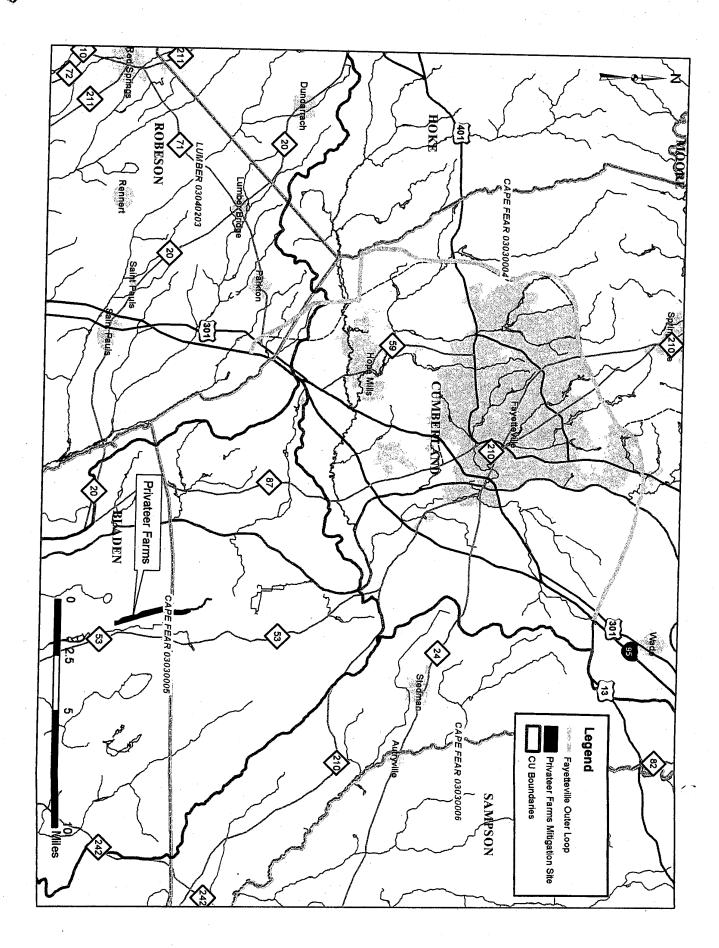
Monitoring Results: Currently, the project is in its third year of monitoring. The five-year monitoring plan for the site includes criteria to evaluate the success of the wetland hydrology, vegetation community, and stream components of the project. Data collected during the 2006 (Monitoring Year 2) growing season by 15 automatic monitoring well gauges at the Privateer site showed that groundwater levels met hydrologic success criteria for 14 of the wells. The



gauge that did meet the criteria exhibited a cumulative hydroperiod of 108 days or 45% of the 2006 growing season, indicating that the location experiences significant wetness, but the water table fluctuates very rapidly and does not experience surface saturated conditions for long periods of time. This is due to the close proximity to the restored stream channel. The vegetation monitoring for 2006 indicated an average survivability of over 532 stems per acre, which is on a trajectory to achieve an average vegetation survival criteria of 320 stems per acre surviving after the fifth growing season.

On-site streamflow gauges documented the occurrence of at least two bankfull flow events during the second year of the monitoring period. In-stream structures installed within the restored stream included constructed riffles, log vanes, log weirs, and root wads. Visual observations of structures throughout the Year 2 season indicated that the structures are functioning as designed. No areas of streambank erosion have been noted after numerous bankfull flow events since construction completion. Photographs were taken throughout the Year 2 growing season to document the evolution of the restored stream channel. Restored pools have maintained a variety of depths and habitat qualities, depending on the location and type of scour features (logs, root wads, etc.).

<u>Awards</u>: American Council of Engineering Companies of North Carolina 2005 Environmental Engineering Excellence Award



فتستدتمر

Privateer Farms Restoration Project Approximate Farm Boundary Site 3. Headwater Wetland Project Easement Site 2. Bottomland Hardwood Site 1. Riverine Swamp 4,000

NC WAM Wetland Rating Sheet

sessment 9/6/07		
Assessor Name/Organization		
, , , , , , , , , , , , , , , , , , , ,		
	Rating	
	HIGH	
	MEDIUM	
	LOW	
portunity	LOW	
resence (Y/N)	NO	
	HIGH	
oortunity	HIGH	
resence (Y/N)	YES	
	HIGH	
oortunity	HIGH	
resence (Y/N)	YES	
	HIGH	
ortunity	HIGH	
resence (Y/N)	YES	
	X	
ortunity	X	
esence (Y/N)	Х	
	LOW	
	MEDIUM	
	LOW	
	NO	
	Rating	
	HIGH	
	HIGH	
ortunity	HIGH	
	YES	
(1/14)	LOW	
	esence (Y/N)	

NC WAM FIELD ASSESSMENT FORM VERSION 3.13 (January 12, 2007)

Wetland Site N	ame Privateer Site 1
Wetland 7	Date 9/6/07
Level III Ecores	Assessor Name/Organization
River B	
	0303 8-Digit Catalogue Unit
	Latitude/Longitude (deci-degrees)
(for instance, within Hydrolog Surface a septic tar Signs of What Habitat/pl	sors affecting the assessment area (may not be within the assessment area) or make note below if evidence of stressors is apparent. Consider departure from reference, if appropriate, in recent past in 10 years). Noteworthy stressors include, but are not limited to the following. cal modifications (examples: ditches, dams, beaver dams, dikes, berms, ponds, etc.) and sub-surface discharges into the wetland (examples: discharges containing obvious pollutants, presence of nearby its, underground storage tanks (USTs), hog lagoons, etc.) regetation stress (examples: vegetation mortality, insect damage, disease, storm damage, salt intrusion, etc.) ant community alteration (examples: mowing, clear-cutting, exotics, etc.)
Describe effects of	f stressors that are present.
Populator O	
Regulatory Consid	erations
Anadromo	to the assessment area.
	rotected species or State endangered or threatened species
NCDWQ I	iparian buffer rule in effect
Federally NCDWQ r Wetland a Publicly ov N.C. Divis N.C. Divis Designate	djacent to or associated stream drains to a Primary Nursery Area
Publicly ov	vned property
N.C. Divis	on of Coastal Management Area of Environmental Concern (AEC) (including the Concern (AEC)
N.C. Divis	On Or Water Quality Dest Usage classification of SA or cumplemental alaraster at the state of th
☐ Designate	NCNHP reference community
What type of natur	al stream is associated with the wetland, if any? (Check all that apply)
	. Check all that apply)
☑ Blackwate☐ Brownwate☐ Tidal (if tid	
☐ Tidal (if tid	al, check one of the following boxes) Lunar Wind Both
	
Is the assessment	area's surface water storage capacity or duration substantially altered by beaver? Yes No
1. Ground	Surface Condition/Vegetation Condition – assessment area condition metric
Check	a box in each column. Consider alteration to the ground ourfood (CC) in the
	e (VS) in the assessment area. Compare to reference wetland if applicable (see User Manual v1.0). If a VS
⊠A	
□в	B Severely altered over most of the assessment area (arranged as to the assessment)
	[where appropriate], exotic species, grazing, less diversity [if appropriate], artificial hydrologic alteration)
2. Surface	and Sub-Surface Storage Capacity and Duration – assessment area condition metric
Check	a box in each column. Consider surface storage assessment area condition metric
Guide (s soils. A	a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage and duration (Sub). Consider both increase and decrease in hydrology. Refer to the NRCS Scope and Effect see User Manual v1.0 Appendix G) for North Carolina hydric soils for the zone of influence of ditches in hydric ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect surface and sub-surface water. Consider tidal flooding regime, if applicable.
⊠A	☑A Water storage capacity and duration are not altered.
□в	B Water storage capacity or duration are altered, but not substantially (typically, not sufficient to
	change vegetation).
. □c	Water storage capacity or duration are substantially altered (typically, alteration sufficient to result in vegetation change) (examples: intensive ditching, fill, sedimentation, channelization, diversion, man-made berms, beaverdams, stream incision, sewer lines, soil compaction).

•	Other Storage/Surface Relier – assessment area/wetland type condition metric				
(1	Check a box in each column. Select the appropriate storage for the assessment area (AA) and the wetland type WT).				
·	AA WT A > 50% of the wetland type with depressions able to pond water > 2 feet B B > 50% of the wetland type with depressions able to pond water 1 to 2 feet C C > 50% of wetland type with depressions able to pond water 6 inches to 1 foot D D > 50% of wetland type with depressions able to pond water 3- to 6-inches deep Depressions able to pond water < 3-inches deep				
4.	and a second a good of the grant area condition wells				
	Select all that apply. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the top foot. National Technical Committee for Hydric Soils regional indicators are noted (use most recent DA Sandy soil				
	B Predominantly characterized by mottled (redoxymorphic features), mineral soil (F6, F8, F12, TF10, S5, S6) Predominantly characterized by other, mineral soil (no mottling) Gleyed mineral soil (F2, S4) Soil ribbon < 1 inch Soil ribbon ≥ 1 inch No peat or muck presence A peat or muck presence (A6, A7, A8, A9, A10, F1, S1) Peat or muck soil (histosol or histic epipedon) (A1, A2, A3)				
5.					
•	Check a box in each column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). Examples of sub-surface discharges include presence of nearby septic tank, underground storage surface. Surf Sub A A Little or no evidence of pollutants or discharges entering the assessment area Noticeable evidence of pollutants or discharges entering the wetland and stressing, but not				
	C Noticeable evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and potentially overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive sedimentation)				
6.	Land Use – opportunity metric				
	Check all that apply. Evaluation of this metric involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont and 30 feet wide in the Mountains. WS 5M 2M A A A > 30% impervious surfaces with stormwater Best Management Practices (BMPs) (land use examples:				
	industrial, commercial, and high-density residential)				
	□B □B □B > 30% impervious surfaces without stormwater BMPs □C □C □C 10 to 30% impervious surfaces □D □D □D < 10% impervious surfaces □E □E □E □E □H □E □H				
	□G □G □G □G Confined animal operations (or other local, concentrated source of pollutants) □H □H □H ≥ 20% coverage of pasture without riparian buffer □I □I □I ≥ 20% coverage of pasture with effective riparian buffer □J □J □J □J ≥ 20% coverage of agricultural land (regularly planted by the coverage of pasture without riparian buffer				
	S S S S S S S S S S				
7.	Wetland Acting as Vegetated Buffer – assessment area condition metric				
	Is the assessment area within 50 feet of a stream or other open water? ("open water" does not include man-made ditches or canals) \[\sum Yes \text{INo} \text{If No, Skip to next metric} \]				
	Stream width (Stream width is normal flow width [ordinary high water to ordinary high water]). If the stream is anastomosed, combine widths of channels/braids for a total stream width.				

	□≤ 15-feet wide □Not Applicable Do roots of assessment area vegetation extend into the bank of the adjacent stream/open water? □Yes □No					
	Is stream or other open water sheltered or exposed?					
	Sheltered – adjacent open water with width < 2500 feet <u>and</u> no regular boat traffic. □Exposed – adjacent open water with width ≥ 2500 feet <u>or</u> regular boat traffic.					
8	. Wetland/Riparian Buffer Width – assessment area/wetland type/wetland complex makes					
	wetland complex (WC), and the riparian buffer at the assessment area (RB) (if applicable). Riparian buffer width is from the outside banks of the outer channels of an anastomosed system. Make buffer judgment based on dominant WT WC RB (if applicable). Select the appropriate width for the wetland type at the assessment area (RB) (if applicable). Riparian buffer width is from the outside banks of the outer channels of an anastomosed system. Make buffer judgment based on dominant WT WC RB (if applicable) A ☑A ☑A ☑A ▷A ≥ 100 feet					
	□B □B From 80 to < 100 feet □C □C From 50 to < 80 feet □D □D □D □E □E □E □E □E From 30 to < 40 feet					
	☐F ☐F From 15 to < 30 feet ☐G ☐G ☐G From 5 to < 15 feet					
9.	□H □H □H < 5 feet					
Э.	Inundation Duration – assessment area condition metric Answer for assessment area dominant landform.					
	□A Evidence of short-duration inundation (< 7 consecutive days) □B Evidence of saturation, without evidence of inundation □C Evidence of long-duration inundation (7 to 30 consecutive days or more)					
10	. Indicators of Deposition – assessment area condition metric					
	Consider recent deposition only (no plant growth since deposition). Sediment deposition is not excessive, but at approximately natural levels. Sediment deposition is excessive, but not overwhelming the wetland. Sediment deposition is excessive and is overwhelming the wetland.					
11.	Wetland Size – wetland type/wetland complex condition metric					
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the contiguous wetland complex (WC), and the size of the contiguous, forested wetland (FW) (if applicable, see User Manual). Boundaries are formed by uplands, four-lane roads, or urban landscapes. An observed beaver pond forms a boundary if it extends across the entire width of the floodplain. Additionally, other wetland types are considered boundaries for column WT. If assessment area is clear-WT WC FW (if applicable) □A □A ≥ 500 acres □B □B □B From 100 to < 500 acres □C □C □C From 50 to < 100 acres					
	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □					
	☐F ☐F ☐F From 5 to < 10 acres ☐G ☐G ☐G From 1 to < 5 acres					
	□H □H From 0.5 to < 1 acre					
	☐ ☐ ☐ From 0.1 to < 0.5 acre ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐					
	LIK LIK ⊠K < 0.01 acre					
12.	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only) A Wetland type is the full extent (> 90%) of its network leads to the condition of the network leads to the					
	 \[\omega A \\ \text{Wetland type is the full extent (≥ 90%) of its natural landscape size.} \] \[\omega B \\ \text{Wetland type is < 90% of the full extent of its natural landscape size.} \] 					
13.	Connectivity to Other Natural Areas – landscape condition metric					
	Check appropriate box(es). This metric refers to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate) that includes the wetland type. Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Consider if the wetland type is well-connected (WC) or loosely-connected (LC) to the landscape patch. WC LC					

\$

4

		∐D	From 50 to < 100 acres From 10 to < 50 acres
	□E □F		< 10 acres Wetland type has a poor or no connection to other natural habitats
		k Yes or No.	
		arshes only)	Does wetland type have a surface hydrology connection to open waters or tidal wetlands? (evaluate
	⊠Yes 4 Educ		Is the assessment area subject to overbank flooding during normal conditions?
	4. Eage Estima	Eπect – wetta	and type condition metric
	fields, cuts < □A □B	10 years old. No artificia No artificia	rom wetland type boundary to artificial edges. Artificial edges include permanent features such as two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-Consider the eight main points of the compass. Il edge within 150 feet in four to seven directions Il edge occurs within 150 feet in more than four directions or assessment area is clear-cut
15	. Vegeta	ative Compos	sition – assessment area condition metric (skip for marshes and Pine Flat)
	$\Box \land$	Vegetation	is close to reference condition in species present and their proportions. Lower strata composed of
ap	propriate		ith exotic plants absent or sparse within the assessment area.
	□в	of native sp that develo dominant, o	pecies characteristic of the wetland type. This may include communities of weedy native species op after clearcutting or clearing. It also includes communities with exotics present, but not over a large portion of the expected strate.
	⊠c	dominated composed	severely altered from reference in composition. Expected strata are unnaturally absent or by exotic species or composed of planted stands of non-characteristic species or inappropriately of a single species.
16	. Vegeta	tive Diversity	/ – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	⊠A □B □C	Vegetation	diversity is high and is composed primarily of native species. diversity is low or has > 10% cover of exotics. is dominated by exotic species.
17.			e – assessment area/wetland type condition metric
	⊠ Ve	getation pres	sent
	Ev:	aluate percer	nt coverage of vegetation for marshes only coverage of vegetation
		B < 25%	coverage of vegetation
	Ch	eck a box in a	each column for each stratum. Evaluate this portion of the matrix for
	AA	WT	ure in airspace above the assessment area (AA) and the wetland type (WT) separately.
		3	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent
		3	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent
	□A ⊠B □C	В⊠В	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent
	⊠A □B □C □ Veg	БВ	Dense herb layer Moderate density herb layer Herb layer sparse or absent
18.			condition metric
	□A		
	landscap ⊠B	Large snags e stability). Not A	(more than one) are present (> 12-inches DBH, or large relative to species present and
19.	⊠B	Not A	ibution – wetland type condition metric
	⊠B	Not A r Class Distri	

⊠c Most canopy trees are < 6-inches DBH or no trees.

20. Large Woody Debris - wetland type condition metric

Include both man-made and natural debris piles.

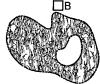
Large logs (more than one) are present (> 12-inches in diameter, or large relative to species present and landscape stability).

⊠B Not A

21. Vegetation/Open Water Dispersion - wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)

Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.









22. Habitat Uniqueness - wetland type condition metric

Has the N.C. Environmental Management Commission classified the assessment area as "Unique ☐Yes ⊠No Wetlands" (UWL)?"

Notes

Site is achnegear old resteration project.

Woodry species are planted in buffer and

Wetlandareas, only about shoulderhigh

Herb. cover mostly hydrophytic

NC WAM Wetland Rating Sheet

Wetland Site Name	Privateer Site 2	Date of Assessment 9/6/07		
Wetland Type Bottomland Hardwood Forest		Assessor Name/Organization		
Notes on Field Presence of reg	ressor affecting assessment area (Y/N) Assessment Form (Y/N) gulatory considerations (Y/N)	NO MO NO		
	nsively managed (Y/N)	NO		
Wetland may be	e a high-quality riverine wetland (Y/N)			
Sub-function Rating	Summary			
Function	Sub-function	Metrics	Rating	
Hydrology	Surface Storage and Retention	Condition	HIGH	
•••	Sub-surface Storage and Retenti	ion Condition	MEDIUM	
Water Quality	Pathogen Change	Condition	HIGH	
		Condition/Opportunity	HIGH	
		Opportunity Presence (Y/N)	NO	
	Particulate Change	Condition	HIGH	
		Condition/Opportunity	HIGH	
		Opportunity Presence (Y/N)	YES	
	Soluble Change	Condition	HIGH	
		Condition/Opportunity	HIGH	
		Opportunity Presence (Y/N)	YES	
	Physical Change	Condition	HIGH	
	•	Condition/Opportunity	HIGH	
		Opportunity Presence (Y/N)	YES	
	Pollution Change	Condition	X	
		Condition/Opportunity	Х	
Ughitat		Opportunity Presence (Y/N)	Х	
Habitat	Physical Structure	Condition	LOW	
	Landscape Patch Structure	Condition	MEDIUM	
	Vegetation Composition	Condition	LOW	
	Uniqueness	Condition	NO	
Function Rating Sumi	mary			
Function		Metrics	Rating	
Hydrology		Condition	HIGH	
Water Quality		Condition	HIGH	
		Condition/Opportunity	HIGH	
•		Opportunity Presence (Y/N)	YES	
Habitat		Condition	LOW	
Overall Wetland R	ating HIGH			

NC WAM FIELD ASSESSMENT FORM VERSION 3.13 (January 12, 2007)

		nd Site Nan Notland Tw		Date	9/6/07
		Vetland Ty III Ecoregic		Assessor Name/Organization	
	Level	River Bas		Nearest Named Water Body	
				USGS 8-Digit Catalogue Unit	
				Latitude/Longitude (deci-degrees)	
1	Evidence	e of stress	ors affecting the assessment area (n	nay not be within the assessment area	
	Please ci	rcie and/or	make note below if evidence of stress	ors is apparent. Consider deporture from	reference, if appropriate in recent past
1	(ioi illotai	ioc, within	TO years). INDIEMOLLING SCIESSORS INCIDE	le. Dut are not limited to the following	in the second
	•	Hydrologic	al modifications (examples: ditches di	ams heaver dams dikes herms pondo	etc.)
		sentic tank	id sub-surface discharges into the we	tetland (examples: discharges containing	obvious pollutants, presence of nearby
		copile tarile	s, anderground storage talks (US IS).	noa ragoons etc i	
	•	Habitat/pla	nt community alteration (examples: mo	mortality, insect damage, disease, storm	damage, salt intrusion, etc.)
1				owing, crear-cutting, exotics, etc.)	
	s the ass	sessment a	area intensively managed? 🔲 Yes	s 🖾 No	
;	Docariba	offeete of	A		
'	Describe	ellects of	stressors that are present.		
١.				•	
F	Regulato	ry Conside	rations		
5	Select all	that apply t	o the assessment area.		
		Anadromou			
	∃ ¦	Federally p	rotected species or State endangered	or threatened species	
] !] \	Metland adi	parian buffer rule in effect	. . .	
۱	i i	Publicly owi	acent to or associated stream drains to ned property	a Primary Nursery Area	
Ē				ironmental Concern (AEC) (including buff	
] ₁	N.C. DIVISIO	n of water Quality best usage classific	ation of SA or supplemental classification	er)
[J	Designated	NCNHP reference community	service outpromental diagonication.	3 OF FIGURE
V	Vhat type	of natural	stream is associated with the wetla	nd if any? (Check all that annie)	}
D	3	Blackwater	The state of the s	no, it any? (Check all that apply)	į
		Brownwater			
] 7	Γidal (if tidal	, check one of the following boxes)	☐ Lunar ☐ Wind ☐ Both	
Is			rea on a coastal island?	⊠ No	
			-	- 	
IS	the ass	essment a	rea's surface water storage capacity	or duration substantially altered by be	eaver? Yes No
1.					
•	Chook	a hav in a	Condition/Vegetation Condition – as	sessment area condition metric	
	the ass	a DUX III e essment ar	ach column. Consider alteration to the	ne ground surface (GS) in the assessme	nt area and vegetation structure (VS) in
			pased on evidence of alteration.	applicable (see User Manual v1.0). If a r	eference is not applicable, then rate the
	GS	VS	e de la compania del la compania de	·	
	⊠A	□A	Not severely altered		
	□В	⊠B	Severely altered over most of the asse	essment area (ground surface alteration e	vamnles: vehicle trocks, evenesive
			ocamenation, me-plow lanes, skidde	tidoks. Deading, till soil compaction o	hvious pollutopto) (vocateties ets
			The state of the s	ulbance, nerolcioes salt intrusion lwhor	e appropriatel, exotic species, grazing
			rose diversity [ii appropriate], artificial i	lydrologic alteration)	
2.	Surface	and Sub-	Surface Storage Capacity and Durat	on – assessment area condition metric	c
	Check	a box in e	ach column. Consider surface stora	ne capacity and duration (Curt) and and	
	applicat	,,	a ditch > 1 foot deep is expected to	affect both surface and sub-surface wa	ater. Consider tidal flooding regime, if
	Surf	Sub			3 ***3*********************************
	⊠A		Water storage capacity and duration a	re not altered	
	□в	□в	Water storage capacity or duration are	altered, but not substantially (typically, no	A =
	□c		. rater storage capacity of duration are	SUDSIGNIBILIV Altered (typically alteration (sufficient to requit in transfer.
			change) (examples: intensive ditching	fill, sedimentation, channelization, divers	ion man-made herms hower
			dams, stream incision, sewer lines, soi	I compaction).	, mar-made berms, peaver
3 .	Water 9		rface Relief – assessment area/wetla	· · · · · ·	
•					
	AA	a box in ea WT	un column. Select the appropriate sto	rage for the assessment area (AA) and th	ne wetland type (WT).
	ΩÃ		> 50% of the wetland type with depres	sions able to pond water > 2 feet	
	⊟̂B		50% of the wetland type with depress50% of the wetland type with depress		
	□c			s able to pond water 6 inches to 1 foot	
	⊠Ď			s able to pond water 3- to 6-inches deep	
	-				
	□E	□E	Depressions able to pond water < 3-inc	nes deep	

4.	Soil Te	Soil Texture/Structure – assessment area condition metric			
	Select all that apply. Dig soil profile in the dominant assessment area landscape feature. Make soil observations within the top foot National Technical Committee for Hydric Soils regional indicators are noted (use most recent guidance). A Sandy soil				
□B Predominantly characterized by mottled (redoxymorphic features), mineral soil (F6, F8, F12, TF10, S5, S6) □D Predominantly characterized by other, mineral soil (no mottling) □D Gleyed mineral soil (F2, S4) □E Soil ribbon < 1 inch			haracterized by other, mineral soil (no mottling) soil (F2, S4)		
	□F		on ≥ 1 in		
	⊠G □H			presence presence (A6, A7, A8, A9, A10, F1, S1)	
	□i'	Peat or	muck so	il (histosol or histic epipedon) (A1, A2, A3)	
5.				- opportunity metric	
	Check Exampl Surf	a box in es of sub- Sub	surface o	column. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). discharges include presence of nearby septic tank, underground storage tank (UST), etc.	
	⊠a □B	⊠a ⊟B	Noticea	r no evidence of pollutants or discharges entering the assessment area able evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the ent capacity of the assessment area	
	□с	□c	Noticea potentia	able evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and ally overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive	
6.	l and II	se – oppo		ntation)	
υ.			_	aluation of this metric involves a GIS effort with field adjustment. Consider sources draining to assessment area	
	and with	nin the wat ad Piedmo	tershed on tershed ont	reshed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal of feet wide in the Mountains.	
	WS □A	5M □A	2M □A	> 30% impervious surfaces with stormwater Best Management Practices (BMPs) (land use examples:	
	□в	□в	□в	industrial, commercial, and high-density residential) > 30% impervious surfaces without stormwater BMPs	
	□с	□c	□c	10 to 30% impervious surfaces	
	⊠D □E	⊠D □E	⊠D □E	< 10% impervious surfaces Old urban development (pink areas on USGS 7.5-minute quadrangles)	
	□F □G	□F □G	□F □G	New adjacent development	
	□H	□H	⊟н	Confined animal operations (or other local, concentrated source of pollutants) ≥ 20% coverage of pasture without riparian buffer	
	⊠ 1 □।	⊠J □ı	⊠λ □ı	≥ 20% coverage of pasture with effective riparian buffer ≥ 20% coverage of agricultural land (regularly plowed land) without riparian buffer	
	□ĸ	□ĸ	□ĸ	≥ 20% coverage of agricultural land (regularly plowed land) with effective riparian buffer	
	□L ⊠M	□L ⊠M	□L ⊠M	≥ 20% coverage of maintained grass/herb Silvicultural land with disturbance < 5 years old	
7	□N	□N	□N	Little or no opportunity. Lack of opportunity may result from hydrologic modifications that prevent drainage or overbank flow from affecting the assessment area.	
7.				hin 50 feet of a stream or other open water? ("open water" does not include man-made ditches or canals)	
		⊠ res	L_IN0	If No. Skip to next metric	
	widths of	widtn (Stre f channels ∏≤ 15-fe	voi aius it	th is normal flow width [ordinary high water to ordinary high water]). If the stream is anastomosed, combine or a total stream width. X Not Applicable Not	
	Do roots			⊠> 15-feet wide	
	Is stream	or other	open wat	ter sheltered or exposed?	
		⊠Shelte □Expose	red – adj ed – adja	acent open water with width < 2500 feet <u>and</u> no regular boat traffic. acent open water with width ≥ 2500 feet <u>or</u> regular boat traffic.	
8.	Wetland			Vidth – assessment area/wetland type/wetland complex metric	
	Check a	box in e	ach colu	umn. Select the appropriate width for the wetland type at the assessment area (WT) the wetland assessment	
	only be	present or	n one sid	de of the water body. The riparian buffer is measured from the outside banks of the suites abanable of an	
	anastoni	useu sysii	eni. Iviar	ke buffer judgment based on dominant landscape feature. Record a note if a portion of the buffer has been	
	WT	or disturb	ea.	oplicable)	
	⊠A	⊠A	⊠A` ·	≥ 100 feet	
	□B □C	□B □C	□B □C	From 80 to < 100 feet From 50 to < 80 feet	
	□D	□D	□D	From 40 to < 50 feet	
	□E □F		□E □F	From 30 to < 40 feet From 15 to < 30 feet	
	□G	□G	□G	From 5 to < 15 feet	
	\Box			< 5 foot	

ூ.	Inundation Duration – assessment area condition metric
	Answer for assessment area dominant landform. Answer for assessment area dominant landform. Answer for assessment area dominant landform.
	B Evidence of saturation, without evidence of inundation
	☐C Evidence of long-duration inundation (7 to 30 consecutive days or more)
10.	Indicators of Deposition – assessment area condition metric
	Consider recent deposition only (no plant growth since deposition).
	 ☑A Sediment deposition is not excessive, but at approximately natural levels. ☑B Sediment deposition is excessive, but not overwhelming the wetland.
	C Sediment deposition is excessive and is overwhelming the wetland.
11.	Wetland Size – wetland type/wetland complex condition metric
	Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the contiguous wetland complex (WC), and the size of the contiguous, forested wetland (FW) (if applicable, see User Manual). Boundaries are formed by uplands, four-lane roads, or urban landscapes. An observed beaver pond forms a boundary if it extends across the entire width of the floodplain. Additionally, other wetland types are considered boundaries for column WT. If assessment area is clear-cut, select "K" for FW column. WT WC FW (if applicable) □A □A ≥ 500 acres
	☑B
	□C □C From 50 to < 100 acres □D □D From 25 to < 50 acres
	□D □D From 25 to < 50 acres □E □E □E From 10 to < 25 acres
	□F □F From 5 to < 10 acres
	☐G ☐G From 1 to < 5 acres ☐H ☐H ☐H From 0.5 to < 1 acre
	□I □I From 0.1 to < 0.5 acre
	□J □J From 0.01 to < 0.1 acre □K □K ⊠K < 0.01 acre
12	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
12.	Wetland type is the full extent (≥ 90%) of its natural landscape size.
	□B Wetland type is < 90% of the full extent of its natural landscape size.
13.	Connectivity to Other Natural Areas – landscape condition metric
	Check appropriate box(es). This metric refers to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate) that includes the wetland type. Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Consider if the wetland type is well-connected (WC) or loosely-connected (LC) to the landscape patch. WC LC
	□B □B From 100 to < 500 acres
	□C □C From 50 to < 100 acres □D □D From 10 to < 50 acres
	□E < 10 acres
	□F □F Wetland type has a poor or no connection to other natural habitats
	 Check Yes or No. ☐ Yes ☐ No ☐ No ☐ No ☐ See See See No. ☐ Does wetland type have a surface hydrology connection to open waters or tidal wetlands? (evaluate for marshes only) ☐ Yes ☐ No Is the assessment area subject to overbank flooding during normal conditions?
14.	Edge Effect – wetland type condition metric
	Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass. □ A No artificial edge within 150 feet in all directions □ B No artificial edge within 150 feet in four to seven directions □ C An artificial edge occurs within 150 feet in more than four directions or assessment area is clear-cut
15.	Vegetative Composition – assessment area condition metric (skip for marshes and Pine Flat)
	Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate
	species, with exotic plants absent or sparse within the assessment area.
	Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or
	clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.
16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only)
	☑A Vegetation diversity is high and is composed primarily of native species.
	□B Vegetation diversity is low or has > 10% cover of exotics. □C Vegetation is dominated by exotic species.
	I II. VEGERALIOTE S GOTTINIALEGY BY EXOLIC SPECIES.

%17	17. Vegetative Structure – assessment area/wetland type condition metric					
		Ve	getation pr	esent		
		Ev	aluate perc	ent coverage of vegetation for marshes only		
			A ≥ 25°	% coverage of vegetation		
	,		eck a hov	% coverage of vegetation		
		str	ucture in a	in each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider irspace above the assessment area (AA) and the wetland type (WT) separately.		
		~~	VV 1	separately.		
			3 □B	Canopy closed, or nearly closed, with natural gaps associated with natural processes Canopy present, but opened more than natural gaps Canopy sparse or absent		
			3 ,	Dense mid-story/sapling layer Moderate density mid-story/sapling layer Mid-story/sapling layer sparse or absent		
			3 ⊠B	Dense shrub layer Moderate density shrub layer Shrub layer sparse or absent		
		\boxtimes		Dense herb layer		
				Moderate density herb layer		
			, ∣etation abs	Herb layer sparse or absent		
18.	Sna			pe condition metric		
	□A					
	⊠B		Not A	s (more than one) are present (> 12-inches DBH, or large relative to species present and landscape stability).		
19.	Diar	mete	r Class Dis	tribution – wetland type condition metric		
	□A		Most canor	by trees have stems > 6-inches in diameter at breast height (DBH); many large trees (> 12-inches DBH) are		
	□в					
	⊠c		Most canor	by trees have stems between 6- and 12-inches DBH, few are > 12-inch DBH. by trees are < 6-inches DBH or no trees.		
20.	Larc	ae W		s – wetland type condition metric		
	Inclu	ıde b	oth man-ma	and and natural debris piles.		
	∐A		Large logs	(more than one) are present (> 12-inches in diameter, or large relative to species present and landscape stability).		
	⊠в					
21.	Vege	etatio	on/Open Wa	ater Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)		
	0010	OL 1111	s inguite tital	thest describes the amount of interspersion between vegetation and open water in the growing season. Patterned sted areas, while solid white areas indicate open water.		
			MAR.			
		W				
		•				
22	Hahii	tat II	niauonoss	– wetland type condition metric		
 □Y€		⊠No				
ш.,	<i>.</i>		rias trie	N.C. Environmental Management Commission classified the assessment area as "Unique Wetlands" (UWL)?"		
Note	s					
	-	^^		and and the Property States		
	_	W	Ne Ve	& concerns as Riterine Swamp		
				U		

NC WAM Wetland Rating Sheet

Wetland Site Name	Privateer Site 3	Date of Assessment	9/6/07
Wetland Type	Headwater Wetland A	Assessor Name/Organization	
Presence of str	essor affecting assessment area (Y/N)	NO -	
	Assessment Form (Y/N)	# WO	
	gulatory considerations (Y/N)	NO 0	
Wetland is inter	nsively managed (Y/N)	NO	
	e a high-quality riverine wetland (Y/N)		
	, ,		
Sub-function Rating Function	Sub-function	Metrics	Rating
Hydrology	Surface Storage and Retention	Condition	HIGH
, .,	Sub-surface Storage and Retenti		HIGH
Water Quality	Pathogen Change	Condition	MEDIUM
		Condition/Opportunity	MEDIUM
		Opportunity Presence (
	Particulate Change	Condition	HIGH
	,	Condition/Opportunity	X
		Opportunity Presence (//N) X
	Soluble Change	Condition	MEDIUM
		Condition/Opportunity	HIGH
•		Opportunity Presence (\	(/N) YES
	Physical Change	Condition	HIGH
		Condition/Opportunity	HIGH
-		Opportunity Presence (Y	Y/N) YES
	Pollution Change	Condition	X
		Condition/Opportunity	X
		Opportunity Presence (Y	//N) X
Habitat	Physical Structure	Condition	HIGH
	Landscape Patch Structure	Condition	HIGH
	Vegetation Composition	Condition	MEDIUM
	Uniqueness	Condition	NO
Function Rating Sum	ımary		
Function		Metrics	Rating
Hydrology		Condition	HIGH
Water Quality		Condition	HIGH
		Condition/Opportunity	HIGH
		Opportunity Presence (Y	/N) YES
Habitat		Condition	HIGH
Overall Wetland F	Rating HIGH		

NC WAM FIELD ASSESSMENT FORM VERSION 3.13 (January 12, 2007)

V		I Site Nam		Date	9/6/07	
١.		etland Typ		Assessor Name/Organization		
"		i ⊑coregioi River Basii	Southeastern Plains	Nearest Named Water Body		
	□ Y			USGS 8-Digit Catalogue Unit Latitude/Longitude (deci-degrees)		
Is ti	dence ase circ instanc instanc s s s s h he asse	of stresso cle and/or rece, within 1 dydrologica curface and eptic tanks signs of veglabitat/plan essment are effects of signs of veglabitat/plan essment are effects of signs of veglabitat/plan essment are effects of signs of veglabitation and adjaubilicly own .C. Divisior	rs affecting the assessment area (r nake note below if evidence of stress D years). Noteworthy stressors included modifications (examples: ditches, does not stress discharges into the way underground storage tanks (USTs), etation stress (examples: vegetation at community alteration (examples: make a intensively managed? Yestressors that are present. The assessment area. If is the control of	may not be within the assessment area) fors is apparent. Consider departure from fide, but are not limited to the following. for ams, beaver dams, dikes, berms, ponds, e fetland (examples: discharges containing from lagoons, etc.) from mortality, insect damage, disease, storm for owing, clear-cutting, exotics, etc.) Solvent No Or threatened species or a Primary Nursery Area Original Primary Nursery Area Original Primary Services (Including buff)	etc.) obvious pollutants, presence of nearby damage, salt intrusion, etc.)	
Wha	N D at type	.C. Division esignated I of natural	of Water Quality best usage classific NCNHP reference community stream is associated with the wetla	cation of SA or supplemental classification	s of HQW, ORW, or Trout	
	B Ti		check one of the following boxes)	☐ Lunar ☐ Wind ☐ Both		
is th	ne asse	ssment ar	ea on a coastal island? Yes	⊠ No		
is th	ne asse	ssment ar	ea's surface water storage canacity	y or duration substantially altered by be	nover2	
ti a Q	Check a	a box in ea essment are nent area b VS A B	ased on evidence of alteration. Not severely altered Severely altered over most of the ass sedimentation, fire-plow lanes, skidd	essessment area condition metric the ground surface (GS) in the assessme applicable (see User Manual v1.0). If a r essment area (ground surface alteration e er tracks, bedding, fill, soil compaction, o sturbance, herbicides, salt intrusion [where	examples: vehicle tracks, excessive	
2. S	lurface		ess diversity [if appropriate], artificial	hydrologic alteration)		
C (S w a S	Surface and Sub-Surface Storage Capacity and Duration – assessment area condition metric Check a box in each column. Consider surface storage capacity and duration (Surf) and sub-surface storage capacity and duration (Sub). Consider both increase and decrease in hydrology. Refer to the NRCS Scope and Effect Guide (see User Manual v1.0 Appendix G) for North Carolina hydric soils for the zone of influence of ditches in hydric soils. A ditch ≤ 1 foot deep is considered to affect surface water only, while a ditch > 1 foot deep is expected to affect both surface and sub-surface water. Consider tidal flooding regime, if applicable. Surf Sub					
	₫A]B]C	□B V	water storage capacity or duration are	e altered, but not substantially (typically, no e substantially altered (typically, alteration g, fill, sedimentation, channelization, divers	sufficient to result in vegetation	
		•	face Relief – assessment area/wetl	• •		
	heck a	box in ea	ch column. Select the appropriate st	torage for the assessment area (AA) and t	he wetland type (WT).	
[]	A B C D D D	□A □B □C ⊠D	 > 50% of the wetland type with depree > 50% of the wetland type with depree > 50% of wetland type with depressio > 50% of wetland type with depressio Depressions able to pond water < 3-in 	ssions able to pond water 1 to 2 feet ons able to pond water 6 inches to 1 foot ons able to pond water 3- to 6-inches deep		

4.,	Şoil Texture/Structure – assessment area condition metric							
	Select a National	Technica Sandy s	ıl Commit oil	g soil profile in the dominant assessment area landscape feature. Make soil observations within the top foot. tee for Hydric Soils regional indicators are noted (use most recent guidance).				
		Predomi Gleyed r	nantly ch	paracterized by mottled (redoxymorphic features), mineral soil (F6, F8, F12, TF10, S5, S6) paracterized by other, mineral soil (no mottling) poil (F2, S4)				
	□F		on ≥ 1 ind					
	⊠G	No peat	or muck	presence				
				resence (A6, A7, A8, A9, A10, F1, S1) (histosol or histic epipedon) (A1, A2, A3)				
5.				opportunity metric				
	Example Surf	s of sub-s Sub	surface di	Dlumn. Consider surface pollutants or discharges (Surf) and sub-surface pollutants or discharges (Sub). ischarges include presence of nearby septic tank, underground storage tank (UST), etc.				
	⊠a □B	⊠a ⊟B	Noticeal	no evidence of pollutants or discharges entering the assessment area ble evidence of pollutants or discharges entering the wetland and stressing, but not overwhelming the nt capacity of the assessment area				
	□c [°]	□с	Noticeal	ble evidence of pollutants or discharges (pathogen, particulate, or soluble) entering the assessment area and Ily overwhelming the treatment capacity of the wetland (water discoloration, dead vegetation, excessive				
6.		e – oppo	-					
	within en and withi	Check all that apply. Evaluation of this metric involves a GIS effort with field adjustment. Consider sources draining to assessment area within entire upstream watershed (WS), within 5 miles and within the watershed draining to the assessment area (5M), and within 2 miles and within the watershed draining to the assessment area (2M). Effective riparian buffers are considered to be 50 feet wide in the Coastal Plain and Piedmont and 30 feet wide in the Mountains.						
	□A	5M □A	2M □A	> 30% impervious surfaces with stormwater Best Management Practices (BMPs) (land use examples: industrial, commercial, and high-density residential)	٠			
	□B □C	□B □C	□B □C	> 30% impervious surfaces without stormwater BMPs 10 to 30% impervious surfaces				
	⊠Ď	⊠Ď	⊠Ď	< 10% impervious surfaces				
	□E	ΠE	□E	Old urban development (pink areas on USGS 7.5-minute quadrangles)				
	E.	턌		New adjacent development				
	□G □H	□G □H	□G □H	Confined animal operations (or other local, concentrated source of pollutants) ≥ 20% coverage of pasture without riparian buffer				
				≥ 20% coverage of pasture with effective riparian buffer				
	⊠ì	⊠î	⊠î	≥ 20% coverage of agricultural land (regularly plowed land) without riparian buffer				
	□k □L	□k □L	□k □L	≥ 20% coverage of agricultural land (regularly plowed land) with effective riparian buffer ≥ 20% coverage of maintained grass/herb				
	⊠M	⊠м	⊠M	Silvicultural land with disturbance < 5 years old				
	□N	□N	□N	Little or no opportunity. Lack of opportunity may result from hydrologic modifications that prevent drainage or overbank flow from affecting the assessment area.				
7.				ted Buffer – assessment area condition metric				
	Is the ass	sessment ⊠Yes	area with	nin 50 feet of a stream or other open water? ("open water" does not include man-made ditches or canals) If No, Skip to next metric				
	Stream v	vidth (Stre	eam widt	h is normal flow width [ordinary high water to ordinary high water]). If the stream is anastomosed, combine				
	widths of	channels.	/braids fo	or a total stream width.				
	Do roote			□> 15-feet wide □Not Applicable a vegetation extend into the bank of the adjacent stream/open water?				
	DO TOOLS	or assess ⊠Yes		a vegetation extend into the bank of the adjacent stream/open water?				
	Is stream	or other	open wat	er sheltered or exposed?				
		☐Expos	ed – adja	acent open water with width < 2500 feet <u>and</u> no regular boat traffic. cent open water with width ≥ 2500 feet <u>or</u> regular boat traffic.				
8.				Vidth – assessment area/wetland type/wetland complex metric				
	(WC), an only be panastomo	d the ripa present or	irian buffe n one sic em. Mak	amn. Select the appropriate width for the wetland type at the assessment area (WT), the wetland complex er at the assessment area (RB) (if applicable). Riparian buffer width is measured from top of bank and need do of the water body. The riparian buffer is measured from the outside banks of the outer channels of an ace buffer judgment based on dominant landscape feature. Record a note if a portion of the buffer has been				
			RB (if ap	oplicable)				
	⊠A	⊠A	⊠a` ˈ	≥ 100 feet				
		Ū₿	$\Box B$	From 80 to < 100 feet				
	Π̈́	∐°	□c	From 50 to < 80 feet				
	Πn	\Box D	□D	From 40 to < 50 feet				
	꿈	ΪĒ	ΠE	From 30 to < 40 feet				
	낻	냚	ΠF	From 15 to < 30 feet				
	냋	片	∐Ġ	From 5 to < 15 feet				
		GH	ШΗ	< 5 feet				
	\Box \Box							

•	9.,	Inundation Duration – assessment area condition metric
		Answer for assessment area dominant landform. Answer for assessment area dominant landform. Evidence of short-duration inundation (< 7 consecutive days) Evidence of saturation, without evidence of inundation Evidence of long-duration inundation (7 to 30 consecutive days or more)
	10.	Indicators of Deposition – assessment area condition metric
		Consider recent deposition only (no plant growth since deposition). □ Sediment deposition is not excessive, but at approximately natural levels. □ Sediment deposition is excessive, but not overwhelming the wetland. □ C Sediment deposition is excessive and is overwhelming the wetland.
	11.	Wetland Size – wetland type/wetland complex condition metric
		Check a box in each column. Involves a GIS effort with field adjustment. This metric evaluates three aspects of the wetland area: the size of the wetland type (WT), the size of the contiguous wetland complex (WC), and the size of the contiguous, forested wetland (FW) (if applicable, see User Manual). Boundaries are formed by uplands, four-lane roads, or urban landscapes. An observed beaver pond forms a boundary if it extends across the entire width of the floodplain. Additionally, other wetland types are considered boundaries for column WT. If assessment area is clear-cut, select "K" for FW column. WT WC FW (if applicable) □ A □ A ≥ 500 acres □ B □ B □ From 100 to < 500 acres □ C □ C □ C □ C □ C From 50 to < 100 acres □ D □ D □ D From 25 to < 50 acres □ F □ F □ F From 10 to < 25 acres □ F □ F □ F From 5 to < 10 acres □ G □ G □ G From 1 to < 5 acres □ H □ H □ H From 0.5 to < 1 acre □ H □ H □ H From 0.1 to < 0.5 acre □ J □ J □ J From 0.01 to < 0.1 acre □ J □ J □ J From 0.01 to < 0.1 acre
	12	Wetland Intactness – wetland type condition metric (evaluate for Pocosins only)
	12.	Wetland type is the full extent (≥ 90%) of its natural landscape size.
		□B Wetland type is the full extent (= 30%) of the full extent of its natural landscape size.
	13.	Connectivity to Other Natural Areas – landscape condition metric
		Check appropriate box(es). This metric refers to the landscape patch, the contiguous naturally vegetated area and open water (if appropriate) that includes the wetland type. Boundaries are formed by four-lane roads, urban landscapes, maintained fields (pasture and agriculture), or open water > 300 feet wide. Consider if the wetland type is well-connected (WC) or loosely-connected (LC) to the landscape patch. WC LC MA MA ≥ 500 acres B B From 100 to < 500 acres C C From 50 to < 100 acres D D From 10 to < 50 acres E S < 10 acres Wetland type has a poor or no connection to other natural habitats
		Check Yes or No.
		 ☐ Yes ☐ No ☐ Does wetland type have a surface hydrology connection to open waters or tidal wetlands? (evaluate for marshes only) ☐ Yes ☐ No Is the assessment area subject to overbank flooding during normal conditions?
		Estimate distance from wetland type boundary to artificial edges. Artificial edges include permanent features such as fields, development, two-lane or larger roads (≥ 40-feet wide), utility line corridors wider than a two-lane road, and clear-cuts < 10 years old. Consider the eight main points of the compass. □ No artificial edge within 150 feet in all directions □ No artificial edge within 150 feet in four to seven directions □ An artificial edge occurs within 150 feet in more than four directions or assessment area is clear-cut
	15	Vegetative Composition – assessment area condition metric (skip for marshes and Pine Flat)
		☐A Vegetation is close to reference condition in species present and their proportions. Lower strata composed of appropriate
		species, with exotic plants absent or sparse within the assessment area. Vegetation is different from reference condition in species diversity or proportions, but still largely composed of native species characteristic of the wetland type. This may include communities of weedy native species that develop after clearcutting or clearing. It also includes communities with exotics present, but not dominant, over a large portion of the expected strata. Vegetation severely altered from reference in composition. Expected strata are unnaturally absent or dominated by exotic
		species or composed of planted stands of non-characteristic species or inappropriately composed of a single species.
	16.	Vegetative Diversity – assessment area condition metric (evaluate for Non-tidal Freshwater Marsh only) ☑A Vegetation diversity is high and is composed primarily of native species. ☐B Vegetation diversity is low or has > 10% cover of exotics. ☐C Vegetation is dominated by exotic species.

_。 17̯.	Vegetative Structure – assessment area/wetland type condition metric							
	∨ Vegetation present							
	Evaluate percent coverage of vegetation for marshes only							
	k a box in each column for each stratum. Evaluate this portion of the metric for non-marsh wetlands. Consider							
	structure in airspace above the assessment area (AA) and the wetland type (WT) separately.							
	AA WT \[\rightarrow A \right							
	□A □A Dense mid-story/sapling layer □B □B Moderate density mid-story/sapling layer □C □C Mid-story/sapling layer sparse or absent							
	□A □A Dense shrub layer □B ☑B Moderate density shrub layer □C □C Shrub layer sparse or absent							
	□A □A Dense herb layer □B □B Moderate density herb layer □C □C Herb layer sparse or absent □ Vegetation absent							
40	•							
10.	Snags – wetland type condition metric Large snags (more than one) are present (> 12-inches DBH, or large relative to species present and landscape stability).							
	B Not A							
19.	Diameter Class Distribution – wetland type condition metric							
	Most canopy trees have stems > 6-inches in diameter at breast height (DBH); many large trees (> 12-inches DBH) are							
	present. Most canopy trees have stems between 6- and 12-inches DBH, few are > 12-inch DBH.							
	Most canopy trees have steins between 6- and 12-inches DBH, few are > 12-inch DBH. Most canopy trees are < 6-inches DBH or no trees.							
20.	Large Woody Debris – wetland type condition metric							
	Include both man-made and natural debris piles. A Large logs (more than one) are present (> 12-inches in diameter, or large relative to species present and landscape stability). Not A							
21.	Vegetation/Open Water Dispersion – wetland type/open water condition metric (evaluate for Non-Tidal Freshwater Marsh only)							
	Select the figure that best describes the amount of interspersion between vegetation and open water in the growing season. Patterned areas indicate vegetated areas, while solid white areas indicate open water.							
22	Habitat Uniqueness – wetland type condition metric							
 □Y€								
	1 Add the N.C. Environmental Management Commission classified the assessment area as "Unique Wetlands" (UWL)?							
Note								
	Restraction site, stream relocated back tomorgh							
	Restraction site, stream relocated back Honoya forested system (in year3) of wontory							