NOT AN INSTRUMENT PROJECT

As-Built Baseline Monitoring Report

Black Gum Creek Wetland Restoration Site

DMS Project Number 97063

Robeson County, North Carolina

April 2016

Prepared by:
NC Department of Environmental Quality
Division of Mitigation Services
1652 Mail Service Center
Raleigh, NC 27699

This report was written in conformance with the DOD and EPA 40 CFR Part 230 (Final Rule) and the April 2003 US Army Corps of Engineers, Wilmington District Stream Mitigation Guidelines

TABLE OF CONTENTS

Appendices

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1.0 PROJECT SUMMARY

The Black Gum Creek Project (the site) is a wetland rehabilitation and preservation project constructed for the NC Division of Mitigation Services (DMS) to fulfill non-riparian wetland needs in the Lumber River Basin 03040203 Catalog Unit. The project is located in northwest Robeson County, approximately 6 miles north of Maxton, off Modest Rd (Figure 1). This project includes rehabilitation of non-riparian wetlands and preservation of existing forested and ponded wetlands (Table 1).

The Project site is a former agricultural field, located on an inter-stream divide between the Lumber River and Black Gum Swamp, surrounded by forested areas and agricultural parcels. The site was altered since the mid-80s, which included ditching and clearing.

The site contains approximately 9.940 acres exhibiting wetland hydrology and soils (Wetland 1), but initially was lacking in hydrophytic vegetation, lending itself to a rehabilitation restoration approach using the definitions provided in 40 CFR Part 230 (Final Rule). Additionally, there are two jurisdictional wetland communities on the site, as confirmed by an approved jurisdictional determination (JD) by the US Army Corps of Engineers on January 6, 2016, leading to a preservation approach to provide wetland restoration equivalents (RE). These preservation areas include 23.042 acres of a successional wetland and forested hardwood flat in the Southern section of the project (Wetland 2) and 51.382 acres of forested hardwood flat/pocosin and open water/wetland habitat in the northern section of the project, for a total of 74.424 acres of preservation (Figure 2). These acreages have been updated from the Mitigation Plan to As-Built stage due to GIS geometry calculation.

Wetland restoration activities included planting the rehabilitation areas in March 2016 with 5,010 bare root species from the Hardwood Flat Forest Community (NCWAM, v. 4.1 2010) as well as other similar species found in the adjacent forested wetland community. There were six (6) different species selected to reflect the target vegetative community.

1.1 Goals and Objectives

The Lumber River Basin Restoration Priorities state that the goals for the Black Gum Creek 14-digit HUC are:

- Replacing buffer
- Repairing channelized streams
- Preservation of existing resources.

The following specific project goals, as stated in the Mitigation Plan, include:

- Restoring a hardwood flat vegetation community
- Expanding forested wetland complex

The success of these project goals will be addressed through the following objectives:

- Plant native tree/shrub species
- Preserve existing hardwood flat/pocosin wetlands

2.0 PERFORMANCE STANDARDS

2.1 Vegetation

An average density of 260 stems/acre must be surviving after five years of monitoring. Upon completion of planting in March 2016, eight (8) permanent vegetation plots were installed and initial plant stocking was performed to determine species composition and density (Appendix C, Table 6). Vegetation was monitored using the Carolina Vegetation Survey (CVS) protocols level 2 monitoring.

2.2 Hydrology
The site will present continuous saturated or inundated hydrologic conditions for at least 8% of the growing season during normal weather conditions. A "normal" year is based on NRCS climatological data for Robeson County, using the 30th to 70th percentile thresholds as the range of normal. The growing season for Robeson County, using the 50% chance of higher than 28 F method, is from March 22th through November 5th, 228 days (WETS Table, Robeson County). Hydrologic performance will be determined through evaluation of automatic recording gauge data supplemented by documentation of wetland hydrology indicators as defined in the 1987 USACE Delineation Manual, daily data will be collected from automatic wells over the 5-year monitoring period.

Five (5) continuous monitoring groundwater gauges were installed to provide pre-restoration conditions, and data was downloaded to provide one more year of pre-restoration data for this as-built report. Data from the 2015 growing season for monitoring gauges 3, 4 and 5 is provided in Appendix D. Gauges 1 and 2 were destroyed, presumably by a bear, and the data from these two gauges was not recoverable.

3.0 MONITORING PLAN

Annual monitoring data will be reported using the DMS monitoring template. The monitoring report shall provide a project data chronology that will facilitate an understanding of project status and trends, population of DMS databases for analysis, research purposes, and assist in decision making regarding project close-out.

Required	Parameter	Quantity	Frequency	Notes
Yes	Groundwater Hydrology	Quantity and location of gauges will be determined in consultation with DMS	annual	Groundwater monitoring gauges with data recording devices will be installed on site; the data will be downloaded on a quarterly basis
Yes	Vegetation	Quantity and location of vegetation plots will be determined in consultation with DMS	Monitoring Years 1, 2,3,4,5	Vegetation will be monitored using the Carolina Vegetation Survey (CVS) protocols
	Exotic and nuisance vegetation		Semi-annual	Locations of exotic and nuisance vegetation will be mapped
	Project boundary		Semi-annual	Mapping of vegetation damage, boundary encroachments

The first scheduled vegetation monitoring will be conducted during the first full growing season following project completion. Monitoring will occur in years 1, 2, 3, 4 and 5. The survivability of the vegetation plantings will be evaluated using a 100m^2 vegetative sampling plots randomly placed in the planted areas.

Groundwater elevations will be monitored to evaluate jurisdictional wetland hydrology. Verification of wetland hydrology will be determined by automatic recording of well data collected within the project area.

Permanent photographic reference points will be established to assist in characterizing each site and to allow qualitative evaluation of site conditions. The location of each photo point will be marked in the monitoring plan and the bearing/orientation of the photograph will be documented.

Annual monitoring reports will be prepared and submitted after all monitoring tasks for each year are completed. The report will document the monitored components and include all collected data and photographs. Each report will provide the new monitoring data and compare the most recent results against previous findings. The monitoring report format will be similar to that set out in the most recent DMS monitoring protocol.

4.0 MAINTENANCE AND CONTINGENCY PLAN

DMS shall monitor the site and conduct a physical inspection of the site a minimum of once per year throughout the post-construction monitoring period until performance standards are met. These site inspections may identify site components and features that require routine maintenance. Routine maintenance should be expected most often in the first two years following site construction and may include the following:

Component/Feature	Maintenance through project close-out	Remedial Measures
Vegetation	Vegetation shall be maintained to ensure survival. Routine vegetation maintenance and repair activities may include supplemental planting. The site will also be evaluated to ensure diffuse flow is still occurring.	Any remedial activities performed will be documented in the annual monitoring reports.
Site Boundary	Site boundaries shall be identified in the field to ensure clear distinction between the mitigation site and adjacent properties. Boundaries may be identified by fence, marker, bollard, post, tree-blazing, or other means as allowed by site conditions and/or conservation easement. Boundary markers disturbed, damaged, or destroyed will be repaired and/or replaced on an as needed basis.	Any remedial activities performed will be documented in the annual monitoring reports.

5.0 BASELINE

Baseline monitoring components were established in 2016. A total of 5,010 woody stems were planted by Bruton Natural Systems, Inc. in March 2016. Upon the completion of planting in March 2016, initial plant stocking density and composition were verified. See Table 6 in Appendix C for the list of species and number of each planted. In addition, DMS staff randomly selected and established eight (8) 100 square meter (m^2) vegetation plots. See Figure 3 in Appendix B for plot locations and Table 7 in Appendix C for information on plot density.

APPENDIX A

BACKGROUND TABLES

Table 1: Project Mitigation Components
Black Gum Creek, DMS Project ID# 97063

Mitigation Components									
	Stream		Riparian Wetland		Non-riparian Wetland		Buffer	Nitrogen Nutrient	Phosphorous Nutrient Offset
Type	R	RE	R	RE	R	RE			
Acres					9.940	74.424			
Total Credits	-	-	-	-	6.627	7.442			

Project Components						
Project Component	Stationing/ Location	Existing Footage/Acreage	Approach (PI, PII etc.)	Restoration -or- Restoration Equivalent	Restoration Acreage	Mitigation Ratio
Wetland 1	-	9.940	-	R	9.940	1.5
Wetland 2	-	23.042	-	RE	23.042	10
Wetland 3	-	51.382	-	RE	51.382	10

Component Summation						
Restoration Level	Stream (linear feet)	Riparian Wetland (acres)		Non- (acres)	Buffer (square feet)	Upland (acres)
		Riverine	Non-Riverine			
Restoration (Rehabilitation)	-	-	-	9.940	-	-
Enhancement		-	-		-	-
Enhancement I	-					
Enhancement II	-					
Creation		-	-	-		
Preservation	-	-	-	74.424		-
High Quality Preservation	-	-	-	-		-

R=Restoration, RE= Restoration Equivalent

Table 2. Project Activity and Reporting History

Activity or Deliverable	Data collection Complete	Completion or Delivery
Institution Date	NA	Jul-05
404 permit date	NA	NA
Restoration Plan	NA	Jan-16
Site Planted	NA	Mar-16
Mitigation Plan / As-built Baseline	Apr-16	Apr-16
Year 1 Monitoring		
Year 2 Monitoring		
Year 3 Monitoring		
Year 4 Monitoring		
Year 5 Monitoring		

Table 3. Project Contacts Table

Designer Primary planting plan POC	NCDEQ Division of Mitigation Services Kristin Miguez 910-796-7475
Survey Contractor Survey contractor POC	Landmark Surveying, Inc. PO Box 839, Graham, NC 27253-0839 Doug Yarbrough - 336-263-1294
Planting Contractor Planting contractor POC	Bruton Natural Systems, Inc. PO Box 1197, Fremont, NC 27830 Charlie Bruton - 919-242-6555
Monitoring Performers	NCDEQ Division of Mitigation Services 1652 Mail Service Center, Raleigh, NC 27699-1652
Vegetation Monitoring POC	Kristin Miguez 910-796-7475
Wetland Monitoring POC	Kristin Miguez 910-796-7475

Table 4. Project Attributes Table

Project Information			
Project Name	Black Gum Creek		
County	Robeson		
Project Area (acres)	147.47		
Project Coordinates (lat. & long.)	79°19'44" W 34°49'12" N		
Project Watershed Summary Information			
Physiographic Province	Coastal Plain		
River Basin	Lumber		
USGS Hydrologic Unit 8-Digit	3040203	**USGS Hydrologic Unit 14-Digit**	3040203020010
DWR Sub-basin	03-07-51		
Project Drainage Area (ac)	N/A		
Project Drainage Area % Impervious	<1%		
CGIA Land Use Classification	50% Forested, 41% Agriculture		
Existing Wetland Summary Information			
Parameters	**1**	**2**	**3**
Size of Wetland (acres)	9.940	23.042	51.382
Wetland Type	Non-riparian	Non-riparian	Non-riparian
Mapped Soil Series	Rains & Plummer/ Osier	Plummer/Osier & Rutledge	Rutledge
Drainage Class	Poorly & Very Poorly Drained	Very Poorly Drained	Very Poorly Drained
Soil Hydric Status	Hydric	Hydric	Hydric
Source of Hydrology	Precipitation	Precipitation	Precipitation
Hydrologic Impairment	None	None	None
Existing Vegetation	Crops	Successional	Forested
Percent composition of exotic invasive vegetation	0%	0%	0%
Regulatory Considerations			
Regulation	**Applicable**	**Resolved**	**Supporting Documentation**
Waters of the U.S. Section 404	Yes	Yes	Jurisdictional Determination
Waters of the U.S. Section 401	Yes	Yes	Jurisdictional Determination
Endangered Species Act	N/A	N/A	N/A
Historic Preservation Act	N/A	N/A	N/A
Coastal Zone Management Act (CZMA)/ Coastal Area Management Act (CAMA)	N/A	N/A	N/A
FEMA Floodplain Compliance	N/A	N/A	N/A
Essential Fisheries Habitat	N/A	N/A	N/A

APPENDIX B

VISUAL ASSESSMENT DATA

Figure 1. Vicinity Map

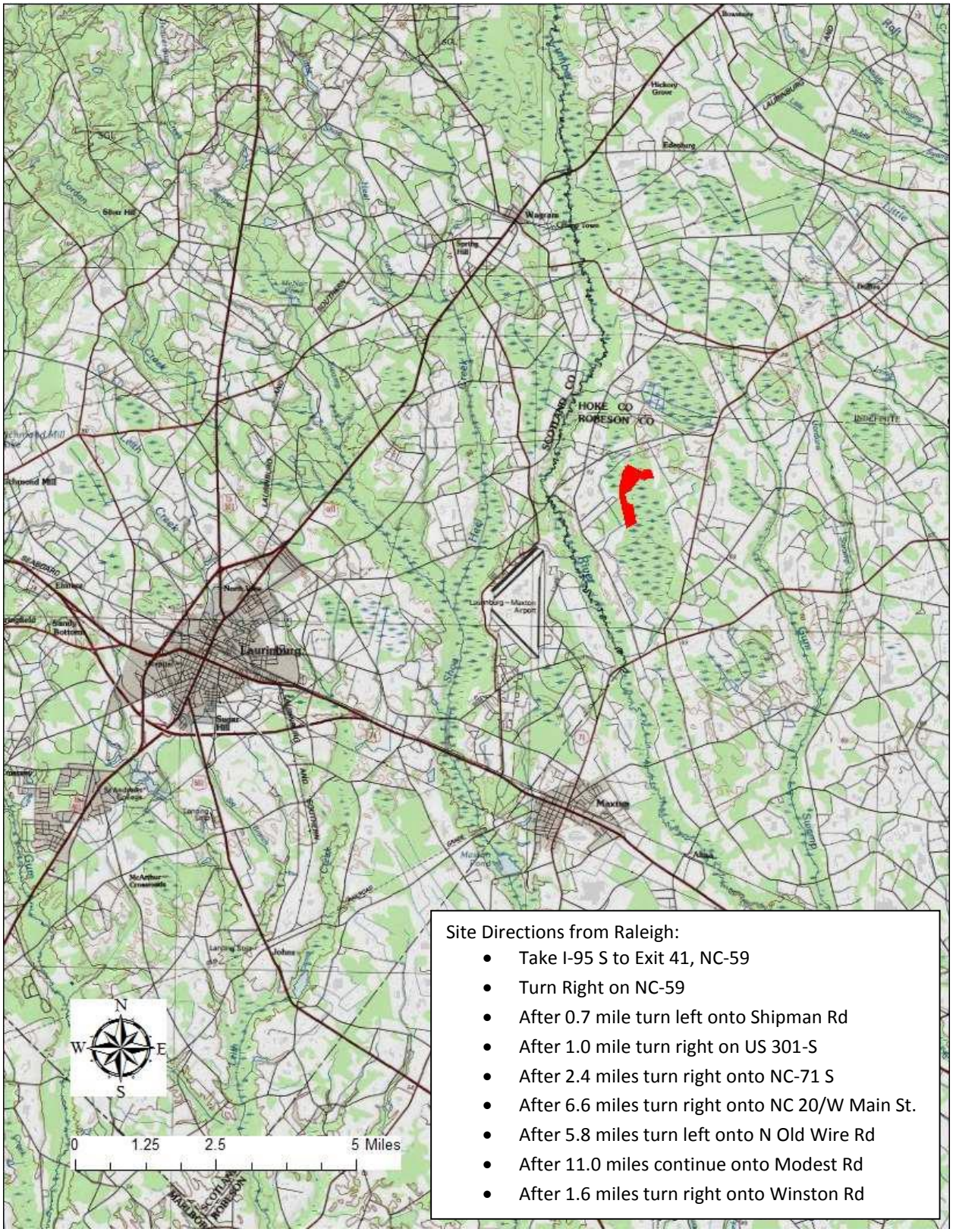
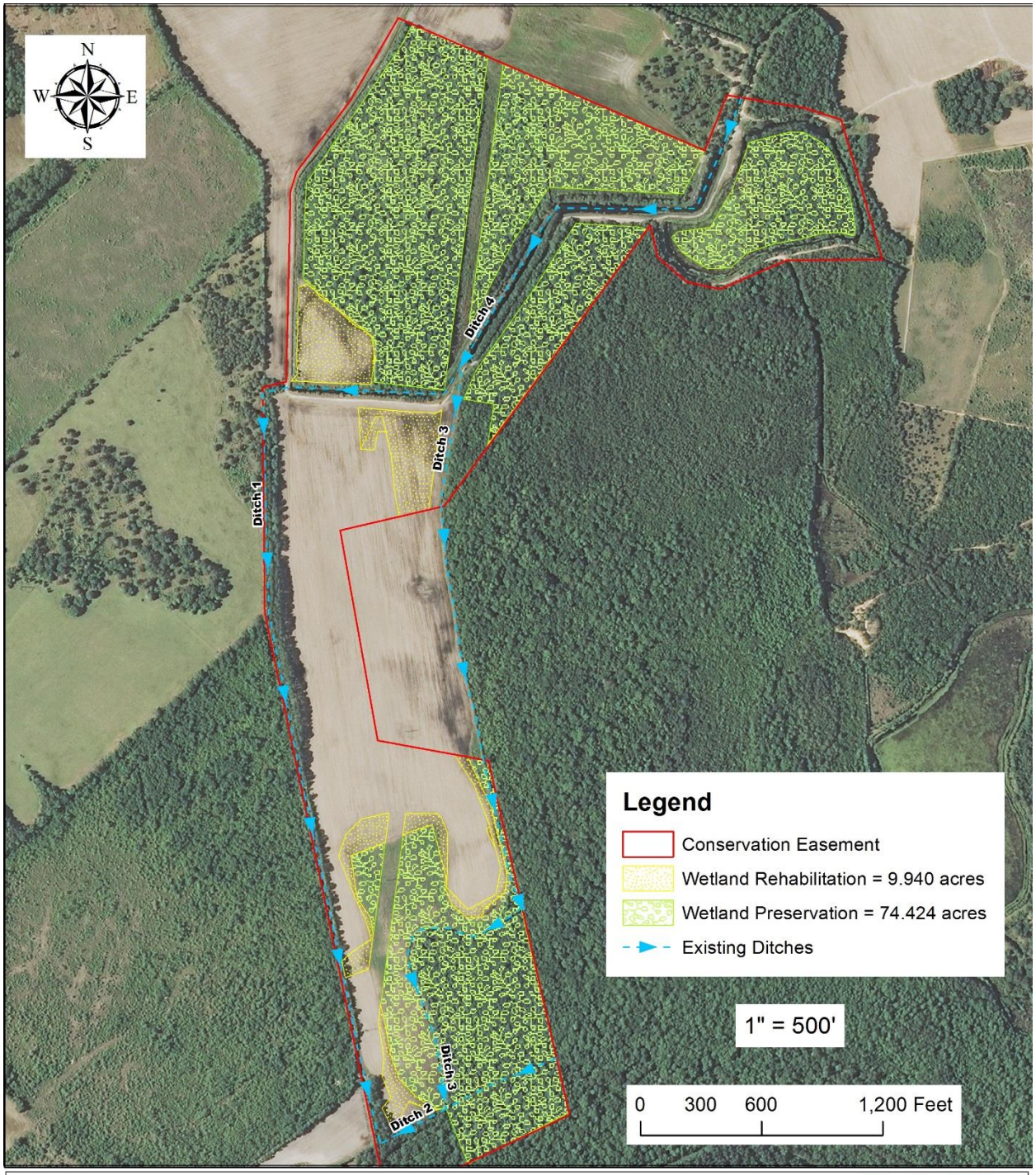


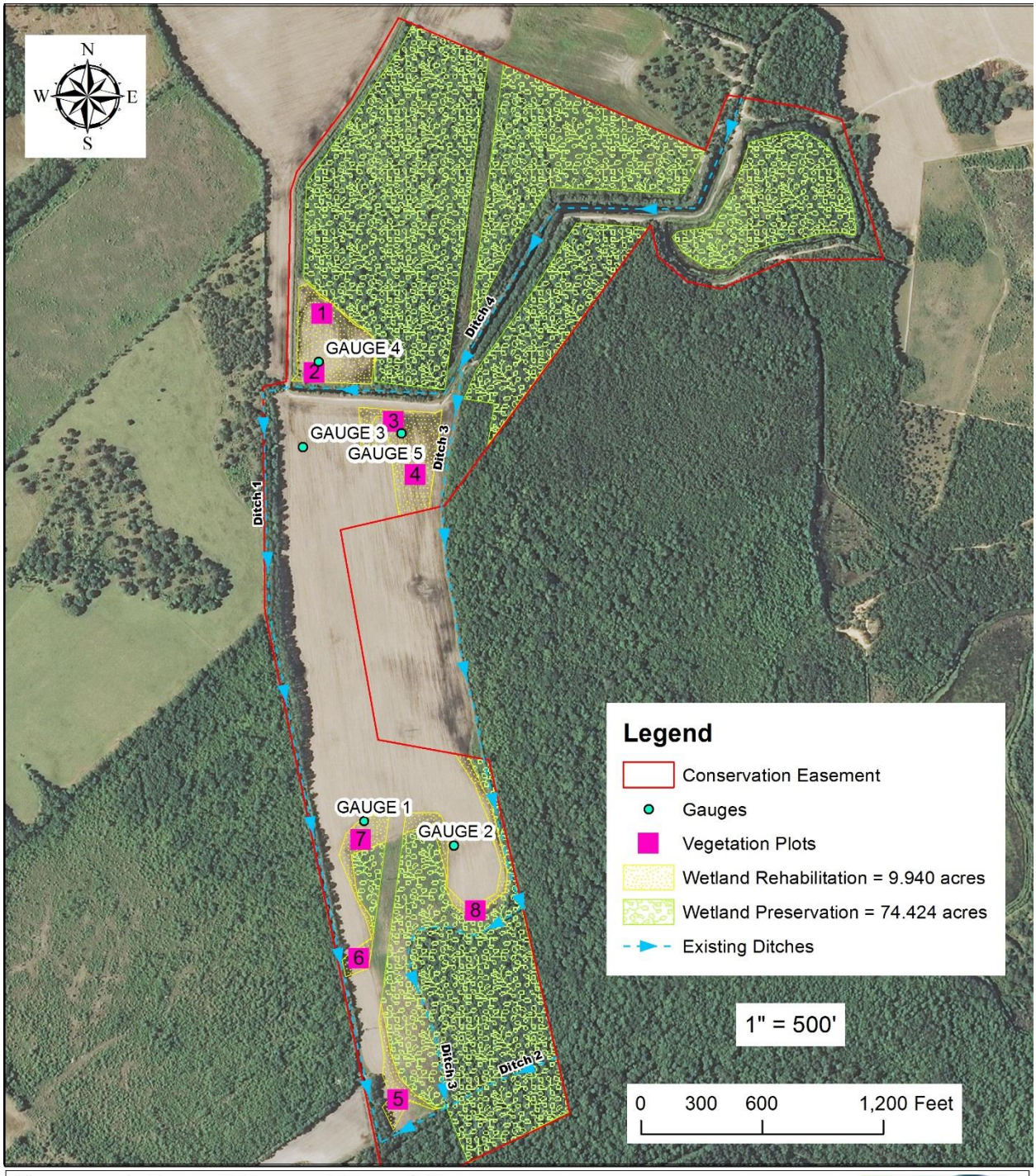
Figure 2. Asset Map



Asset Map
Black Gum Site 97063
As-Built Baseline 2016
Robeson County, NC

Mitigation Services
ENVIRONMENTAL QUALITY

Figure 3. Current Conditions Plan View



Current Conditions Plan View
Black Gum Site 97063
As-Built Baseline 2016
Robeson County, NC
Note: Gauge 2 and 3 are not inside wetland asset areas, and are not counted toward success criteria

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Site Photos (all photo points are located on the SE corner of the vegetation plot)


Photo Point 1


Photo Point 2


Photo Point 3


Photo Point 4


Photo Point 5


Photo Point 6


Photo Point 7


Photo Point 8

Table 5. Vegetation Condition Assessment
Black Gum Creek, DMS Project ID# 97063
Planted Acreage: 9.9 acres

Vegetation Category	Definitions	Mapping Threshold	CCPV Depiction	Number of Polygons	Combined Acreage	% of Planted Acreage
1. Bare Areas	Very limited cover of both woody and herbaceous material.	0.1 acres	Pattern and Color	0	0.00	0.0%
2. Low Stem Density Areas	Woody stem densities clearly below target levels based on MY3, 4, or 5 stem count criteria.	0.1 acres	Pattern and Color	0	0.00	0.0%
			Total	0	0.00	0.0%
3. Areas of Poor Growth Rates or Vigor	Areas with woody stems of a size class that are obviously small given the monitoring year.	0.25 acres	Pattern and Color	0	0.00	0.0%
			Cumulative Total	0	0.00	0.0%
Easement Acreage[2]	**14**					
Vegetation Category	**Definitions**	**Mapping Threshold**	**CCPV Depiction**	**Number of Polygons**	**Combined Acreage**	**% of Easement Acreage**
4. Invasive Areas of Concern[4]	Areas or points (if too small to render as polygons at map scale).	1000 SF	Pattern and Color	0	0.00	0.0%
5. Easement Encroachment Areas[3]	Areas or points (if too small to render as polygons at map scale).	none	Pattern and Color	0	0.00	0.0%

APPENDIX C

VEGETATION PLOT DATA

Table 6. Planted Species
Black Gum Creek, DMS Project ID# 97063

Scientific Name	Common Name	Number Planted	% of total planted
Acer rubrum	Red Maple	835	16.67%
Fraxinus pennsylvanica	Green Ash	835	16.67%
Cornus amomum	Silky Dogwood	835	16.67%
Beltula nigra	River Birch	835	16.67%
Plantanus occidentalis	American Sycamore	835	16.67%
Quercus michauxii	Swamp Chestnut Oak	835	16.67%
	Total:	**5,010**	**100%**

Table 7. Vegetation Density
Black Gum Creek, DMS Project ID# 97063

			Current Plot Data (MY0 2016)																							Annual Means		
			97063-01-0001			97063-01-0002			97063-01-0003			97063-01-0004			97063-01-0005			97063-01-0006			97063-01-0007			97063-01-0008			MY0 (2016)		
Scientific Name	Common Name	Species Type	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T
Acer rubrum	red maple	Tree	3	3	3	3	3	3	12	12	12	5	5	5	6	6	6	2	2	2	1	1	1	2	2	2	34	34	34
Betula nigra	river birch	Tree	2	2	2				2	2	2				4	4	4	3	3	3	4	4	4	1	1	1	16	16	16
Cornus amomum	silky dogwood	Shrub	1	1	1				1	1	1	1	1	1	4	4	4	5	5	5				4	4	4	16	16	16
Fraxinus pennsylvanica	green ash	Tree	9	9	9				1	1	1	3	3	3										3	3	3	16	16	16
Platanus occidentalis	American sycamore	Tree	3	3	3	4	4	4				5	5	5	1	1	1	3	3	3	4	4	4				20	20	20
Quercus michauxii	swamp chestnut oak	Tree	3	3	3	3	3	3	1	1	1	1	1	1	1	1	1				2	2	2	1	1	1	12	12	12
Unknown		Shrub or Tree																1	1	1							1	1	1
		Stem count	21	21	21	10	10	10	17	17	17	15	15	15	16	16	16	14	14	14	11	11	11	11	11	11	115	115	115
		size (ares)	1			1			1			1			1			1			1			1			8		
		size (ACRES)	0.02			0.02			0.02			0.02			0.02			0.02			0.02			0.02			0.20		
		Species count	6	6	6	3	3	3	5	5	5	5	5	5	5	5	5	5	5	5	4	4	4	5	5	5	7	7	7
		Stems per ACRE	849.8	849.8	849.8	404.7	404.7	404.7	688	688	688	607	607	607	647.5	647.5	647.5	566.6	566.6	566.6	445.2	445.2	445.2	445.2	445.2	445.2	581.7	581.7	581.7

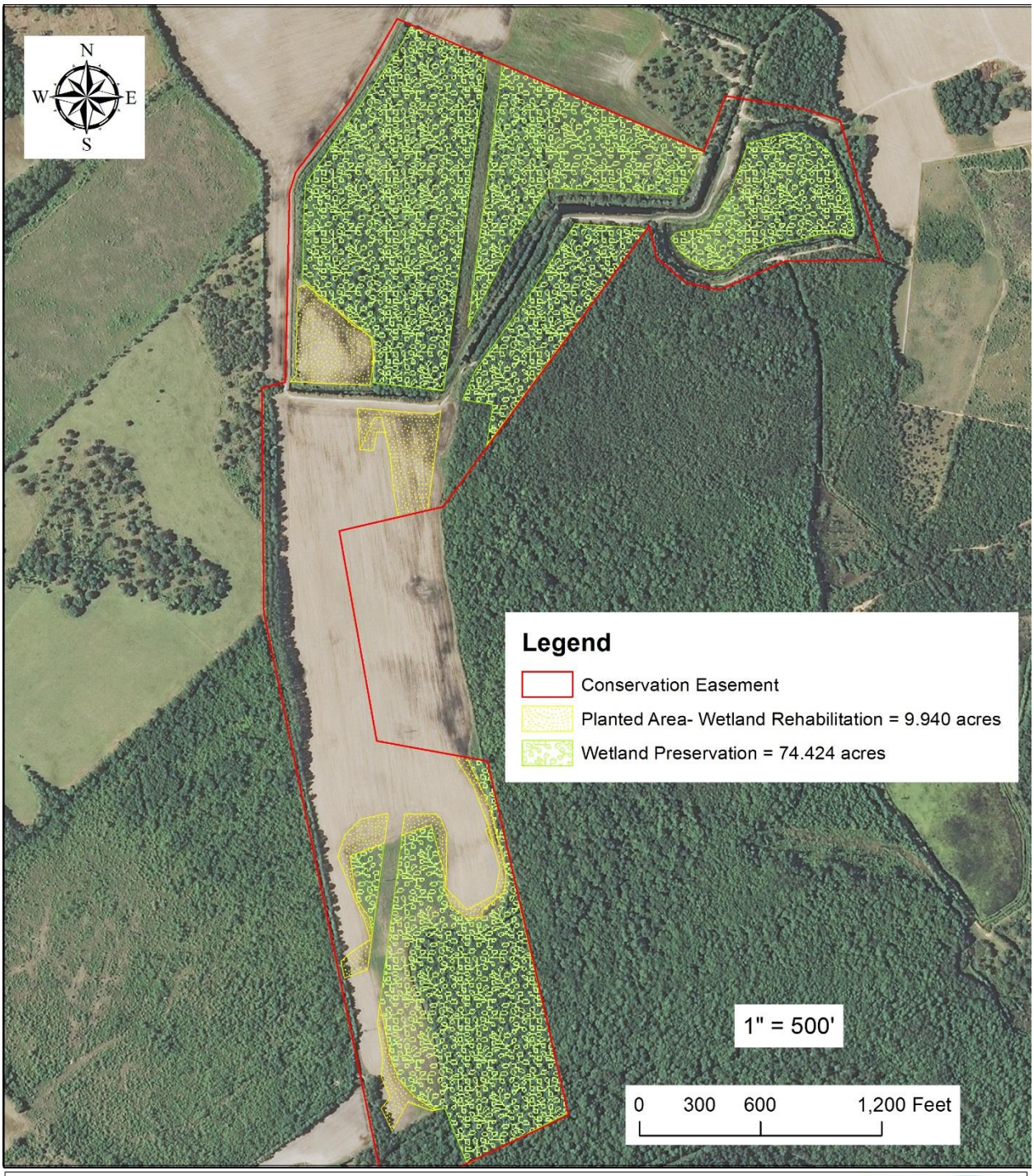
Type = Tree, Shrub, Livestake
P = Planted
T = Total

Color for Density
Exceeds requirements by 10%
Exceeds requirements, but by less than 10%
Fails to meet requirements, by less than 10%
Fails to meet requirements by more than 10%

APPENDIX D

AS-BUILT PLAN and 2015 MONITORING GAUGE DATA

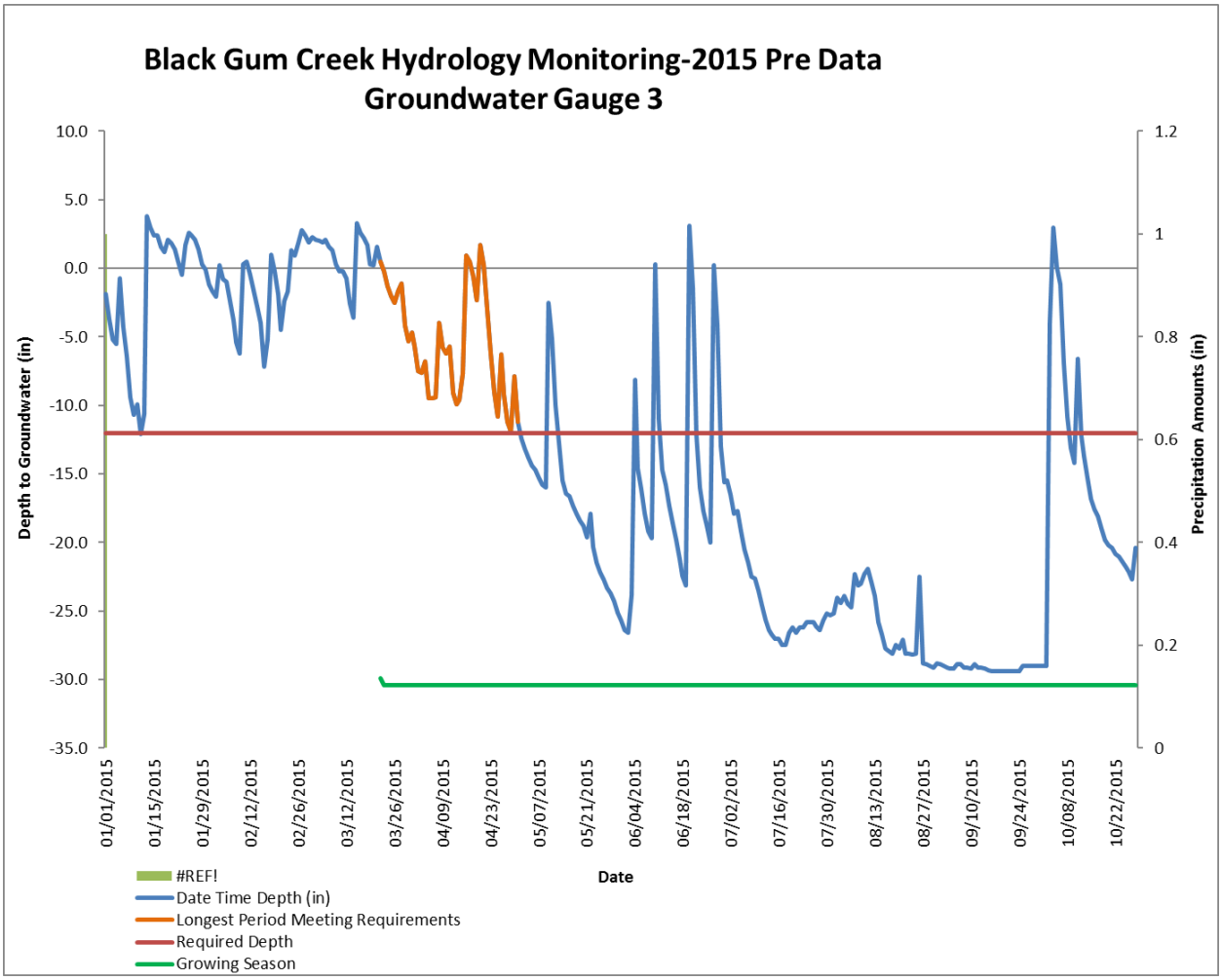
Figure 4. As-built Plan



As-Built Map
Black Gum Site 97063
As-Built Baseline 2016
Robeson County, NC

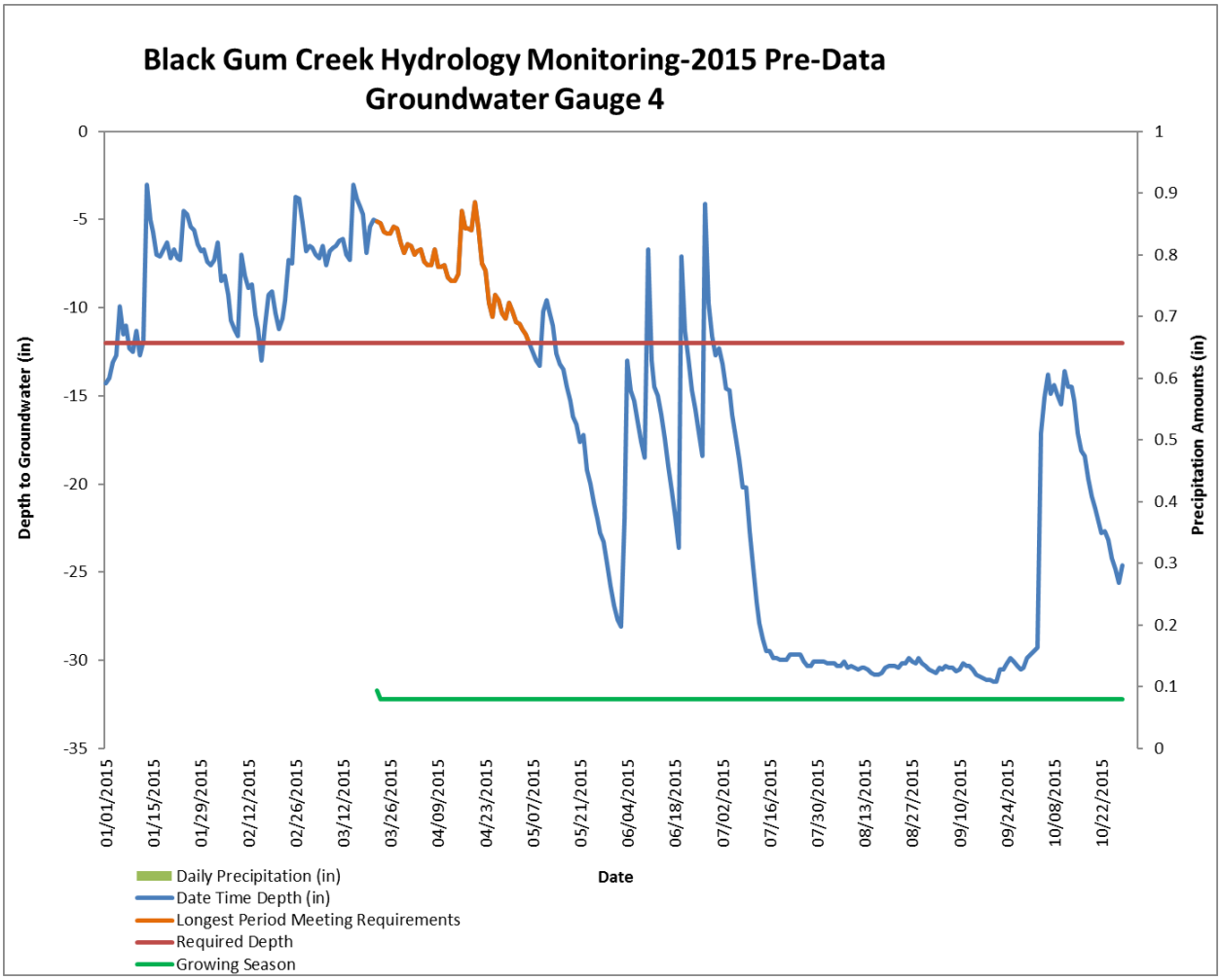
Mitigation Services
ENVIRONMENTAL QUALITY

Figure 5a. Monitoring Gauge #3



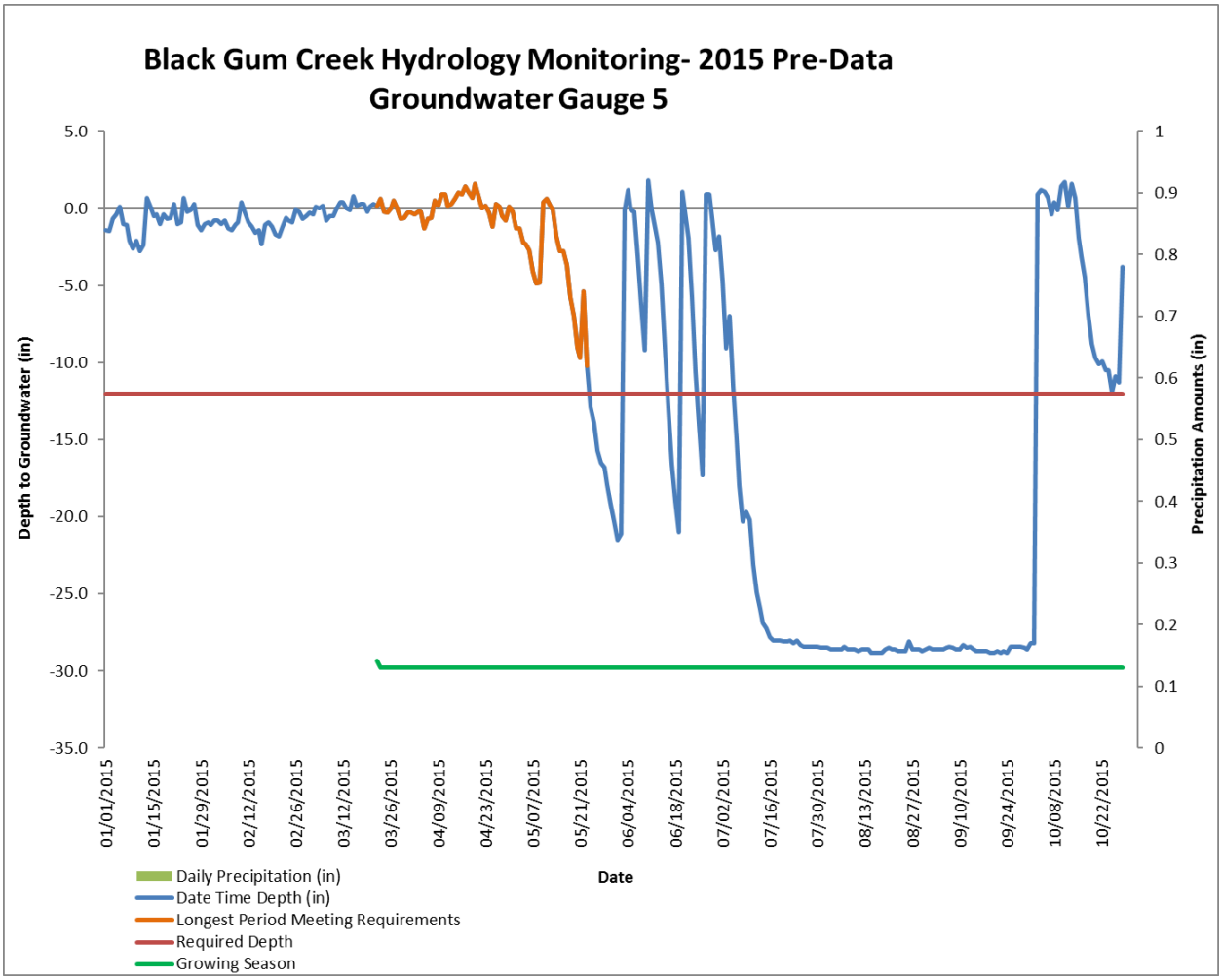
Growing Season Days: 228 (Mar 22 – Nov 5)
Success Hydroperiod Percent: 8%
Required Number of Days Meeting Requirements: 18
Longest Period Meeting Requirements: 41
Hydroperiod Percent: 17.98%

Figure 5b. Monitoring Gauge #4



Growing Season Days: 228 (Mar 22 – Nov 5)
Success Hydroperiod Percent: 8%
Required Number of Days Meeting Requirements: 18
Longest Period Meeting Requirements: 46
Hydroperiod Percent: 20.18%

Figure 5c. Monitoring Gauge #5



Growing Season Days: 228 (Mar 22 – Nov 5)
Success Hydroperiod Percent: 8%
Required Number of Days Meeting Requirements: 18
Longest Period Meeting Requirements: 63
Hydroperiod Percent: 27.63%

APPENDIX E

CLARIFICATIONS TO IRT

This project is not an Instrument Project and as such, a formal response to comments was not provided prior to the completion of the Final Mitigation Plan. Several of the concerns brought forward below were subsequently discussed with members of the IRT. For clarification purposes, a detailed response is being provided as part of the Baseline Monitoring Document.

*Todd Bowers, USEPA, February 19, 2016***:**
1. General comment: Well-documented past site activity, comments, letters and recent progress towards establishing this site as a wetland bank. However, many questions arise based on some lack of definitive information to those who have not been on-site with the IRT. Disclaimer: I have not been on-site or in any discussions with the IRT concerning this project. I realize this project has a lengthy history and many approaches have been considered that I have not been privy to.

> *Response: This project was originally submitted to the Division of Mitigation Services (DMS, then EEP) as a Full Delivery Project that included a combination of stream and riparian wetland restoration. Upon further review, staff decided this was not an appropriate approach. Staff met on-site with Todd Tugwell, Tyler Crumbley, Mickey Sugg and David Bailey on 4/15/2013 to discuss the project. At the conclusion of the site visit, it was decided that the areas exhibiting both hydric soils and wetland hydrology were suitable for non-riparian wetland rehabilitation. In addition, the areas where wetland hydrology was restored and planted were acceptable for wetland restoration. DMS later determined that restoring wetland hydrology to some of the drained hydric soils was not feasible due to the potential for hydrologic trespass. The project as presented and planted now offers a combination of non-riparian wetland rehabilitation and preservation.*

2. The goal of "repairing channelized streams" is not being addressed by this mitigation plan. In fact it appears that stream restoration is now not being considered per the letter dated July 2, 2104 from the NCDMS (formerly EEP).

> *Response: The goal of "repairing channelized streams" is referring to one of the goals for the overall watershed as listed in the Lumber River Basin Restoration Priorities document. Correct, stream restoration is no longer part of this project.*

3. With regard to the large amount of area being classified as "preservation" there seems to be a lack of information pertaining to:
   a. Hydrology baseline data for the preservation areas
   b. The effect of ditching on the wetlands being considered for preservation and restoration

Response: DMS has not collected baseline hydrologic information for the wetland preservation areas, however our consultant did complete a Feasibility Study of the site in 2014. The study included both a soils delineation and reconnaissance of the ditches on site. Ditch cross-sections and profiles showed that these ditches have minimal slope, and two to four feet of standing water were encountered at the time of the site investigation. This indicates that even though these ditches are positively draining the site, the normal flow moving through them is minimal and they are not likely having a significant impact on the local water table.

4. Please have the provider supply the IRT with a shapefile outlining the conservation easement of the site.

Response: The location of the conservation easement is provided in the Mitigation Plan.

5. Why is the easement boundary, especially with regard to the center portion of the site where no wetlands will be established or preserved, much larger than the acreage of the mitigation?

Response: DMS acquired the easement necessary for the project as it was originally presented to include both stream and wetland restoration. The project scope and footprint has since been reduced to include only non-riparian wetland rehabilitation and preservation.

6. What, if anything, will happen with the on-site ditches since stream restoration is not being considered?

Response: The ditches are not intended to be maintained or otherwise manipulated. They will be monitored for beaver activity and managed as appropriate throughout the monitoring period.

7. I am a little troubled that we are considering 10 acres of "successional wetlands" for preservation credit. The sponsor should consider a higher ratio or justify how the wetlands considered for preservation are functioning in a manner similar to or provide the habitat of reference wetlands in a similar location (non-riparian on an interstream divide).

Response: DMS is applying a credit ratio of 10:1 for the wetland preservation on this project instead of a ratio of 5:1 which has been used for high quality wetland preservation. These areas are exhibiting wetland characteristics, including successional vegetation, and DMS is of the opinion that this area is best suited for preservation credit.

8. The sponsor should provide some sort of demonstrable imminent threat towards the areas being considered for preservation.

Response: The areas being considered for preservation were surrounded by or adjacent to land that was being used for agricultural production. The threat that these areas could be converted to agricultural or other uses was removed when DMS acquired the conservation easement.

*Mac Haupt, NCDWR, 29 February 2016***:**
1. The ditch map located in the section with the Jurisdictional Determination should also be placed forward in the document just before the Mitigation Plan View. This is one of the most crucial pieces of information for this project because all the ditches remain open and leads the reader to why this project is primarily preservation and rehabilitation.

Response: The map was added as Figure 2.7 – Existing Hydrology Features in the final Mitigation Plan. Ditch locations are also shown on Figure 3 of the Baseline Monitoring Document.

2. During the site visit today (February 29th, 2016) it was noted that beaver had blocked the culvert on the western boundary of the property (about a 1/3 of the way down). It may be advisable to remove the beaver just before and while the tree planting is going on and after for a period of time to allow the trees to adjust before being inundated.

Response: DMS has coordinated with APHIS for the removal of dams and management of beavers at the site.

3. Determination of Credits-DWR agrees with the preservation ratio (10:1) since the site is a mixture of early successional and mature stands. However, the rehabilitation is proposed at 1.5:1 and DWR believes a more appropriate ratio is 2:1 (the rehabilitation areas are adjacent to open ditches, are currently already naturalizing, and other sections represent a very narrow band around jurisdictional wetlands).

Response: DMS presented the proposed 1.5:1 credit ratio for wetland rehabilitation to the IRT at a meeting on July 22, 2014. There was no indication from the IRT that this credit scenario was not acceptable, and no formal meeting minutes were generated. DMS deemed the ratio as approved and proceeded with crediting of the wetland rehabilitation assets at the 1.5:1 ratio.

4. DWR does not concur with granting any preservation credit for wetlands that contain ditches. Please check your asset map to make sure that many of the preservation areas do not overlap with ditches on site.

Response: The wetland preservation areas were all deemed jurisdictional by the USACE. A feasibility study conducted by our consultant indicated that "even though these ditches are positively draining the site, the normal flow moving through them is minimal and they are not likely having a significant impact on the local water table. However, they do serve to hold and help drain surface water during storm events."

5. The northeastern portion of the preservation is open water and should be noted as such on the Mitigation Plan view. DWR believes that this limited habitat is beneficial to the overall site ecology and should be included in the credit.

Response: Noted, this area is likely inundated related to beaver activity in the large canal that splits the site. DMS will make note of this area in the Baseline Monitoring Report.

Andrea Hughes, USACE, March 10, 2015:
1. The Black Gum Creek Wetlands aerial with ditch locations and wetland boundaries (in the JD section) indicates that Ditches 1-5 are located within the boundaries of the conservation easement area. The mitigation plan indicates that these areas cannot be filled due to the potential for hydrologic trespass. Will these ditches be maintained in the future?

Response: There is no intent to maintain these ditches. They will be monitored for beaver activity and managed as appropriate throughout the monitoring period.

2. Section 8.0: Vegetation success is contingent upon survival of 260 planted stems/acre at Year 5 monitoring.

Response: Correction has been made.

3. Section 10.0: Please provide the name of the party responsible for long-term management.

Response: This is a State-held conservation easement that is anticipated to be managed by the DEQ Stewardship program.