"Simpson Tract"
Non-Riverine Wetland Restoration Project

Beaufort County, NC
Tar-Pamlico River Basin
(Cataloging Unit #03020104)

Annual Monitoring Report – Year 1
(Task 7)

NC EEP Contract #D05027-1

Prepared For:

North Carolina Department of Environment and Natural Resources
Ecosystem Enhancement Program
1652 Mail Service Center
Raleigh, NC 27699-1652

December 2007

Submitted By:

Wetlands Resource Center
3970 Bowen Road
Canal Winchester, Ohio 43110

Project Manager:
Cal Miller
Office: 614-864-7511
Cell: 614-327-7034
Email: wetlandresource@aol.com

Prepared By:

LMG
LAND MANAGEMENT GROUP INC.
Environmental Consultants

Wilmington, N.C.

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

EXECUTIVE SUMMARY

Prior to project implementation, the Simpson Tract Property was managed for silvicultural production. The site consisted entirely of mono-culture pine stands with sparse hardwood colonization. Under contract with the EEP, Wetland Resource Center (WRC) restored 30.0 acres of non-riverine wetland which drain into the Pungo Creek (a tributary of the Pungo River) in Beaufort County, NC.

The entire 30.0 acre area has been planted with an appropriate mixture of tree and shrub species at an average density of 720 stems/acre. Planting was completed in February 2007. A total of fifteen (15) 0.10-acre permanent plots corresponding to a total of 1.5 acres (equivalent to 5% of the restoration area) were established throughout the project area. Annual monitoring will be conducted near the end of the growing season (September-October) for a period of five years. Vegetative planting will be deemed successful if survivorship of plantings and volunteers of desirable species meets or exceeds a target stem density of 320 stems/acre.

Annual vegetative monitoring was conducted on September 20, 2007. During this monitoring event a total of 954 woody stems were counted across the fifteen plots. All of these stems were comprised of planted species or acceptable volunteers. The woody stem count correlates to an average of 636 stems per acre, providing a sufficient density to meet the aforementioned success criteria. Hydrologic monitoring has been on-going since the initiation of restoration work. Restoration of appropriate wetland hydrologic conditions has been achieved, with each of the six monitoring wells registering water table depths within 12" of the surface for durations exceeding 32 consecutive days (12.5% of the growing season).

The following monitoring report summarizes the project and includes more specific information related to the vegetative and hydrologic components of the restoration.

1.0 NARRATIVE

Introduction

As approved by the EEP, WRC implemented the restoration of 30.0 acres of non-riverine wetland habitat located at the headwaters of Pungo Creek, a fourth-order tributary of the Pungo River within the Tar-Pamlico River Basin (USGS 8-digit Hydrologic Unit 03020104; DWQ Subbasin 03-03-07). The project area is part of the "Simpson Tract", located approximately 10 miles south of Plymouth in Beaufort County, NC (refer to Figure 1-5). This tract was intensively managed for silvicultural production prior to implementation of restoration activities. The project will provide for the re-establishment of characteristic tree and shrub species adjacent to open field ditches on the north side of Rodman Road.

Mitigation Goals and Objectives

The proposed restoration project is intended to provide suitable, high-quality non-riverine wetland restoration as compensatory mitigation for wetland impacts authorized through the EEP. The objective of the project is to restore appropriate vegetation and diffuse flow conditions to help reduce non-point source discharge of contaminants into adjacent water bodies and increase flood water retention. The primary functions of the restoration project are to provide surface water storage, nutrient uptake, and sediment retention. In addition, the project will provide ancillary benefits to wildlife by providing refuge for resident and migratory species via enhanced niche habitat and increased food-web support.

Pre-Construction Conditions

The 30-acre restoration area is part of a larger tract of land (1,391 acres). Approximately 950 acres have been determined to be non-jurisdictional ("non-wetlands") by the NRCS (USACE concurrence of this determination has also been provided in previous submittals to the EEP). The remaining acreage has been confirmed to be jurisdictional wetlands. The predominant land use of the tract (both jurisdictional and non-jurisdictional areas) is silvicultural production. Prior land use practices (including herbicide, pesticide, and fertilizer application) serve as potential contributors to decreased water quality of adjacent surface waters (i.e. ditches and 'blue-line' streams). The natural vegetative assemblage of the tract has been modified over the years via prescribed drainage improvements (i.e. ditching), bedding, and planting of loblolly pine (*Pinus taeda*). These silvicultural practices have resulted in a community dominated by pine in more mature stands outside of the proposed restoration area. Hardwood species characteristic of headwater swamp communities of the Coastal Plain are either absent entirely or occur only in sparse locations. Typical canopy species of an undisturbed area would include swamp tupelo (*Nyssa biflora*), bald cypress (*Taxodium distichum*), pond pine (*Pinus serotina*), and Atlantic white cedar (*Chamaecyparis thyoides*). Understory species typical of non-

riverine swamp forest communities include American titi (*Cyrilla racemiflora*), sweet bay (*Magnolia virginiana*), red bay (*Persea borbonia*), fetterbush (*Lyonia lucida*), red maple (*Acer rubrum*), and catbrier (*Smilax* species).

Project Implementation

Site preparation commenced in the fall of 2006. During this period, areas of invasive or non-target species were drum-chopped and bush-hogged. Following these activities, an herbicide was applied to reduce competition within the project area. A water soluble herbicide was used and applied by a licensed applicator to reduce impacts to the surrounding open water areas.

In order to re-establish the appropriate hydrologic conditions throughout the restoration area, a total of four (4) 50' long ditch plugs were installed in ditches draining from the project area. Prior to project construction, appropriate 401/404 authorization was received for placement of clay plugs within those ditches.

Earth work was conducted from February 20-21, 2007. Approximately 100 cubic yards of material was used to form the ditch plugs. Ditch plugs were installed at specified locations. Final grading was conducted in the plugged areas to allow for subsidence and compaction of the fill material. All areas that were disturbed during the installation process were covered with a seed mixture to minimize erosion. Refer to the previously submitted mitigation plan for photographs of the initial post-construction conditions. Refer to Table 1 for a complete project timeline.

Site planting was completed on February 23, 2007. The installation of approximately 18,000 seedlings was supervised by LMG to ensure proper spacing and planting depths. LMG obtained a mix of hardwood and shrub seedlings which accurately represent the targeted headwater swamp community discussed in the approved restoration plan (Table 2). Seedlings were planted on approximately 8' centers at a depth sufficient to cover the root collar throughout the project area. Following the planting activities, LMG inspected the project area to ensure that seedlings had been installed correctly.

2.0 AS-BUILTS

As defined by the approved restoration plan, a total of fifteen (15) permanent monitoring plots were established, which corresponds to a total of 1.5 acres (equivalent to 5% of the restoration area). A total of six (6) automated wells (RDS, Inc. WM-40s) were also installed to monitor shallow groundwater hydrology and surface inundation within the restoration area. All six wells were paired with vegetation plots.

Three (3) additional wells were installed in reference areas located near the Van Swamp Gameland to the northeast of the project site. These reference sites were selected based on similarities in landscape position, hardwood species assemblages and soil types. Wells were installed in accordance with installation methods outlined in the Wetlands Regulatory Assistance Program (WRAP) Technical Note 00-02. Water levels are being recorded once daily. Data is downloaded from the wells every three months (i.e. once quarterly). Data from well downloads is compiled and graphically displayed to demonstrate the hydroperiods of monitored areas. Refer to the attached survey (Appendix D) of the wetland restoration area for the location and corresponding number of the permanent vegetative monitoring plots and paired hydrologic monitoring equipment on the site.

3.0 MONITORING PLAN

Annual monitoring will be conducted near the end of each growing season for a period of five years. Vegetative monitoring will continue to be conducted at each of the fifteen (15) 0.10-acre permanent plots. Vegetative planting will be deemed successful if survivorship of plantings and volunteers of desirable species[1] meets or exceeds a target stem density of 320 stems/acre. Hydrologic monitoring will deemed successful if static water table at, or within, 12" of the soil surface for 12.5% of the growing season (equivalent to 32 days based upon SCS-established growing season dates) during periods of normal rainfall. Data from the three reference wells will also be included. Monitoring reports will be submitted annually to the EEP (by January 1 of each year). These reports will include results of vegetative monitoring and photographic documentation of site conditions. Monitoring reports will also identify any contingency measures that may need to be employed to remedy any site deficiencies. For instance, deer browse tubes and fencing may need to be used if evidence of significant herbivory or deer browse is observed. In addition, supplemental planting may be necessary in areas of reduced survivorship.

4.0 MONITORING RESULTS (YEAR 1)

Vegetation Monitoring

Monitoring of the on-site vegetation was conducted on September 20, 2007. A total of 954 stems were counted throughout the fifteen plots, which correlates to an average of 636 stems/acre within the project area (Table 3). Bald cypress (*Taxodium distichum*) was the most abundant woody species, with a total of 386 individuals. Other planted species such as black gum (*Nyssa sylvatica*) and red bay (*Persea borbonia*) were

[1] Desirable species are considered as noninvasive species characteristic of riparian habitats.

also prevalent within the monitored plots. Acceptable survivorship was found at 13 of the 15 plots, with plots #13 and #10 containing less than 40 individuals. The reduced survivorship in these plots may be attributed to the drought conditions that followed the initial planting in February 2007 and continued throughout the summer and fall. Current estimates from the USDA classify Beaufort County as a D3 (Extreme Drought) county, experiencing a precipitation deficit of greater than 24 inches for 2007. Refer to Appendix A for photographs of current site conditions and Appendix B for information regarding individual plot totals.

While average stem densities are sufficient to meet the applicable success criteria across the site, continued drought conditions may adversely impact the remaining seedlings. If survivorship totals continue to decline during the Year 2 annual monitoring event, a supplemental planting may be implemented to ensure that all appropriate success criteria are met during the course of this project. In the event that this occurs, WRC will contact the NCEEP to discuss the logistics of the proposed work.

Hydrologic Monitoring

Monitoring of water table depths has been conducted throughout 2007 (Appendix C). Each of the six monitoring wells registered water tables within 12" of the surface for 43 consecutive days between April 15th and May 28th, 2007. This period represents 17.3% of the growing season in Beaufort County well above the 12.5% success criteria. Wells #1-4 and #6 exhibited water table depths above the 12" threshold for an even longer duration, exceeding 60 consecutive days. Precipitation totals during this time were within the 30% and 70% normal rainfall distribution provided in the WETS data tables. Rainfall totals fell below the 30% in mid-June and remained at or below this threshold for the majority of 2007.

Groundwater levels exhibited a discernable increase following individual precipitation events greater than 0.25". Discharge rates following these events were found to be gradual, average 0.6 inches/day which is consistent with very poorly drained soil units.

Data collected from monitoring wells #10 and #11 (reference) during the following months did not meet jurisdictional criteria for hydrology. However, abnormally low precipitation coupled with high evapotranspiration rates during the summer months likely contributed to the observed lower water table depths.

5.0 CONCLUSION

Wetland Resource Center has completed the implementation of 30.0 acres of non-riverine restoration located in TAR-7 of the lower Tar-Pamlico Basin. At the end of Year 1 monitoring, the vegetative success criteria has

been met and the site appears to be progressing well towards the target headwater swamp forest community. Hydrologic conditions since project construction have also become more characteristic of these systems, showing water table depths at or near the surface for significant durations during the growing season. The reversion of land previously managed for silvicultural purposes to wetlands will decrease source nutrient loading and concurrently increase nutrient removal capacity. In addition, the project will provide ancillary benefits to aquatic and wildlife habitat via enhanced niche habitat and increased food-web support. By doing so, the proposed project will help to effectively mitigate for authorized loss of wetlands within the Tar-Pamlico Basin.

Tables

Table 1. Simpson Wetland Restoration Timeline

Task	Project Milestone	Completion Date	COMMENTS
1	Feasibility Study, CE Document, and Public Meeting	July 1, 2005	
2	Record a Conservation Easement on the Site	September 22, 2006	Recorded in Beaufort County Register of Deeds
3	Restoration Plan Approved by EEP	April 2006	Restoration Plan complete
4	Mitigation Site Earthwork Completed	February 15, 2007	Ditch Plug installation approved by NWP #27
5	Mitigation Site Planting and Installation of Monitoring Devices	February 21, 2007	Approved by EEP
6	Submittal of Mitigation Plan (including as-built drawings)	June, 2007	Approved by EEP
7	Submittal of Monitoring Report #1 to EEP	December 31, 2007	
8	Submittal of Monitoring Report #2 to EEP	December 31, 2008	
9	Submittal of Monitoring Report #3 to EEP	December 31, 2009	
10	Submittal of Monitoring Report #4 to EEP	December 31, 2010	
11	Submittal of Monitoring Report #5 to EEP	December 31, 2011	

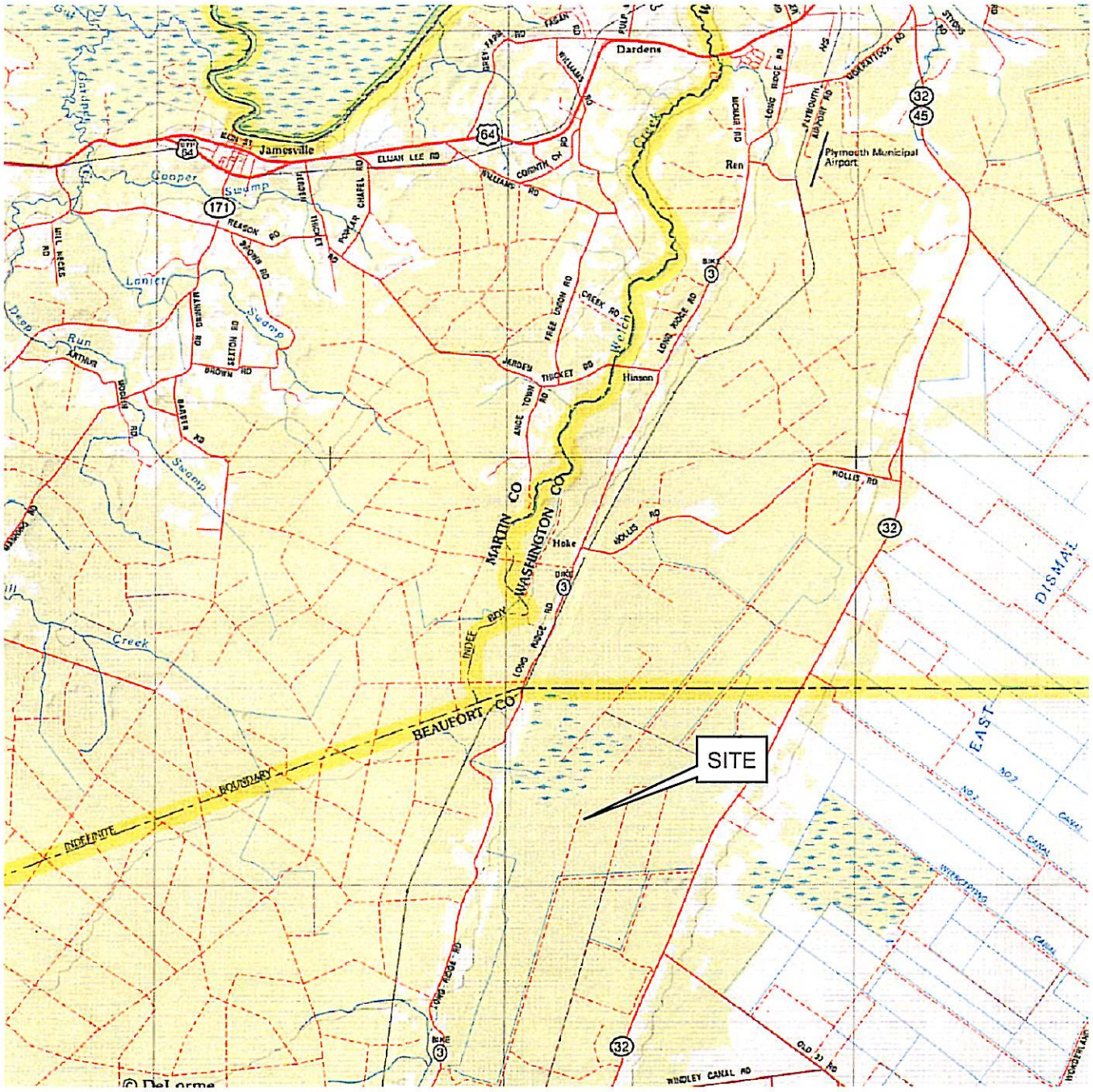
TABLE 2. Simpson Non-riverine Plant List (Planted February 2007)

Species	# planted	(% of total)
Bald cypress (*Taxodium distichum*)	4,000	22.86%
White Cedar (*Chamaemycyparis thyoides*)	2,500	14.29%
Black Gum (*Nyssa sylvatica*)	5,000	28.57%
Red Bay (*Persea borbonia*)	3,000	17.14%
Fetterbush (*Lyonia lucida*)	1,000	5.71%
Sweet Bay (*Magnolia virginiana*)	2,000	11.43%
Wax Myrtle (*Myrica cerifera*)	1,000	5.71%
Total Plants	**18,500**	

Simpson Farm Restoration Wetland
TABLE 3. Monitoring Plot Comparison (Year 1)

SPECIES	PLOT 1	PLOT 2	PLOT 3	PLOT 4	PLOT 5	PLOT 6	PLOT 7	PLOT 8	PLOT 9	PLOT 10	PLOT 11	PLOT 12	PLOT 13	PLOT 14	PLOT 15	TOTAL
Atlantic White Cedar			3		8		6				6	9			1	33
Bald Cypress	45	11	36	72	54	42	38	4	30	9	27	14			4	386
Black Gum		6	3			6	5	11	3	14	1		6	52	33	140
Wax Myrtle		14	1			18				5		3			1	42
Fetterbush						3		40	25	4		75			8	155
Sweetbay		15	6	21	2		8	3	2	2	9	22	7	1		98
Red Bay	37	2	5				3	26					23	4		100
TOTAL	**82**	**48**	**54**	**93**	**64**	**69**	**60**	**84**	**60**	**34**	**43**	**123**	**36**	**57**	**47**	**954**
Total Counted toward Success	**82**	**48**	**54**	**93**	**64**	**69**	**60**	**84**	**60**	**34**	**43**	**123**	**36**	**57**	**47**	**954**
Stem Density (per ac)	**820**	**480**	**540**	**930**	**640**	**690**	**600**	**840**	**600**	**340**	**430**	**1230**	**360**	**570**	**470**	**636**

Figures



N

SCALE: 1" = 2 miles

Simpson Tract
Tar-Pamlico River Basin
HUC: 03020104
Subbasin:03-03-07

Figure 1.
Vicinity Map

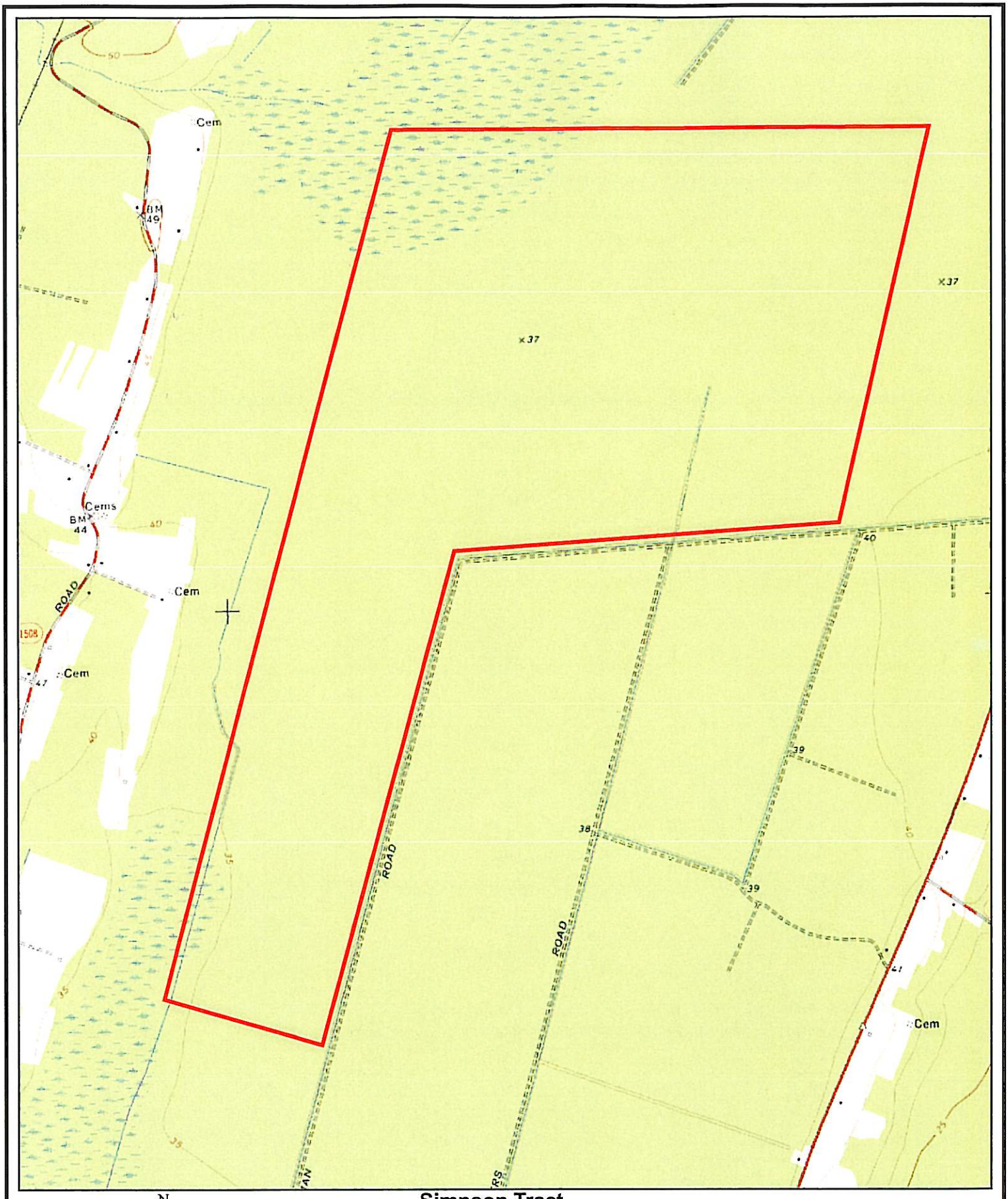
Delorme Gazetteer

Land Management Group, Inc.

Simpson Tract
Tar-Pamlico River Basin
HUC: 03020104
Subbasin:03-03-07

Figure 2.
USDA Soil Survey

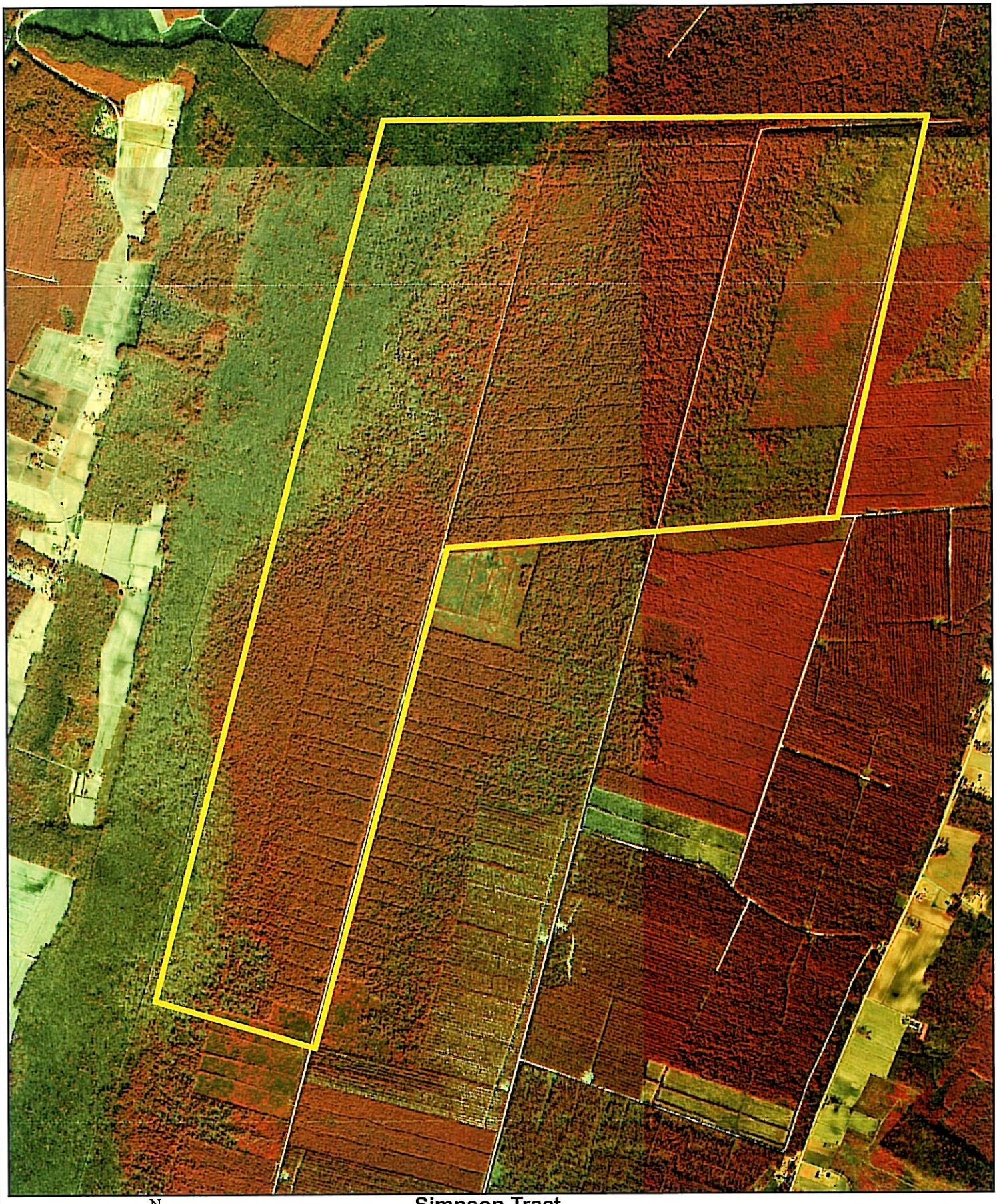
Beaufort County
Land Management Group, Inc.



Simpson Tract
Tar-Pamlico River Basin
HUC: 03020104
Subbasin:03-03-07

Figure 3.
USGS Topographic Map
Hoke, NC

Land Management Group, Inc.



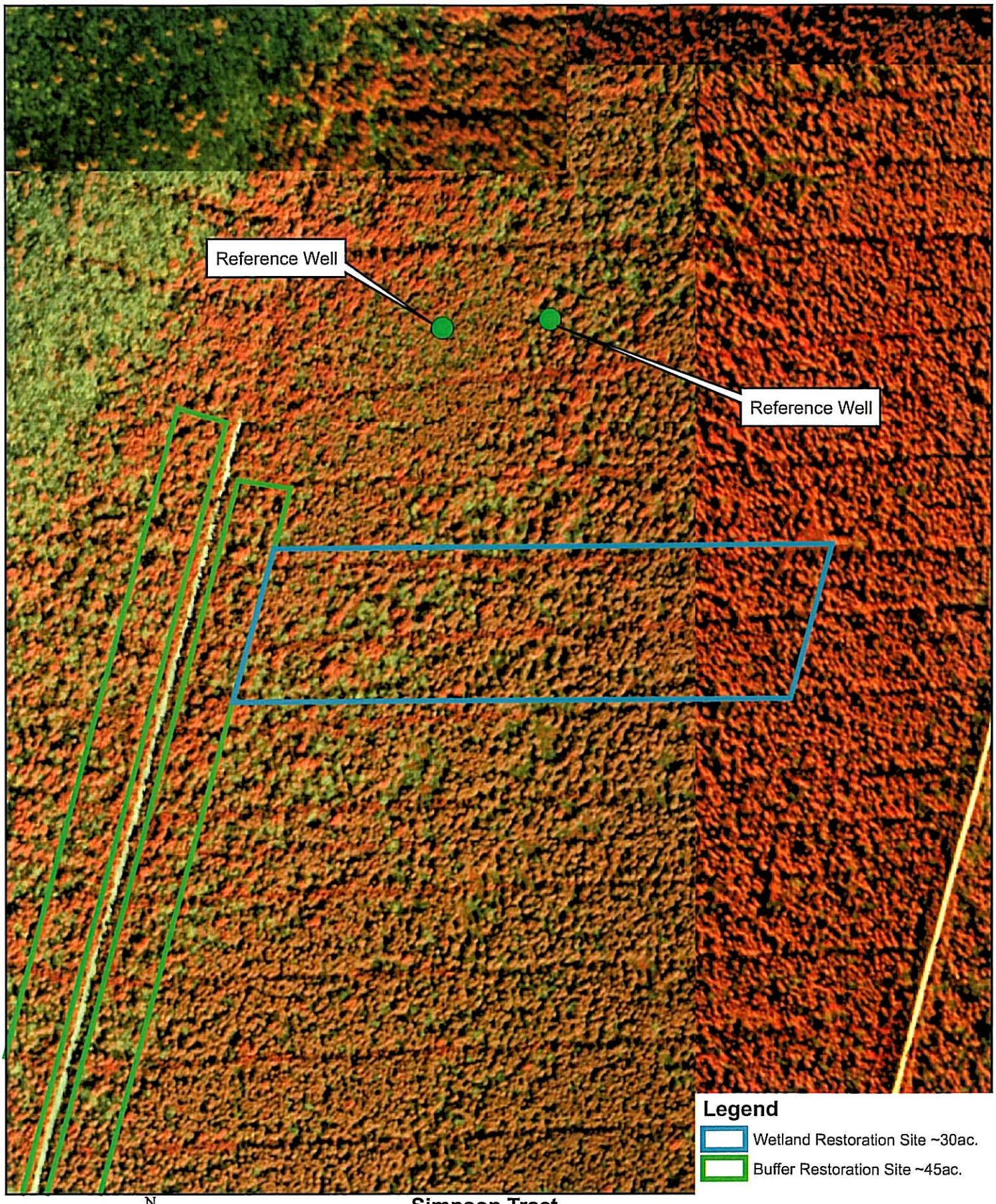
N

0 2,000 4,000 ft

Simpson Tract
Tar-Pamlico River Basin
HUC: 03020104
Subbasin:03-03-07

Figure 4.
1998 Aerial Photography

Land Management Group, Inc.



Simpson Tract
Tar-Pamlico River Basin
HUC: 03020104
Subbasin:03-03-07

Figure 5.
Wetland and Buffer
Restoration Plan

Land Management Group, Inc.

Appendix A. Site Photographs
(September 2007)

(1)View of current conditions at Plot 7

(2) View of current conditions at Plot 4

(3) View of planted Bald Cypress seedling

(4) View of site conditions (looking east)

(5) View of plot with paired monitoring well

(6) View of fetterbush in Plot 12

Appendix B. Individual Plot Data Sheets
(September 2007)

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 1

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	3	<.5ft	Planted	3
Bald Cypress	SA	9	1ft.	Planted	9
Bald Cypress	SA	29	1.5ft	Planted	29
Bald Cypress	SA	4	2ft	Planted	4
Sweetbay	SA	29	<.5ft	Volunteer	29
Sweetbay	SA	7	1ft.	Planted	7
Sweetbay	SA	1	1.5ft	Planted	1
	TOTAL SHRUBS	0		OBSERVED DENSITY (PER PLOT)	82
	TOTAL TREES OF PLANTED SPECIES	53		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	29			
	TOTAL INDIVIDUALS	82			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 2

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	1	<.5ft	Volunteer	1
Bald Cypress	SA	2	1ft	Planted	2
Bald Cypress	SA	5	1.5ft	Planted	5
Bald Cypress	SA	3	2ft.	Planted	3
Black Gum	SA	1	<.5ft	Volunteer	1
Black Gum	SA	1	1ft	Planted	1
Black Gum	SA	4	1.5ft	Planted	4
Sweetbay	SA	11	<.5ft	Planted	11
Sweetbay	SA	3	1ft	Planted	3
Sweetbay	SA	1	1.5ft	Planted	1
Wax Myrtle	SH	7	<.5ft	Volunteer	7
Wax Myrtle	SH	7	1ft	Planted	7
Red Bay	SA	1	1.5ft	Planted	1
Red Bay	SA	1	2ft.	Planted	1
	TOTAL SHRUBS	14		OBSERVED DENSITY (PER PLOT)	48
	TOTAL TREES OF PLANTED SPECIES	32		OBSERVED DENSITY (PER ACRE)	480
	TOTAL TREES OF VOLUNTEER SPECIES	2			
	TOTAL INDIVIDUALS	48			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 3

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	4	1ft	Planted	4
Bald Cypress	SA	27	1.5ft	Planted	27
Bald Cypress	SA	5	2ft.	Planted	5
Black Gum	SA	1	1ft	Planted	1
Black Gum	SA	2	2ft.	Planted	2
Wax Myrtle	SH	1	1ft	Planted	1
Red Bay	SA	3	3ft	Planted	3
Red Bay	SA	2	4ft.	Planted	2
Sweetbay	SA	5	<.5ft	Volunteer	5
Sweetbay	SA	1	1ft	Planted	1
Atlantic White Cedar	SA	3	<.5ft	Planted	3
	TOTAL SHRUBS	1		OBSERVED DENSITY (PER PLOT)	54
	TOTAL TREES OF PLANTED SPECIES	48		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	5			
	TOTAL INDIVIDUALS	54			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 4

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	9	<.5ft	Planted	9
Bald Cypress	SA	13	1ft	Planted	13
Bald Cypress	SA	35	1.5ft	Planted	35
Bald Cypress	SA	15	2ft.	Planted	15
Sweetbay	SA	18	<.5ft	Volunteer	18
Sweetbay	SA	3	1ft	Planted	3
	TOTAL SHRUBS	0		OBSERVED DENSITY (PER PLOT)	93
	TOTAL TREES OF PLANTED SPECIES	75		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	18			
	TOTAL INDIVIDUALS	93			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 5

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	1	<.5ft	Volunteer	1
Bald Cypress	SA	6	1ft	Planted	6
Bald Cypress	SA	39	1.5ft	Planted	39
Bald Cypress	SA	8	2ft	Planted	8
Atlantic White Cedar	SA	8	<.5ft	Planted	8
Sweetbay	SA	2	<.5ft	Volunteer	2
	TOTAL SHRUBS	0		OBSERVED DENSITY (PER PLOT)	64
	TOTAL TREES OF PLANTED SPECIES	61		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	3			
	TOTAL INDIVIDUALS	64			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 6

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	3	<.5ft	Volunteer	3
Bald Cypress	SA	12	1ft.	Planted	12
Bald Cypress	SA	21	1.5ft	Planted	21
Bald Cypress	SA	6	2ft	Planted	6
Black Gum	SA	2	1.5ft	Planted	2
Black Gum	SA	4	2ft	Planted	4
Sweetbay	SA	15	<.5ft	Volunteer	15
Sweetbay	SA	3	1ft.	Planted	3
Fetterbush	SH	3	<.5ft	Volunteer	3
	TOTAL SHRUBS	3		OBSERVED DENSITY (PER PLOT)	69
	TOTAL TREES OF PLANTED SPECIES	48		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	18			
	TOTAL INDIVIDUALS	69			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 7

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	1	<.5ft	Volunteer	1
Bald Cypress	SA	10	1ft.	Planted	10
Bald Cypress	SA	15	1.5ft	Planted	15
Bald Cypress	SA	12	2ft	Planted	12
Black Gum	SA	1	<.5ft	Planted	1
Black Gum	SA	2	1ft.	Planted	2
Black Gum	SA	2	1.5ft	Planted	2
Atlantic White Cedar	SA	6	<.5ft	Planted	6
Red Bay	SA	1	<.5ft	Volunteer	1
Red Bay	SA	2	1ft.	Volunteer	2
Sweetbay	SA	5	<.5ft	Planted	5
Sweetbay	SA	2	1ft.	Planted	2
Sweetbay	SA	1	2ft	Planted	1
	TOTAL SHRUBS	0		OBSERVED DENSITY (PER PLOT)	60
	TOTAL TREES OF PLANTED SPECIES	56		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	4			
	TOTAL INDIVIDUALS	60			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 8

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	4	1.5ft	Planted	4
Black Gum	SA	1	<1ft.	Volunteer	1
Black Gum	SA	2	1ft.	Planted	2
Black Gum	SA	7	1.5ft.	Planted	7
Black Gum	SA	1	2ft.	Planted	1
Red Bay	SA	3	1ft.	Planted	3
Red Bay	SA	18	1.5ft	Planted	18
Red Bay	SA	5	2ft	Planted	5
Sweetbay	SA	2	<1ft.	Volunteer	2
Sweetbay	SA	1	1ft.	Planted	1
Fetterbush	SH	40	<1ft.	Planted	40
	TOTAL SHRUBS	40		OBSERVED DENSITY (PER PLOT)	73
	TOTAL TREES OF PLANTED SPECIES	30		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	3			
	TOTAL INDIVIDUALS	73			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 9

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	1	<.5ft	Volunteer	1
Bald Cypress	SA	3	1ft.	Planted	3
Bald Cypress	SA	18	1.5ft	Planted	18
Bald Cypress	SA	8	2ft	Planted	8
Black Gum	SA	1	1.5ft	Planted	1
Black Gum	SA	1	3ft	Planted	
Black Gum	SA	1	4ft	Planted	1
Sweetbay	SA	1	<.5ft	Volunteer	1
Sweetbay	SA	1	1ft.	Planted	1
Fetterbush	SH	25	<1ft.	Volunteer	25
	TOTAL SHRUBS	25		OBSERVED DENSITY (PER PLOT)	59
	TOTAL TREES OF PLANTED SPECIES	33		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	1			
	TOTAL INDIVIDUALS	59			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 10

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	6	<.5ft	Volunteer	6
Bald Cypress	SA	1	1ft.	Planted	1
Bald Cypress	SA	2	2ft	Planted	2
Black Gum	SA	2	<.5ft	Volunteer	2
Black Gum	SA	2	1ft.	Planted	2
Black Gum	SA	8	1.5ft	Planted	8
Black Gum	SA	2	2ft	Planted	2
Sweetbay	SA	1	<.5ft	Volunteer	1
Sweetbay	SA	1	1ft.	Planted	1
Wax Myrtle	SH	2	<.5ft	Volunteer	2
Wax Myrtle	SH	3	1ft.	Planted	3
Fetterbush	SH	2	<.5ft	Volunteer	2
Fetterbush	SH	1	1ft.	Planted	1
Fetterbush	SH	1	1.5ft	Planted	1
	TOTAL SHRUBS	9		OBSERVED DENSITY (PER PLOT)	34
	TOTAL TREES OF PLANTED SPECIES	16		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	9			
	TOTAL INDIVIDUALS	34			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 11

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	2	.5ft	Volunteer	2
Bald Cypress	SA	2	1ft.	Planted	2
Bald Cypress	SA	15	1.5ft	Planted	15
Bald Cypress	SA	8	2ft	Planted	8
Black Gum	SA	1	1.5ft	Planted	1
Atlantic White Cedar	SA	6	<1ft.	Planted	6
Sweetbay	SA	8	<.5ft	Volunteer	8
Sweetbay	SA	1	.5ft	Planted	1
	TOTAL SHRUBS	0		OBSERVED DENSITY (PER PLOT)	43
	TOTAL TREES OF PLANTED SPECIES	33		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	10			
	TOTAL INDIVIDUALS	43			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 12

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	3	1ft	Planted	3
Bald Cypress	SA	9	1.5ft	Planted	9
Bald Cypress	SA	2	2ft	Planted	2
Atlantic White Cedar	SA	9	.5ft	Planted	9
Sweetbay	SA	8	<.5ft	Volunteer	8
Sweetbay	SA	12	.5ft	Planted	12
Sweetbay	SA	2	1ft	Planted	2
Wax Myrtle	SH	3	1ft.	Planted	3
Fetterbush	SH	75	<1ft.	Volunteer	75
	TOTAL SHRUBS	78		OBSERVED DENSITY (PER PLOT)	123
	TOTAL TREES OF PLANTED SPECIES	38		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	8			
	TOTAL INDIVIDUALS	123			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 13

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Black Gum	SA	3	1.5ft	Planted	3
Black Gum	SA	3	2ft	Planted	3
Red Bay	SA	1	<1ft.	Planted	1
Red Bay	SA	6	1.5ft	Planted	6
Red Bay	SA	7	2ft	Planted	7
Red Bay	SA	4	2.5ft.	Planted	4
Red Bay	SA	3	3.5ft	Planted	3
Red Bay	SA	1	4ft	Planted	1
Red Bay	SA	1	4.5ft	Planted	1
Sweetbay	SA	2	.5ft	Volunteer	2
Sweetbay	SA	4	1ft	Planted	4
Sweetbay	SA	1	1.5ft	Planted	1
	TOTAL SHRUBS	0		OBSERVED DENSITY (PER PLOT)	36
	TOTAL TREES OF PLANTED SPECIES	34		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	2			
	TOTAL INDIVIDUALS	36			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 14

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Black Gum	SA	1	<.5ft	Volunteer	1
Black Gum	SA	7	1ft.	Planted	7
Black Gum	SA	20	1.5ft	Planted	20
Black Gum	SA	19	2ft	Planted	19
Black Gum	SA	3	2.5ft	Planted	3
Black Gum	SA	2	3ft	Planted	2
Red Bay	SA	2	1ft.	Planted	2
Red Bay	SA	2	2ft	Planted	2
Sweetbay	SA	1	<.5ft	Volunteer	1
	TOTAL SHRUBS	0		OBSERVED DENSITY (PER PLOT)	57
	TOTAL TREES OF PLANTED SPECIES	55		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	2			
	TOTAL INDIVIDUALS	57			

SIMPSON FARM RESTORATION WETLAND SITE
ANNUAL MONITORING DATA SHEET - VEGETATION PLOTS

PLOT NUMBER 15

SPECIES	STRATUM (T, SA, or SH)	Number of Individuals	HEIGHT	Planted vs. Volunteer Species	Number of Individuals Counted toward Success Criteria
Bald Cypress	SA	1	1.5ft	Planted	1
Bald Cypress	SA	3	2ft	Planted	3
Atlantic White Cedar	SA	1	<.5ft	Planted	1
Black Gum	SA	2	<.5ft	Volunteer	2
Black Gum	SA	2	1ft.	Planted	2
Black Gum	SA	10	1.5ft	Planted	10
Black Gum	SA	16	2ft	Planted	16
Black Gum	SA	2	2.5ft	Planted	2
Black Gum	SA	1	3ft	Planted	1
Wax Myrtle	SH	1	<.5ft	Volunteer	1
Fetterbush	SH	5	<.5ft	Planted	5
Fetterbush	SH	2	1ft.	Planted	2
Fetterbush	SH	1	2ft	Planted	1
	TOTAL SHRUBS	9		OBSERVED DENSITY (PER PLOT)	44
	TOTAL TREES OF PLANTED SPECIES	33		OBSERVED DENSITY (PER ACRE)	
	TOTAL TREES OF VOLUNTEER SPECIES	2			
	TOTAL INDIVIDUALS	44			

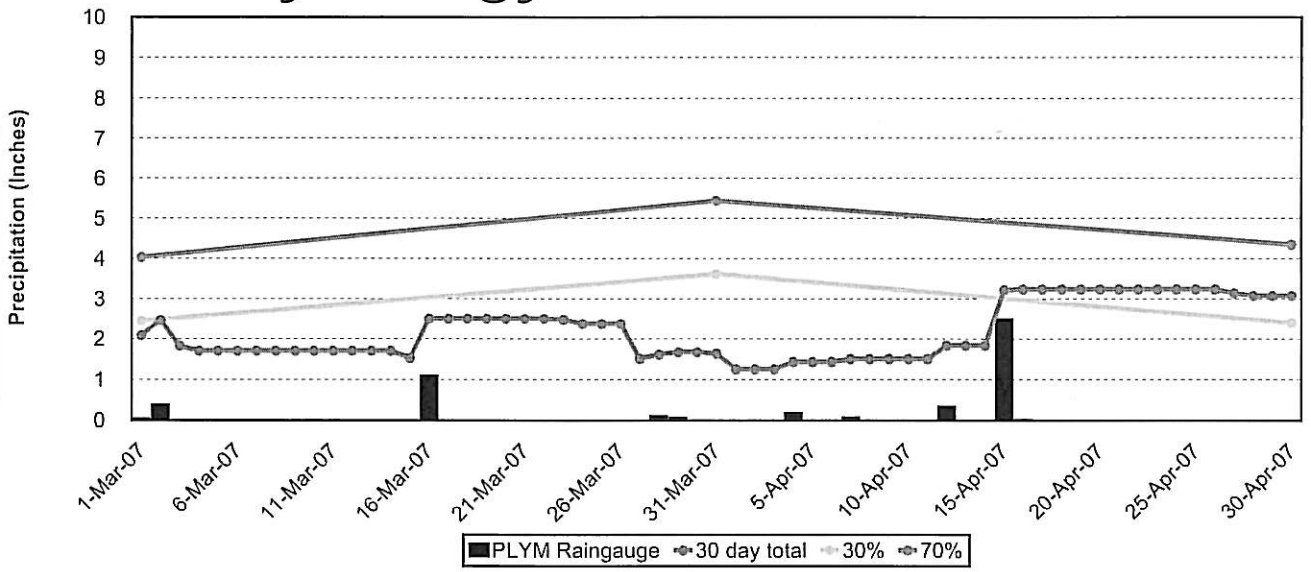
Appendix C. 2007 Hydrographs
Wells 1-6 On-site Wetland Wells
Wells 7-9 Original Reference Wells
Wells 10-11 New Reference Wells (installed May 2007)

Hydrology Assessment

September 2007

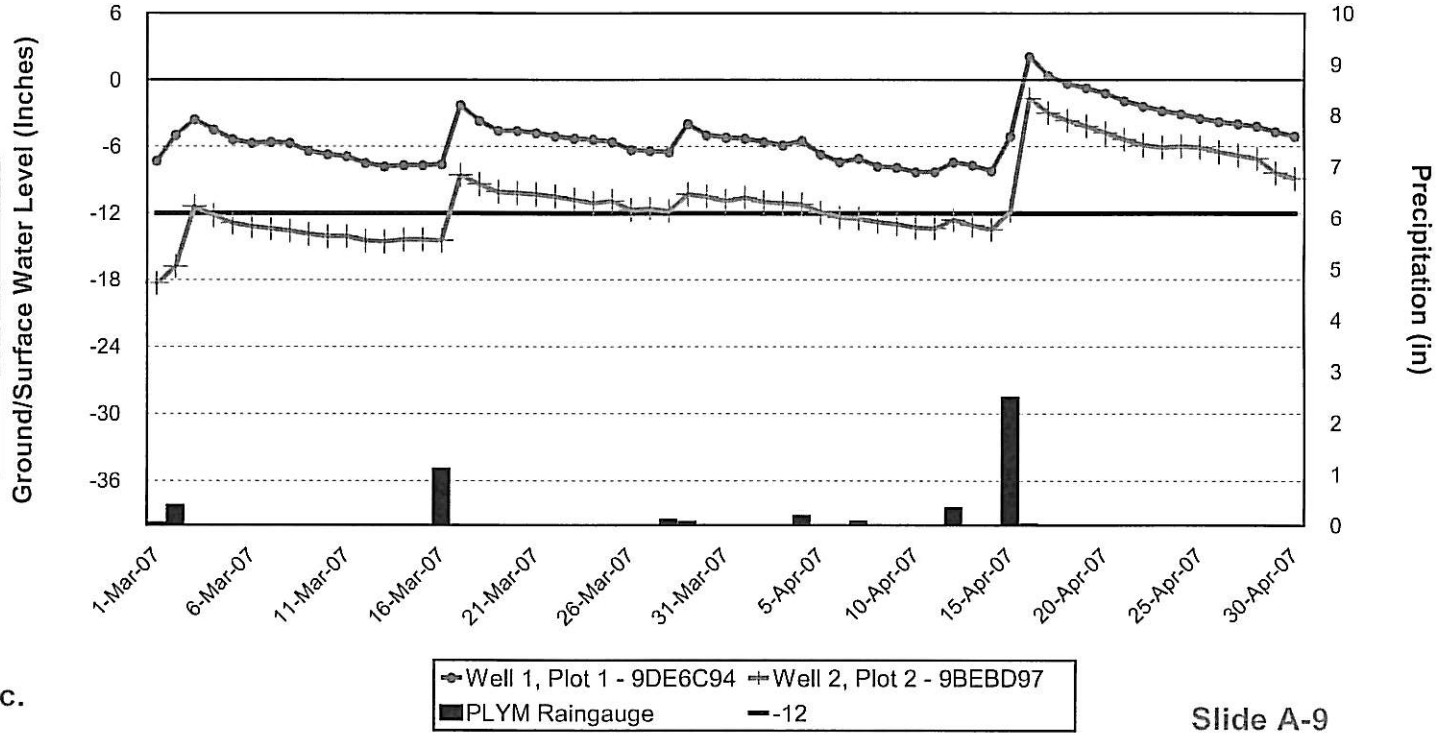
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 1 & 2
- WL 40
- March 1, 2007 -
- April 30, 2007
- One reading per day
- at 7:00am



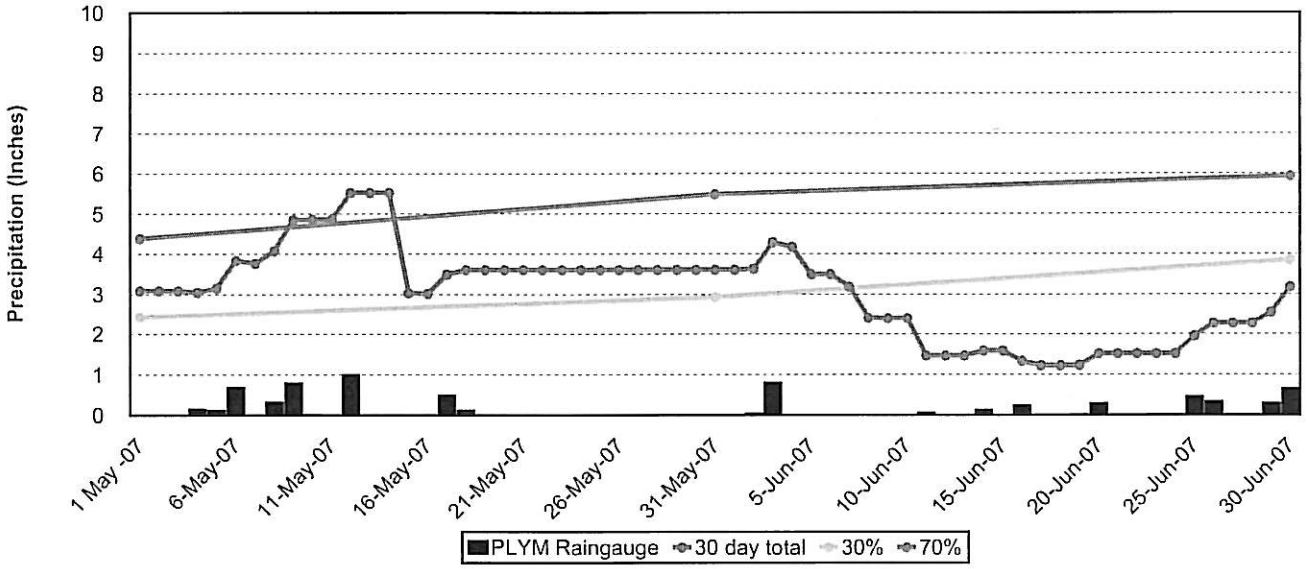
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

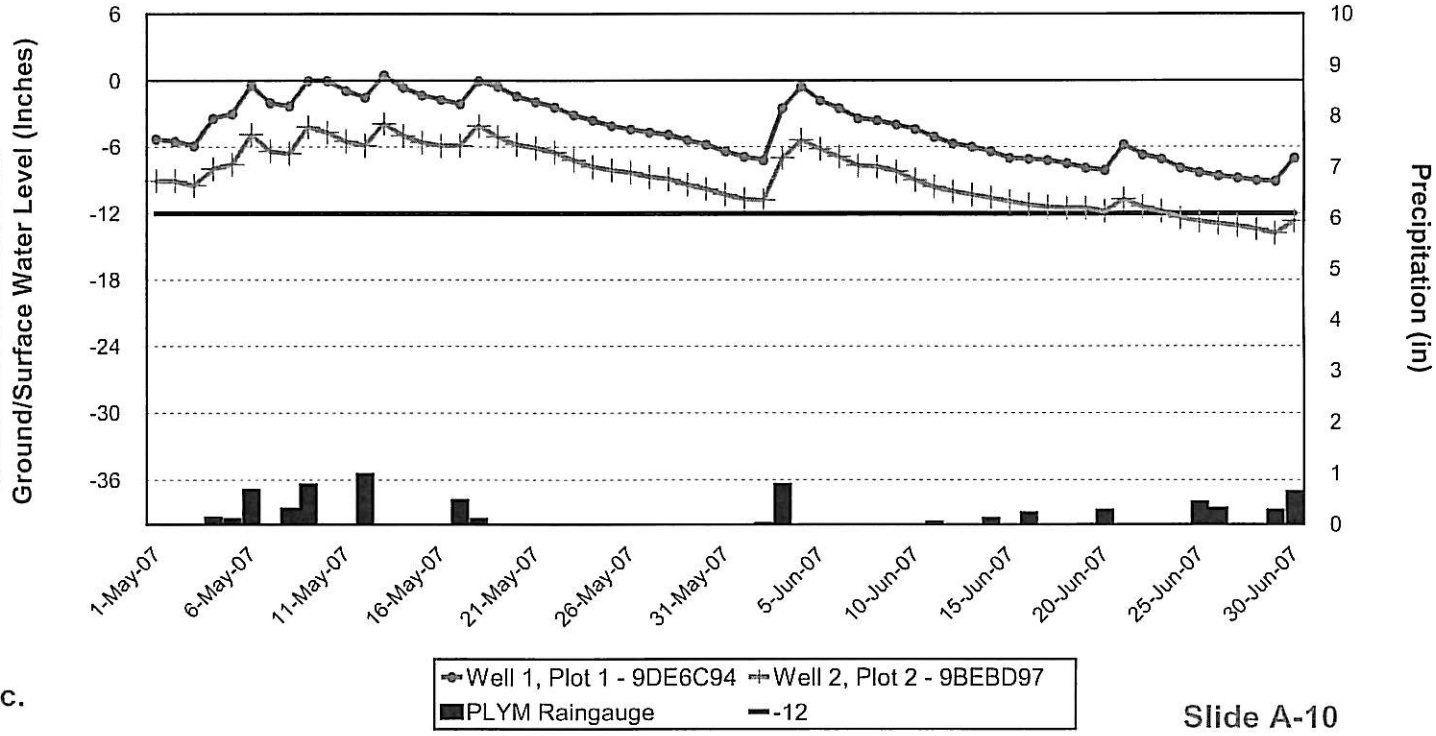
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 1 & 2
- WL 40
- May 1, 2007 -
- June 30, 2007
- One reading per day
- at 7:00am



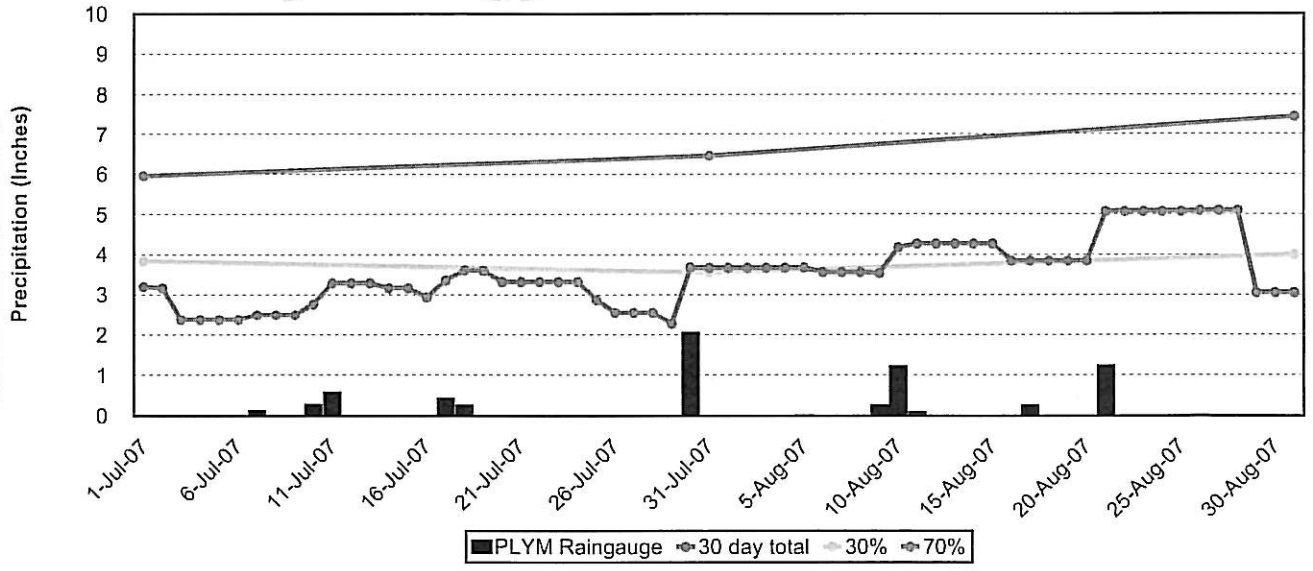
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

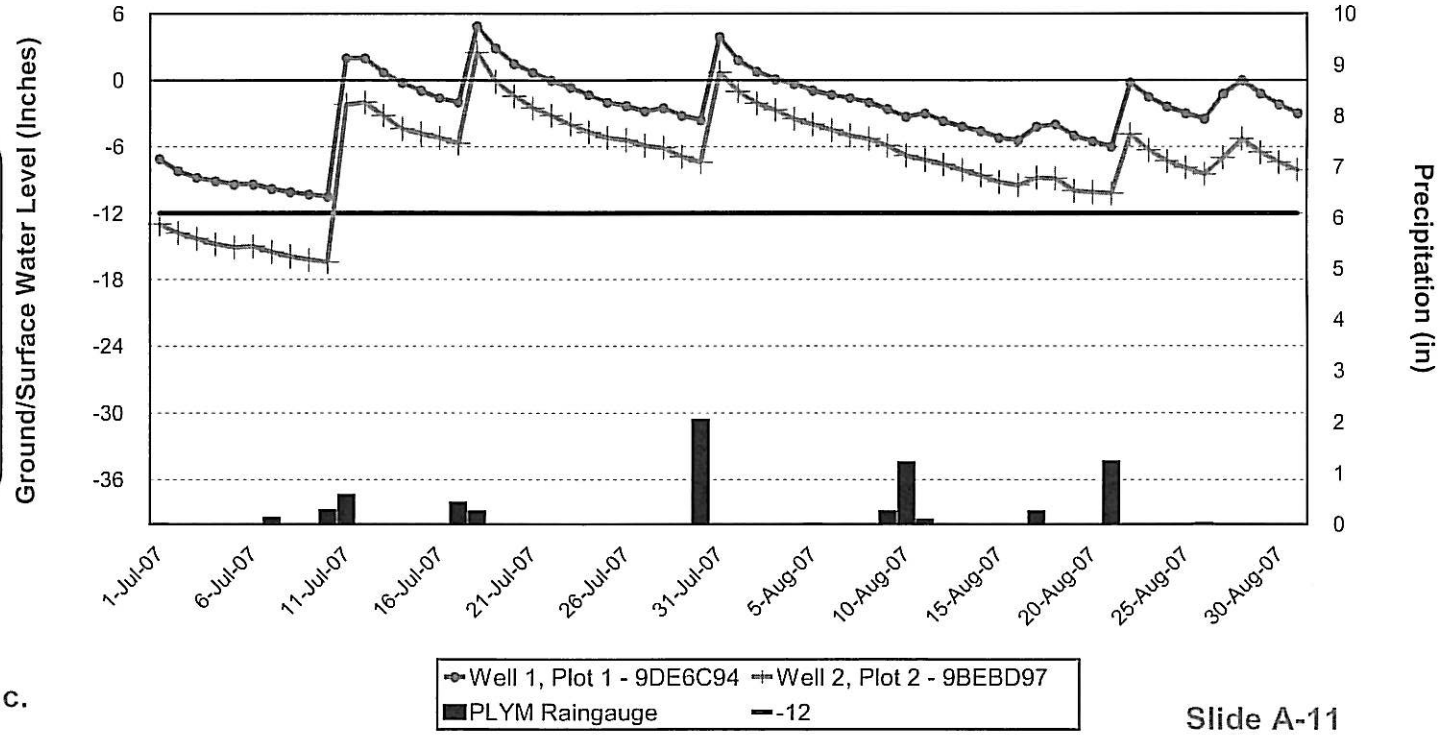
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 1 & 2
- WL 40
- July 1, 2007 -
- August 31, 2007
- One reading per day
- at 7:00am



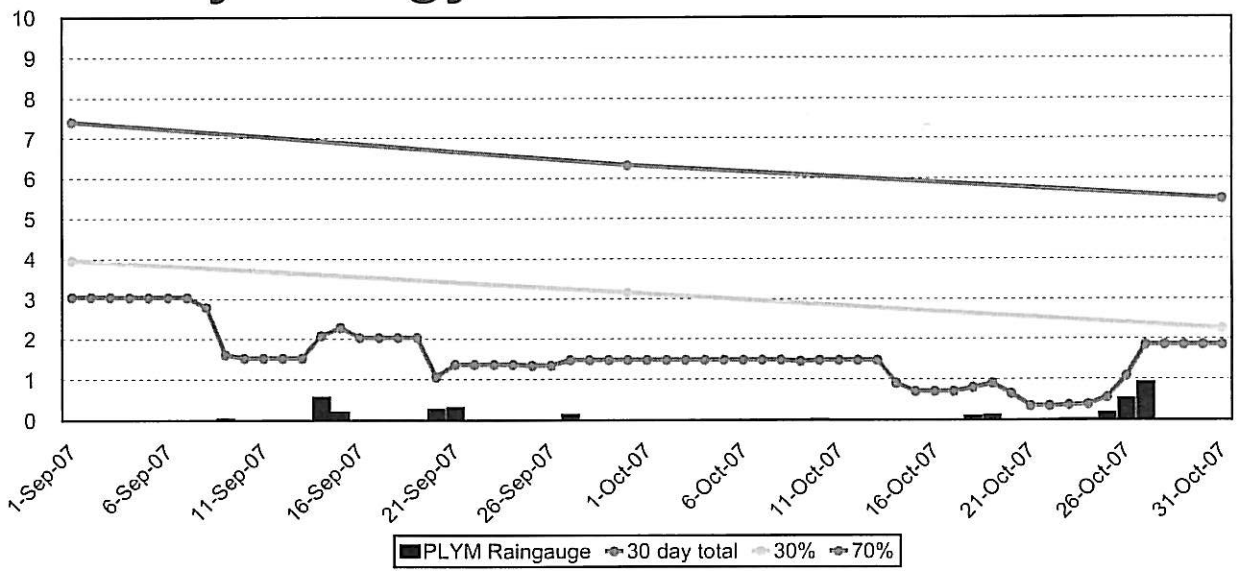
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

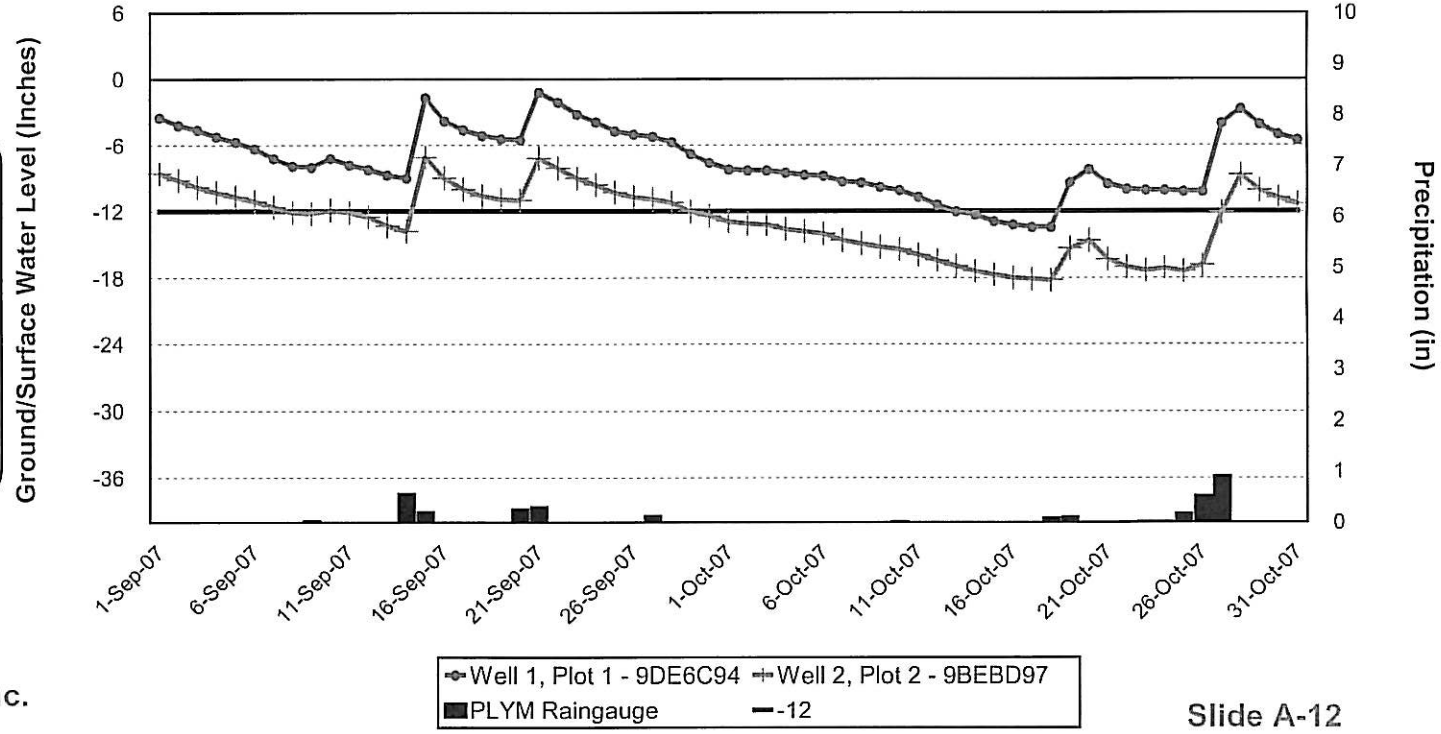
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 1 & 2
- WL 40
- September 1, 2007 -
- October 31, 2007
- One reading per day
- at 7:00am



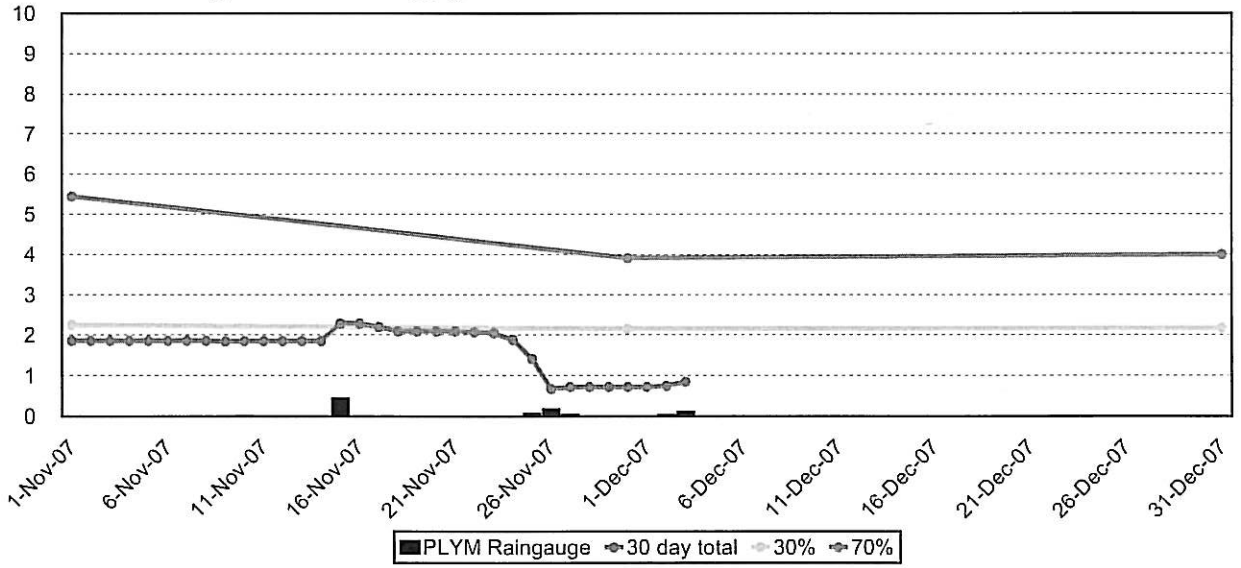
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

December 2007

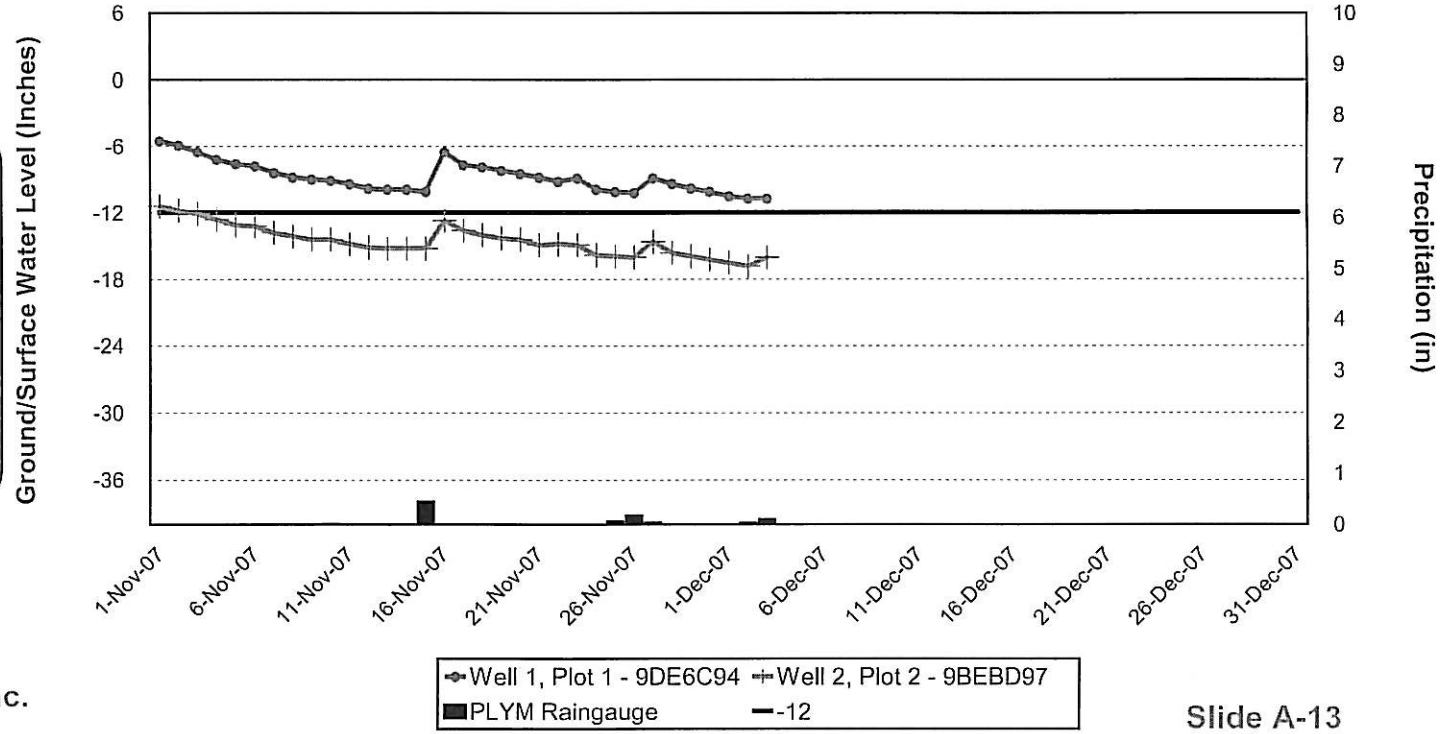
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 1 & 2
- WL 40
- November 1, 2007 -
- December 31, 2007
- One reading per day
- at 7:00am



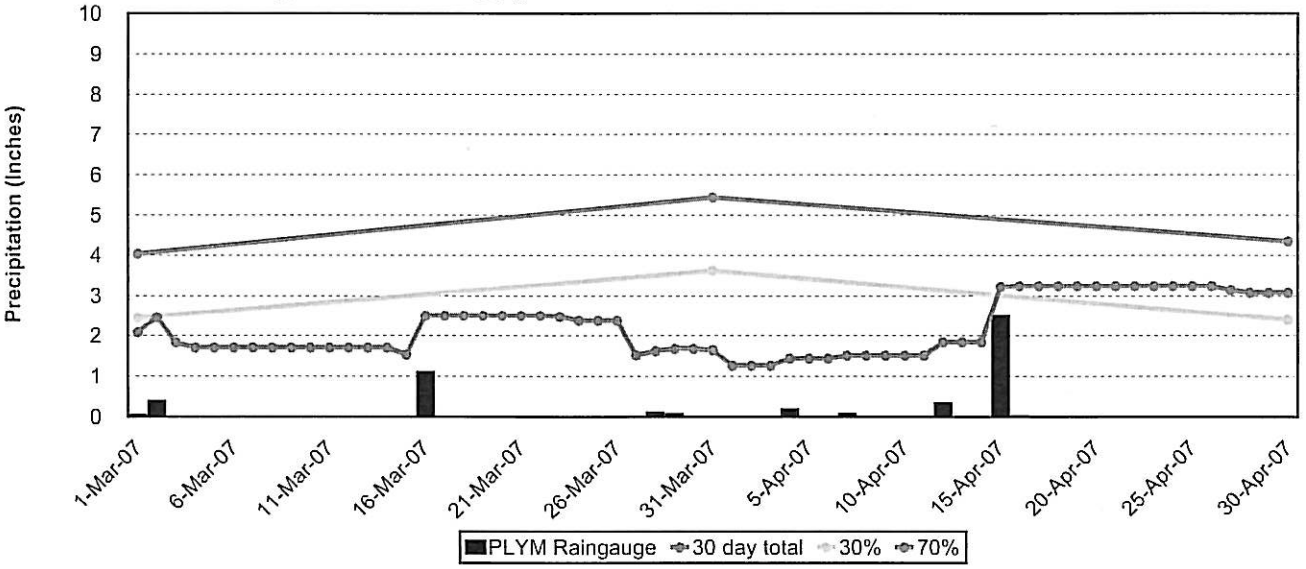
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

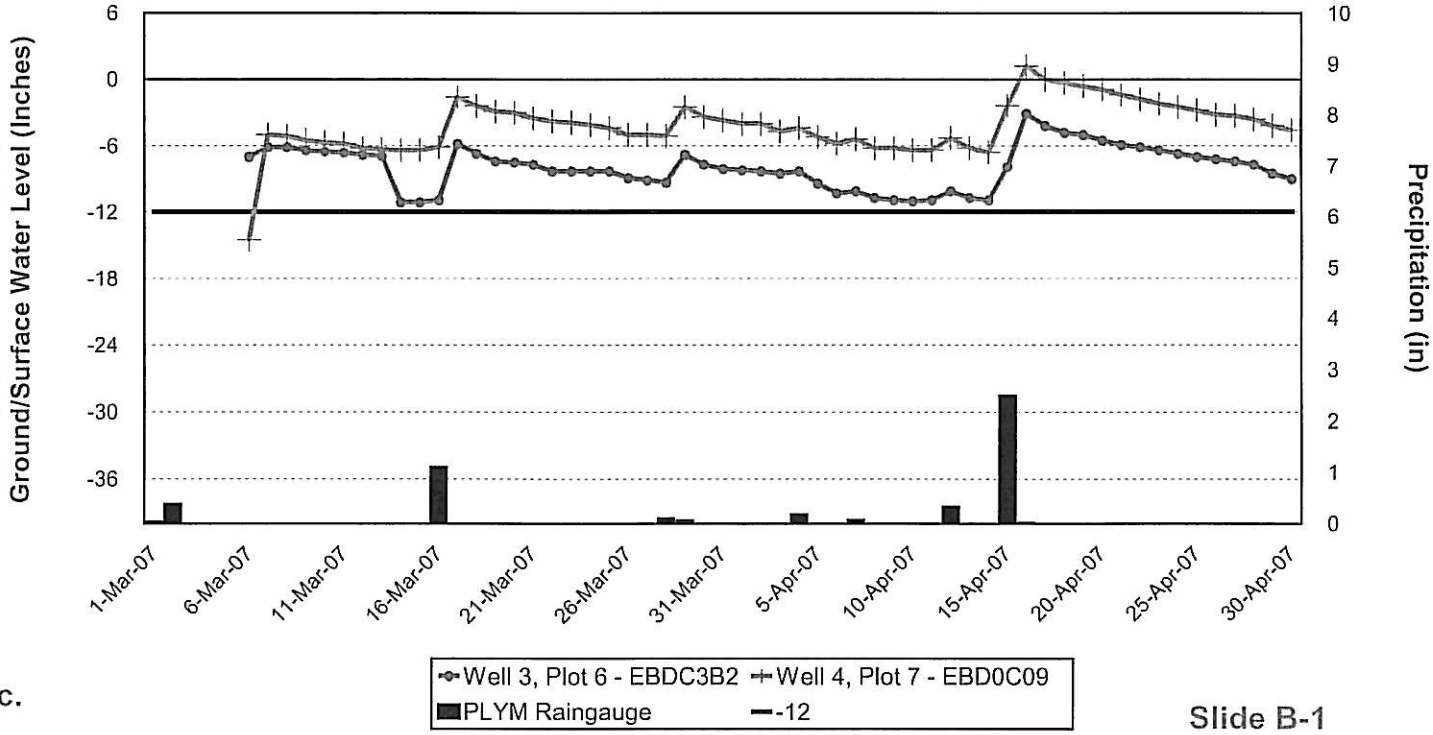
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 3 & 4
- WL 40
- March 1, 2007 -
- April 30, 2007
- One reading per day
- at 7:00am



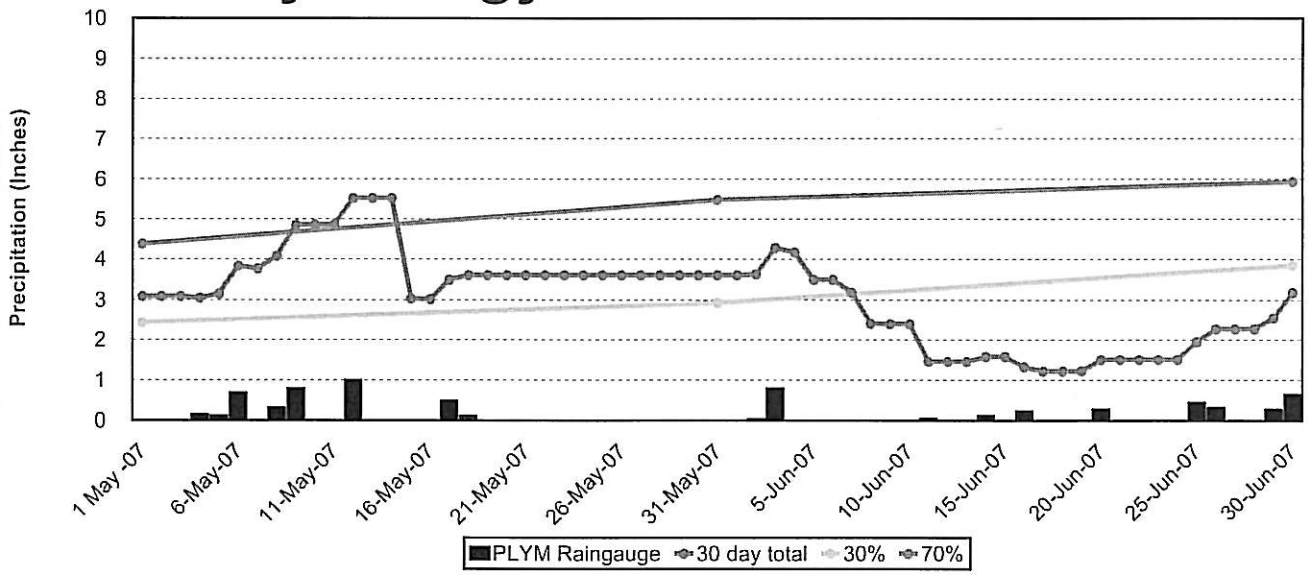
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

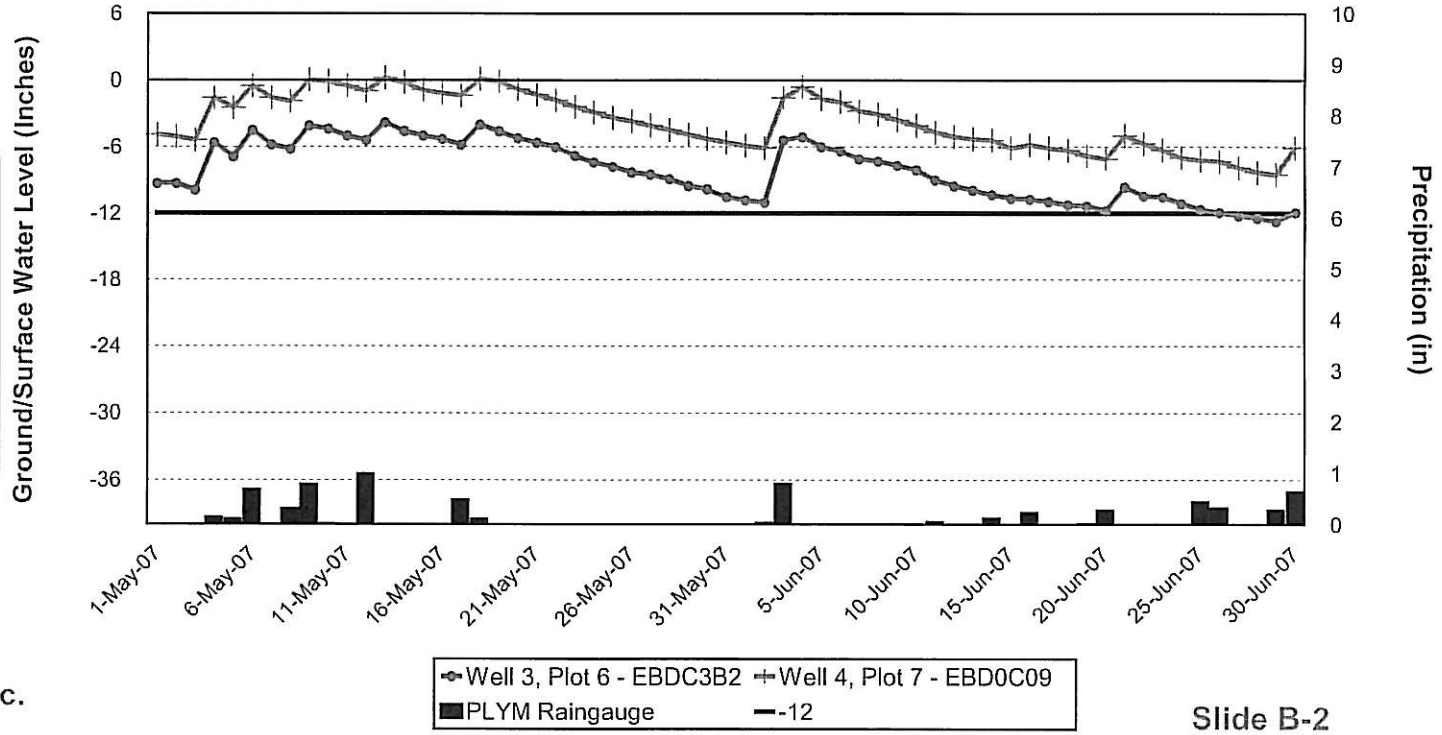
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 3 & 4
- WL 40
- May 1, 2007 -
- June 30, 2007
- One reading per day
- at 7:00am



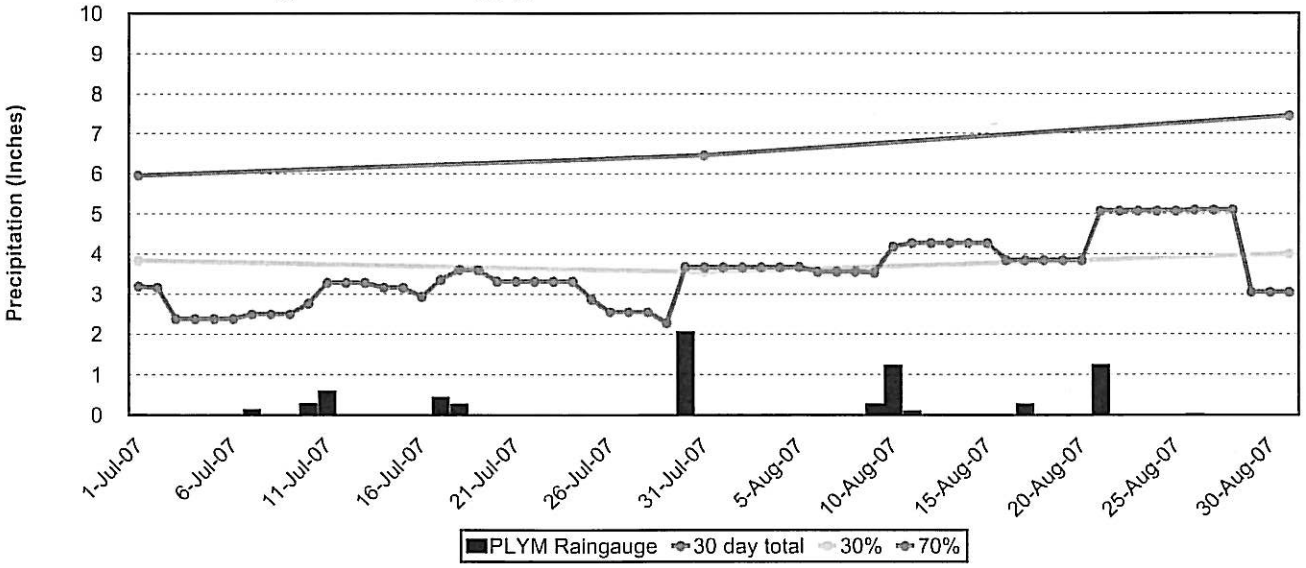
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

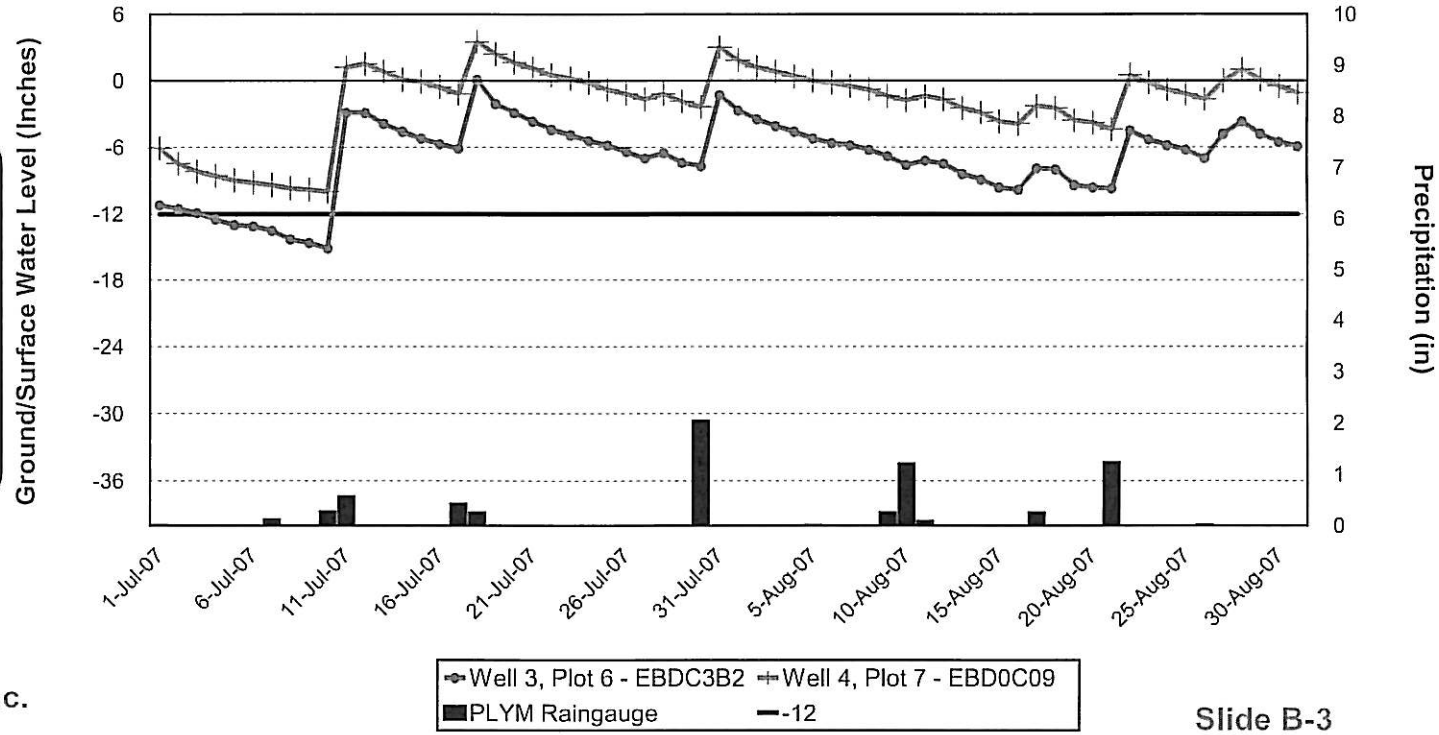
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 3 & 4
- WL 40
- July 1, 2007 -
- August 31, 2007
- One reading per day
- at 7:00am



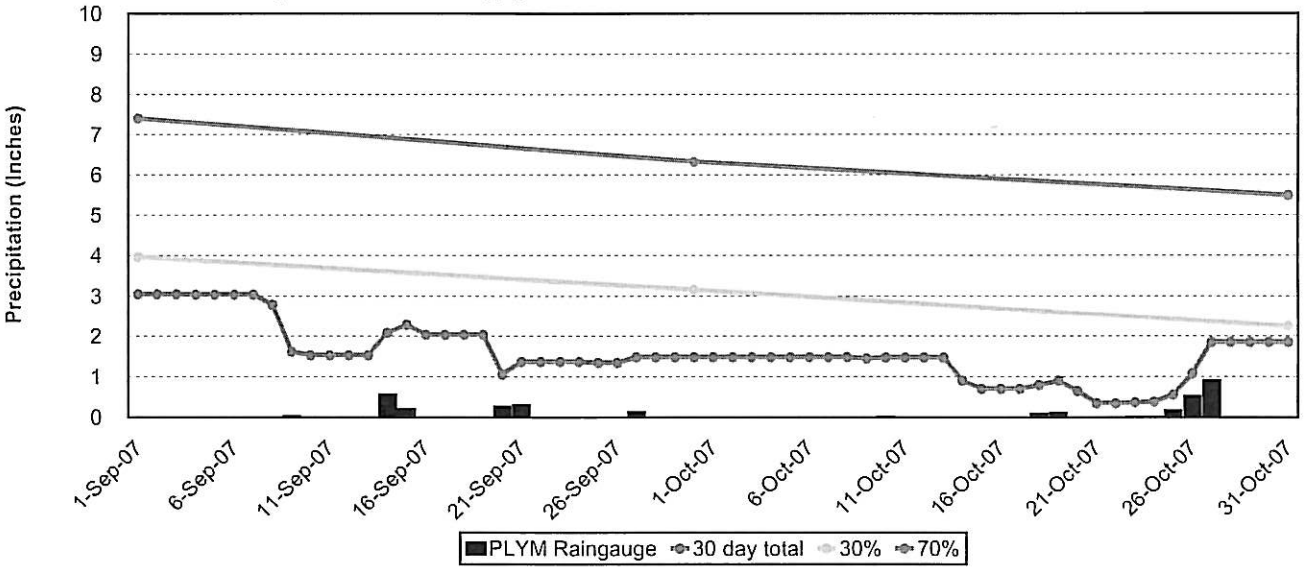
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

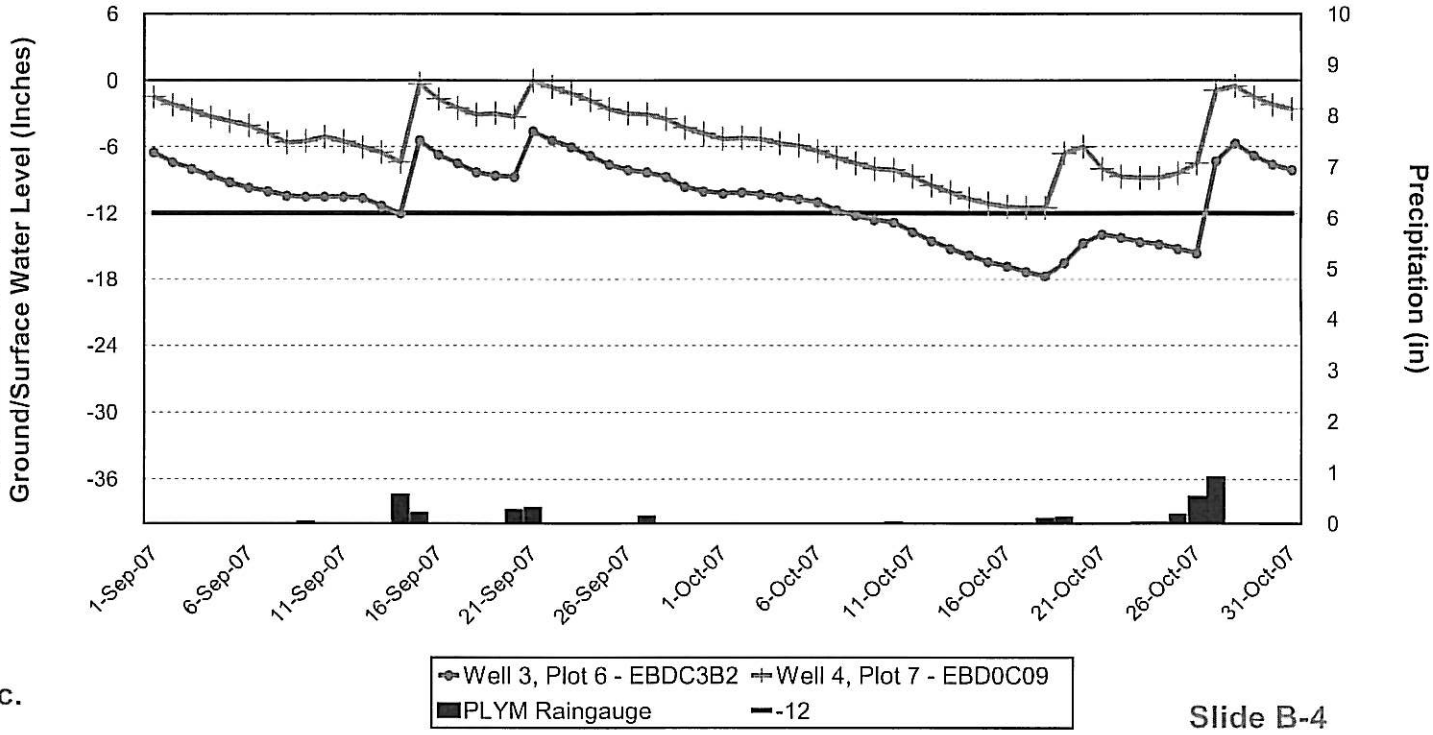
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 3 & 4
- WL 40
- September 1, 2007 -
- October 31, 2007
- One reading per day
- at 7:00am



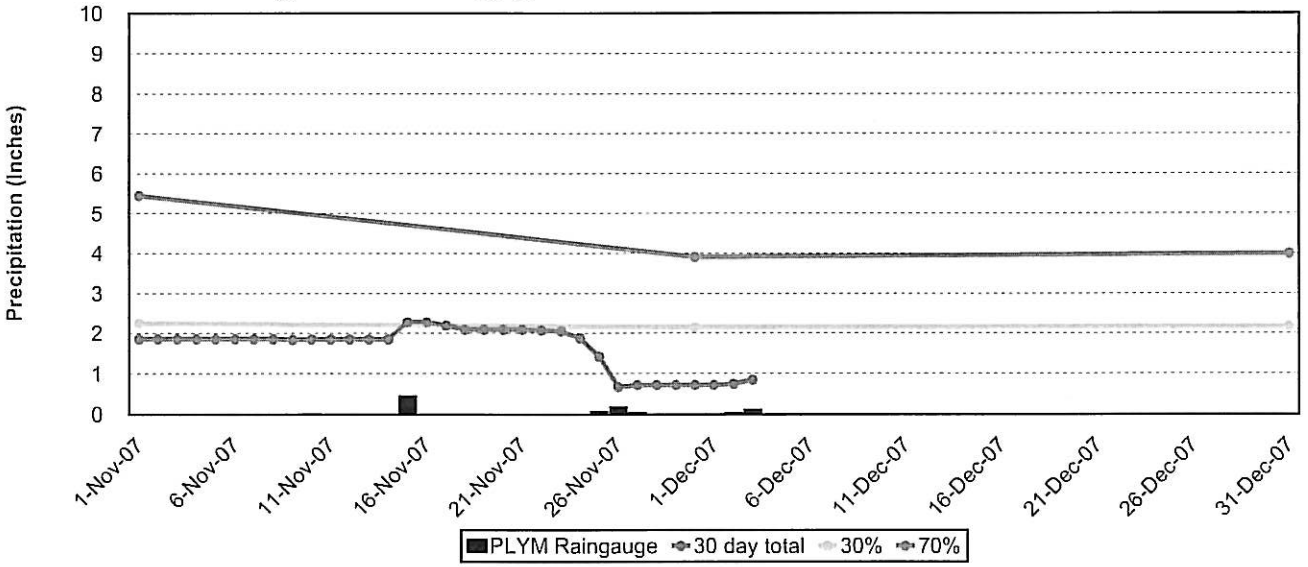
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

December 2007

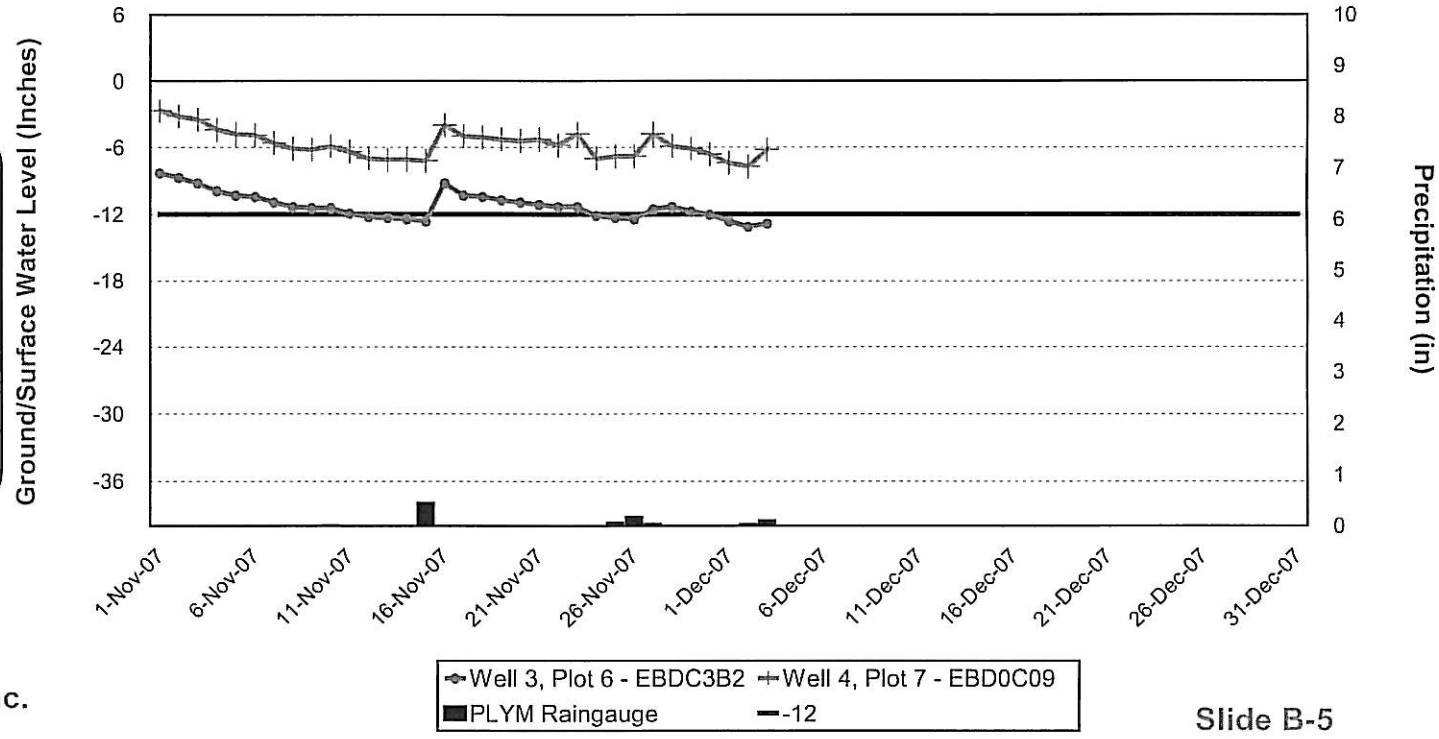
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 3 & 4
- WL 40
- November 1, 2007 -
- December 31, 2007
- One reading per day
- at 7:00am

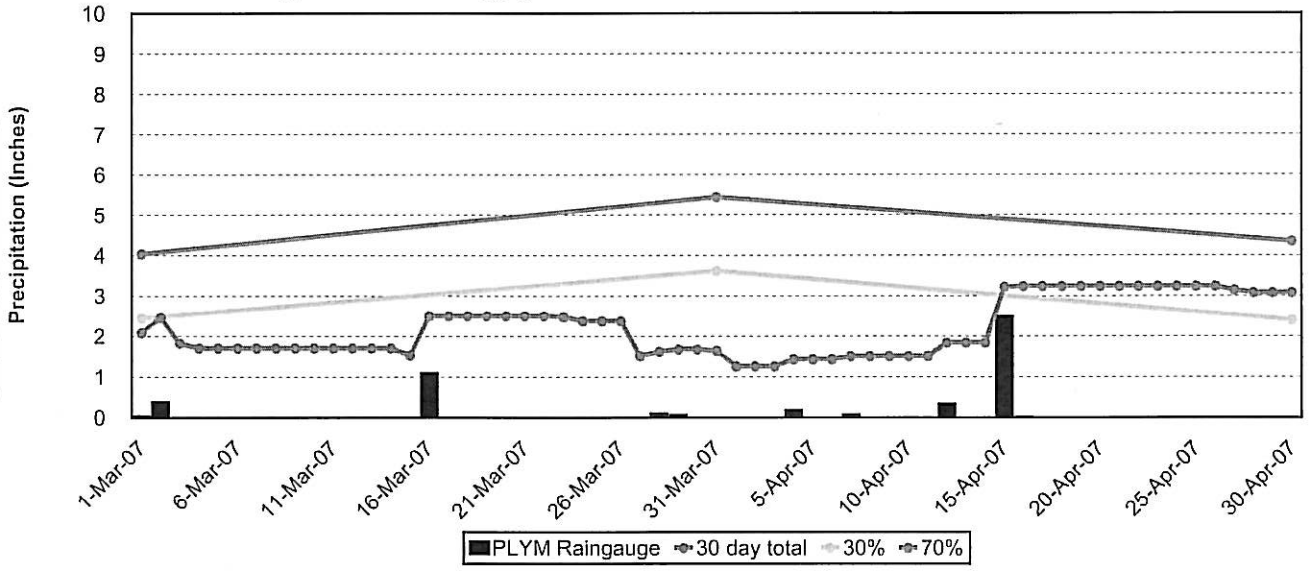


Hydrology Assessment

September 2007

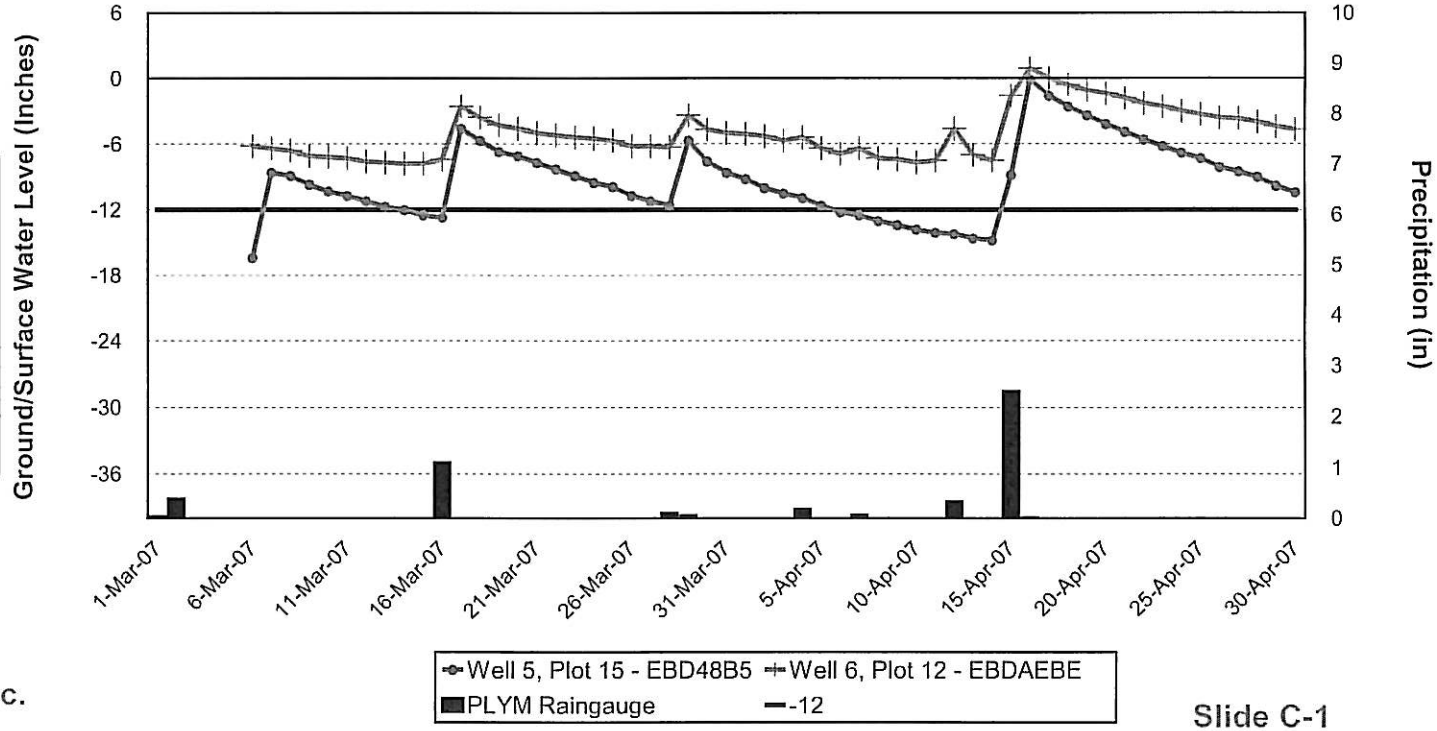
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 5 & 6
- WL 40
- March 1, 2007 -
- April 30, 2007
- One reading per day
- at 7:00am



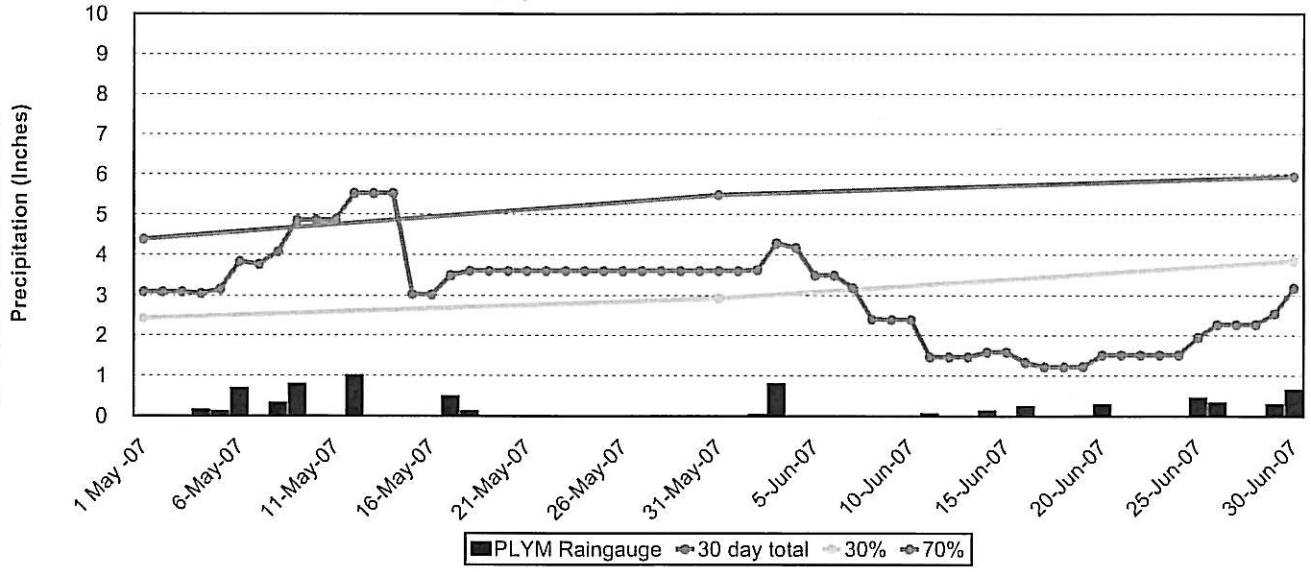
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

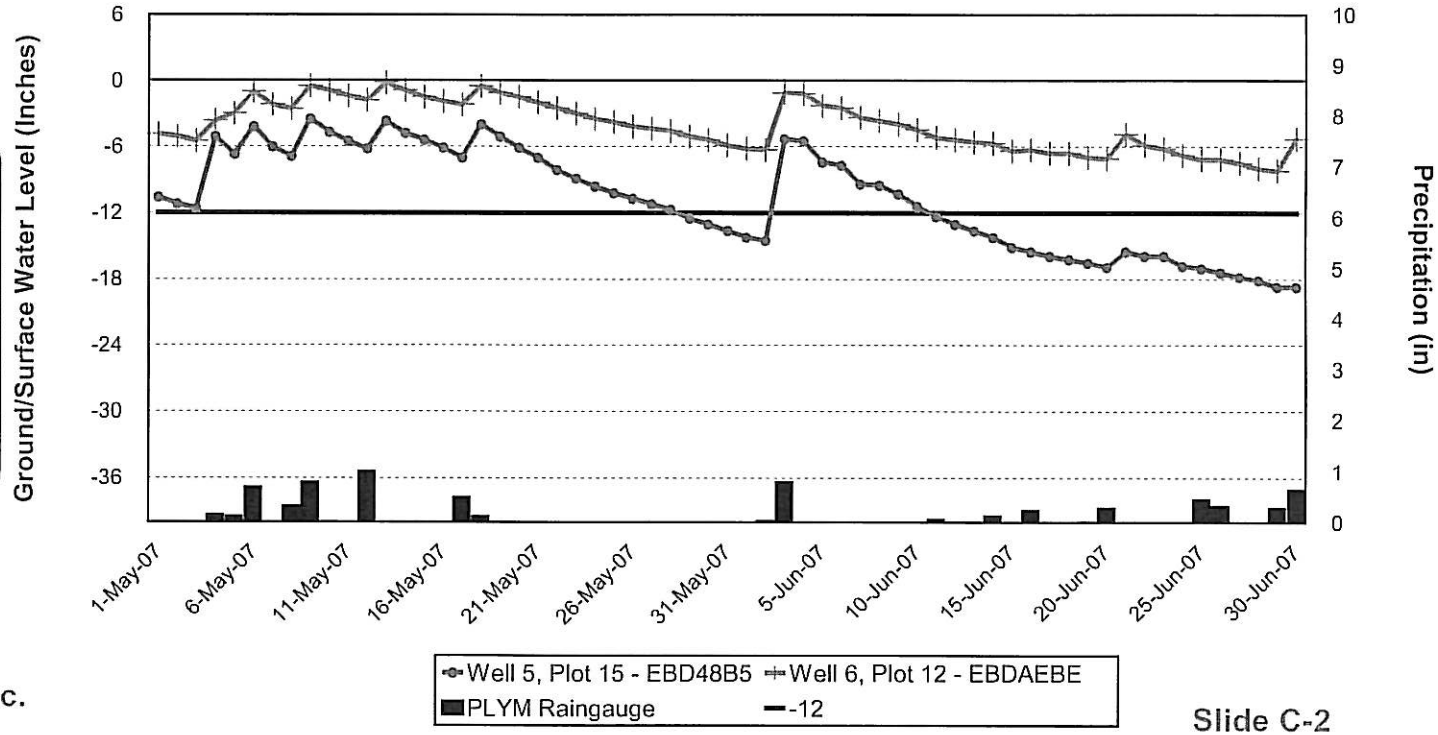
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 5 & 6
- WL 40
- May 1, 2007 -
- June 30, 2007
- One reading per day
- at 7:00am



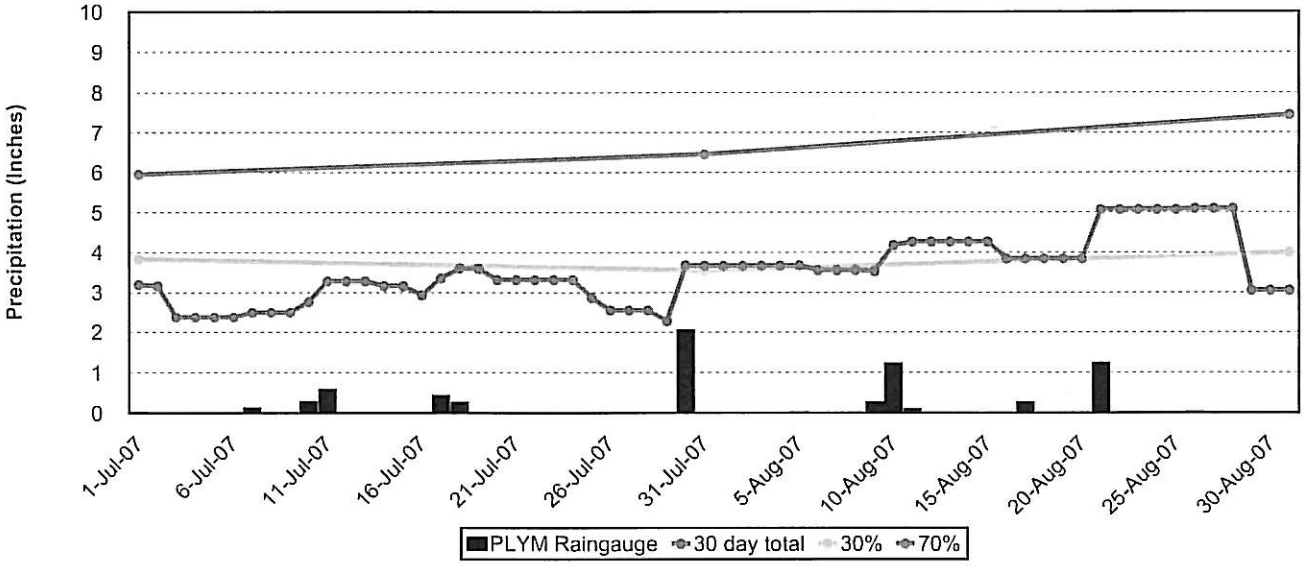
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

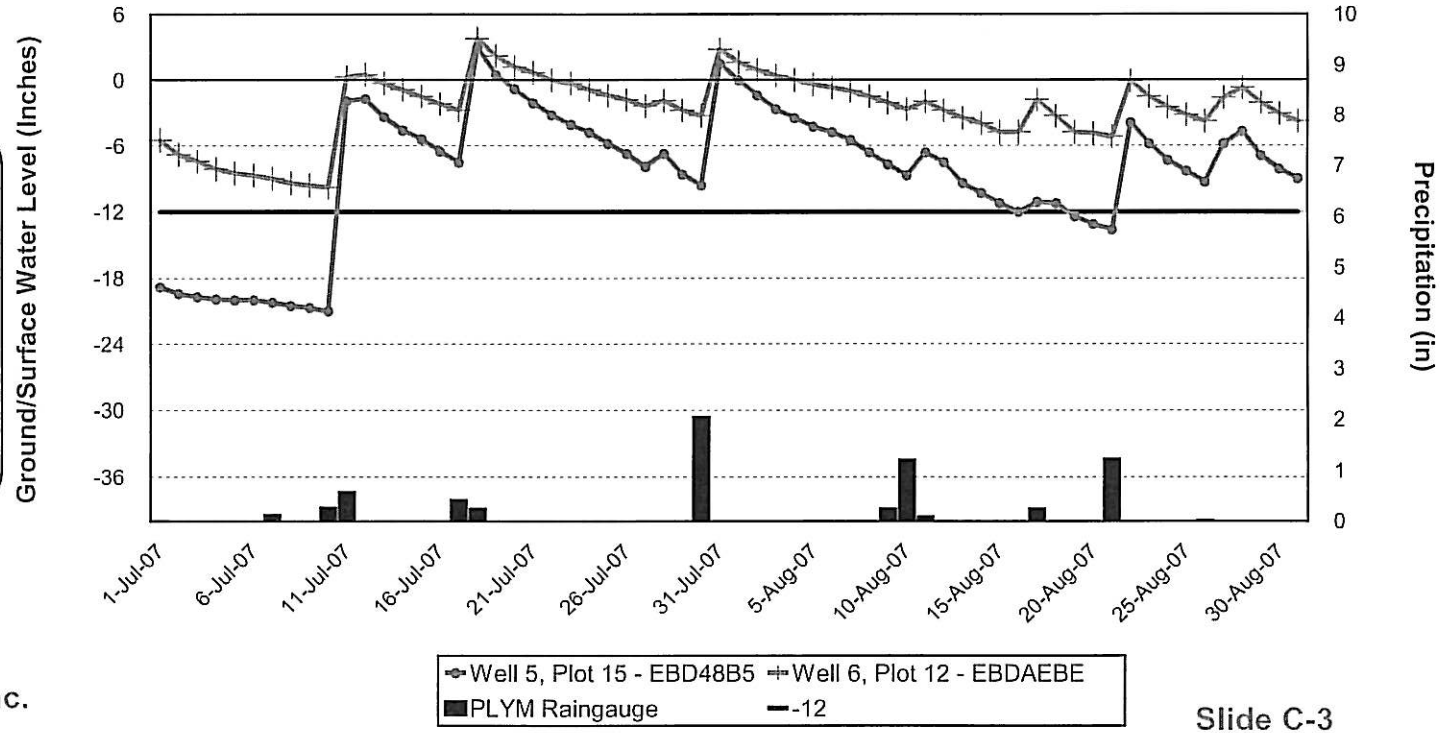
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 5 & 6
- WL 40
- July 1, 2007 -
- August 31, 2007
- One reading per day
- at 7:00am



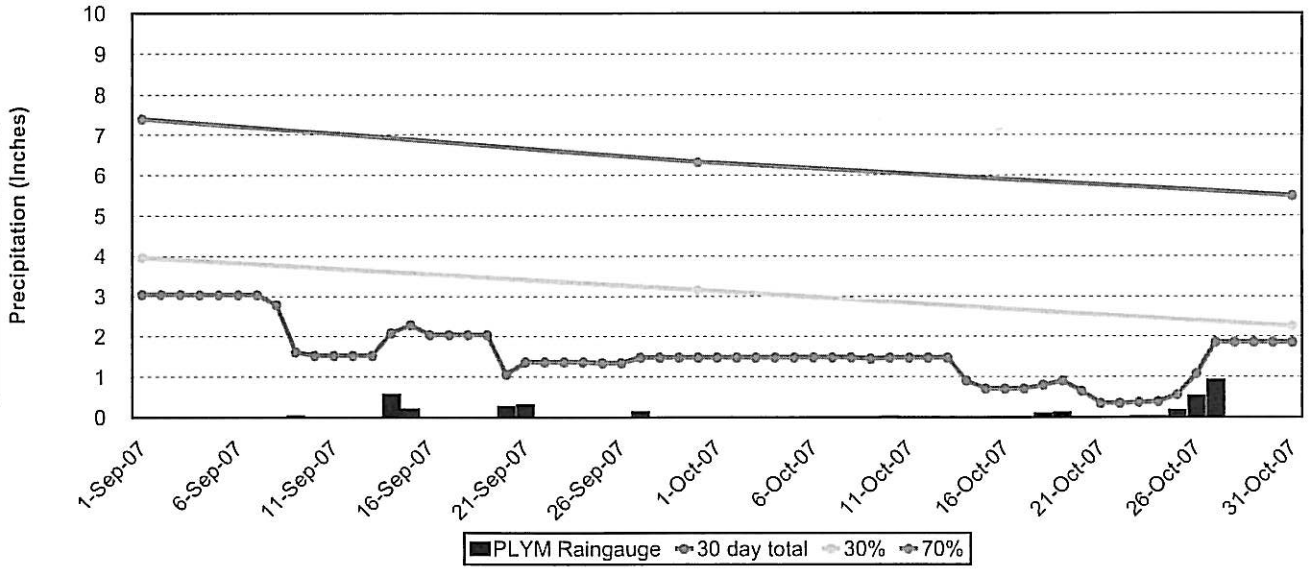
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

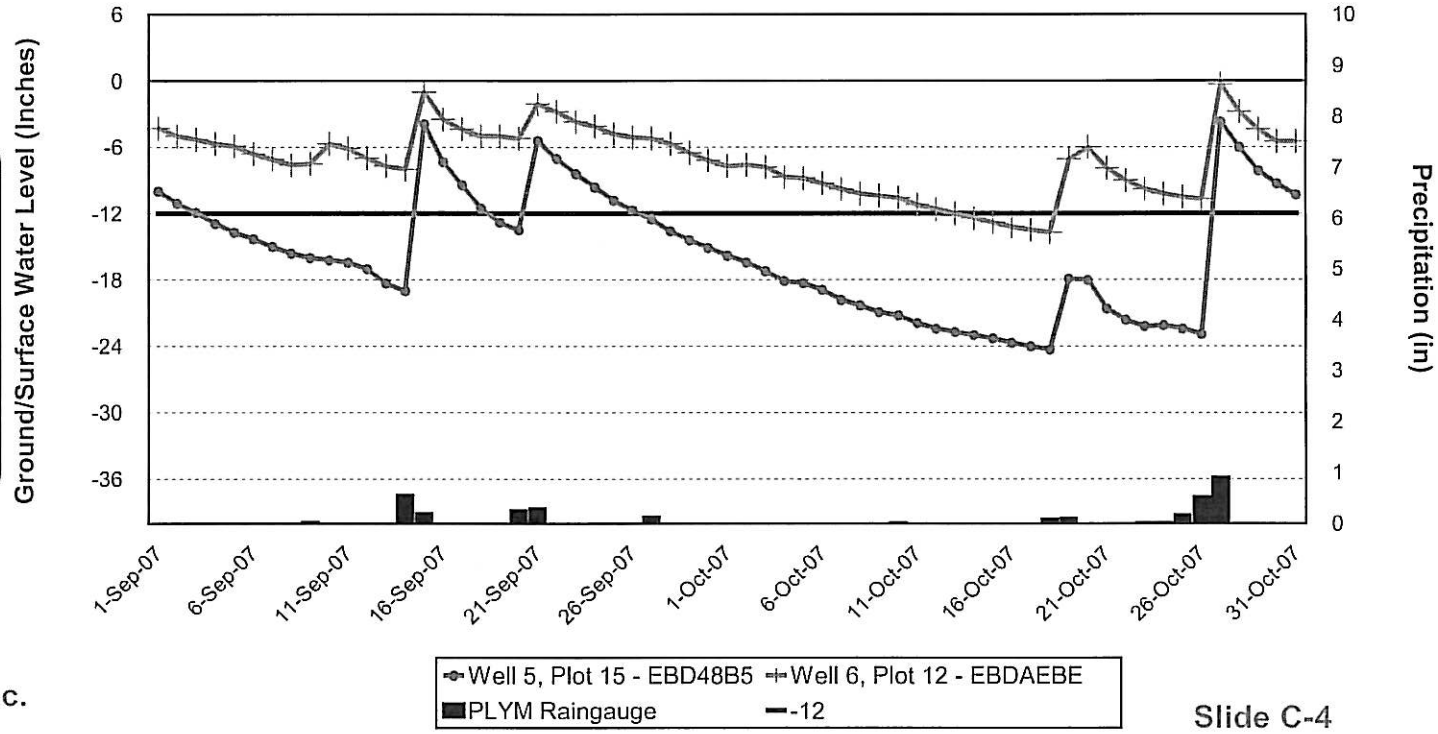
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 5 & 6
- WL 40
- September 1, 2007 -
- October 31, 2007
- One reading per day
- at 7:00am



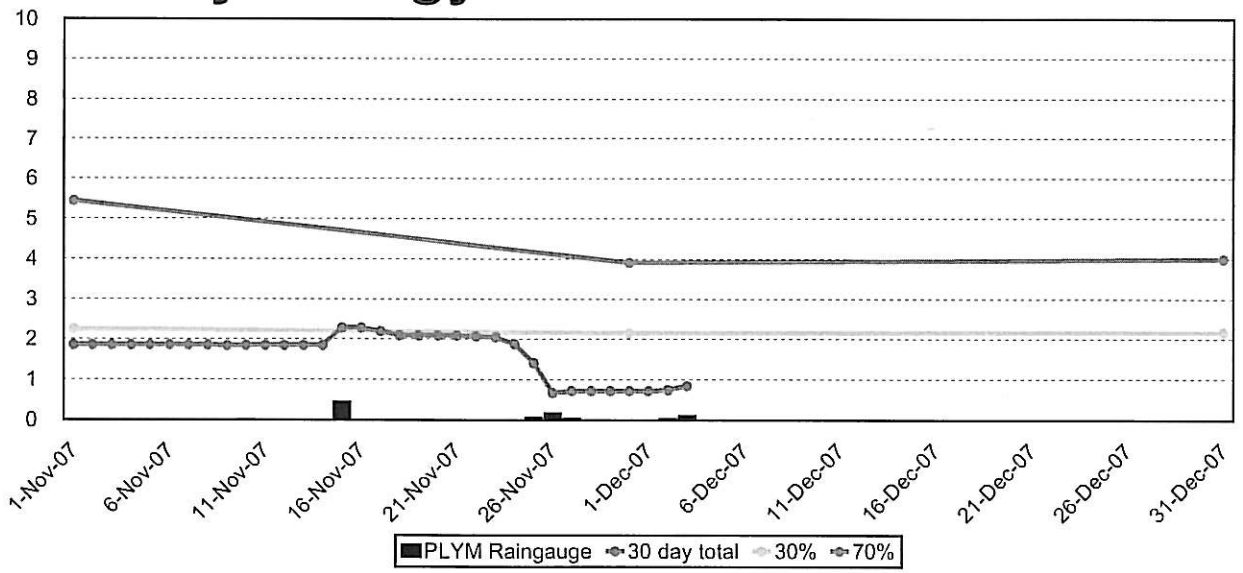
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

December 2007

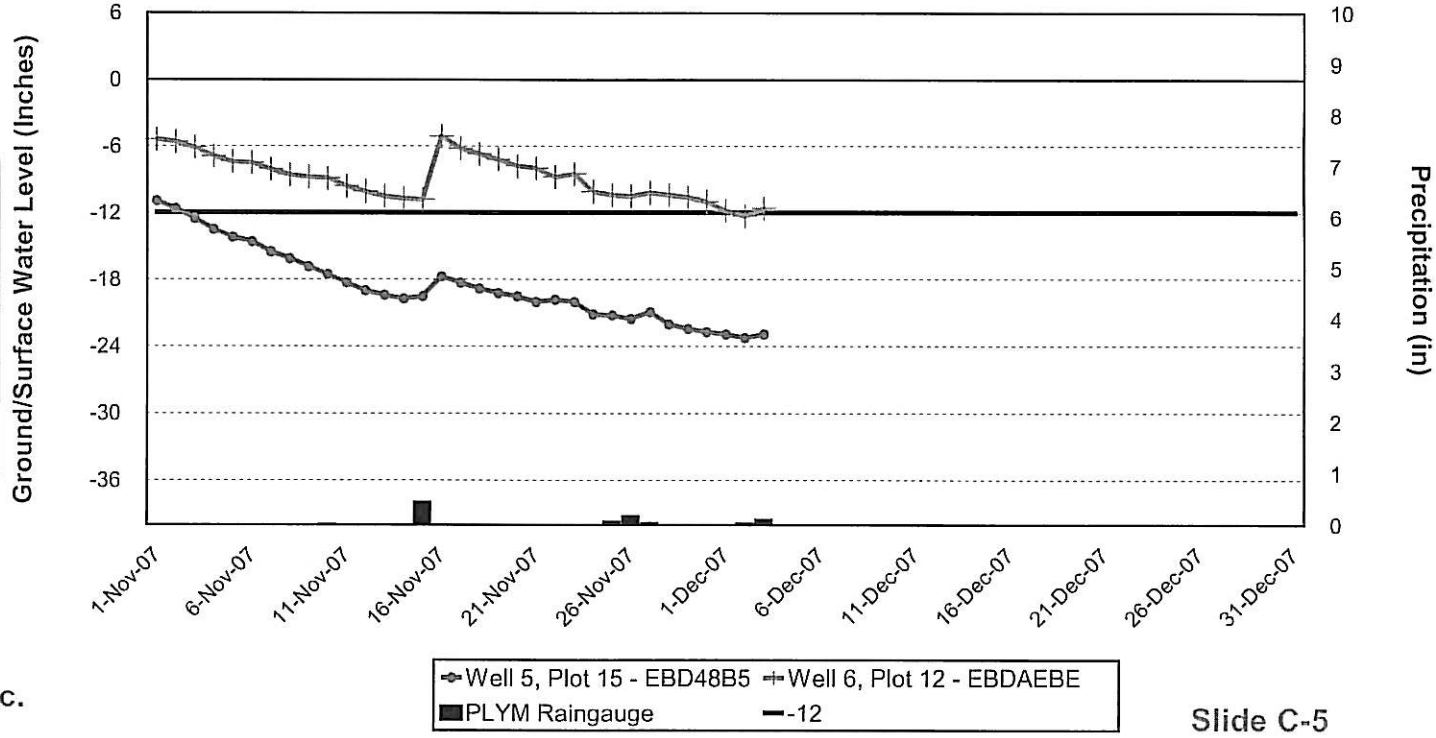
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 5 & 6
- WL 40
- November 1, 2007 -
- December 31, 2007
- One reading per day
- at 7:00am



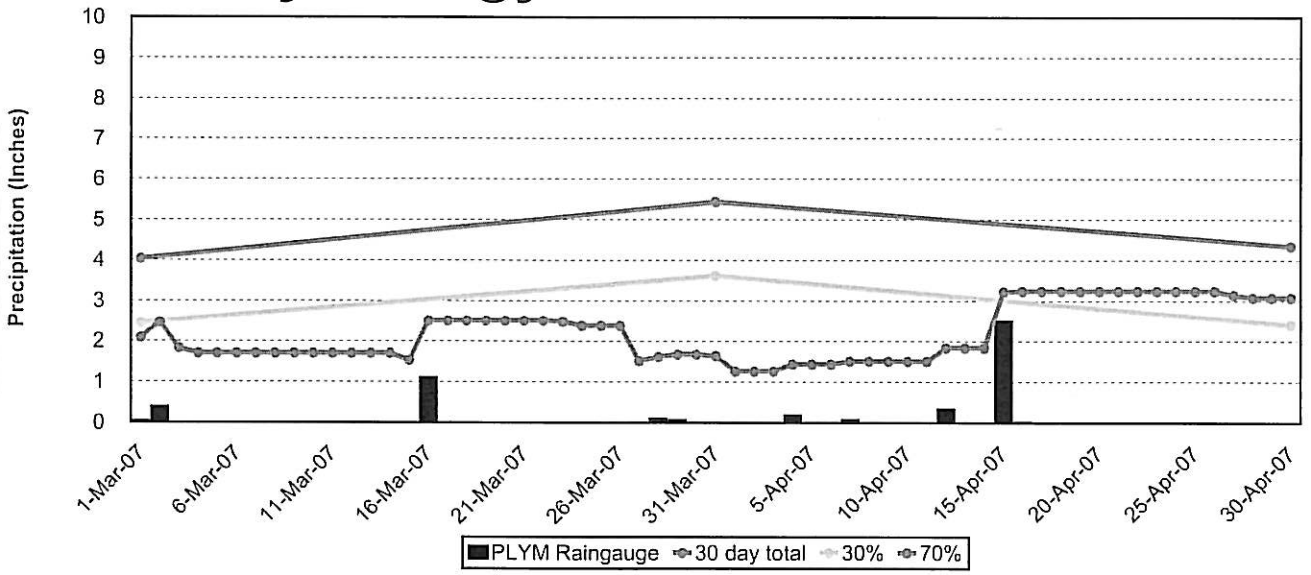
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

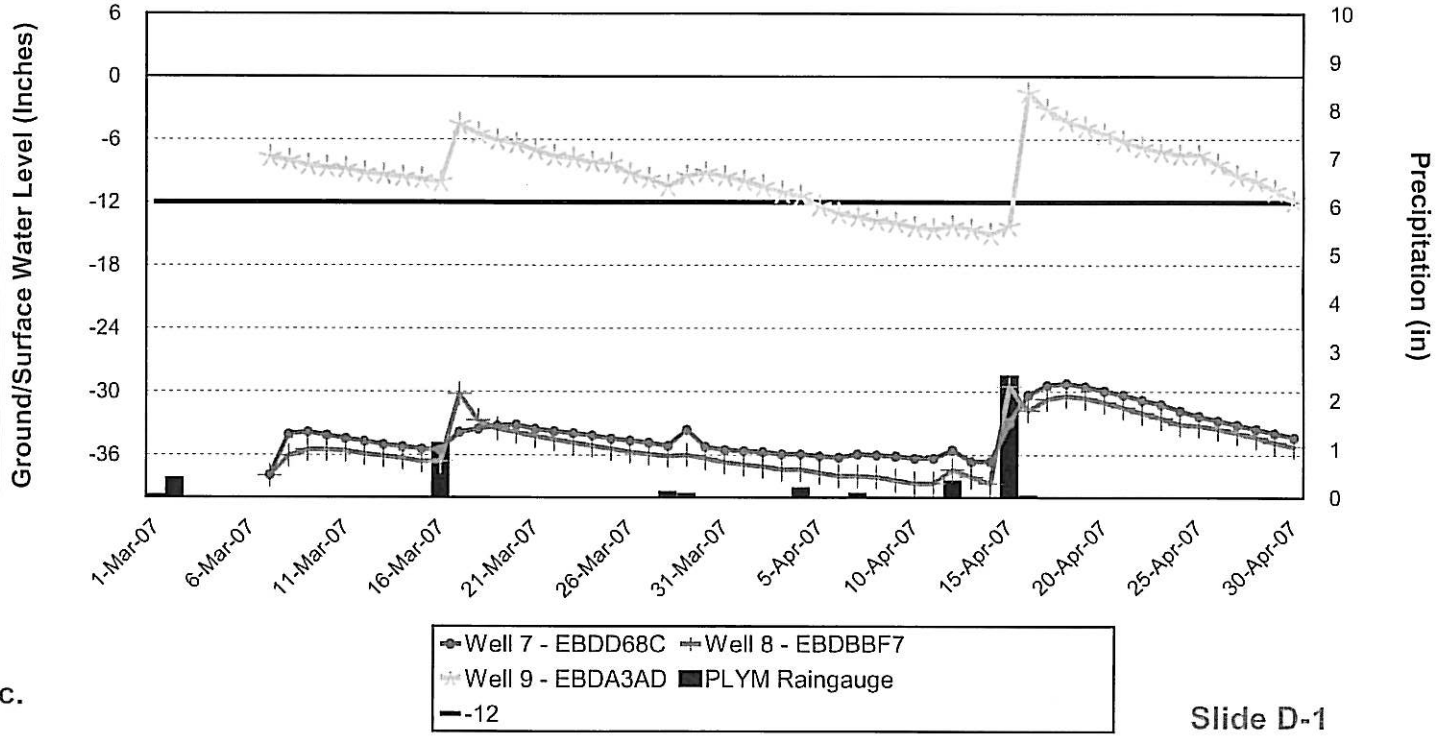
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 7, 8, & 9
- Original Reference Wells
- WL 40
- March 1, 2007 -
- April 30, 2007
- One reading per day
- at 7:00am



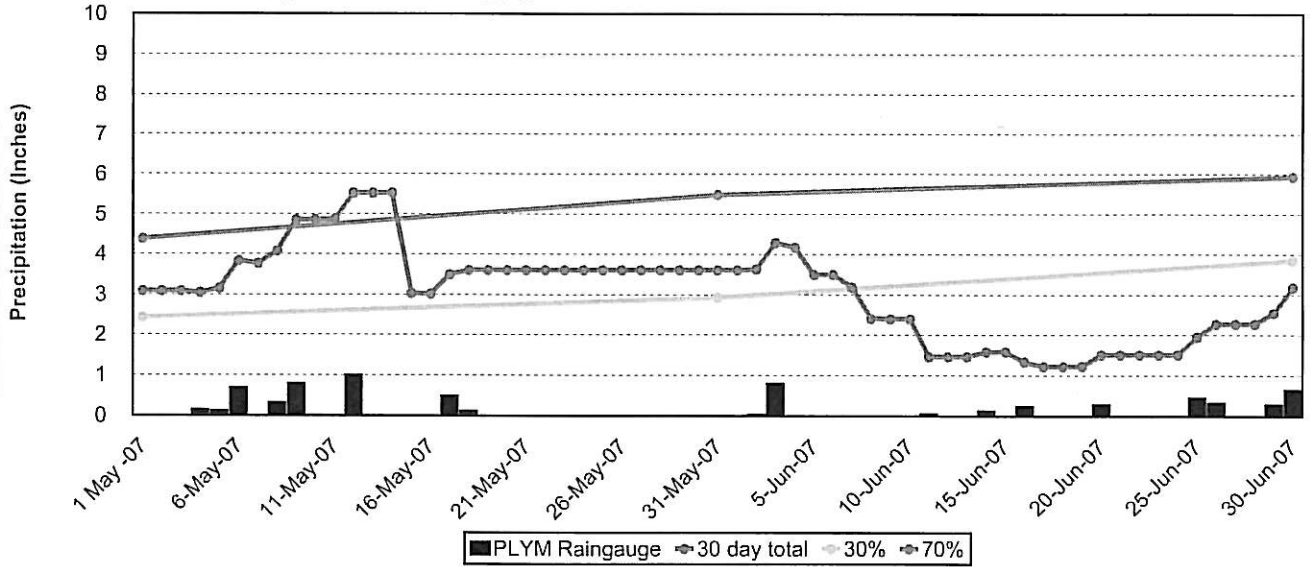
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

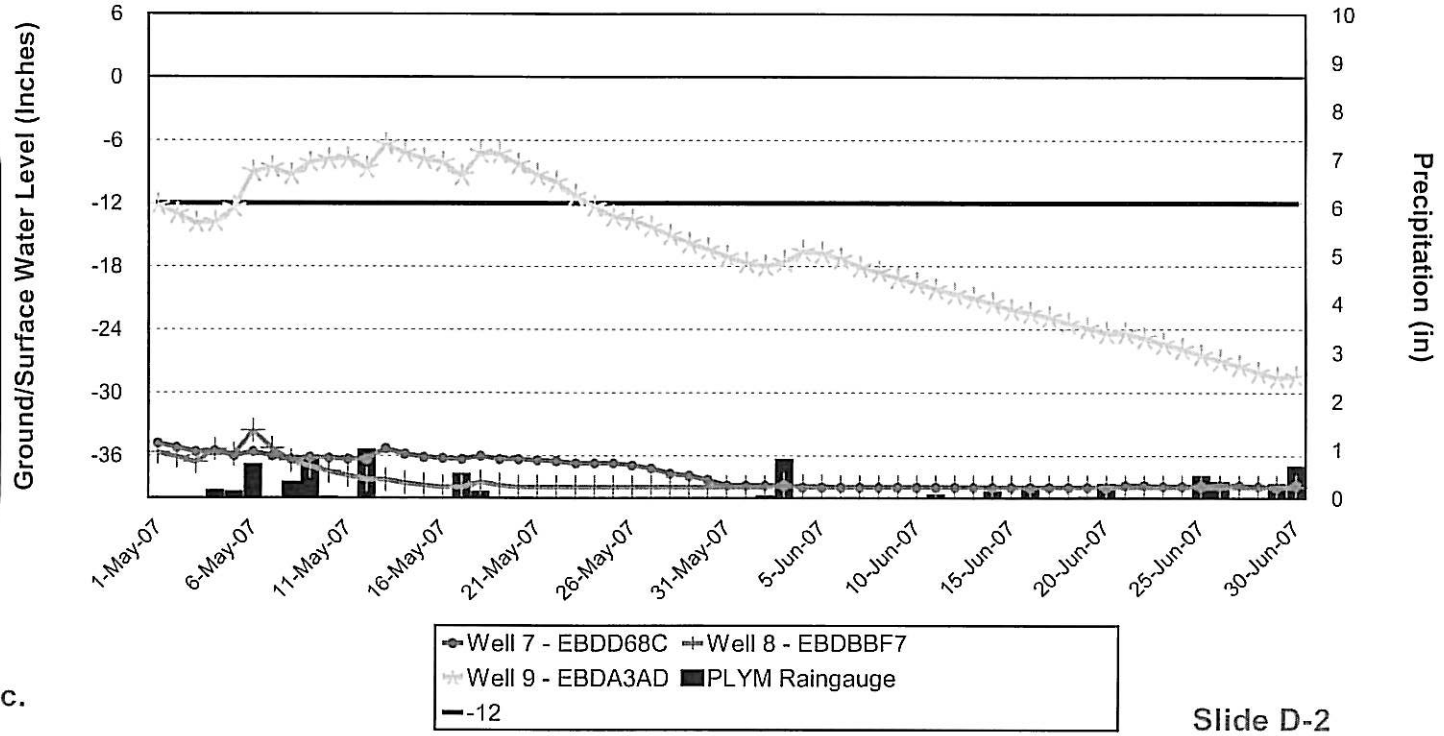
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 7, 8, & 9
- Original Reference Wells
- WL 40
- May 1, 2007 -
- June 30, 2007
- One reading per day
- at 7:00am



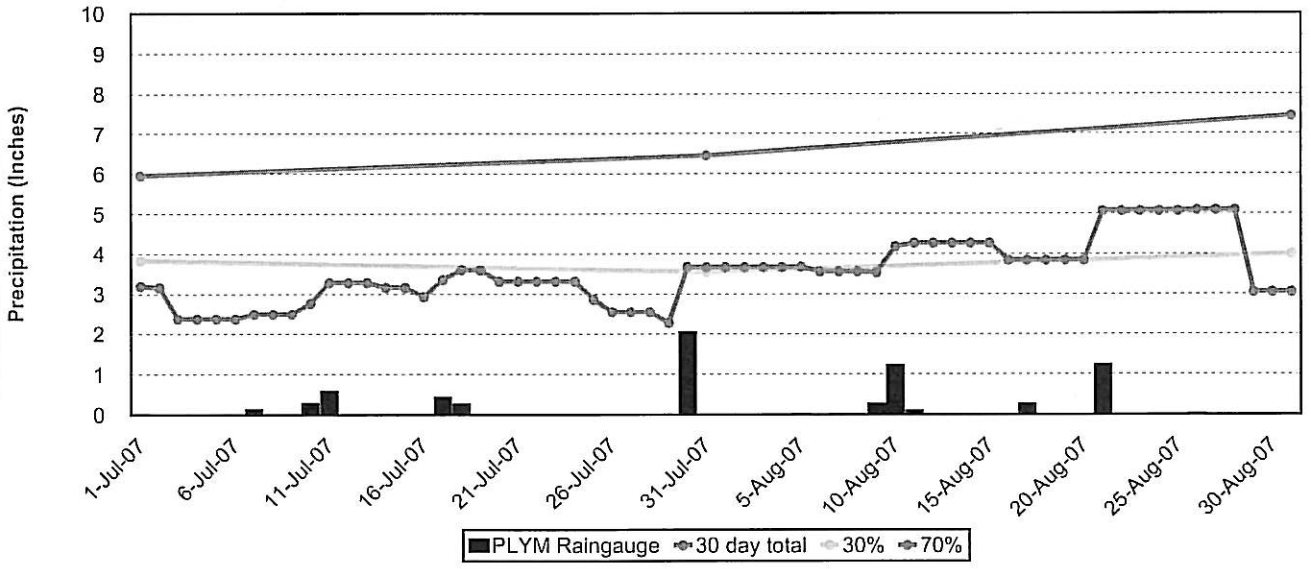
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

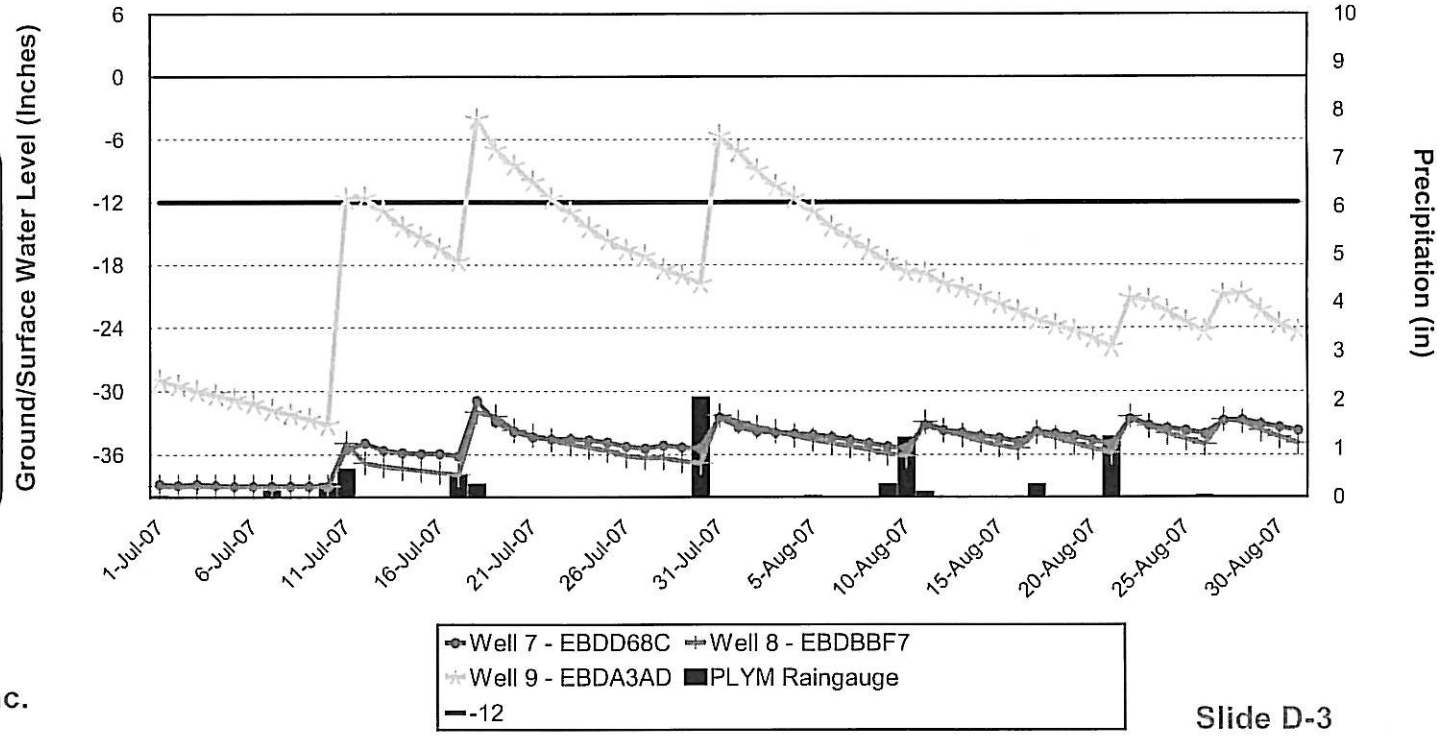
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 7, 8, & 9
- Original Reference Wells
- WL 40
- July 1, 2007 -
- August 31, 2007
- One reading per day
- at 7:00am

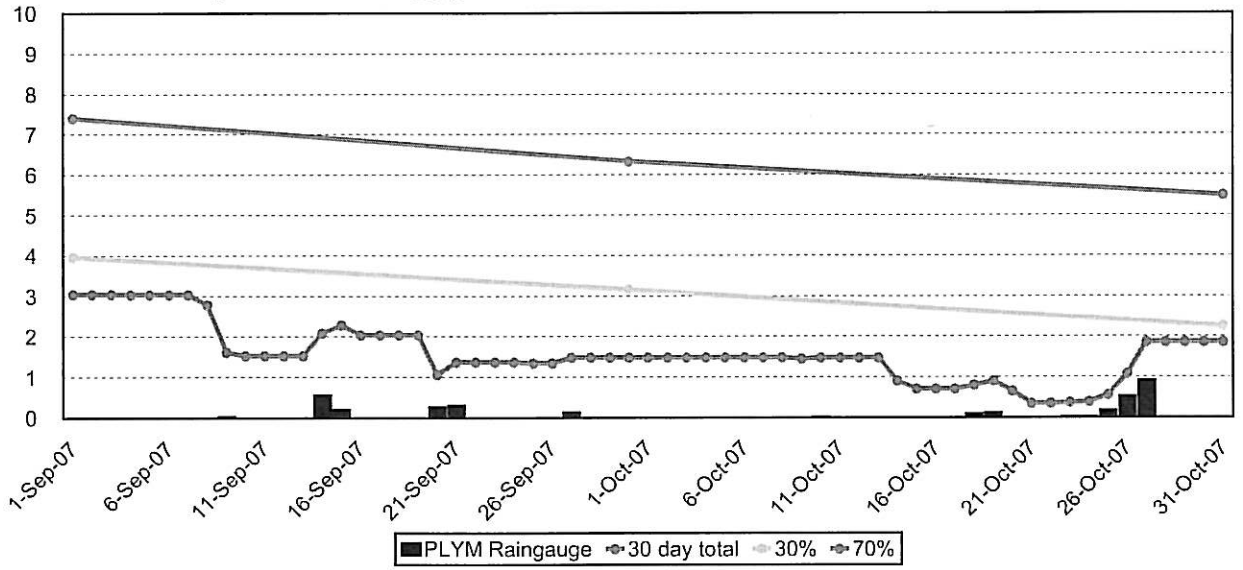


Hydrology Assessment

September 2007

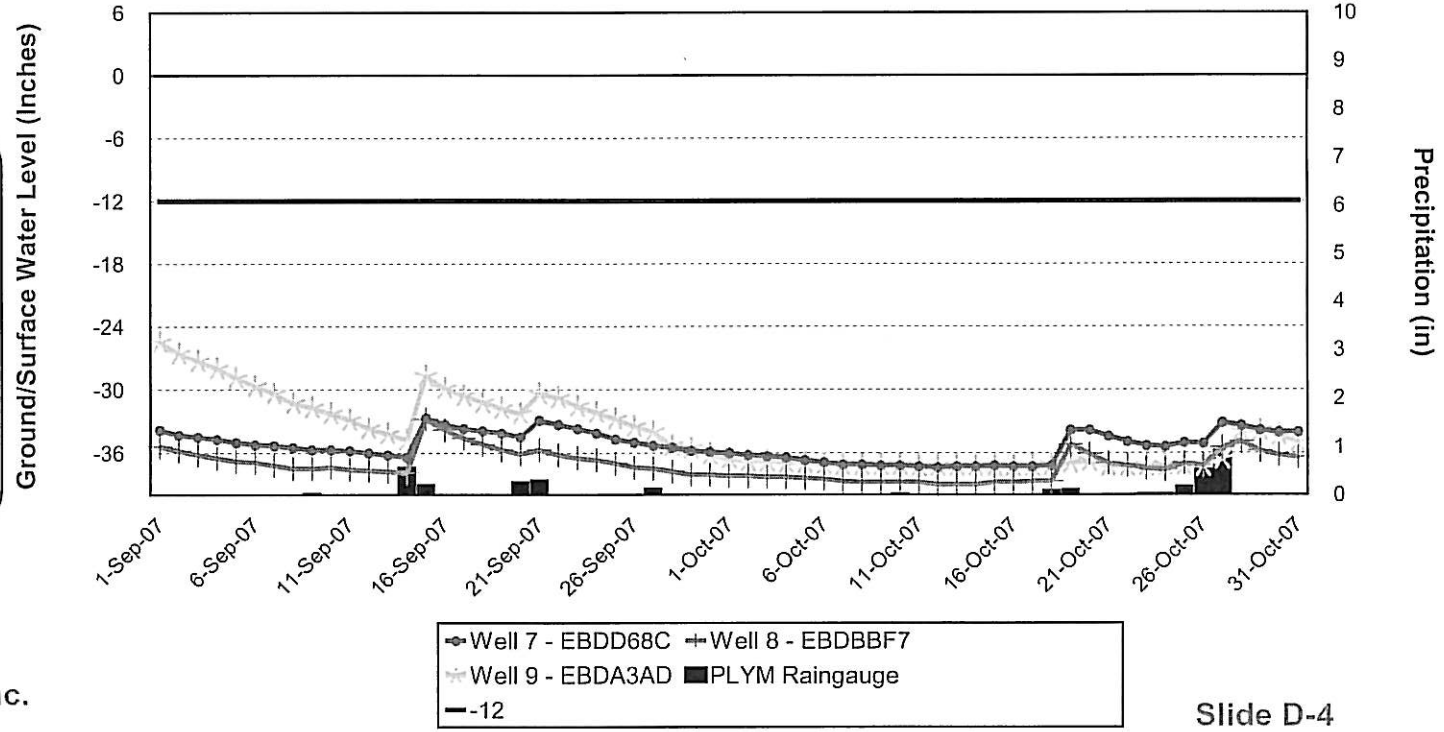
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 7, 8, & 9
- Original Reference Wells
- WL 40
- September 1, 2007 -
- October 31, 2007
- One reading per day
- at 7:00am



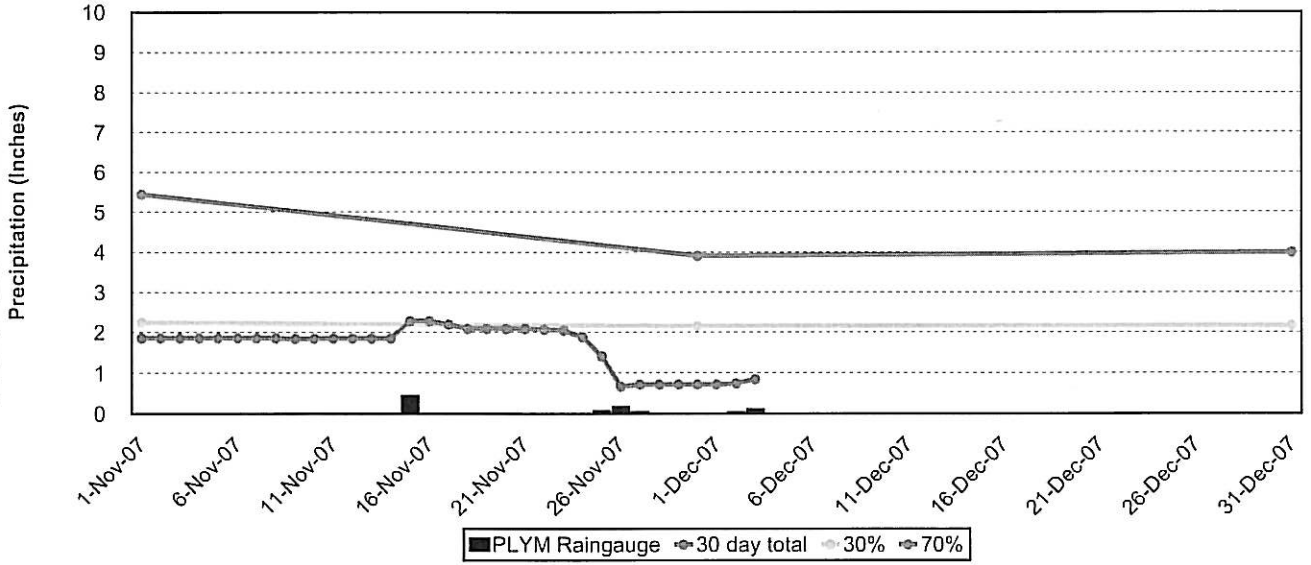
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

December 2007

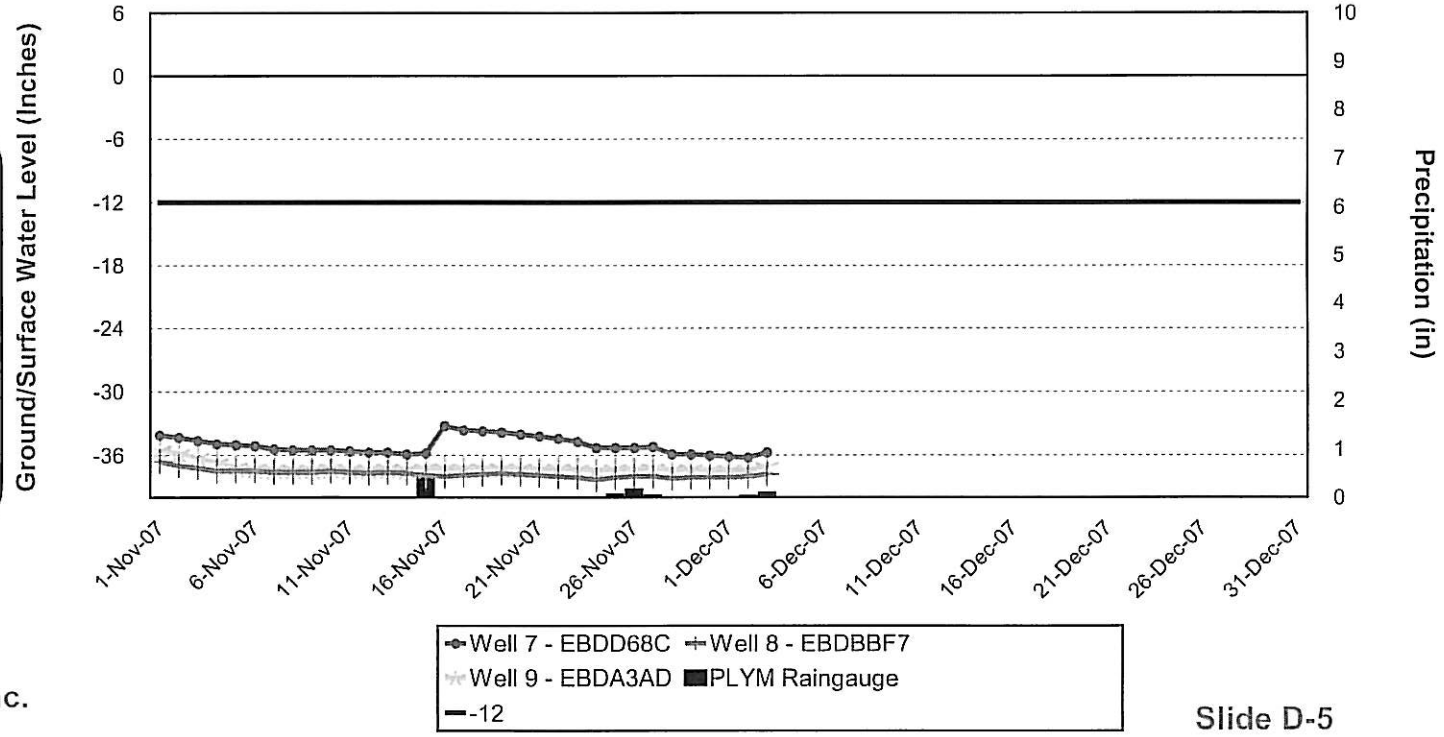
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 7, 8, & 9
- Original Reference Wells
- WL 40
- November 1, 2007 -
- December 31, 2007
- One reading per day
- at 7:00am



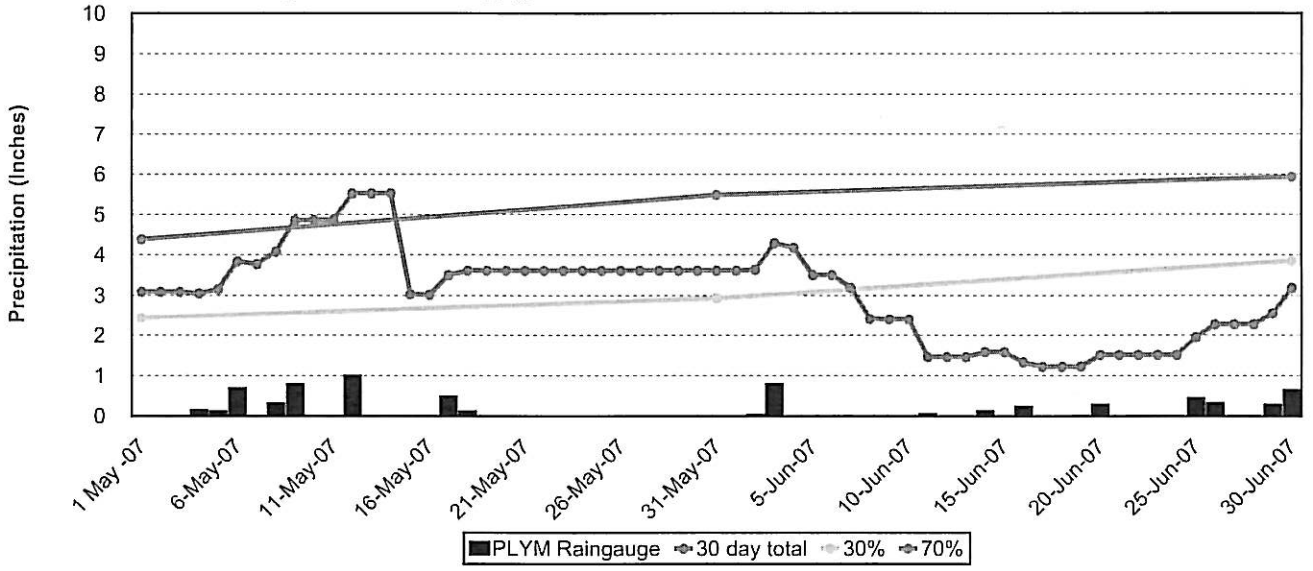
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

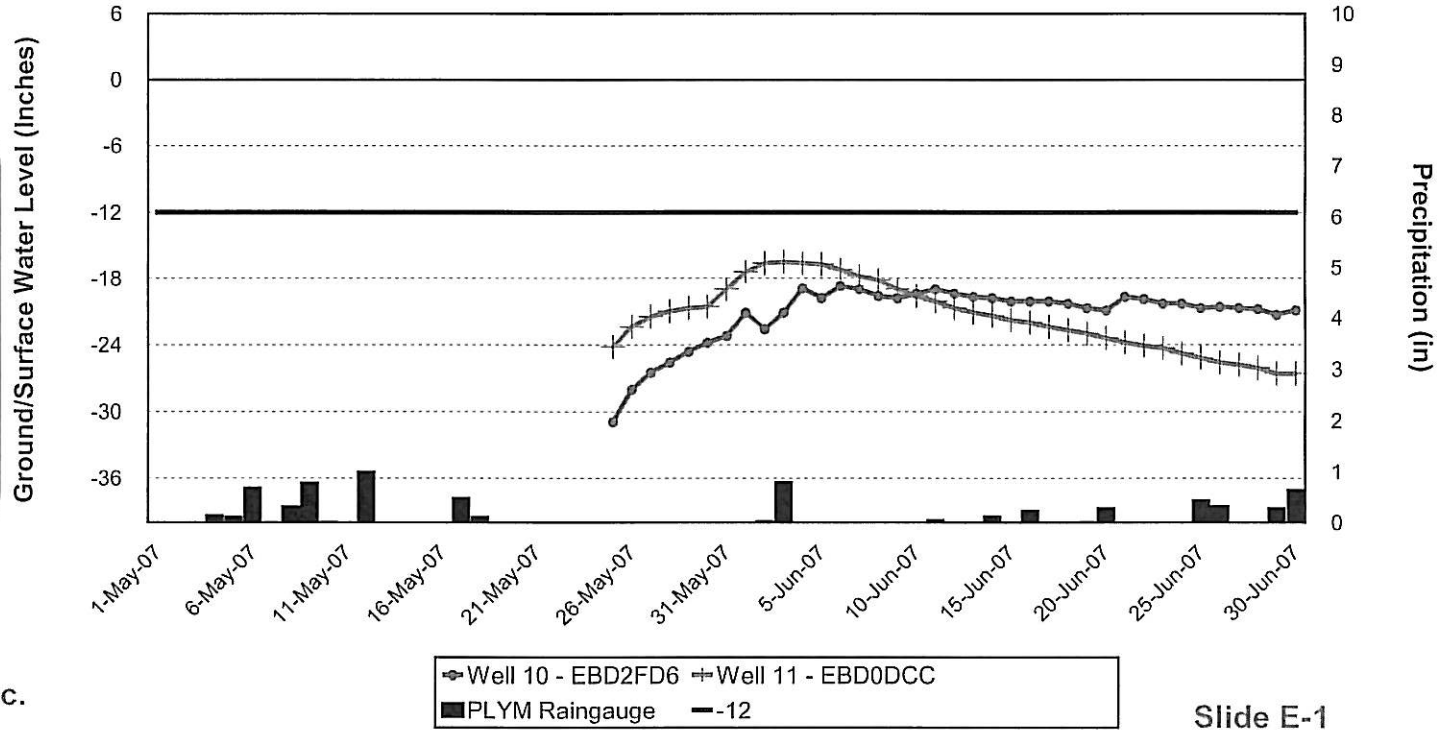
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 10 & 11
- New Reference Wells
- WL 40
- May 1, 2007 -
- June 30, 2007
- One reading per day
- at 7:00am



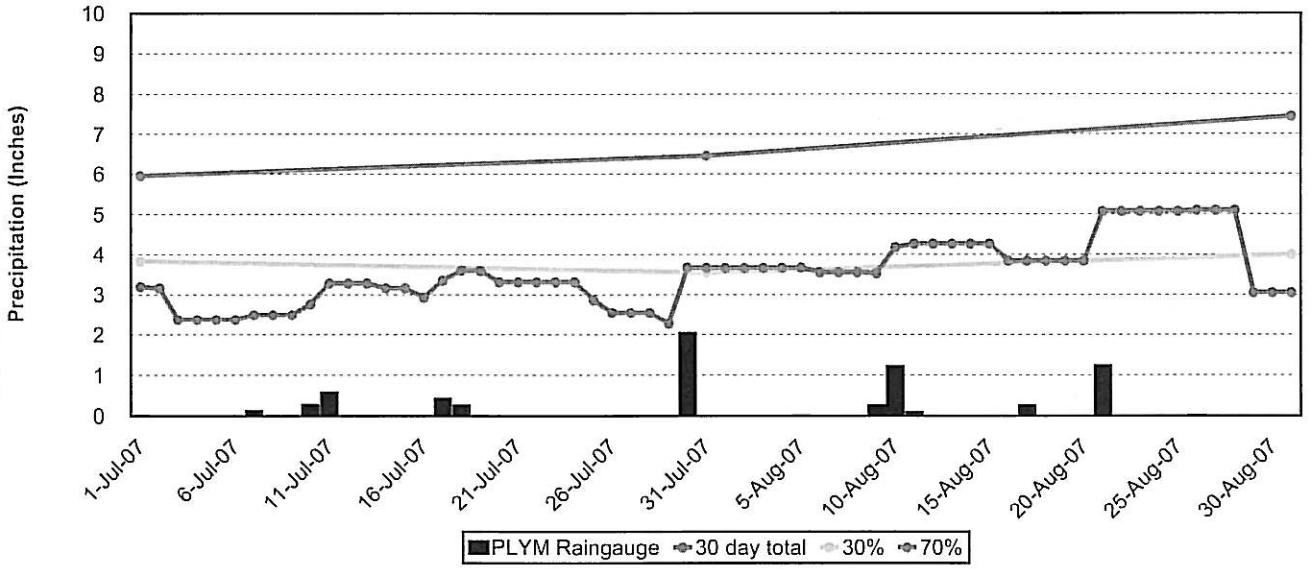
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

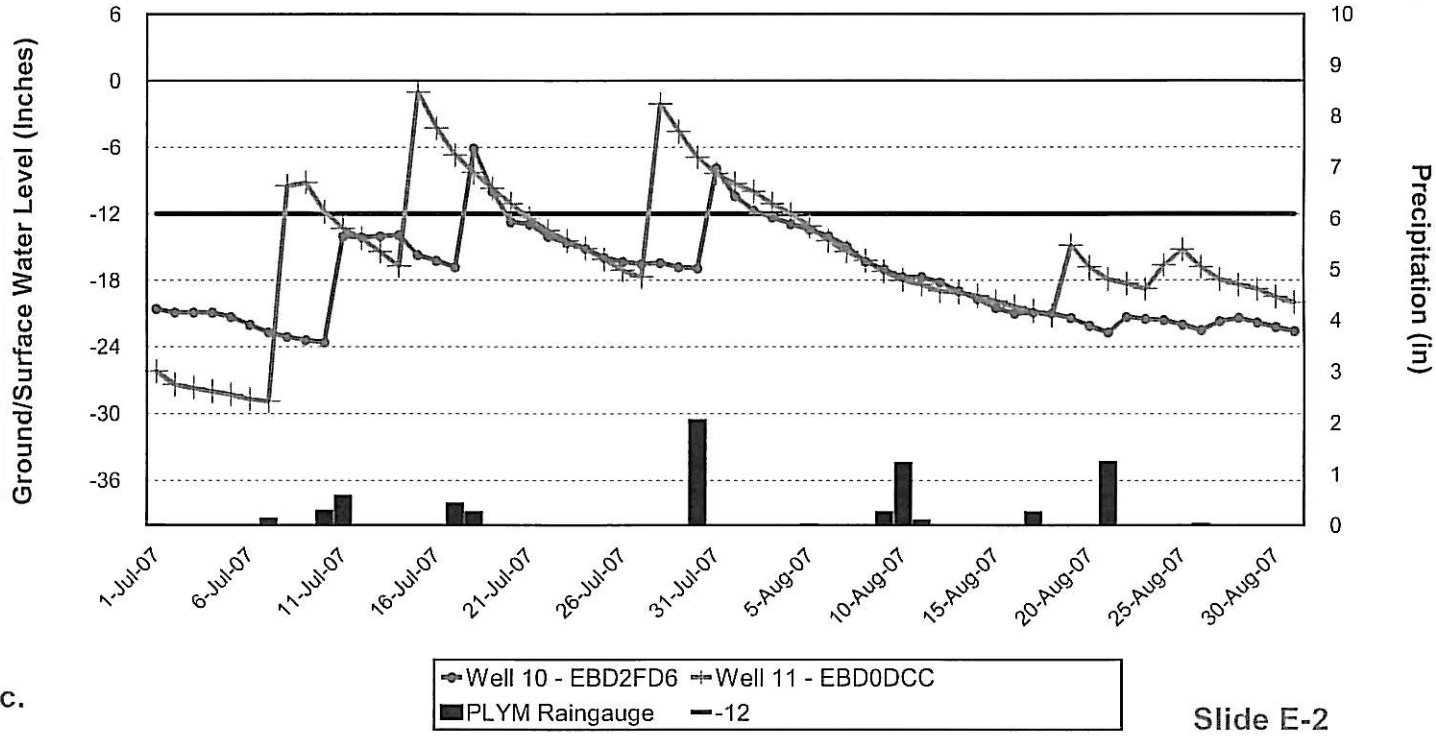
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 10 & 11
- New Reference Wells
- WL 40
- July 1, 2007 -
- August 31, 2007
- One reading per day
- at 7:00am



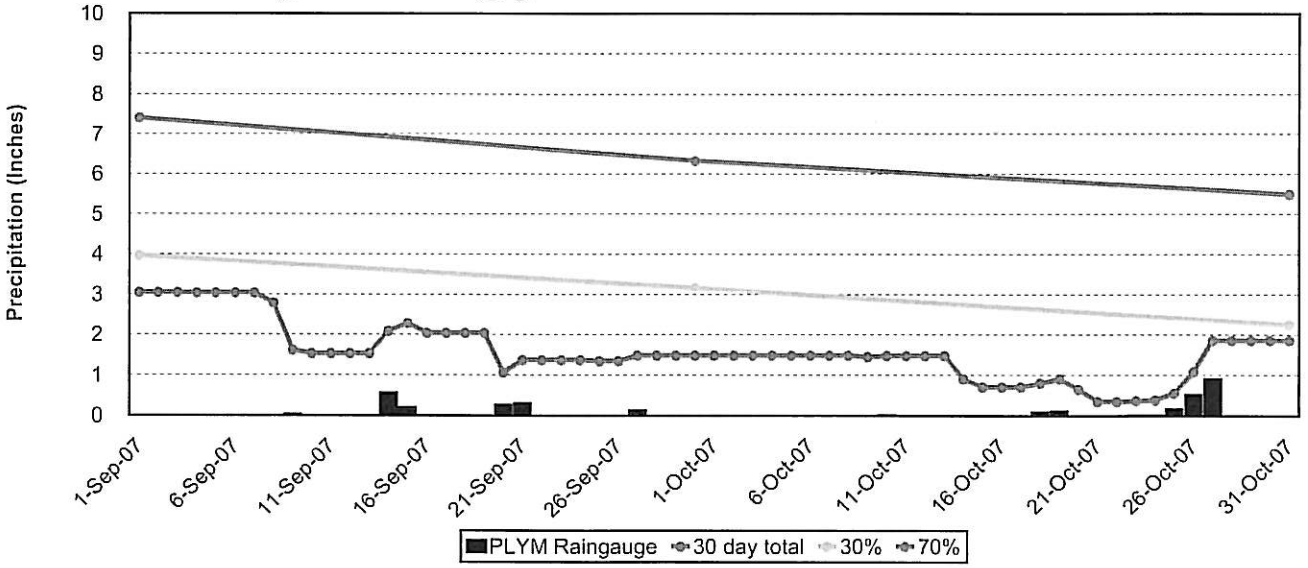
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

September 2007

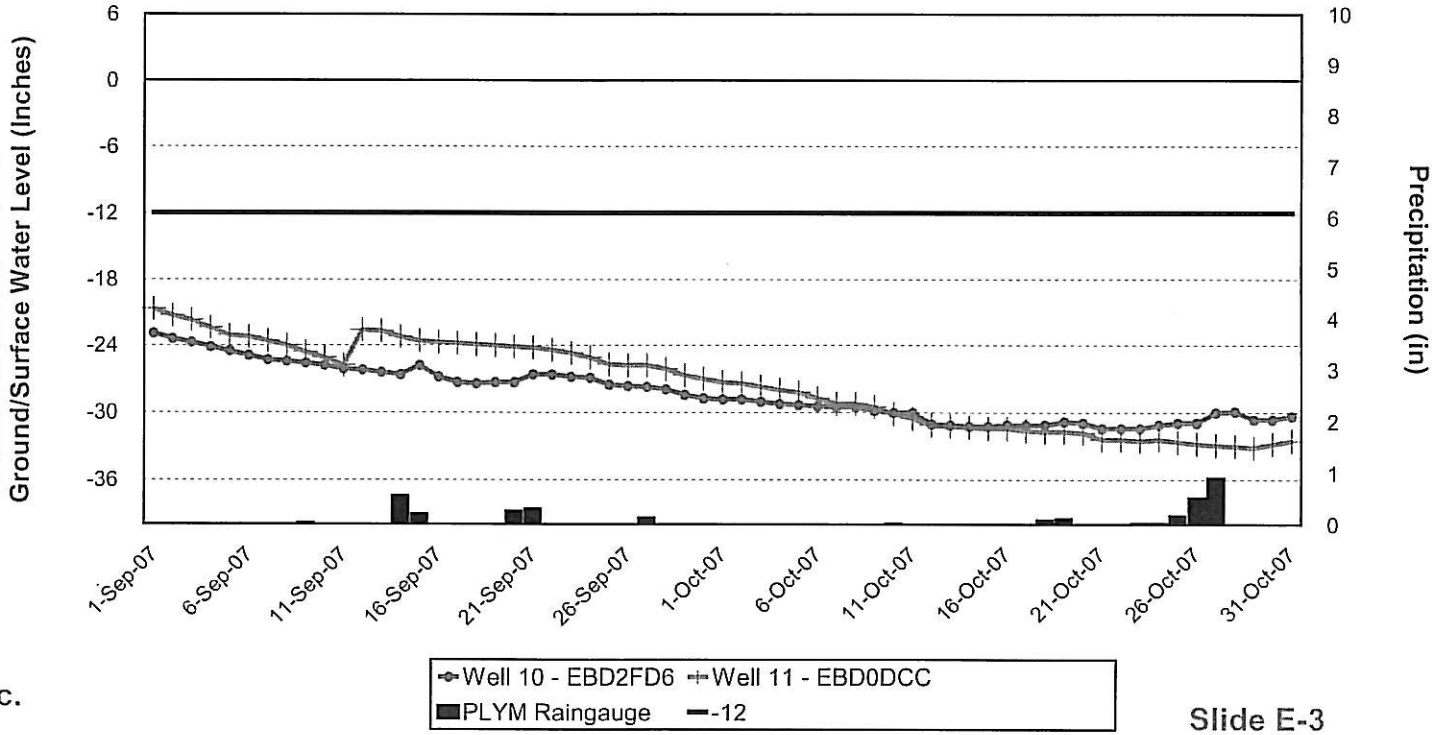
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)



Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 10 & 11
- New Reference Wells
- WL 40
- September 1, 2007 -
- October 31, 2007
- One reading per day
- at 7:00am



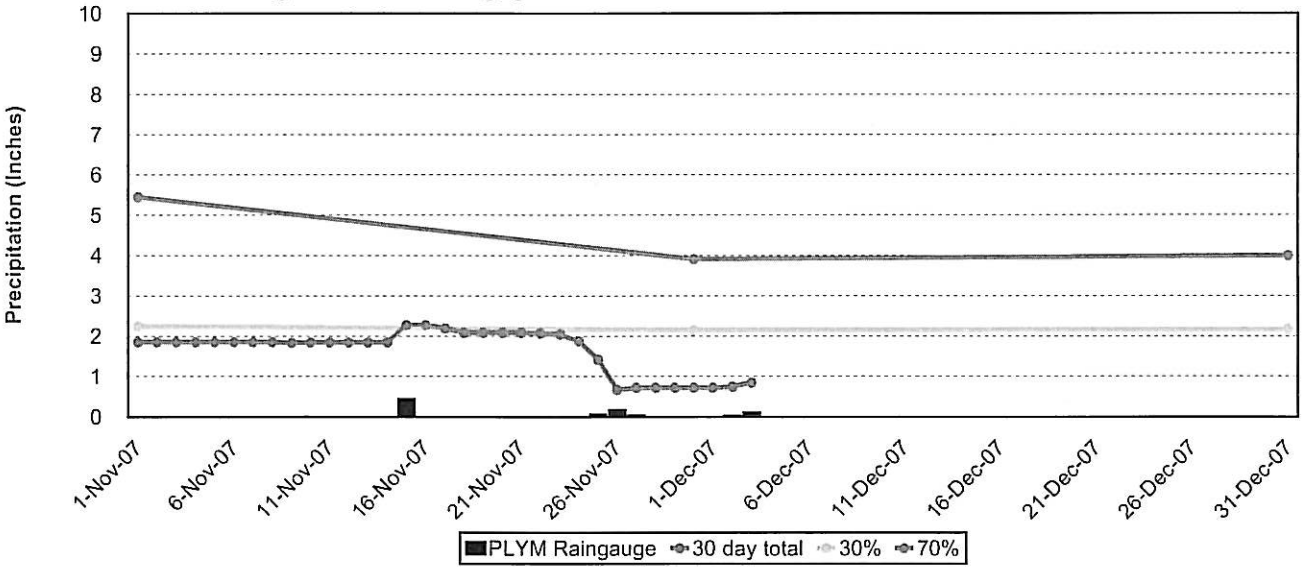
Land Management Group, Inc.
www.lmgroup.net

Hydrology Assessment

December 2007

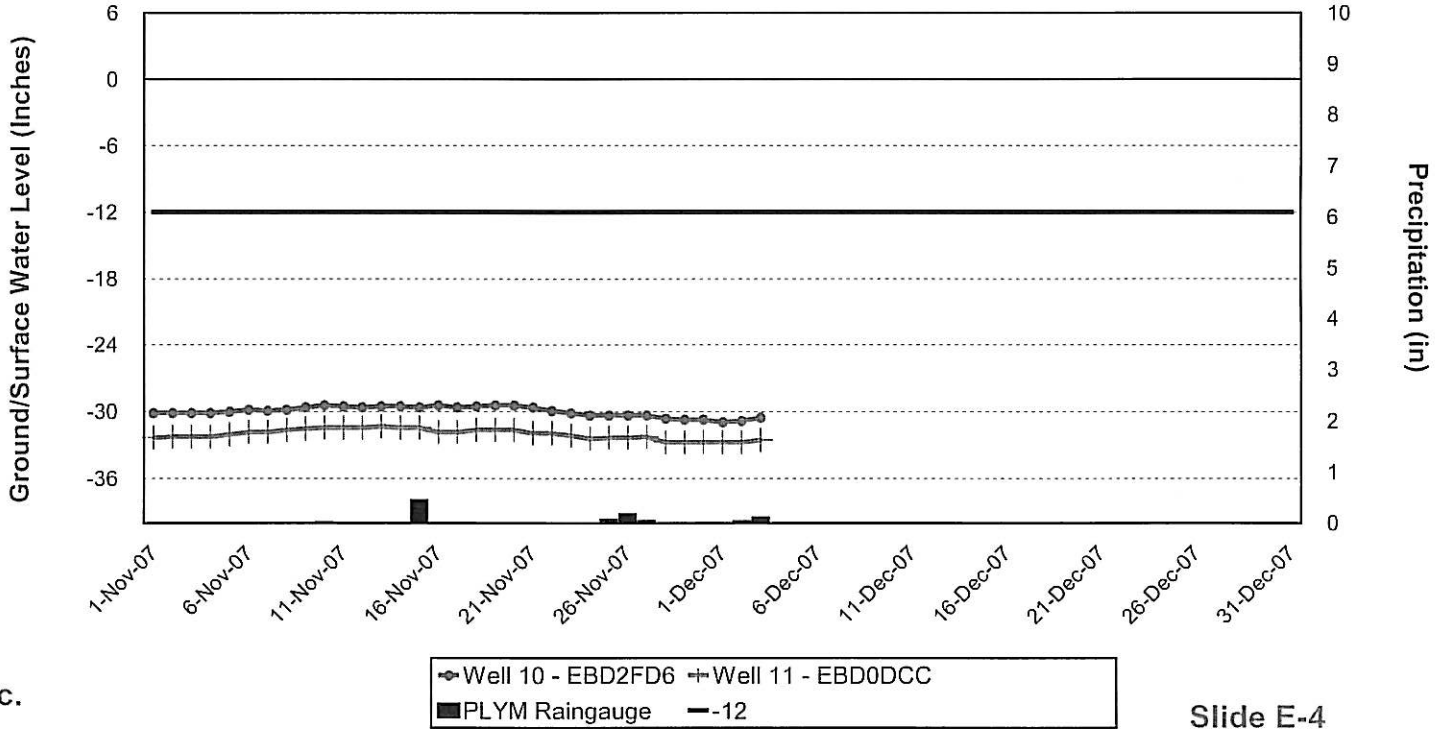
Precipitation data obtained from: station PLYM (www.nc-climate.ncsu.edu)

30% & 70% precipitation data obtained from: WETS Station : PLYMOUTH 5 E, NC6853 (wcc.nrcs.usda.gov)

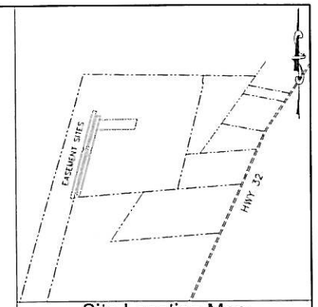


Monitoring Well Record

- Simpson Restoration
- Washington County, NC
- 40-05-624
- Wells 10 & 11
- New Reference Wells
- WL 40
- November 1, 2007 -
- December 31, 2007
- One reading per day
- at 7:00am



Appendix D. Conservation Easement Plat - September 2006 (includes Plot and Well locations)



Site Location Map
NTS

Clay Plug

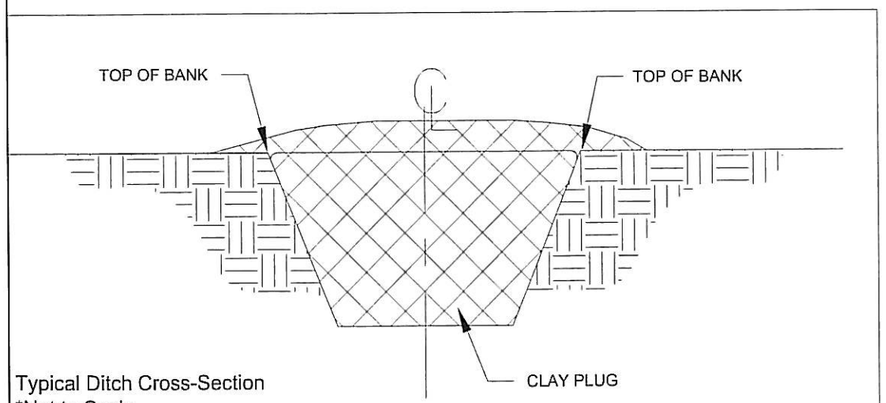
N 89°35'44" E 2178.00'

Existing Ditch

WELL 5
PLOT 6
PLOT 4
PLOT 9
PLOT 14
PLOT 10
PLOT 15
WELL3
WELL 1
PLOT 1
PLOT 5
PLOT 7
WELL 2
NEW 30.00 ACRE WETLANDS AREA
622.48'
N 15°02'22" E
622.48'
S 15°02'22" W
Existing Ditch
PLOT 11
PLOT 8
WELL 6
PLOT 12
PLOT 13
WELL 4
PLOT 2
PLOT 3

S 89°35'44" W 2178.00'

Existing Ditch



Typical Ditch Cross-Section
*Not to Scale

0 50 100 200 400

THIS MAP IS BASED ON ORIGIANL DRAWINGS AND/OR SURVEY INFORMATION FROM:

THE EAST GROUP
Engineering • Architecture Surveying Technology

LAND MANAGEMENT IS NOT RESPONSIBLE FOR THE ACCURACY OF SAID INFORMATION

LAND MANAGEMENT IS NOT RESPONSIBLE FOR LOCATING, OR THE LOCATION OF, UTILITIES. ANY UTILITIES SHOWN ON THIS PLAN HAVE BEEN PROVIDED BY THIRD PARTIES AND ARE FOR GENERAL REFERENCE PURPOSES ONLY. IT IS THE RESPONSIBILITY OF THE OWNER/APPLICANT AND/OR CONTRACTOR TO CONTACT A PROFESSIONAL UTILITY LOCATING COMPANY.

LMG
LAND MANAGEMENT GROUP, Inc.
Environmental Consultants
Post Office Box 2522
Wilmington, North Carolina 28402
Telephone: 910-452-0001

Project: Simpson Welland Restoration	Date: 4/17/07	Revision Date:
Applicant:	Scale: 1"=200'	Job Number: 40-05-624
Title:	Drawn By: GSF	Sheet Number: Appendix B

L:\WETLANDS\2005 WETLANDS FILES\40-05-624 — Simpson Tract, Wetland Restoration 30 ac, Cal Miller\ACAD\East Group_Final-Consv_Eas.dwg