

**Pott Creek II Site
Wetland Restoration Monitoring Report
Project # 92721
Monitoring Year 01
2010**



Submitted to:



NCDENR-EEP, 1652 Mail Service Center, Raleigh, NC 27699-1652

**Construction Completed: May 2005
Gauges Installed: April 2010
Submitted: December 2010**



**Landmark Center II, Suite 220
4601 Six Forks Road
Raleigh, NC 27609
Phone: (919) 783-9214
Fax: (919) 783-9266**

**Project Manager: Adam Spiller
Email: adam.spiller@kci.com
Project No: 12071067D_PC10**

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY / PROJECT ABSTRACT 1
2.0 METHODOLOGY 2
3.0 REFERENCES 2

APPENDIX A – GENERAL FIGURES AND TABLES

Figure 1. Vicinity Map 4
Figure 2. Current Condition Plan View 5
Table 1a. Project Components 6
Table 1b. Component Summations 6
Table 2. Project Activity and Reporting History 7
Table 3. Project Contacts 7
Table 4. Project Attributes 8

APPENDIX B – SITE PHOTOS

Wetland / Gauge Location Photos 10

APPENDIX C – HYDROLOGIC DATA

30-70 Precipitation Graph 13
Wetland Gauge Plots 14
Table 5 Wetland Gauge Attainment Data 20

1.0 EXECUTIVE SUMMARY / PROJECT ABSTRACT

The Pott Creek II Site is located in southern Catawba County, North Carolina, approximately eight miles southwest of Newton. It is in the Northern Inner Piedmont ecoregion of the Piedmont physiographic province. The project is located in USGS Hydrologic Unit 03050102-04-0020 of the Catawba River Basin. The site is made up of one parcel that is bisected by Paintshop Road. The stream restoration construction cleared the site where the new channel was constructed, leaving approximately half of the easement forested. The cleared portion of the site was planted with native vegetation.

The Pott Creek II Restoration Site was completed in April 2005 as a stream restoration site. The 95-acre site is a full delivery project provided for the North Carolina Ecosystem Enhancement Program (EEP) by Mid-Atlantic Mitigation, LLC (MAM). During the full delivery process, wetland credits were not requested and were not a part of the contract with MAM. KCI conducted a wetland feasibility study of the Pott Creek II Site in 2008 to determine the extent of the wetlands on the site. This study found that the stream restoration project created some wetlands while other wetlands had been created by management activities prior to the stream project. Additional natural wetlands that were unaffected by the stream project were preserved as part of the conservation easement. All of these wetlands are available as potential mitigation credit for the EEP.

Because this site was not originally intended to be a wetland restoration site, there is not a set of established project goals and objectives.

The wetland component of the site does not have a vegetation success criterion, so vegetation monitoring is not part of this monitoring report. The entire site was planted with native vegetation as a portion of the stream restoration project and was monitored for vegetative success. The stream monitoring reports have reported that the site has been meeting the project's vegetation success criterion. This wetland monitoring report provides photos of the areas where the gauges are installed as a qualitative record of the wetland conditions.

Six gauges have been established within the created wetlands. Data were collected bi-monthly from the gauges throughout the growing season. The gauges are installed in representative wetlands, which reflect the different hydrologic regimes found at the site: in Wetlands 1, 2, 7, 12, 14, and 19. During the 2010 growing season all of the gauges met the success criteria of having saturated soil conditions occurring within 12 inches of the ground surface for a minimum of 10% (22 days) of the 217 day growing season (March 29 to October 31) during average climatic conditions. The daily rainfall data obtained from a local weather station shows that the area had average rainfall during the 2010 growing season.

Summary information/data related to the occurrence of items such as beaver or encroachment and statistics related to performance of various project and monitoring elements can be found in the tables and figures in the report appendices. Narrative background and supporting information formerly found in these reports can be found in the mitigation and restoration plan documents available on the EEPs website. All raw data supporting the tables and figures in the appendices are available upon request.

2.0 METHODOLOGY

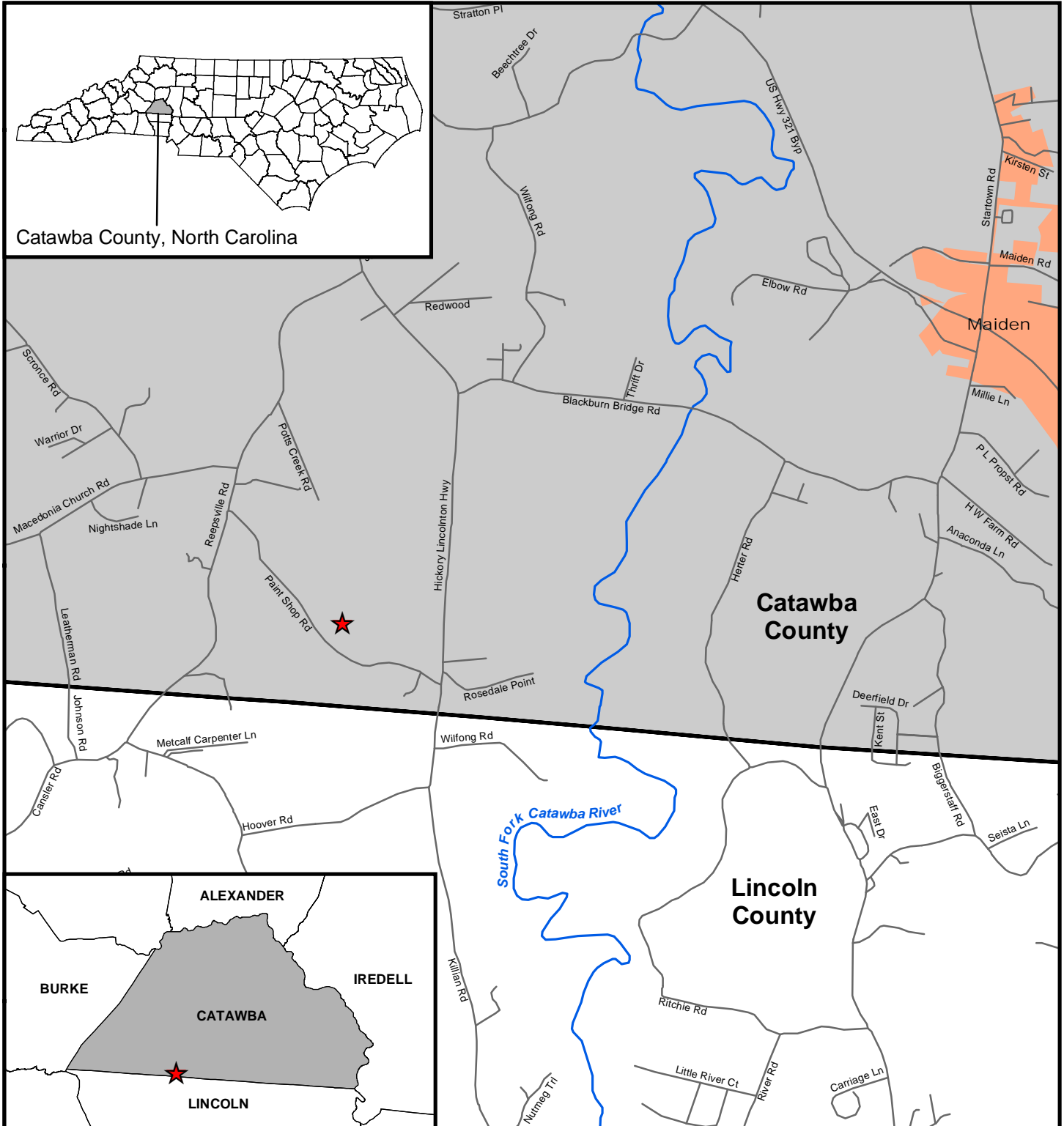
RDS Ecotone gauges provided by the EEP are downloaded on a bi-monthly basis during the growing season to monitor the wetland hydrology.

3.0 REFERENCES







KCI. 2009. *Pott Creek II Wetland Feasibility Memo*. Produced for the EEP. Raleigh, NC.

APPENDIX A

General Figures and Tables



**Figure 1. Vicinity Map
Pott Creek II Site / Project No. 92721**

-  Site Location
-  Major Roads
-  Other Roads
-  Major Streams and Rivers
-  Cities and Towns
-  County Boundaries



1:48,000

1 inch = 4,000 feet

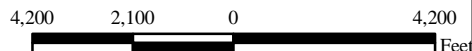
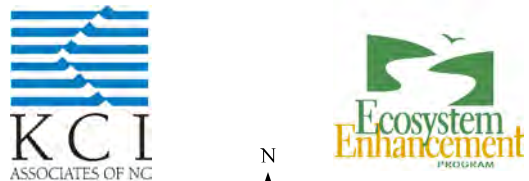


Figure 2. Current Condition Plan View
Pott Creek II / Project No. 92721



KCI
ASSOCIATES OF NC

Ecosystem Enhancement
PROGRAM

N

0 200 400 800
Feet

Project Boundary 1:4,800
Groundwater Wells - Hydrology Met 1 inch = 400 feet

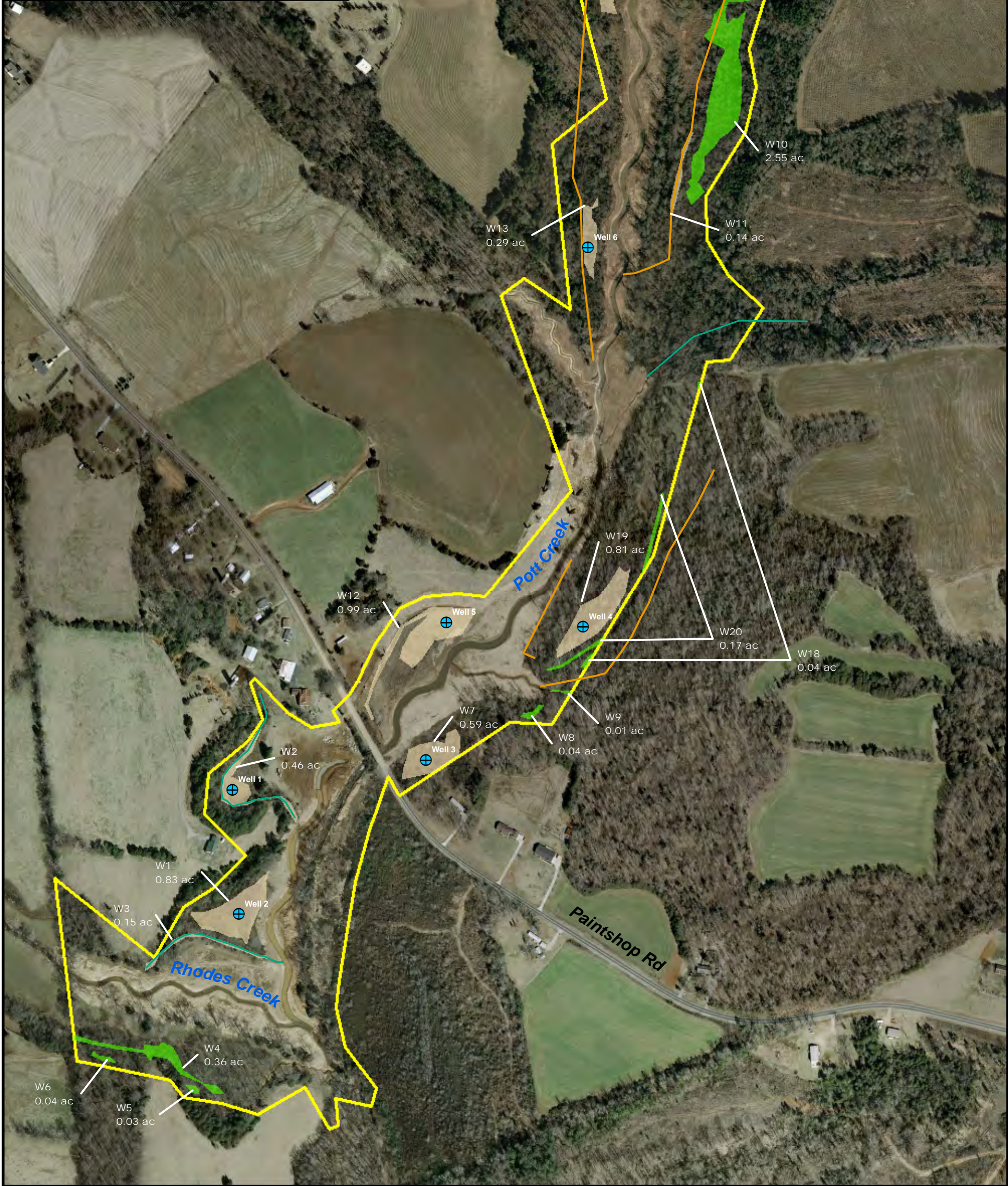
Wetlands

- Creation
- Preservation

Additional Hydrologic Features

- Ditch
- Ephemeral

*Image Source: Catawba County GIS, Orthoimagery 2005.
Map created 12/8/2010 by KCI.*



**Table 1a. Project Components
Pott Creek II Site / Project No. 92721**

Wetland Unit	Total Wetland Acreage	Wetland Preservation (ac)	Wetlands Created Prior to the Stream Restoration (ac)	Wetlands Created After the Stream Restoration (ac)	Notes
W1	0.83			0.83	Contained by levee from stream construction. Wetland is partially forested and partially herbaceous/shrub covered.
W2	0.46			0.46	Created when ephemeral stream was blocked during stream construction. Wetland is forested.
W3	0.15			0.15	Created when ephemeral stream was blocked during stream construction. Wetland is covered by forest.
W4	0.36		0.36		Created prior to stream construction. Wetland is forested.
W5	0.03	0.03			Wetland is forested.
W6	0.04	0.04			Wetland is forested.
W7	0.59			0.59	Hillside seepage contained by levee from stream construction. Wetland is predominantly forested.
W8	0.04	0.04			Wetland is forested.
W9	0.01	0.01			Wetland is forested.
W10	2.55	2.55			Wetland is forested.
W11	0.14	0.14			Wetland is forested.
W12	0.99			0.99	Created when ditch was blocked during stream construction. Wetland is dominated by herbaceous/shrub vegetation.
W13	0.29			0.29	Drainage contained by levee from stream construction. Wetland is forested.
W14	0.45			0.45	Drainage contained by levee from stream construction. Wetland is forested.
W18	0.04	0.04			Wetland is forested.
W19	0.81			0.81	Drainage contained by levee from stream construction. Wetland is forested.
W20	0.17		0.17		Blocked ditch created prior to stream construction. Wetland is forested.
Total	7.95	2.85	0.53	4.57	

**Table 1b. Component Summations
Pott Creek II Site / Project No. 92721**

Restoration Level	Stream (lf)	Riparian Wetland (Ac)		Non-Riparian (Ac)	Upland (Ac)	Buffer (Ac)	BMP
		Riverine	Non-Riverine				
Restoration		0	0				
Enhancement		0	0				
Creation		4.57	0				
Preservation		3.38	0				
Totals		7.95	0				
		7.95					

Table 2. Project Activity & Reporting History Pott Creek II Site / Project No. 92721		
Activity or Report	Data Collection Complete	Actual Completion or Delivery
Stream Restoration Plan		Sept 2004
Planting		Feb 2005
Site Construction		April 2005
Stream As-built Report		June 2005
Year 1 Stream Monitoring		Oct 2005
Year 2 Stream Monitoring		Oct 2006
Year 3 Stream Monitoring		Oct 2007
Year 4 Stream Monitoring		Oct 2008
Year 5 Stream Monitoring		Oct 2009
Wetland Feasibility Study	March - Nov 2008	Jan 2009
Wetland Monitoring Gauges Installed		Apr 2010
Wetland Baseline Report		Jun 2010
Year 1 Wetland Monitoring	Nov 2010	Dec 2010

Table 3. Project Contacts Pott Creek II Site / Project No. 92721	
Full Delivery Provider	Mid-Atlantic Mitigation, LLC 1960 Derita Road Concord, NC 28027
Primary Project Design POC	Rich Mogensen (704) 782-4133
Designer	Mulkey Engineers and Consultants 6750 Tryon Road Raleigh, NC 27511
Stream Monitoring Performers	Mid-Atlantic Mitigation, LLC 1960 Derita Road Concord, NC 28027
Monitoring POC	Kristy Rodrigue (704) 277-3383
Wetland Feasibility and Monitoring Performers	KCI Associates of NC, PA 4601 Six Forks Road, Suite 220 Raleigh, NC 27609
Monitoring POC	Adam Spiller (919) 783-9214

Table 4. Project Attributes
Pott Creek II Site / Project No. 92721

Project County	Catawba County	
Physiographic Region	Piedmont	
Ecoregion	Northern Inner Piedmont	
River Basin	Catawba	
USGS HUC	03050102040020	
NCDWQ Sub-Basin	03-08-35	
Within Extent of EEP Watershed Plan	No	
WRC Class	Warm	
% of Project Easement Demarcated	30%	
Beaver Activity Observed During Design Phase	No	
Restoration Component Attributes		
Drainage Area (sq.mi.)	19.7	
Stream Order	N/A	
Restored Length (feet)	N/A	
Perennial or Intermittent	N/A	
Watershed Type	Rural	
Watershed LULC Distribution		
	Forest/Wetland	-
	Pasture/Managed Herbaceous	-
	Developed	-
Watershed Impervious Cover	<10%	
NCDWQ AU/Index Number	-	
NCDWQ Classification	WS-IV	
303d Listed	No	
Upstream of 303d Listed Segment	No	
Reasons for 303d Listing or Stressor	N/A	
Total Acreage of Easement	95.0	
Total Vegetated Acreage within Easement	95.0	
Total Planted Acreage as Part of Restoration	-	
Rosgen Classification of Pre-Existing	N/A	
Rosgen Classification of As-Built	N/A	
Valley Type	-	
Valley Slope	0.0015	
Valley Side Slope Range	-	
Valley Toe Slope Range	-	
Cowardin Classification	-	
Trout Waters Designation	No	
Species of Concern, Endangered, Etc.	None	
Dominant Soil Series and Characteristics		
	Series	Chewacla
	Depth	-
	Clay%	-
	K	-
	T	-

APPENDIX B

Site Photos



Gauge 1 – Wetland #2, 4/8/2010



Gauge 1 – Wetland #2, 11/16/2010



Gauge 2 – Wetland #1, 4/8/2010

Gauge 2 – Photo unavailable for MY01



Gauge 3 – Wetland #7, 4/8/2010



Gauge 3 – Wetland #7, 11/16/2010



Gauge 4 – Wetland #19, 4/8/2010



Gauge 4 – Wetland #19, 11/16/2010



Gauge 5 – Wetland #12, 4/8/2010



Gauge 5 – Wetland #12, 11/16/2010



Gauge 6 – Wetland #13, 4/8/2010

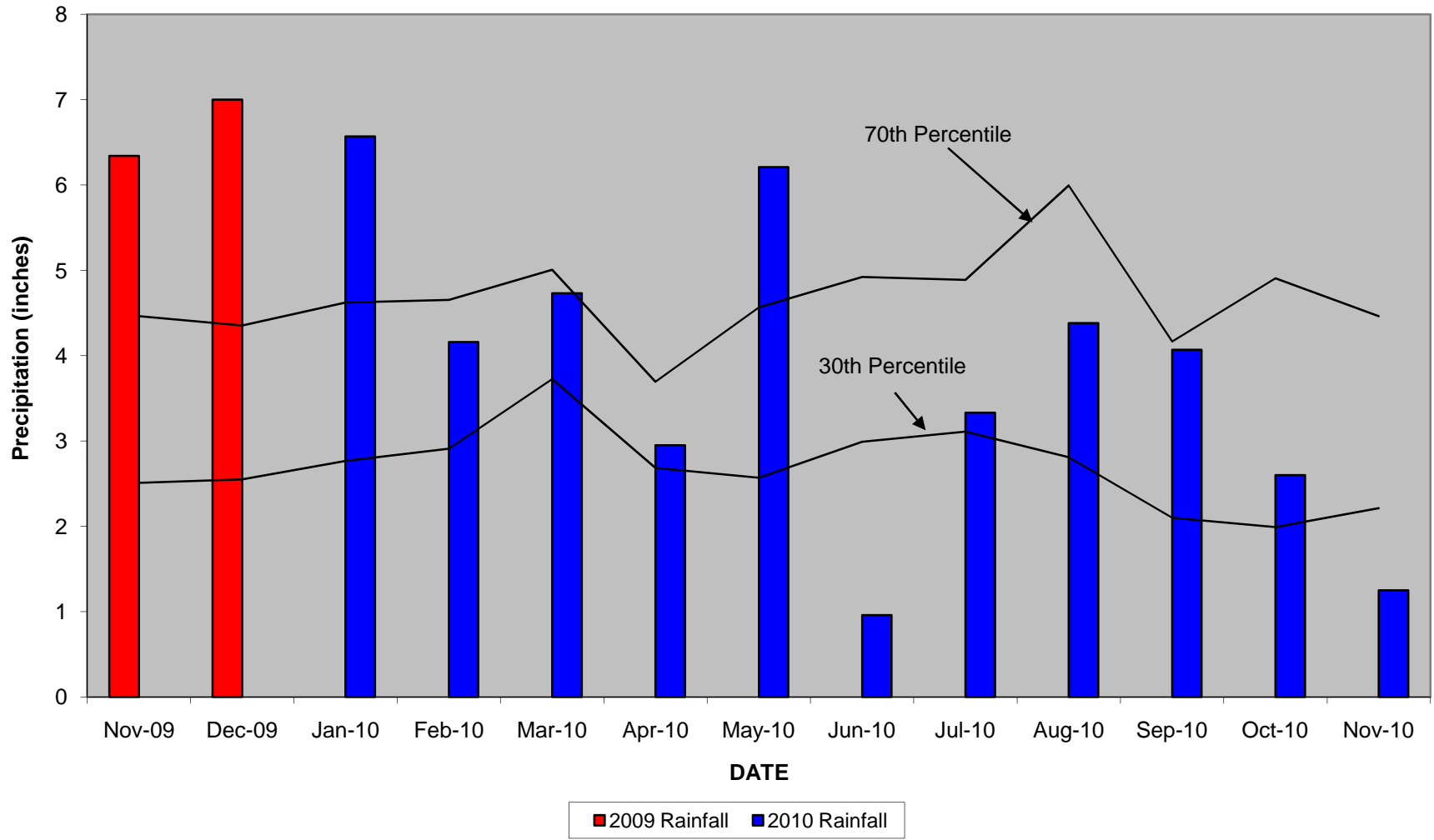


Gauge 6 – Wetland #13, 11/16/2010

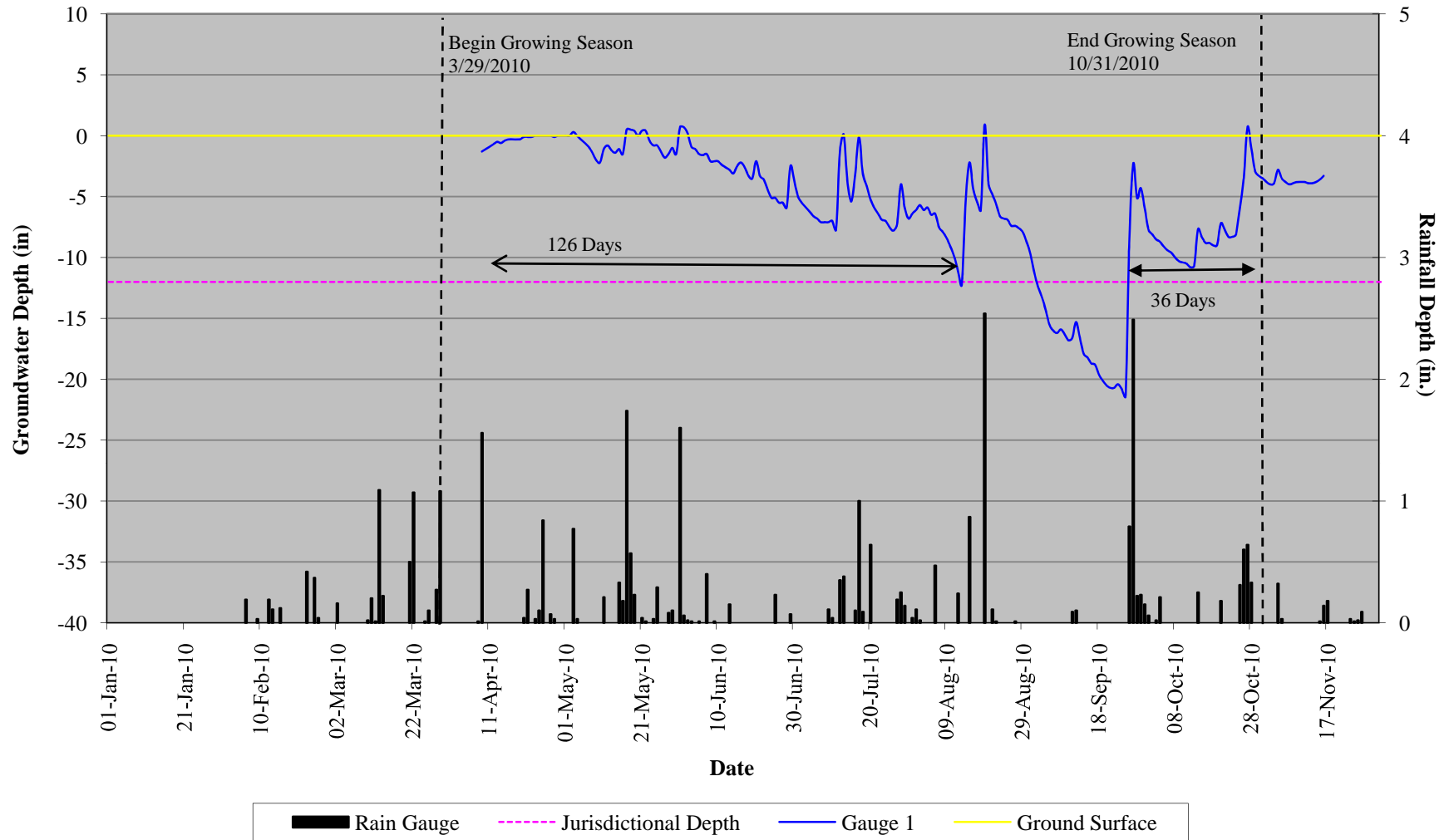
APPENDIX C

Hydrologic Data

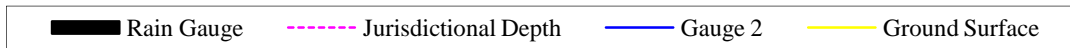
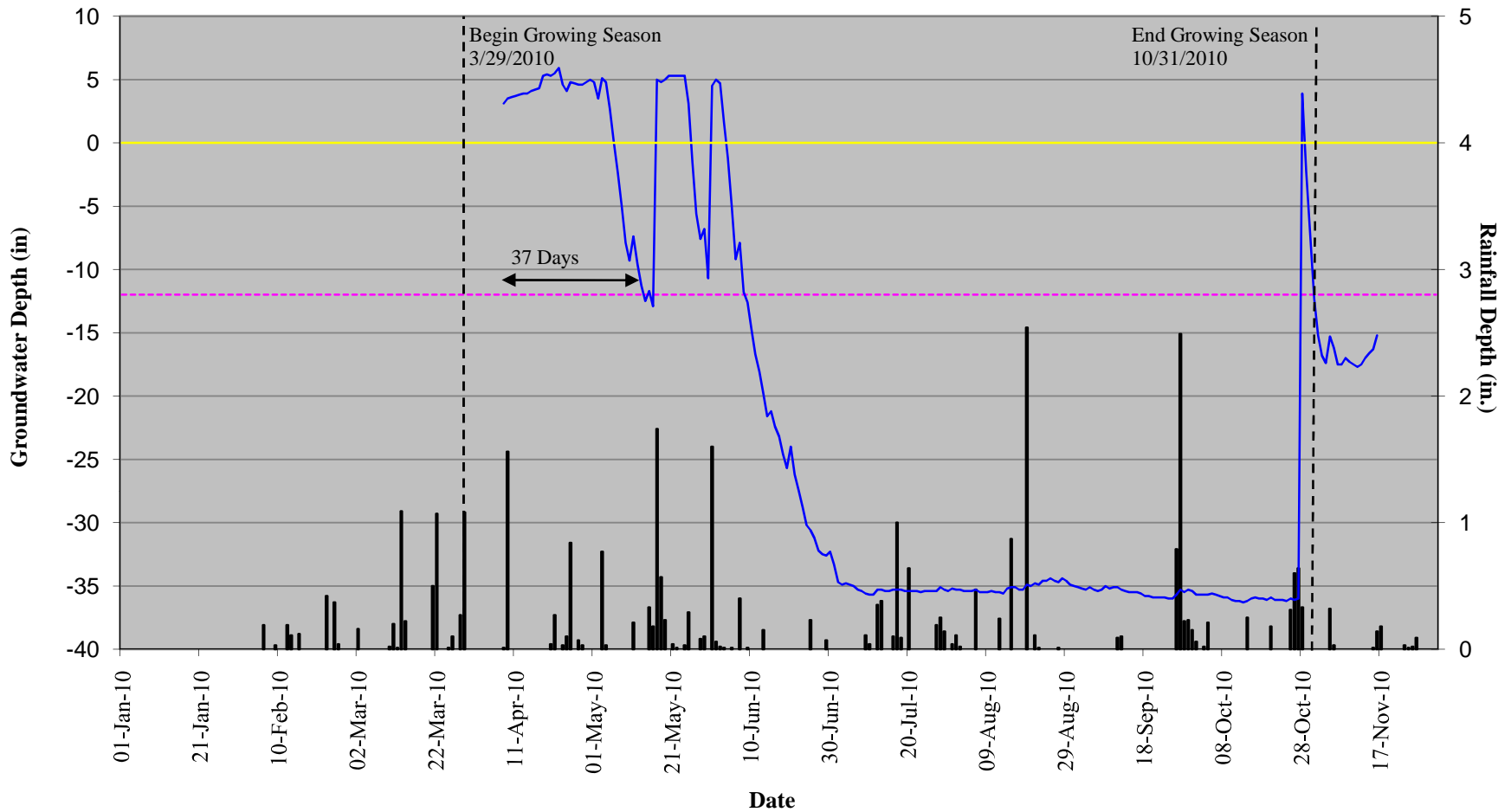
Pott Creek
30-70 Percentile Graph
Lincolnton, NC



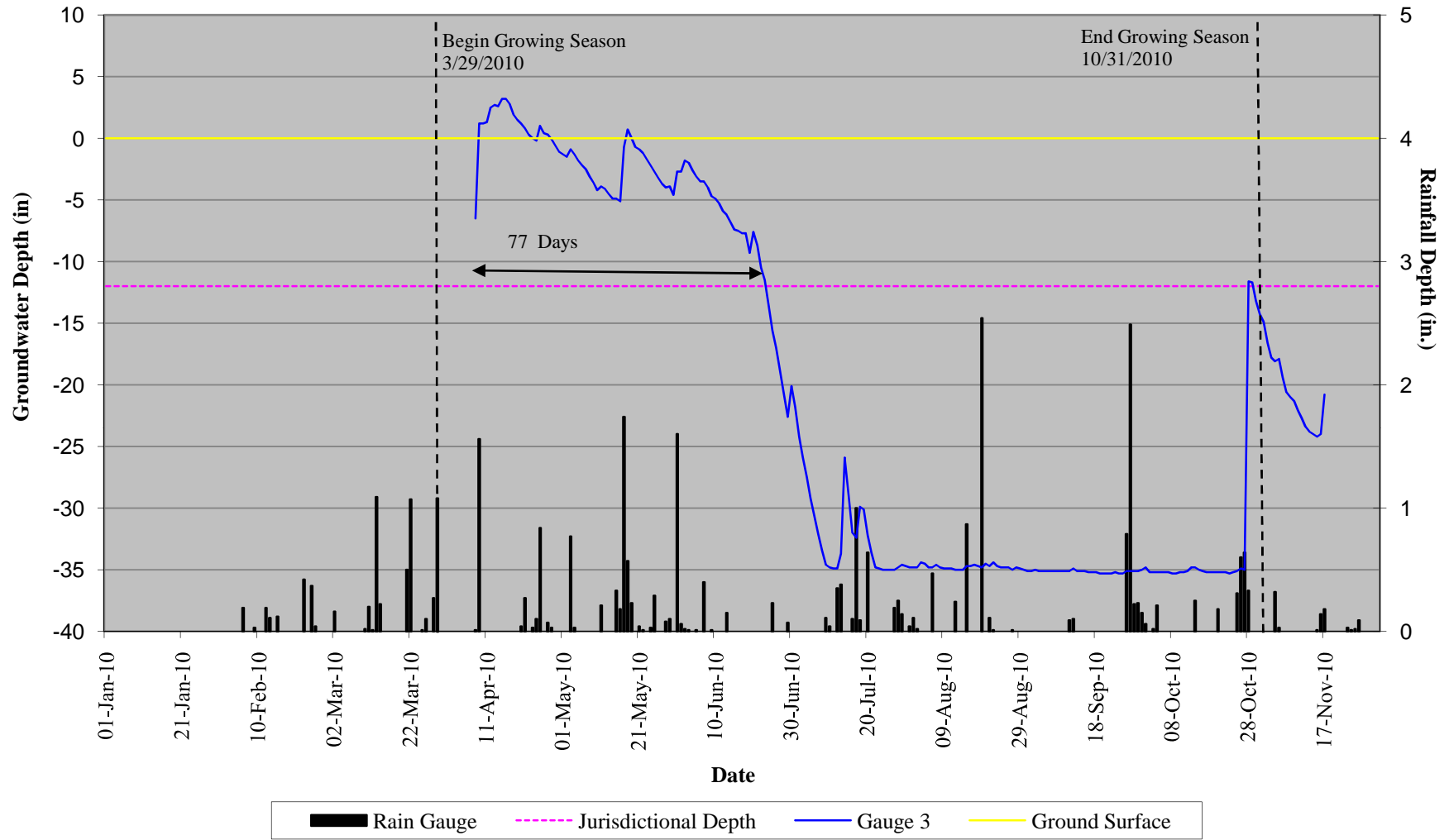
Pott Creek Wetland Monitoring Groundwater Gauge #1 (Wetland #15)



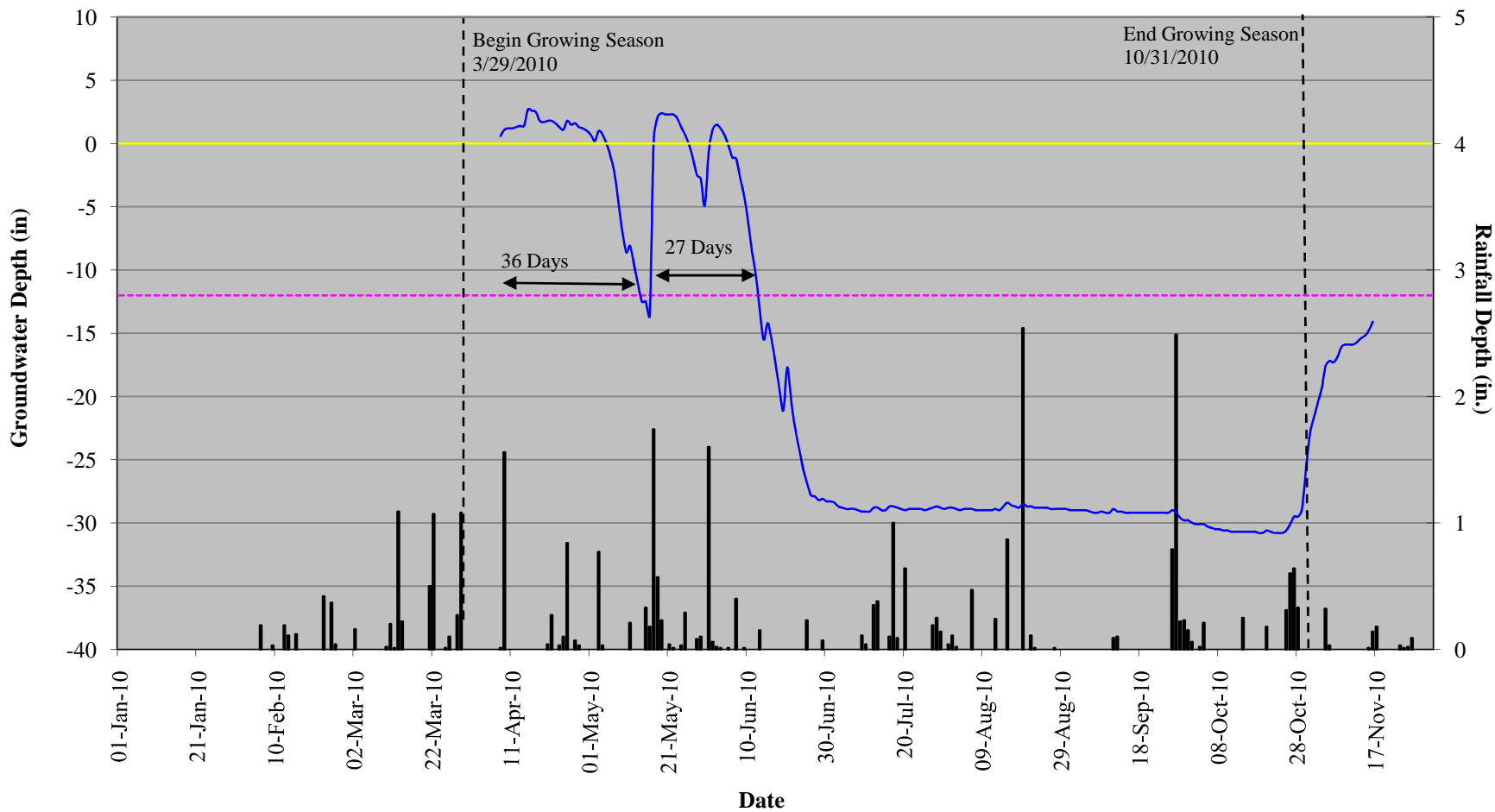
Pott Creek Wetland Monitoring Groundwater Gauge #2 (Wetland #1)



Pott Creek Wetland Monitoring Groundwater Gauge #3 (Wetland #19)

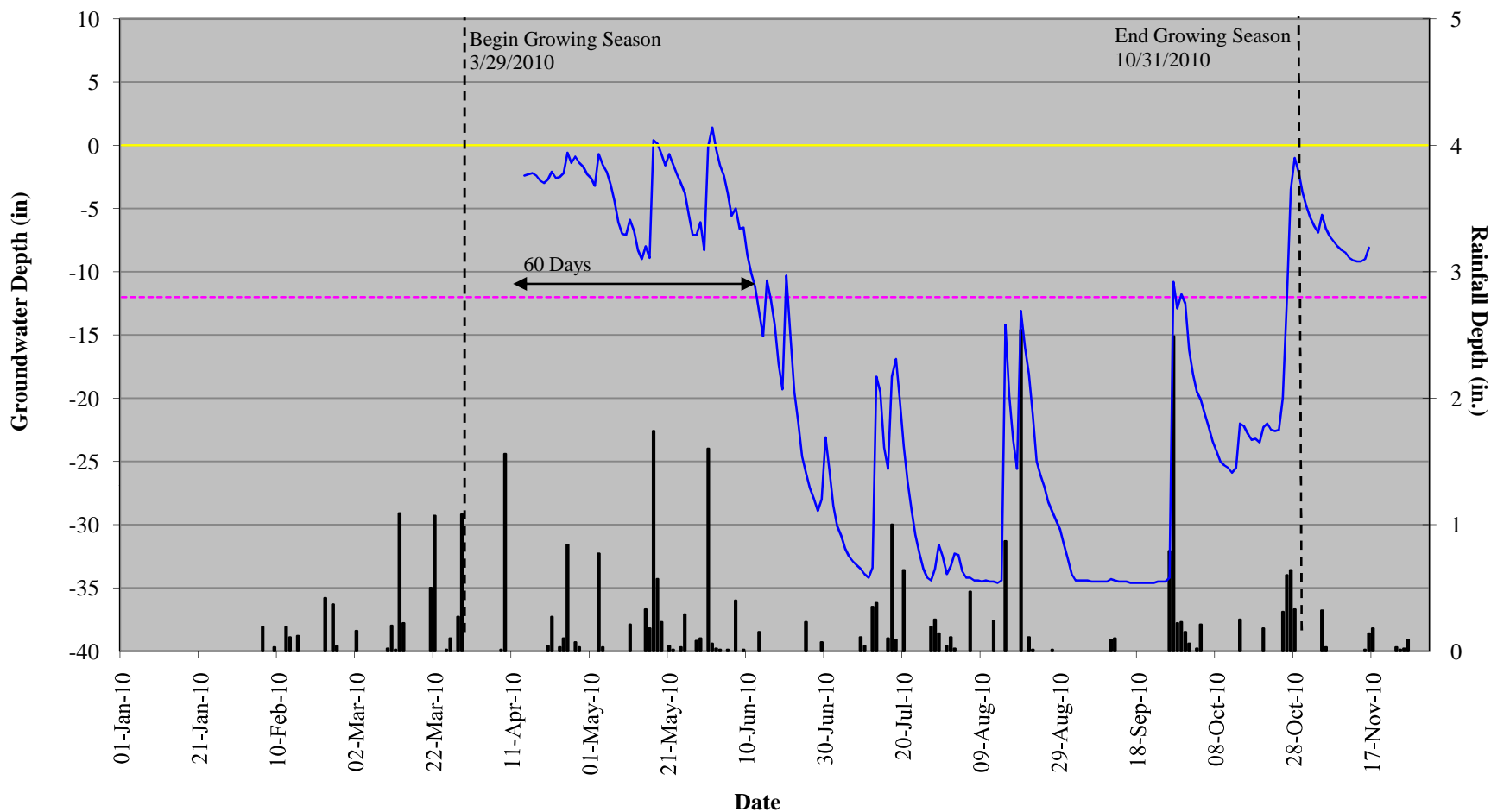


Pott Creek Wetland Monitoring Groundwater Gauge #4 (Wetland #18)



 Rain Gauge	 Jurisdictional Depth	 Gauge 4	 Ground Surface
--	---	---	--

Pott Creek Wetland Monitoring Groundwater Gauge #5 (Wetland #12)



Rain Gauge
 Jurisdictional Depth
 Gauge 5
 Ground Surface

Pott Creek Wetland Monitoring Groundwater Gauge #6 (Wetland #12)

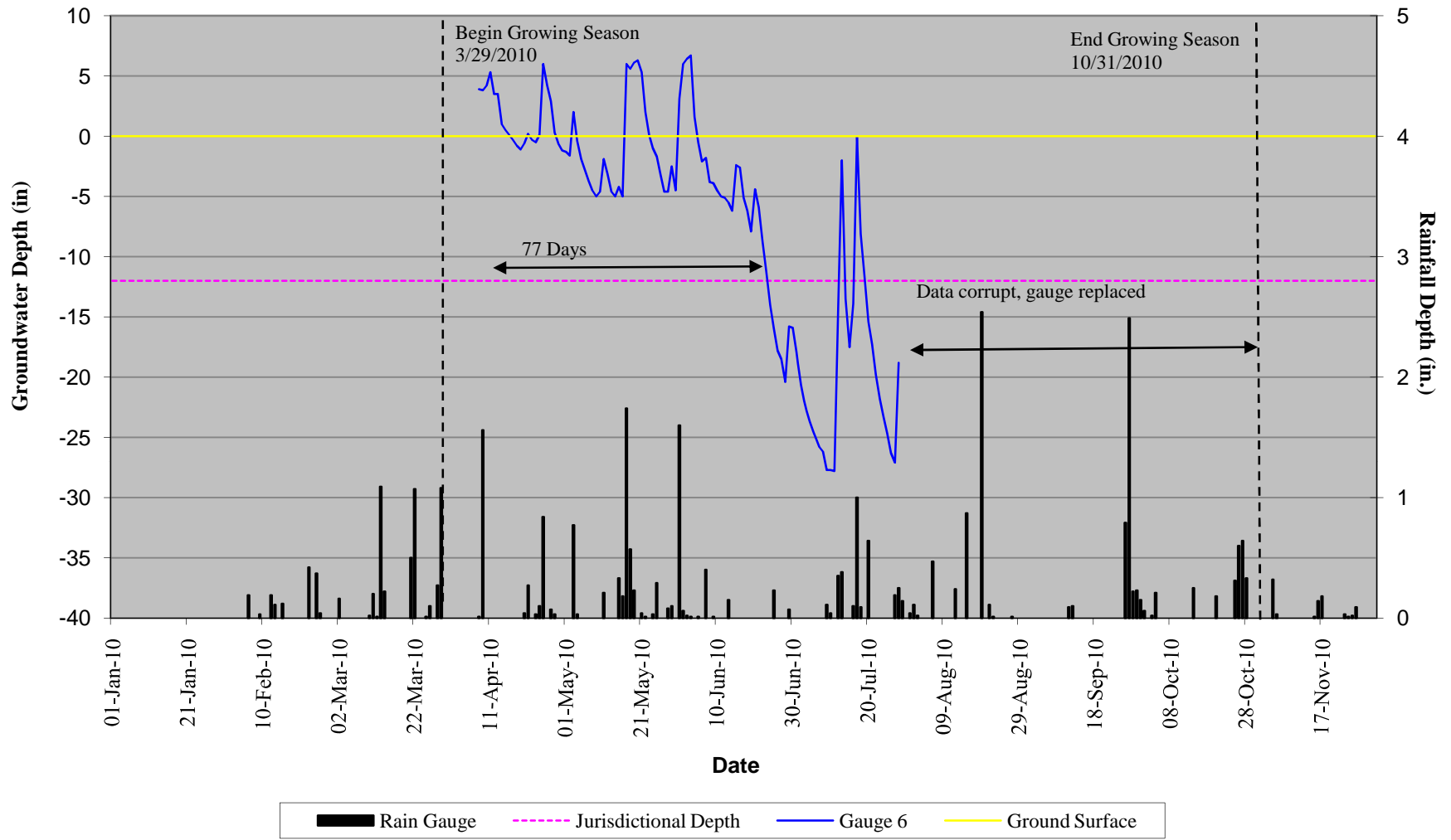


Table 5. Wetland Gauge Attainment Data Pott Creek II Site / Project No. 92721	
Gauge	Success Criteria Achieved / Max Consecutive Days During Growing Season (Percentage)
	Year 1 (2010)
Gauge 1	Yes/126 (58%)
Gauge 2	Yes/37 (17%)
Gauge 3	Yes/77 (35%)
Gauge 4	Yes/36 (17%)
Gauge 5	Yes/60 (28%)
Gauge 6	Yes/77 (35%)

