

**Haw Branch Mitigation Project
Onslow County, North Carolina**

DENR-EEP Contract No. D04015

Year 5 Monitoring Report



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December 2010

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Appendix C	2010 Gauge Data
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1.0 SUMMARY

This Annual Report details the monitoring activities during the 2010 growing season on the Haw Branch Mitigation Site. Construction of the Site was completed in December 2005. The 2010 data represents results from the fifth year of hydrologic, vegetation, and stability monitoring for both wetlands and streams.

Restoration of the Haw Branch Site involves stream restoration, and riverine wetland restoration. Restoration of the site included the construction of a stable meandering channel across hydric agricultural fields. The channel was designed and constructed using natural channel design techniques. Restoration also involved raising the local water table by filling drainage ditches on-site, and creation of microtopography across the Site. After construction, it was determined that there are 10,005 linear feet of stream restoration and 25.8 acres of riverine wetland restoration on the Site.

This Annual Report presents the data from seven hydrologic monitoring stations, 20 vegetation monitoring plots, two crest gauges, one rain gauge, and 21 cross sections, as required by the approved Restoration Plan for the Site. All seven of the hydrologic stations are equipped with HOB0 automated data loggers.

In 2010, six of seven hydrology monitoring gauges at the Site recorded wetland hydroperiods of at least seven percent of the growing season. The remaining gauge exhibited a wetland hydroperiod of less than one percent of the growing season. The results from five years of monitoring have documented, for six of seven monitoring gauges, hydroperiods significantly higher than the specified success criteria, except for 2007 which was a severe drought year. The seventh monitoring gauge has consistently paralleled results from one of the reference gauges over the five year monitoring period. Based on these results, the Site has achieved the hydrologic success criteria specified in the Restoration Plan for the Site.

During the 2010 growing season a hydrologic assessment was performed on the Haw Branch site to delineate wetland restoration areas that have failed to achieve hydrology success criteria. This assessment identified 0.89 acres of riparian wetland restoration in the vicinity of AW5 that is failing to achieve success criteria. An additional 12.29 acres of riparian wetland restoration has been claimed within the stream buffers.

Weather station data from the Hoffmann Forest Weather Station were used in conjunction with a manual rain gauge located on the Site to document local precipitation amounts. The manual gauge is used to validate observations made at the automated weather station. The rainfall total from the Hoffmann gauge was below normal limits in March, April, May, and August. Rainfall was within normal limits for January, June, and July, and above normal limits for February. Based on data collected from the Hoffman Forest Weather Station, the site experienced slightly below-normal rainfall for the period of January through August 2010.

This Annual Report documents vegetation survival based on 20 vegetation-monitoring plots, as specified in the Restoration Plan for this Site. The vegetation monitoring documented a range of 440 stems per acre to 680 stems per acre with an average of 586 stems per acre. The Site had earlier met the initial vegetation survival criteria of 320 stems per acre after the third growing season, and the Site has now met the final vegetation success criteria of 260 surviving stems per acre after the fifth growing season.

The restored stream channel has remained stable, and is providing the intended habitat and hydrologic functions. Four bankfull events were recorded during 2010. All monitored cross sections show little adjustment in stream dimension, and it was concluded that the Site has achieved the stream success criteria specified in the Restoration Plan for the Site.

2.0 INTRODUCTION

2.1 PROJECT DESCRIPTION

The Haw Branch Wetland and Stream Restoration Site is located near the community of Richlands in Onslow County, North Carolina (**Figure 1** and **Figure 2**). The Site has a past history of agricultural use consisting primarily of row crop agriculture. Ditches on the Site were used to increase subsurface drainage when the land was under agricultural production. Construction of the Site, including planting of trees, was completed in December 2005. Groundwater, surface water, and rain gauges were functional beginning January 2006. The 2010 monitoring season represents the fifth year of monitoring for the Site. As-built sheets for the Haw Branch Mitigation Site are included in **Appendix A**.

2.2 PROJECT PURPOSE

Monitoring of the Haw Branch Site is required to demonstrate successful restoration based on the criteria found in the Restoration Plan, and through a comparison to reference site conditions. Hydrologic, vegetation, and stream monitoring are conducted on an annual basis. Success criteria must be met for five consecutive years. **Table 2** details the project history and schedule.

Table 1. Project Mitigation Structure and Objectives

Reach Name	As-Built Length (ft)	Mitigation Units	Restoration Approach
Stream			
UT1A	3,148	3,148	Restoration
UT1B	2,975	2,975	Restoration
UT2	2,967	2,967	Restoration
UT3	915	915	Restoration
Total	10,005	10,005	
Wetland			
	25.8 acres	25.8	Restoration

2.3 PROJECT HISTORY & SCHEDULE

Table 2. Project Activity and Reporting History

Month	Activity
January 2005	Construction Completed
January 2006	Post-restoration Monitoring Begins
November 2006	1st Annual Monitoring Report
November 2007	2nd Annual Monitoring Report
November 2008	3rd Annual Monitoring Report
November 2009	4th Annual Monitoring Report
September 2010	5th Annual Monitoring Report

Table 3. Project Contacts

Contact	Firm Information
Project Manager Norton Webster	EBX-Neuse 1, LLC (919) 608-9688
Designer Kevin Tweedy, PE	Buck Engineering PC (919) 463-5488
Monitoring Contractor Daniel Ingram	WK Dickson and Co., Inc (919) 782-0495

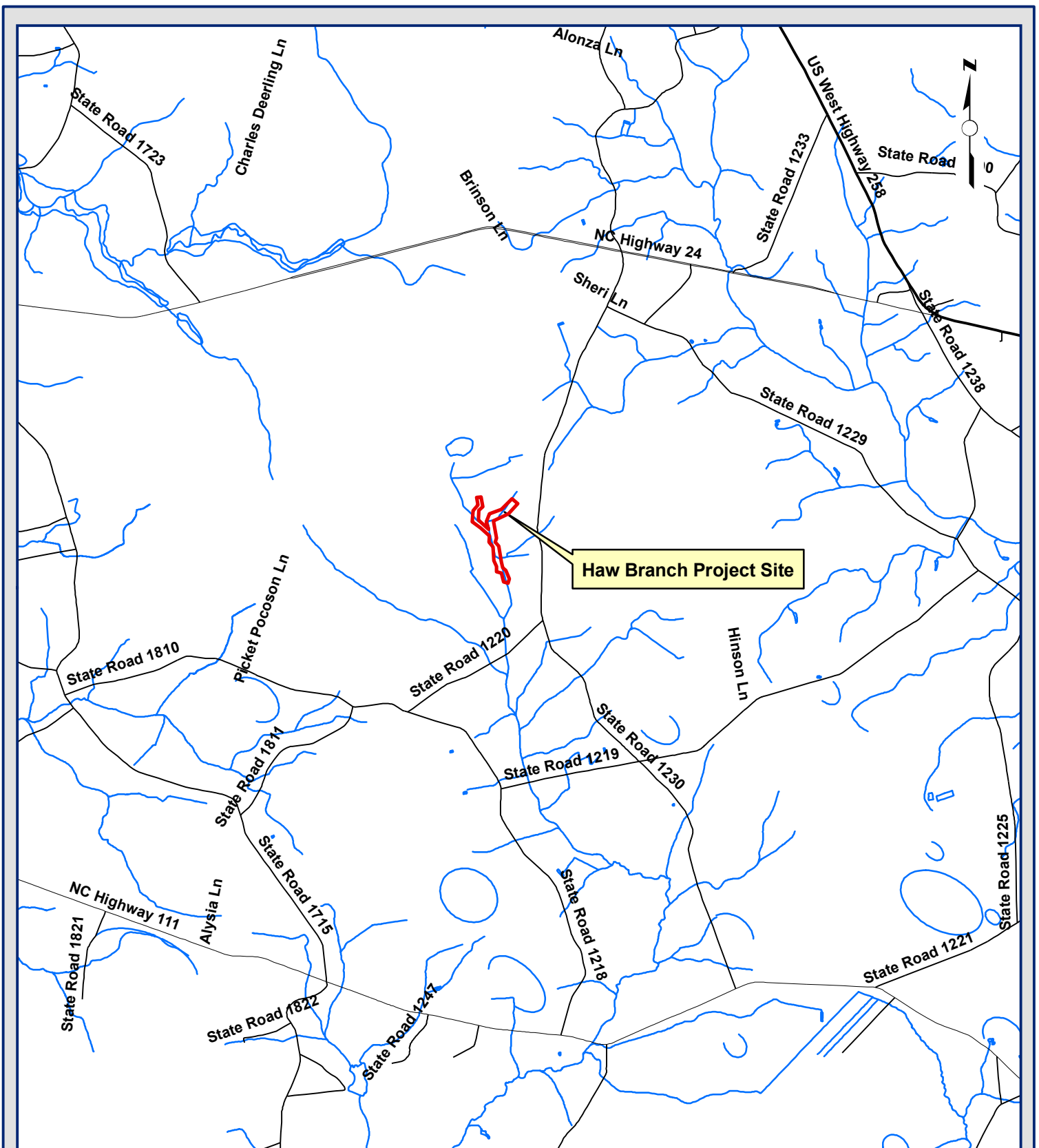


Figure 1.
Haw Branch Stream Mitigation Site
Project Location Map
Onslow County, NC

1 inch equals 1 miles



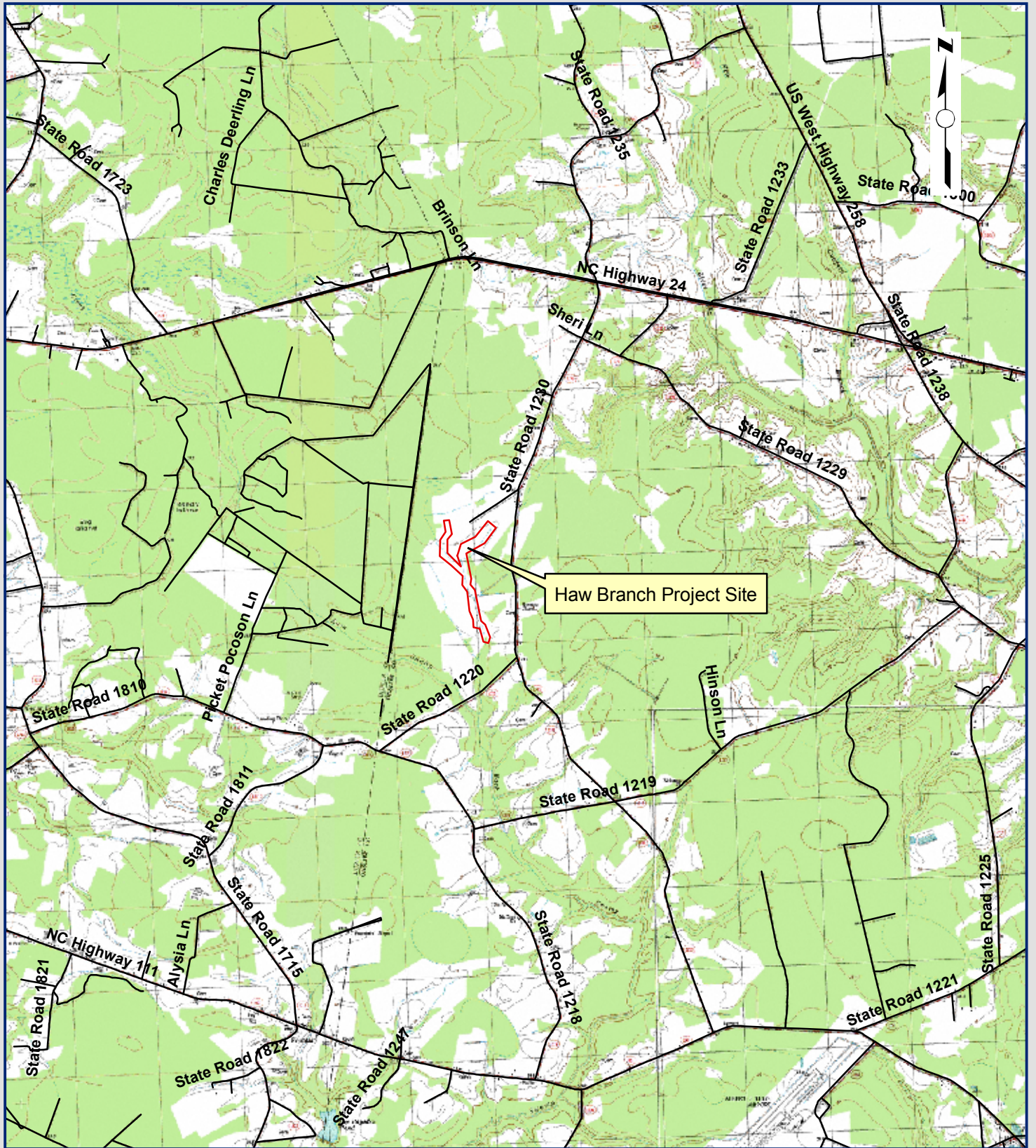


Figure 2.
 Haw Branch Stream Mitigation Site
 USGS Topographic Map
 Onslow County, NC



1 inch equals 1 miles

3.0 HYDROLOGY

3.1 HYDROLOGIC SUCCESS CRITERIA

As stated in the approved Restoration Plan, the monitoring data must show that for each normal year of rainfall within the monitoring period, the Site has been inundated or saturated within 12 inches of the soil surface for a minimum of seven percent of the growing season (17 days). The day count is based on the growing season for Onslow County, which is 239 days long (18 March through 11 November). As specified in the approved Restoration Plan, data are collected from seven HOBO automated groundwater gauges. The Restoration Plan further specifies that in order for the hydrologic data to be considered successful it must be demonstrated that precipitation is either within or below normal limits. Two additional HOBO automated groundwater reference gauges were installed along Haw Branch downstream of the restoration area.

3.2 DESCRIPTION OF HYDROLOGY MONITORING EFFORTS

Seven automated HOBO groundwater gauges were installed in February of 2008 to replace and supplement the three existing automated Infinities gauges and the three manual groundwater gauges that were installed before the beginning of the 2006 growing season. In addition, two manual stream crest gauges were installed in 2006 on reaches UT1B and UT3 (**Figure 3**). One additional Infinities groundwater gauge was installed at the Site during the 2007 growing season, but was subsequently replaced with a HOBO gauge in early 2008. The monitoring protocol for the Site specifies that automated monitoring stations will be downloaded and checked for malfunctions on a monthly basis. During monthly site visits the crest gauges are read, and rainfall totals are collected from the on-Site rain gauge. The hydrologic monitoring data are presented in **Appendix C**.

Automated Gauges

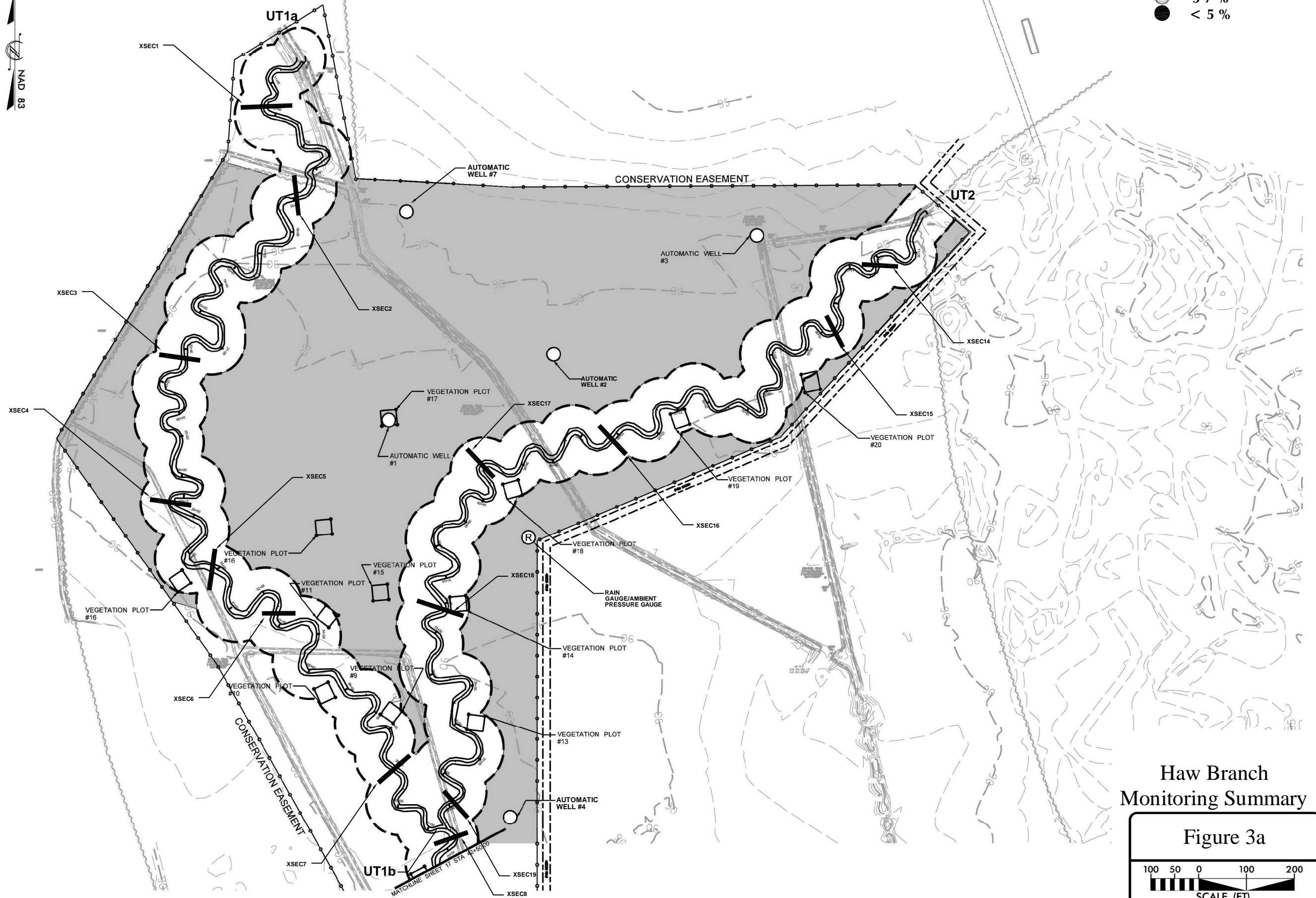
Automatic groundwater gauges record water table elevations four times a day at 06:00, 12:00, 18:00 and 24:00 (every six hours). HOBO gauges employ pressure sensors that record water depth above the bottom of the sensor (with a separate above ground ambient gauge located somewhere on site for comparison purposes). Each HOBO gauge is housed inside of a two-inch diameter PVC casing which extends a minimum of 36 inches below the soil surface. This well also acts as a manual calibration gauge. The calibration water table depth is recorded at monthly downloads. To determine wetland hydroperiods, the automatically recorded data are compared to the calibration data to determine a standard correction factor between the calibration gauge and the automatic gauge for each location. The standard correction factor is applied to correct daily readings. The corrected daily readings are then used to determine wetland hydroperiods.

Data Interpretation

Wetland hydroperiods are calculated from water table depth recordings that are taken four times a day. A wetland hydroperiod is defined as when the water table is equal to or less than 12 inches below ground surface for at least 24 hours. If a water table falls below 12 inches for three consecutive readings (12 hours) then the wetland hydroperiod ends at the last reading within 12 inches of the ground surface. If a water table falls below -12 inches for only one of the readings then maintains a reading above -12 inches for a minimum of 24 hours, then the wetland hydroperiod is calculated continuously. This methodology accounts for minor technical malfunctions occasionally experienced by the automatic gauges.

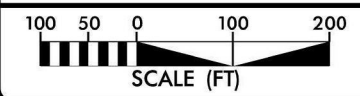
WETLAND HYDROPERIOD

- > 7 %
- ◐ 5-7 %
- < 5 %

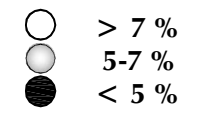


Haw Branch
Monitoring Summary

Figure 3a

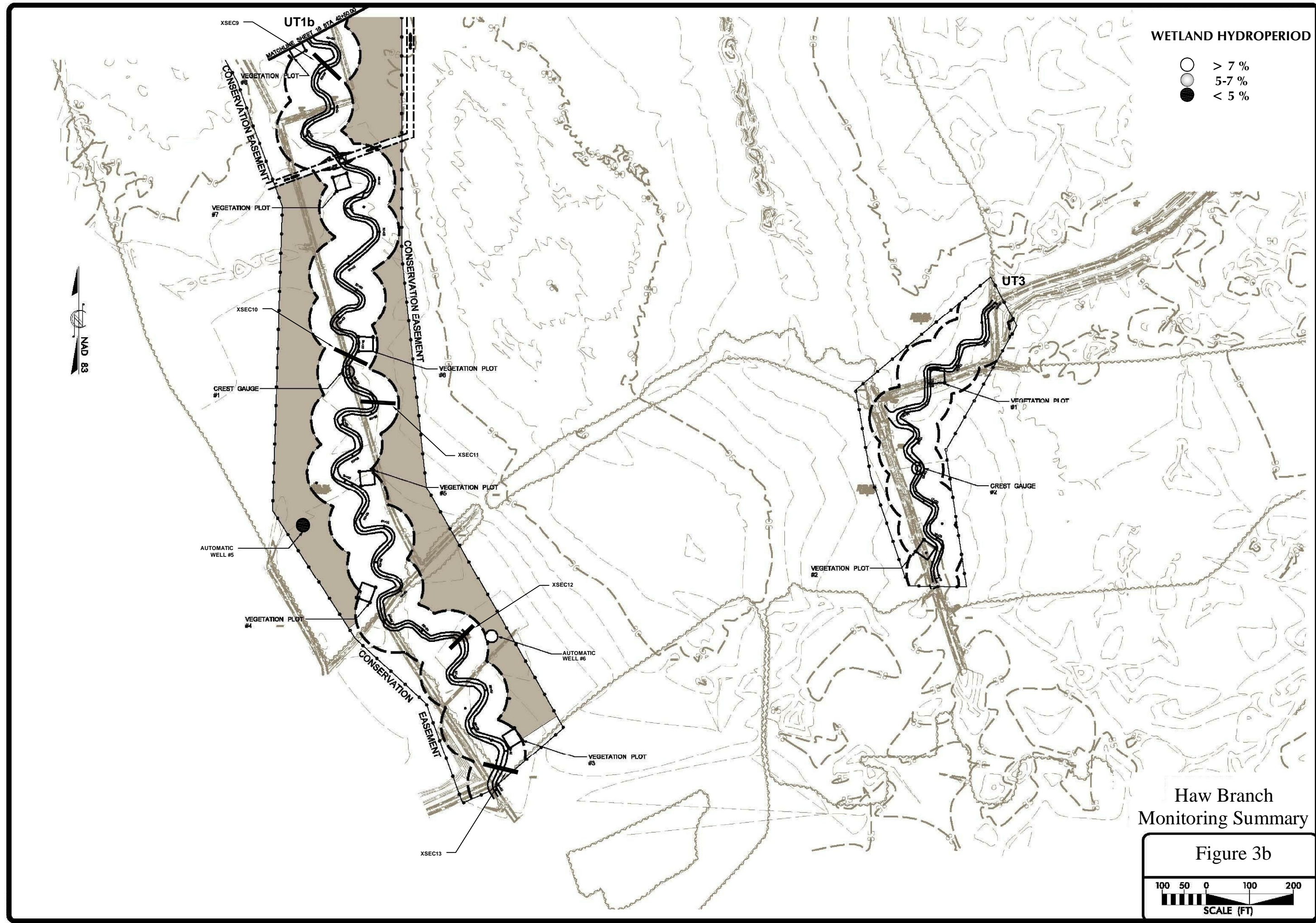
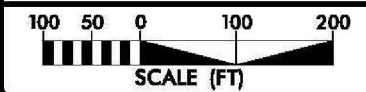


WETLAND HYDROPERIOD



Haw Branch
Monitoring Summary

Figure 3b

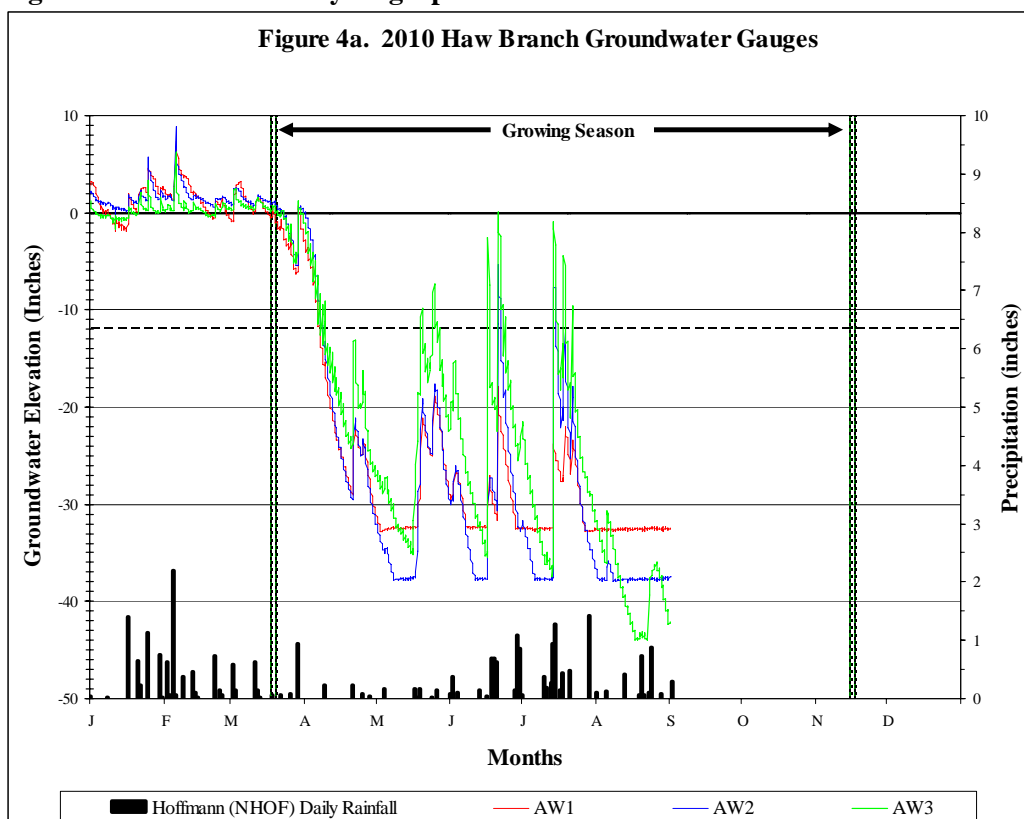


3.3 RESULTS OF HYDROLOGY MONITORING

3.3.1 Site Data

The following hydroperiod statistics were calculated for each monitoring station during the growing season: 1) most consecutive days that the water table was within twelve inches of the soil surface; 2) cumulative number of days that the water table was within twelve inches of the soil surface; and 3) number of times that the water table rose to within twelve inches of the soil surface. The results of these calculations are presented in **Table 4**. **Figure 4** provides charts of the water depth for each of the monitoring gauges on the site. Raw hydrograph data collected from the monitoring gauges are provided in **Appendix C**.

Figure 4. Groundwater Hydrographs



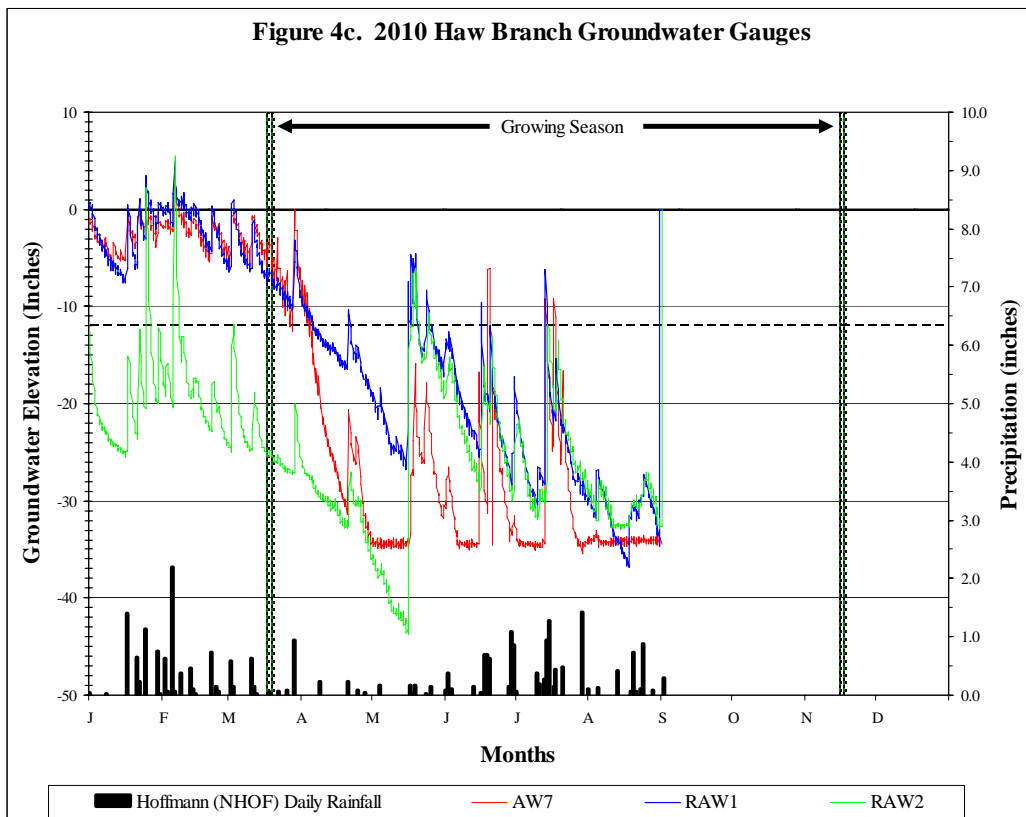
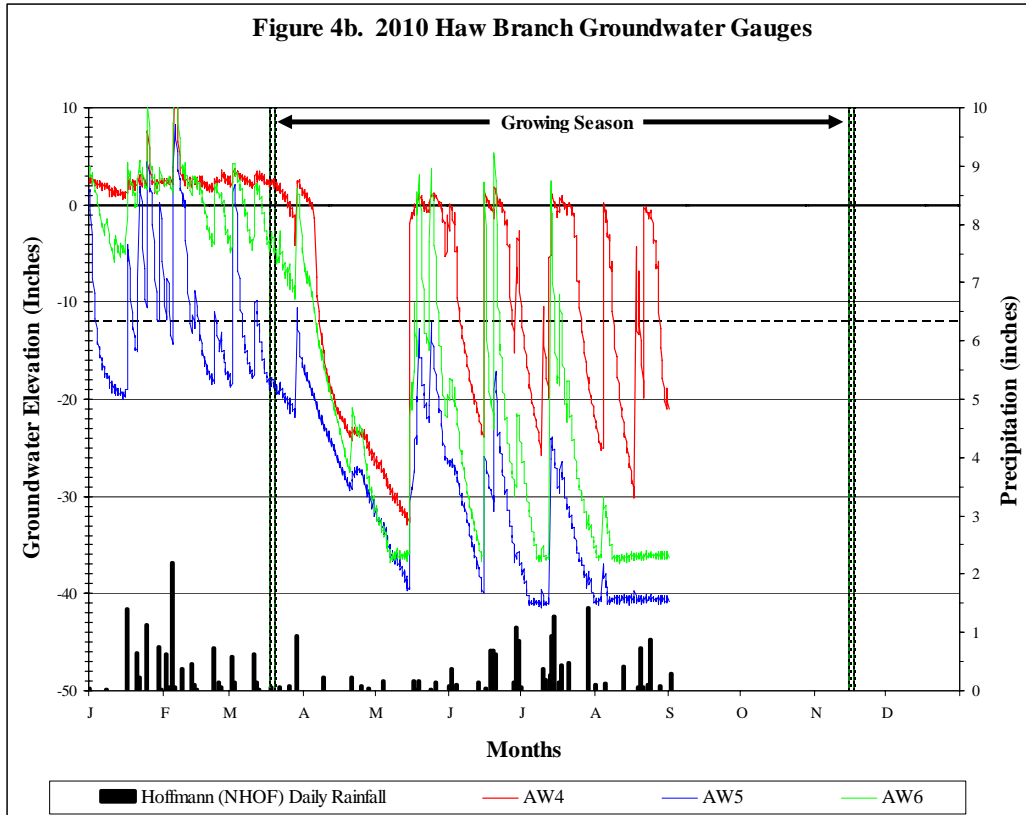


Table 4. Hydrologic Monitoring Results

2010 Max Hydroperiod (Growing Season 18-Mar through 11-Nov, 239 days)					
Gauge	Consecutive		Cumulative		Occurrences
	Days	Percent of growing Season	Days	Percent of growing Season	
AW1	21	9	21	9	1
AW2	22	9	24	10	3
AW3	23	10	34	14	8
AW4	21	9	83	35	8
AW5	1	0	1	0	1
AW6	19	8	33	14	7
AW7	18	8	21	9	4
Reference Gauges					
RAW1	20	8	29	12	5
RAW2	4	2	5	2	2

The 2010 monitoring data demonstrate that most of the Site is functioning as designed. Six gauges, AW1, AW2, AW3, AW4 AW6 and AW7, exceeded the seven percent hydrologic success criteria for the growing season. The remaining gauge exhibited a wetland hydroperiod of less than one percent of the growing season. The results from five years of monitoring have documented, for six of seven monitoring gauges, hydroperiods significantly higher than the specified success criteria, except for 2007 which was a severe drought year. The seventh monitoring gauge has consistently paralleled results from one of the reference gauges over the five year monitoring period. Based on these results, the Site has achieved the hydrologic success criteria specified in the Restoration Plan for the Site.

3.3.2 Reference Data

The approved Restoration Plan provides that if the rainfall data for any given year during the monitoring period is not normal, the reference wetland data can be used to determine if there is a positive correlation between the performance of the restoration site and the natural hydrology of the reference site. The Haw Branch reference wells are located a few miles south of the restoration Site on Dell Brock Rd. The reference data indicate that the restoration area has exceeded reference hydrology.

3.3.3 Climate Data

Comparisons of the 2010 monthly rainfall totals to historical precipitation for Onslow County are shown in **Table 5** and **Figure 6**. Monthly rainfall recordings are on-site, and the daily rainfall readings are from a Hoffmann Forest weather station in Onslow County. No on-site rain gauge data was collected for the months of January and February. The rainfall total from the Hoffmann gauge was below normal limits in March, April, May, and August. Rainfall was within normal limits for January, June, and July, and above normal limits for February. Based on data collected from the Hoffman Forest Weather Station, the site experienced slightly below-normal rainfall for the period of January through August 2010.

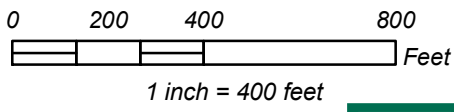


Legend

-  Monitoring Gauges
-  Conservation Easement
-  Restoration Success
-  Restoration Boundary
-  Additional Wetland Restoration

Note: Boundaries are approximate

**Haw Branch
Hydrology Assessment
Figure 5**



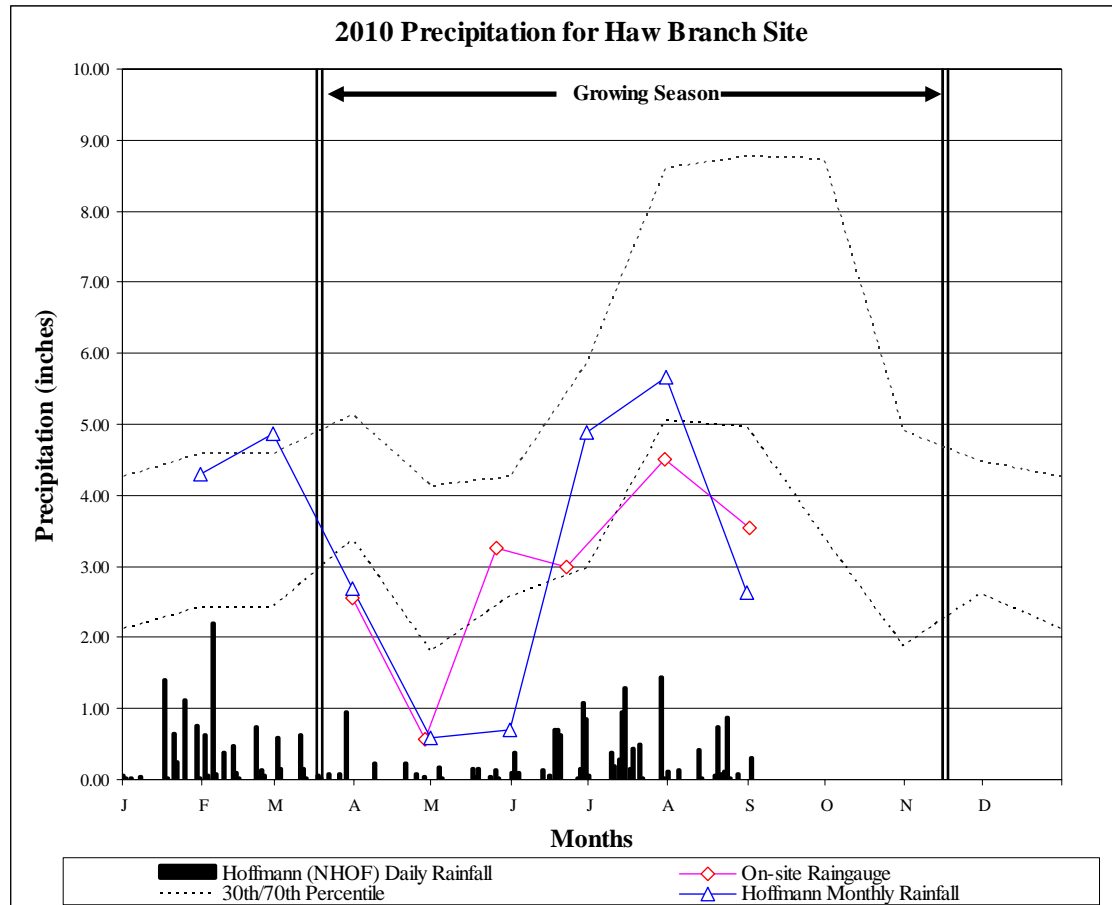
Source: 2006 Aerial Photography supplied by Onslow County.

Restoration Areas
 Fully Successful : 24.91 Acres
 Additional Wetland
 Restoration Area : 12.29 Acres
 Total : 38.09 Acres

Table 5. Comparison of Normal Rainfall to Onslow County 2010 Observed Rainfall

Month	Average	Normal Limits		Hoffmann Monthly Precipitation	On-Site Precipitation
		30 Percent	70 Percent		
January	5.17	4.00	6.13	4.30	---
February	4.16	2.43	4.59	4.86	---
March	4.64	3.37	5.14	2.68	2.56
April	3.15	1.79	4.12	0.58	0.56
May	3.67	2.58	4.27	0.71	3.25
June	4.95	2.98	5.86	4.89	3.00
July	7.22	5.06	8.60	5.66	4.50
August	7.55	4.97	8.77	2.63	3.55
September	6.77	3.40	8.74	---	---
October	3.70	1.88	4.90	---	---
November	3.67	2.61	4.47	---	---
December	3.32	2.13	4.26	---	---
Annual	---	53.06	61.67	---	---
Total	57.97	---	---	26.61	17.42

Figure 6. 2010 Rainfall



3.4 HYDROLOGIC CONCLUSIONS

A portion of the southeastern corner of the Haw Branch mitigation Site is not performing as designed. AW5 has consistently recorded hydroperiods that fall short of the seven percent target, but the hydroperiods recorded by AW5 have matched with the hydroperiods recorded by reference gauge RW1. At the beginning of 2007, a shorter well (18 inches deep) was installed at AW5 to determine if a deep sand lens was draining water from the well. Based on further evaluation, it is likely that the water table is lower than anticipated in this portion of the mitigation site due to the close proximity of a deep drainage ditch to the east of the well and outside of the easement area. AW5 experienced a seven percent hydroperiod at a depth of 19.5 inches in 2010.

During the 2010 growing season a hydrologic assessment was performed on the Haw Branch site to delineate wetland restoration areas that have failed to achieve hydrology success criteria. This assessment identified 0.89 acres of riparian wetland restoration in the vicinity of AW5 that is failing to achieve success criteria. An additional 12.29 acres of riparian wetland restoration has been claimed within the stream buffers. These areas are shown in **Figure 5**.

4.0 VEGETATION

4.1 VEGETATION SUCCESS CRITERIA

The interim measure of vegetative success for the Haw Branch Restoration Plan is the survival of at least 320 three-year old planted trees per acre at the end of Year 3 of the monitoring period. The final vegetative success criterion is the survival of 260 five-year old planted trees per acre at the end of Year 5 of the monitoring period. Up to 20 percent of the site species composition may be comprised of invaders. Remedial action may be required should these (i.e. loblolly pine (*Pinus taeda*), red maple (*Acer rubrum*), sweet gum (*Liquidambar styraciflua*), etc.) present a problem and exceed 20 percent composition. Nine tree species were planted in the wetland restoration area (**Table 6**).

Table 6. Planted Tree Species

ID	Common Name	Scientific Name	FAC Status
1	Swamp Chestnut Oak	<i>Quercus michauxii</i>	FACW-
2	Coastal Willow Oak	<i>Quercus phellos</i>	FACW-
3	River Birch	<i>Betula nigra</i>	FACW
4	Green Ash	<i>Fraxinus pennsylvanica</i>	FACW
5	Overcup Oak	<i>Quercus lyrata</i>	OBL
6	Sugar Berry	<i>Celtis laevigata</i>	FACW
7	Swamp Tupelo	<i>Nyssa biflora</i>	OBL
8	Bald Cypress	<i>Taxodium distichum</i>	OBL
9	Sycamore	<i>Platanus occidentalis</i>	FACW-

4.2 DESCRIPTION OF SPECIES AND VEGETATION MONITORING

The following monitoring protocol was designed to predict vegetative survival. Twenty plots were established on the Haw Branch Site to monitor approximately two percent of the site. Sixteen plots are located adjacent to newly constructed streambeds to monitor the vegetation in

the stream restoration buffer. The other four plots are randomly located to represent the range of conditions that exist on the site. The plots were randomly located within each zone, and randomly oriented within the wetland restoration area.

Plot construction consists of metal fence posts at each of the four corners to clearly and permanently establish the area to be sampled. Ropes were hung connecting all four corners to help in determining if trees close to the plot boundary were inside or outside of the plot. Trees on and just outside of the boundary that appear to have greater than 50 percent of their canopy inside the boundary were counted inside the plot. A piece of ten-foot-tall, white PVC pipe was placed over the metal post on one corner to facilitate visual location of plots throughout the five-year monitoring period. All of the planted stems inside the plot were flagged and marked with a three-foot-tall piece of half-inch PVC to mark them as the planted stems (vs. colonizers), and to help locate them in the future. Each stem is tagged with a permanent, numbered, aluminum tag.

4.3 RESULTS OF VEGETATION MONITORING

Table 7 presents stem counts for each monitoring plot. Each planted tree species is identified across the top row, and each plot is identified down the left column. The numbers on the top row correlate to the ID column of **Table 6**. Trees are flagged in the field on an as-need basis before the flags degrade. Flags are utilized, because they will not interfere with the growth of the tree. Volunteers are also flagged during this process. Annual variation in stem count data can be attributed to mortality and regeneration from root stock of stems previously assessed to be dead.

Table 7. Results of 2010 Vegetation Monitoring

Plot	1	2	3	4	5	6	7	8	9	Total	Stems per Acre
1	2	0	9	0	2	0	0	0	0	13	520
2	4	0	0	0	1	0	0	0	6	11	440
3	3	2	4	0	2	2	0	0	4	17	680
4	3	2	2	0	4	0	0	2	0	13	520
5	0	0	8	1	3	0	4	0	0	16	640
6	0	0	3	3	5	0	2	1	0	14	560
7	1	0	7	0	3	1	1	0	0	13	520
8	4	0	0	0	2	1	5	0	0	12	480
9	0	0	1	1	5	2	3	0	0	12	480
10	4	0	1	1	2	1	4	3	0	16	640
11	0	0	5	3	2	2	3	2	0	17	680
12	0	0	5	0	4	0	2	2	2	15	600
13	0	0	4	0	1	4	6	0	0	15	600
14	1	1	0	7	2	0	0	0	3	14	560
15	4	1	1	1	4	1	1	0	1	14	560
16	2	2	3	0	4	1	3	0	2	17	680
17	2	0	1	0	6	0	5	0	1	15	600
18	5	5	4	0	1	0	0	0	0	15	600
19	5	0	4	0	4	1	0	0	3	17	680
20	0	0	1	0	16	0	0	0	0	17	680

Average Stems per Acre: 586

Range of Stems per Acre: 440-680

Volunteer species were also monitored throughout the five-year monitoring period (**Table 8**). Volunteer woody species were observed in most of the vegetation plots, especially in and around Plot 4, but were deemed too small to tally. Sweetgum (*Liquidambar styraciflua*) is the most common volunteer, though red maple (*Acer rubrum*) and river birch (*Betula nigra*) were also observed.

Table 8. Volunteer Tree Species within the Wetland Restoration Area

ID	Scientific Name	Common Name	FAC Status
A	<i>Liquidambar styraciflua</i>	Sweetgum	FAC+
B	<i>Acer rubrum</i>	Red Maple	FAC
C	<i>Betula nigra</i>	River Birch	FACW

4.4 VEGETATION OBSERVATIONS & CONCLUSIONS

The site was planted in coastal plain small stream swamp species in December 2005. There were twenty vegetation-monitoring plots established throughout the planting areas. The Site had earlier achieved the initial success criteria of 320 trees per acre by the end of year three. The data for 2010 documents that the Site has, achieved the final success criteria of 260 trees per acre by the end of year five. Vegetation monitoring in 2010 has documented an average of 586 stems per acre on the Site, which is a survival rate of greater than 85% based on the initial planting count of 688 stems per acre.

After construction of the mitigation Site, a permanent ground cover seed mixture of Virginia wild rye (*Elymus virginicus*), switch grass (*Panicum virgatum*), and fox sedge (*Carex vulpinoidea*) was broadcast on the Site at a rate of 10 pounds per acre. These species are present on the Site. An application of Oust, a pre-emergent herbicide, was applied to give the planted stems strong growth potential at the start of the growing season. This practice seemed to have been successful as there is ample ground cover across the Site, and the trees seem to be growing well. Hydrophytic herbaceous vegetation, including rush (*Juncus effusus*), spike-rush (*Eleocharis obtusa*), climbing hempweed (*Mikania scandens*) and sedge (*Carex spp.*), were observed across the Site, particularly in areas of periodic inundation. The presence of these herbaceous wetland plants helps to confirm the presence of wetland hydrology on the Site.

There are several weedy species occurring on the Site, though none seem to be posing any problems for the woody or herbaceous hydrophytic vegetation. Broomsedge (*Andropogon spp.*), dogfennel (*Eupatorium capillifolium*), wild dill (*Foeniculum vulgare*), and goldenrod (*Solidago spp.*) were observed on Site. The weedy species seem to pose little threat to survivability on Site.

5.0 STREAM MONITORING

5.1 STREAM SUCCESS CRITERIA

As stated in the approved Mitigation Plan, the stream restoration success criteria for the Site includes the following:

- *Bankfull Events*: Two bankfull flow events must be documented within the five-year monitoring period.
- *Cross-sections*: There should be little change in as-built cross-sections. Cross-sections shall be classified using the Rosgen stream classification method, and all monitored

cross-sections should fall within the quantitative parameters defined for "E" or "C" type channels.

- *Longitudinal Profiles:* The longitudinal profiles should show that the bedform features are remaining stable, e.g. they are not aggrading or degrading. Bedforms observed should be consistent with those observed in "E" and "C" type channels.
- *Photo Reference Stations:* Photographs will be used to subjectively evaluate channel aggradation or degradation, bank erosion, success of riparian vegetation and effectiveness of erosion control measures.

5.2 STREAM MORPHOLOGY MONITORING PLAN

To document the stated success criteria, the following monitoring program was instituted following construction completion on the Haw Branch Site.

5.2.1 Cross Sections

Two permanent cross sections were installed per 1,000 linear feet of stream restoration work. For each set of cross sections, one is at a riffle, and one is at a pool. A total of 21 permanent cross sections were established across the mitigation site. Each cross section was marked on both banks with permanent pins to establish the exact transect used. Permanent cross-section pins were surveyed and located relative to a common benchmark to facilitate easy comparison of year-to-year data. The annual cross-section surveys include points measured at all breaks in slope, including top of bank, bankfull, inner berm, edge of water, and thalweg. Riffle cross sections are classified using the Rosgen stream classification system. Permanent cross sections for 2010 (Year 5) were surveyed in August 2010.

5.2.2 Longitudinal Profile

A longitudinal profile of approximately 3,000 feet was surveyed along the restoration reach in 2010. Measurements include thalweg, water surface, bankfull, and top of low bank. Each of these measurements is taken at the head of each feature, e.g. riffle, run, pool, and glide, and the max pool depth. A common benchmark is used each year to facilitate comparison of year-to-year data. The longitudinal survey for 2010 (Year 5) was conducted in August 2010.

5.2.3 Hydrology

Two crest gauges were installed on the Site to document bankfull events (**Figure 3**). The gauges are checked monthly, and the highest out-of-bank flow event that occurred during the past month is recorded.

5.2.4 Photo Reference Stations

Photographs are used to visually document restoration success. Reference stations are marked with wooden stakes, and Global Positioning Satellite (GPS) coordinates have been determined for each location. Reference photos are taken at each permanent cross-section from both stream banks. The survey tape is centered in the photographs of the bank, and the water line is located in the lower edge of the frame with as much of the bank as possible included in each photo. In-stream structures (e.g., rock vanes, cross vanes, and constructed riffles) that can be located are also photographed. Photo reference stations will be photographed at least once per year for at least five years following construction.

5.3 STREAM MORPHOLOGY MONITORING RESULTS

5.3.1 Cross Sections

Year 5 cross-section monitoring data for stream stability were collected during August 2010, and were compared to baseline data collected in early 2006, as well as data collected during the four

previous monitoring seasons. The Year 5 cross-section survey shows that there has been little adjustment to stream profile or dimension since construction. All monitored cross-sections fell within the quantitative parameters defined for "E" or "C" type channels. Cross sections with photographs can be viewed in **Appendix B**.

5.3.2 Longitudinal Profile

In-stream structures installed within the restored stream include log vanes, log weirs, and root wads. Visual observations of structures throughout the past growing season have indicated that nearly all structures are functioning as designed. Log weirs placed in riffle areas have maintained riffle elevations and provided a downstream scour hole that provides habitat. Some minor areas of localized erosion that were observed previously have stabilized, and do not threaten the success of the Site. A number of beaver dams have been built across the channel. The beavers have been trapped and removed from the Site. All structural problem areas are minor and localized, and no corrective actions are recommended (**Table 9** and **Figures 7a** and **7b**).

Table 9. Stream Areas Requiring Observation

ID	Station	Feature	Problem
1	UT 1A	10+50	Beaver dam, beavers have been removed
2	UT 1A	12+20	Beaver dam, beavers have been removed

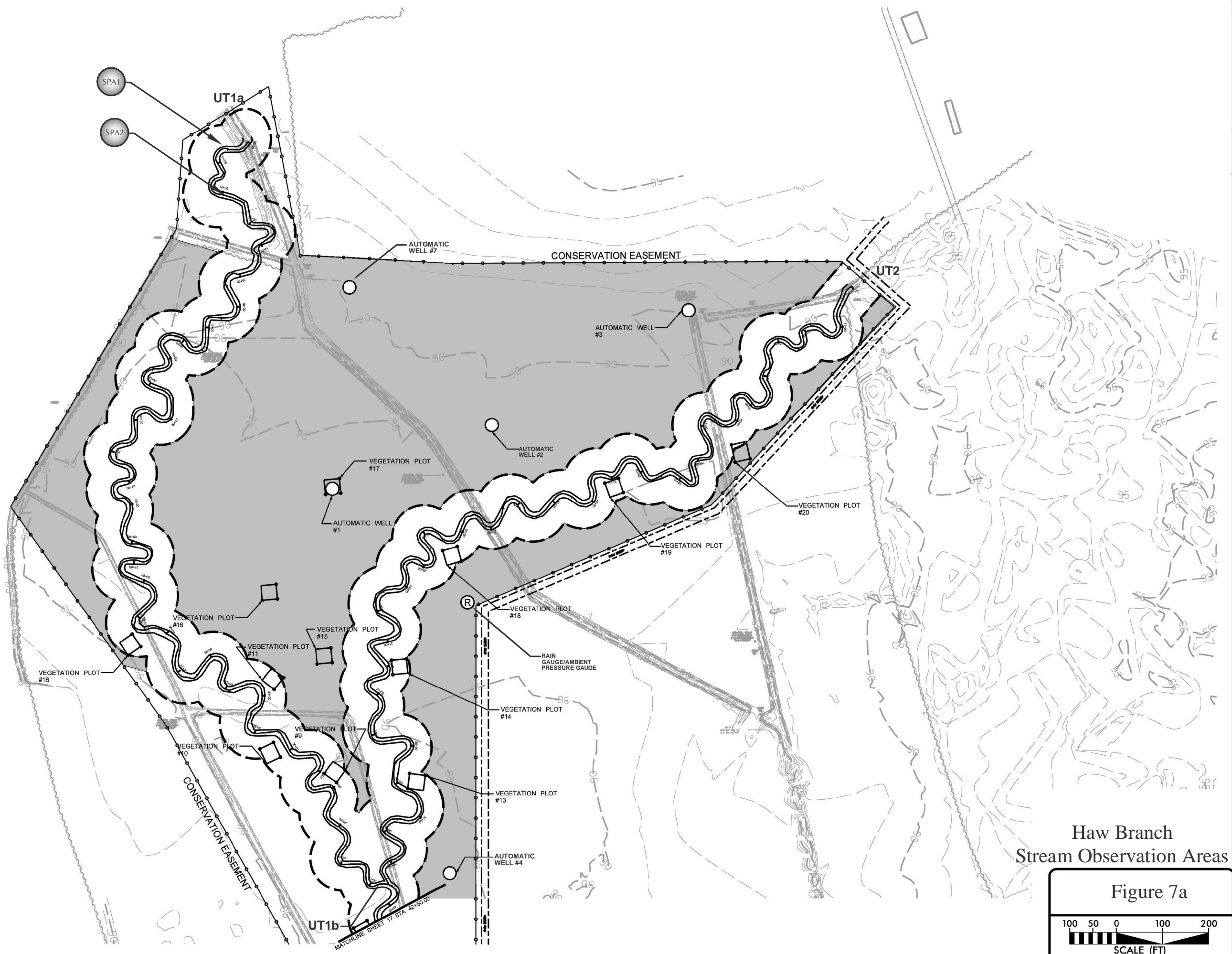
During the 2010 monitoring year, four bankfull events were documented during Site visits (**Table 10**). The largest stream flow recorded was on Crest-Gauge 2 at 2.25 feet above bankfull elevation in February 2010. The profile survey indicated little change to channel dimensions (**Table 11; Appendix B**).

Table 10. Crest Gauge Data

Month Recorded	Crest Gauge 1 (ft)	Crest Gauge 2 (ft)
January	---	---
February	1.15	2.25
March	0.00	0.50
April	0.00	0.00
May	0.00	0.00
June	0.00	0.85
July	0.00	0.75
August	0.00	0.00
September	---	---
October	---	---
November	---	---
December	---	---

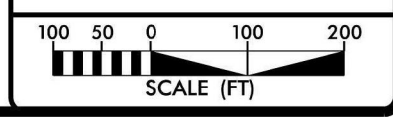
Table 11. Summary of Morphologic Monitoring Parameters

Parameter	Year 5	Year 5	Year 5	Year 5
	Reach 1A	Reach 1B	Reach 2	Reach 3
Bankfull Xsec Area, Abkf (sq ft)	9.4	11.0	6.9	6.7
Avg. Bankfull Width, Wbkf (ft)	12.7	14.1	13.1	9.0
Bankfull W/D	17.8	18.6	25.4	13.1
Bankfull Mean Depth, Dbkf (ft)	0.7	0.8	0.5	0.8
Bankfull Max Depth, Dmax (ft)	1.2	1.4	1.0	1.7



Haw Branch
Stream Observation Areas

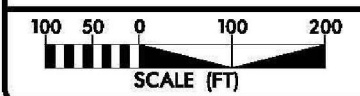
Figure 7a





Haw Branch
Stream Observation Areas

Figure 7b



5.4 STREAM CONCLUSIONS

Overall, the Haw Branch stream channel is performing as designed. Cross section data indicates that little change has occurred since the stream was built. Four bankfull events occurred at the Site in 2010. The stream channel is stable, and problem areas are minimal and localized. No corrective actions are recommended. The Site has achieved the success criteria specified in the Restoration Plan for the Site.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The stream, hydrologic, and vegetation monitoring data for all five monitoring years at the Site are summarized in **Tables 12-15**. Based on this data and the other data and comments provided above in Sections 3, 4, and 5, the Site has achieved the stream, hydrologic, and vegetative success criteria specified in the Restoration Plan.

During the 2010 growing season a hydrologic assessment was performed on the Haw Branch site to delineate wetland restoration areas that have failed to achieve hydrology success criteria. This assessment identified 0.89 acres of riparian wetland restoration in the vicinity of AW5 that is failing to achieve success criteria. An additional 12.29 acres of riparian wetland restoration has been claimed within the stream buffers.

Table 12. Summary of Crest Gauge Data 2006-2010

	2006	2007	2008	2009	2010
Number of Bankfull Events	2	5	5	8	4
Maximum Height Above Bankfull (feet)	2.75	2.30	1.15	1.40	2.25

Table 13a. Summary of Morphologic Monitoring Parameters 2006-2010 for Reach 1A

Parameter	As-Built	Year 1	Year 2	Year 3	Year 4	Year 5
Bankfull Xsec Area, Abkf (sq ft)	8.6	8.6	8.9	8.9	9.5	9.4
Avg. Bankfull Width, Wbkf (ft)	12.9	12.9	12.7	12.8	15.2	12.7
Bankfull W/D	20.1	20.1	19.4	19.0	27.4	17.8
Bankfull Mean Depth, Dbkf (ft)	0.7	0.7	0.7	0.8	0.6	0.7
Bankfull Max Depth, Dmax (ft)	1.2	1.2	1.2	1.2	1.3	1.2

Table 13b. Summary of Morphologic Monitoring Parameters 2006-2010 for Reach 1B

Parameter	As-Built	Year 1	Year 2	Year 3	Year 4	Year 5
Bankfull Xsec Area, Abkf (sq ft)	12.5	12.5	10.4	7.7	11.9	11.0
Avg. Bankfull Width, Wbkf (ft)	15.9	15.9	13.5	11.4	16.0	14.1
Bankfull W/D	22.3	22.3	18.2	16.6	21.7	18.6
Bankfull Mean Depth, Dbkf (ft)	0.7	0.7	0.8	0.7	0.8	0.8
Bankfull Max Depth, Dmax (ft)	1.5	1.5	1.4	1.2	1.5	1.4

Table 13c. Summary of Morphologic Monitoring Parameters 2006-2010 for Reach 2

Parameter	As-Built	Year 1	Year 2	Year 3	Year 4	Year 5
Bankfull Xsec Area, Abkf (sq ft)	8.3	8.3	6.9	6.8	7.9	6.9
Avg. Bankfull Width, Wbkf (ft)	12.4	12.4	12.9	12.6	14.8	13.1
Bankfull W/D	19.0	19.0	25.0	22.9	29.9	25.4
Bankfull Mean Depth, Dbkf (ft)	0.7	0.7	0.5	0.6	0.5	0.5
Bankfull Max Depth, Dmax (ft)	1.1	1.1	1.0	0.9	1.0	1.0

Table 13d. Summary of Morphologic Monitoring Parameters 2006-2010 for Reach 3

Parameter	As-Built	Year 1	Year 2	Year 3	Year 4	Year 5
Bankfull Xsec Area, Abkf (sq ft)	8.1	8.1	7.1	6.4	8.2	6.7
Avg. Bankfull Width, Wbkf (ft)	11.7	11.7	7.8	10.5	13.4	9.0
Bankfull W/D	17.0	17.0	8.6	17.5	23.2	13.1
Bankfull Mean Depth, Dbkf (ft)	0.7	0.7	1.0	0.6	0.7	0.8
Bankfull Max Depth, Dmax (ft)	1.5	1.5	1.4	1.5	1.6	1.7

Table 14. Summary of Vegetative Monitoring Data 2006-2010

Plot	Planted Stems Per Acre					
	Base	2006	2007	2008	2009	2010
1	720	720	720	680	480	520
2	640	560	520	520	400	440
3	800	760	720	760	680	680
4	680	640	600	520	560	520
5	680	720	720	680	640	640
6	680	680	680	640	560	560
7	640	680	600	560	560	520
8	720	640	560	560	480	480
9	720	720	720	680	480	480
10	680	720	680	680	640	640
11	720	680	680	680	680	680
12	720	720	680	680	640	600
13	720	720	720	680	600	600
14	720	680	680	600	160	560
15	720	720	720	720	720	560
16	720	680	680	680	680	680
17	720	720	600	600	600	600
18	680	640	640	640	600	600
19	720	680	680	680	680	680
20	640	680	680	680	680	680
Average	702	688	664	646	576	586

Table 15. Summary of Hydrologic Data 2006-2010

Gauge	Max Consecutive Hydroperiod (percent of growing season)				
	2006	2007	2008	2009	2010
AW1	41	4	34	20	9
AW2	41	3	34	40	9
AW3	42	7	33	40	10
AW4	32	14	35	49	9
AW5	4	1	3	2	0
AW6	27	12	33	17	8
AW7	N/A	6	33	19	8
RAW1	N/A	8	11	19	8
RAW2	N/A	3	0	1	2

APPENDIX A

As-Built Survey

PROJECT: 0211R HAW BRANCH

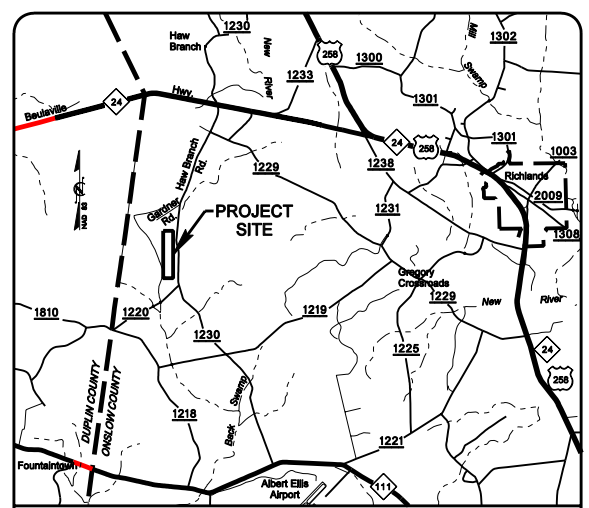
EBX NEUSE I, LLC
HAW BRANCH

ONSLOW COUNTY

LOCATION: SOUTH OF TOWN OF HAW BRANCH
ALONG SR 1230

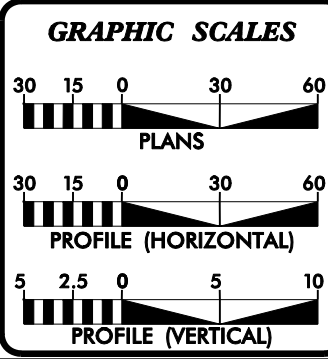
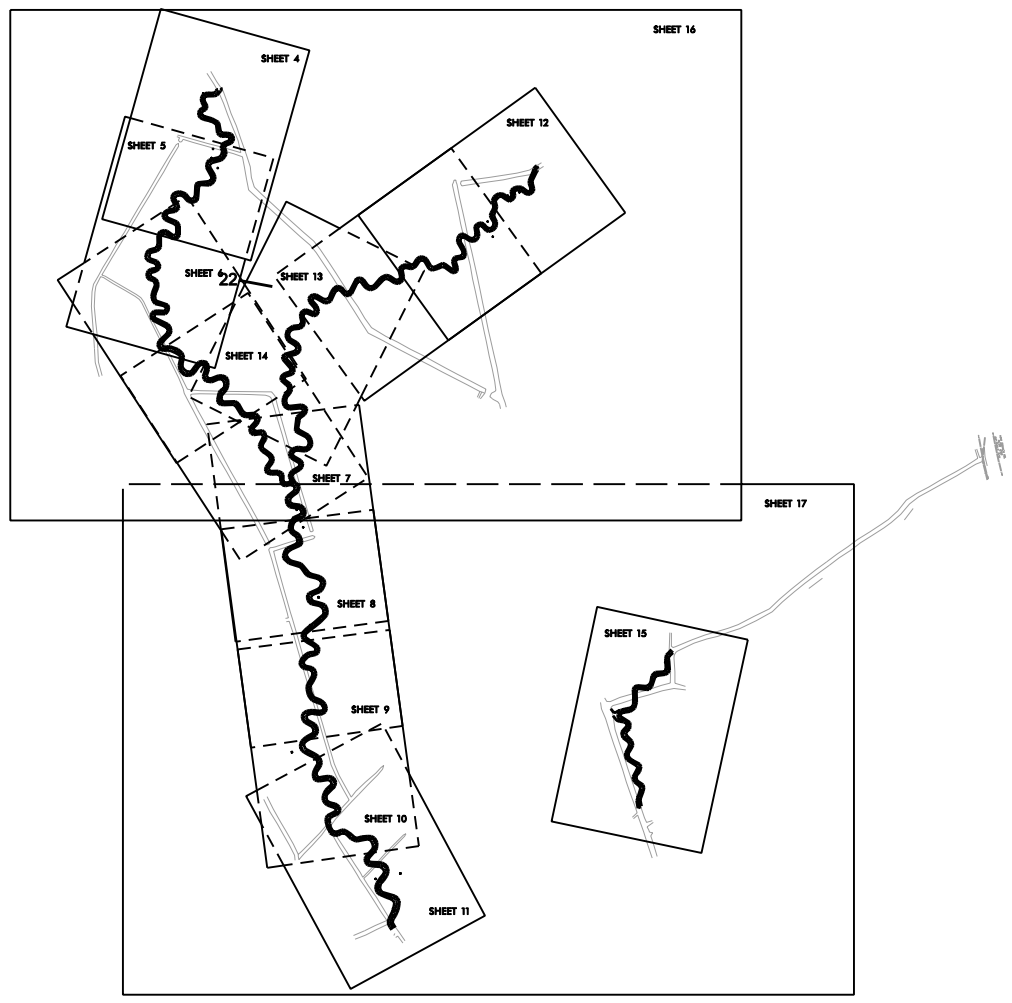
TYPE OF WORK: AS-BUILT PLANS

STATE	BUCK PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	0211R	1	32
NO.	DATE	CHECKED BY	APPROVED BY
1	2/16/06	JOHN HUTTON	KEVIN TWEEDY



VICINITY MAP

- INDEX OF SHEETS**
- 1 TITLE SHEET
 - 1-A STREAM CONVENTIONAL SYMBOLS
GENERAL NOTES, STANDARD SPECIFICATIONS, AND VEGETATION SELECTION
 - 1-B CONVENTIONAL SYMBOLS
 - 2 TO 2-B TYPICAL POOL AND RIFFLE CROSS SECTIONS, STRUCTURE DETAILS
 - 4 TO 15 PLAN VIEW OF PROPOSED AND EXISTING STREAM DESIGN
 - 16 TO 17 WETLAND OVERVIEW



DESIGN SUMMARY

EXISTING STREAM LENGTH	=	4,370 FEET
AS-BUILT STREAM LENGTH	=	10,005 FEET
AS-BUILT RIVERINE WETLAND RESTORATION	=	25.0 ACRES

PREPARED FOR THE OFFICE OF:
EBX NEUSE I, LLC

2530 MERIDIAN PARKWAY, SUITE 200
DURHAM, NORTH CAROLINA 27713

EBX CONTACT:
THOMAS L. RINKER
PROJECT MANAGER

PREPARED IN THE OFFICE OF:

December 2005
COMPLETION DATE:

KEVIN TWEEDY, PE
PROJECT ENGINEER

JOHN HUTTON
PROJECT MANAGER

PROJECT ENGINEER

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CONSTRUCTION SEQUENCE

General Construction Sequence

The following construction sequence shall be used during implementation of the mitigation plan.

1. Onsite meeting with personnel from State Land Quality Section.
2. The Contractor will prepare construction accesses and stockpile areas as shown in the plans. If necessary, erect any safety fences, silt fences, or barriers. Stockpile materials that will be needed during the initial stages of construction.
3. The Contractor shall maintain and use existing culverted stream crossings during the initial stages of construction. The Contractor shall prepare stream crossings at locations shown on the construction plans in accordance with the NC Erosion and Sediment Control Planning and Design Manual. Ditches and stream reaches on site will be left open during the initial stages of construction to allow for drainage and to keep site accessible.
4. Construction traffic shall be restricted to the area denoted as "Limits of Disturbance" on the construction plans.
5. The Contractor will begin by excavating floodplain areas to design grades in all areas except within 10 feet of the top of existing stream banks. The Contractor may fill ditches which do not contain any water during the grading operations. Along ditches with water or stream reaches, excavated material should be stockpiled in areas shown on the plans. In any areas where excavation depths will exceed 1.0 foot, topsoil shall be stockpiled and placed back over these areas to a depth of eight inches to achieve design grades and create a soil base for vegetation.
6. Contractor shall begin construction on each stream reach and complete that stream reach before moving to the next stream. Excavation of new stream channels shall begin on the downstream end and work upstream to allow for drainage. The new channel sections shall be left open on the downstream end to allow for drainage during rain events. A temporary sediment trap shall be installed at the downstream end.
7. The most southern end of Reach UT1 shall be constructed first. This section requires the use of a temporary pump-around operation as noted on the plans. The Contractor shall install temporary coffer dams and pump around operations for these sections. The portion of the channel isolated shall be dewatered and the removed water shall flow through a special stilling basin according to project special provisions.
8. Once UT1 is completed, construction of UT2 will begin.
9. Contractor shall excavate new channel sections in the dry. When new channel sections cross existing ditches and streams, the Contractor may excavate to within 10 feet of the existing channels, but Contractor shall not disturb existing channels until all other sections of the new channel have been constructed and stabilized.
10. Once an excavated section of channel has been constructed to design grades and approved by the Engineer, in-stream structures, matting and transplants shall be placed in that section per the direction of the Engineer and the channel made ready to accept water from the old channel.
11. Upon completion of UT1 and UT2, Contractor shall begin construction of UT3
12. Contractor shall begin Reach UT3 by excavating floodplain bench areas to design grades. Excavated material will be used to construct the access road along Reach UT2.
13. Once the new floodplain of UT3 has been excavated, Contractor shall begin excavating the new stream channel. When new channel section crosses the existing stream, the Contractor may excavate to within 10 feet of the existing channels, but Contractor shall not disturb the existing channel until all other sections of the new channel have been constructed and stabilized.
14. Disking and roughing of field areas adjacent to the stream channel shall be completed prior to turning water into the new stream channel segments. Disking shall not be performed within 10 feet of the new stream channel banks. The Contractor shall NOT disk or rough any areas where excavation activities have not been completed.
15. Once the new channels have been accepted by the Engineer, the temporary sediment trap at the downstream end shall be removed. Water from the old channel stream channel may then be turned into the new stream channel. Apply stabilization practices to the area where the water was turned, and immediately begin filling the old abandoned stream channels.
16. Excavate any new ditches shown on the plans to design elevations, per the direction of the Engineer.
17. Once a section of new channel has been completed, the Contractor will apply temporary seeding, permanent seeding, and mulch to that area as designated in the plans and specifications. Permanent seeding mixtures shall be applied as shown on the vegetation plan. Temporary seeding shall be applied in all areas susceptible to erosion (i.e. disturbed ditch banks, steep slopes, and spoil areas) such that ground cover is established within 15 working days or 30 calendar days, whichever is shorter, following completion of any phase of grading. Permanent ground cover shall be established for all disturbed areas within 15 working days or 90 calendar days (whichever is shorter) following completion of construction.
18. The Contractor shall insure that the site is free of trash and leftover materials prior to demobilization of equipment from the site.
19. Plant woody vegetation according to planting details and specifications. Planting of woody vegetation should only occur during winter or early spring.

CONSTRUCTION QUANTITIES

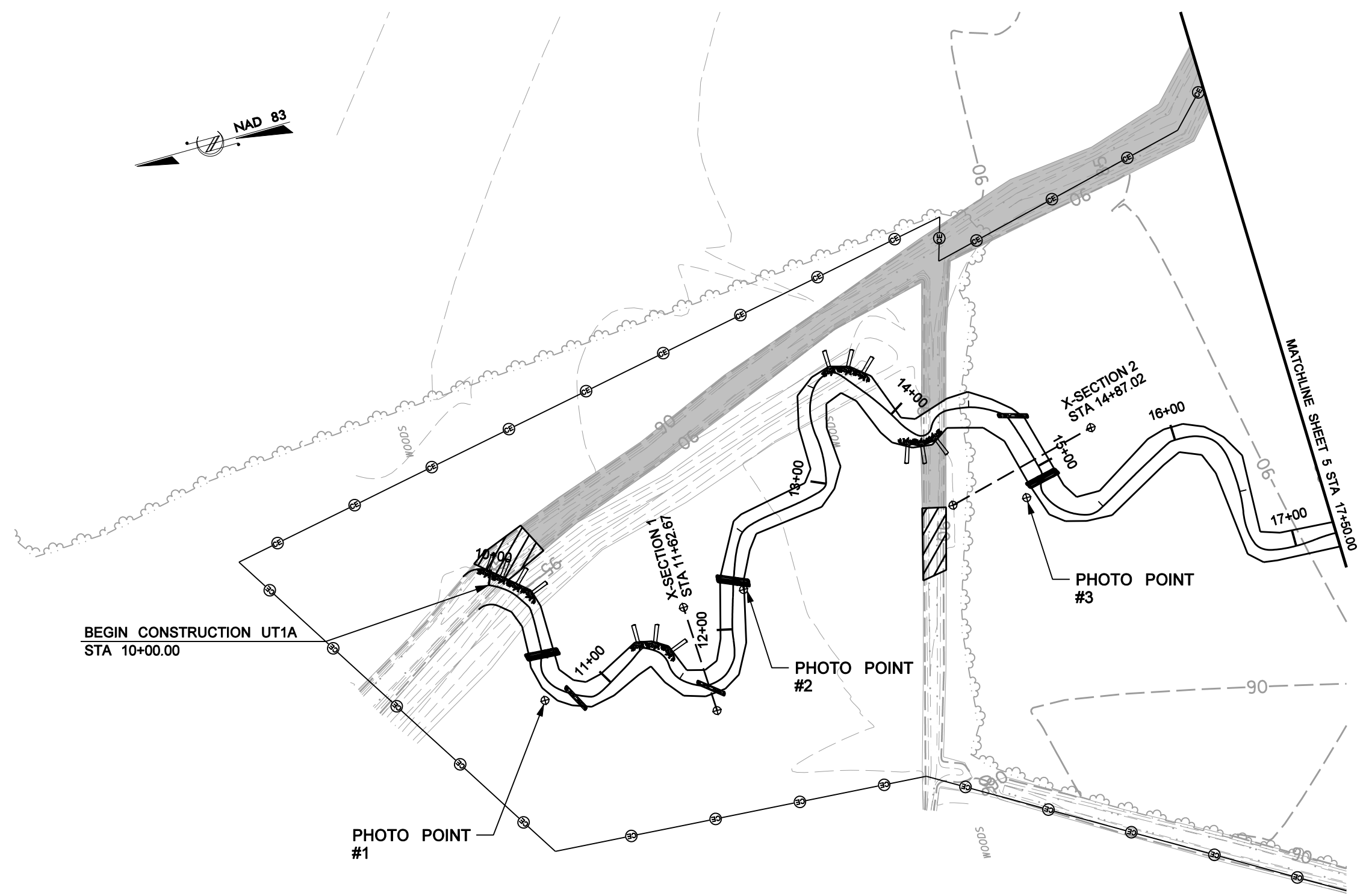
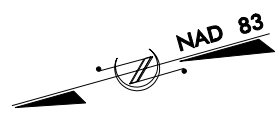
Item #	Description	Quantity	Unit
A			
B			
C	Mobilization / Demobilization	1	LS
D	Temporary Silt Fence	4,056	LF
E	Sand Bags	N/A	EA
F.1	Temporary Seeding	1,077	POUNDS
F.2	Straw Mulch	194	BALE
F.3	Excelsior Matting	N/A	SY
F.4	Lime	N/A	TON
F.5	Fertilizer	N/A	TON
G.1	Permanent Seeding (wetlands)	830	POUNDS
G.2	Permanent Seeding (access road)	N/A	POUNDS
H.1	Excavation, Fill and Grading	20,000	CY
H.2	Backfill	N/A	CY
H.3	Off-Site Soil Disposal	N/A	CY
H.4	Roughing of Soil Surface	48	ACRES
H.5	Clearing	2	ACRES
H.6	Grubbing	0.5	ACRES
I.1	Washed No. 57 Stone	40	TON
I.2	Stone, Class A	66	TON
I.3	Stone, Class B	117	TON
I.4	Class A/B Stone	N/A	TON
I.5	ABC Stone (crusher run)	N/A	TON
I.6	Boulders	N/A	TON
I.7	Class II	2	TON
J.1	Root Wads (on-site)	190	EA
J.2	Root Wads (off-site)	N/A	EA
J.3	Logs (15-30 ft)	N/A	EA
J.4	Logs (8-15 ft)	111	EA
K	Non woven Filter Fabric, Type II	720	SY
L.1	Temporary Culvert - 36" CSP	60	LF
L.2	Permanent Culvert - 48" CSP	30	LF
L.3	Permanent Culvert - "	N/A	LF
L.4	Corrugated Pipe	N/A	LF
M	Coconut Fiber (COIR) Matting	16,690	SY
N.1	Shrub and Tree Transplants	1,000	SY
N.2	Sod Mats	N/A	SY
O.1	Live Stakes	8,925	STEMS
O.2	Cutting Bundles	N/A	EA
P	Pump Around Operations	1	LS
Q	Special Stilling Basins	3	EA
R	Impervious Dikes	48	LF
S.1	Fencing	N/A	LF
S.2	Large Gates	N/A	EA
S.3	Walk Gates	N/A	EA
T.1	Tree Purchase	N/A	STEMS
T.2	Tree Planting	32,460	STEMS
U	Waste Disposal	N/A	LS

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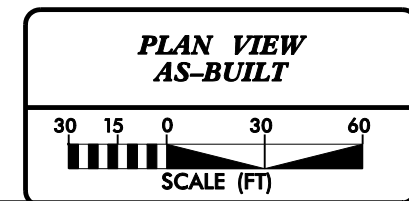
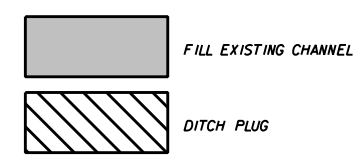
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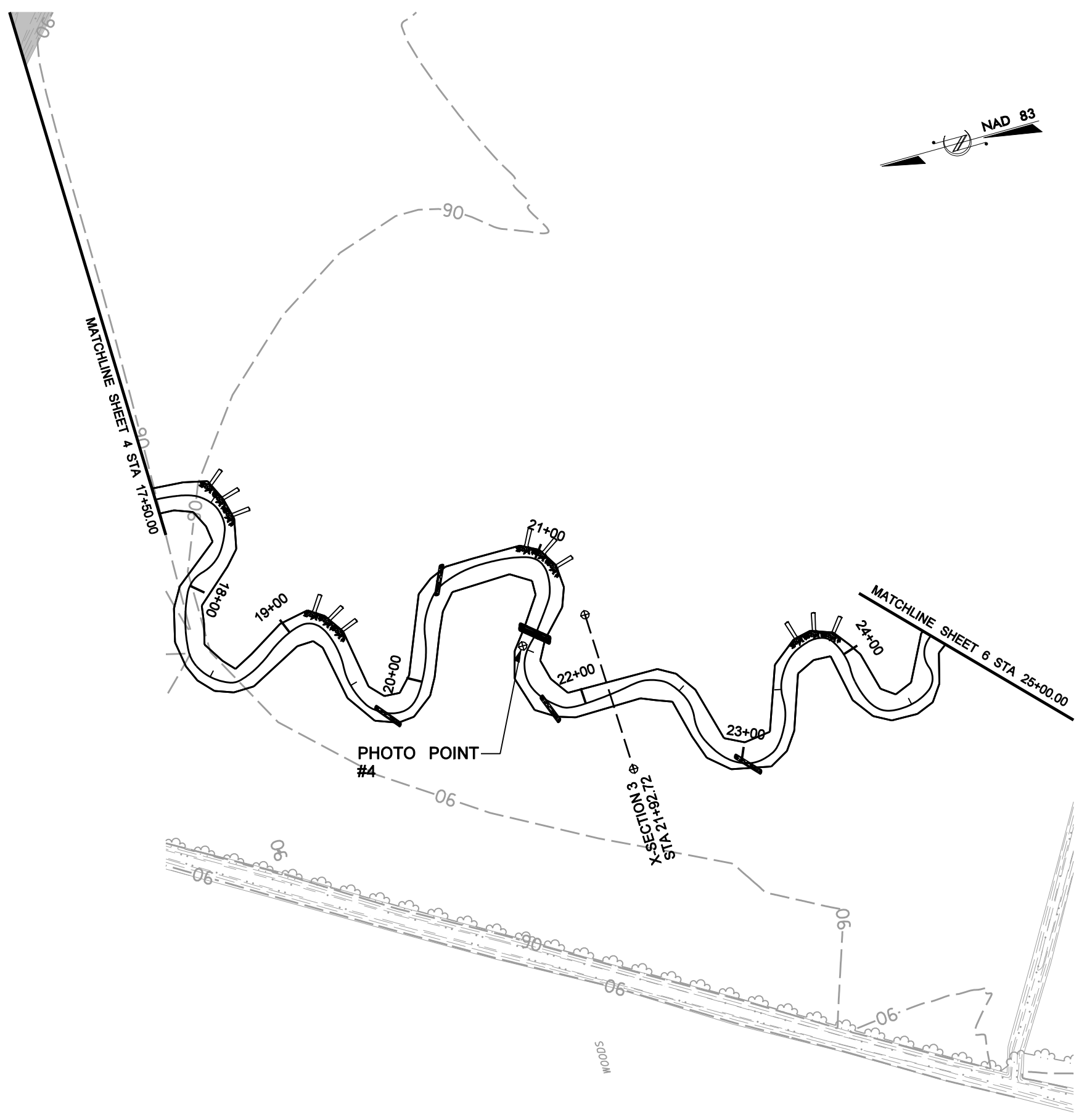
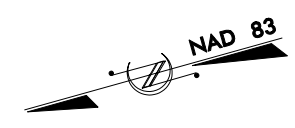
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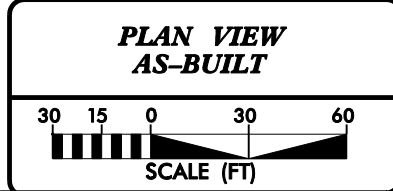
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 FILL EXISTING CHANNEL



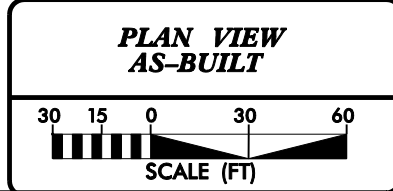
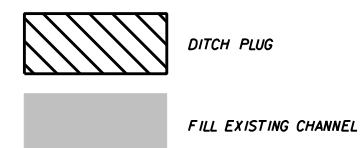
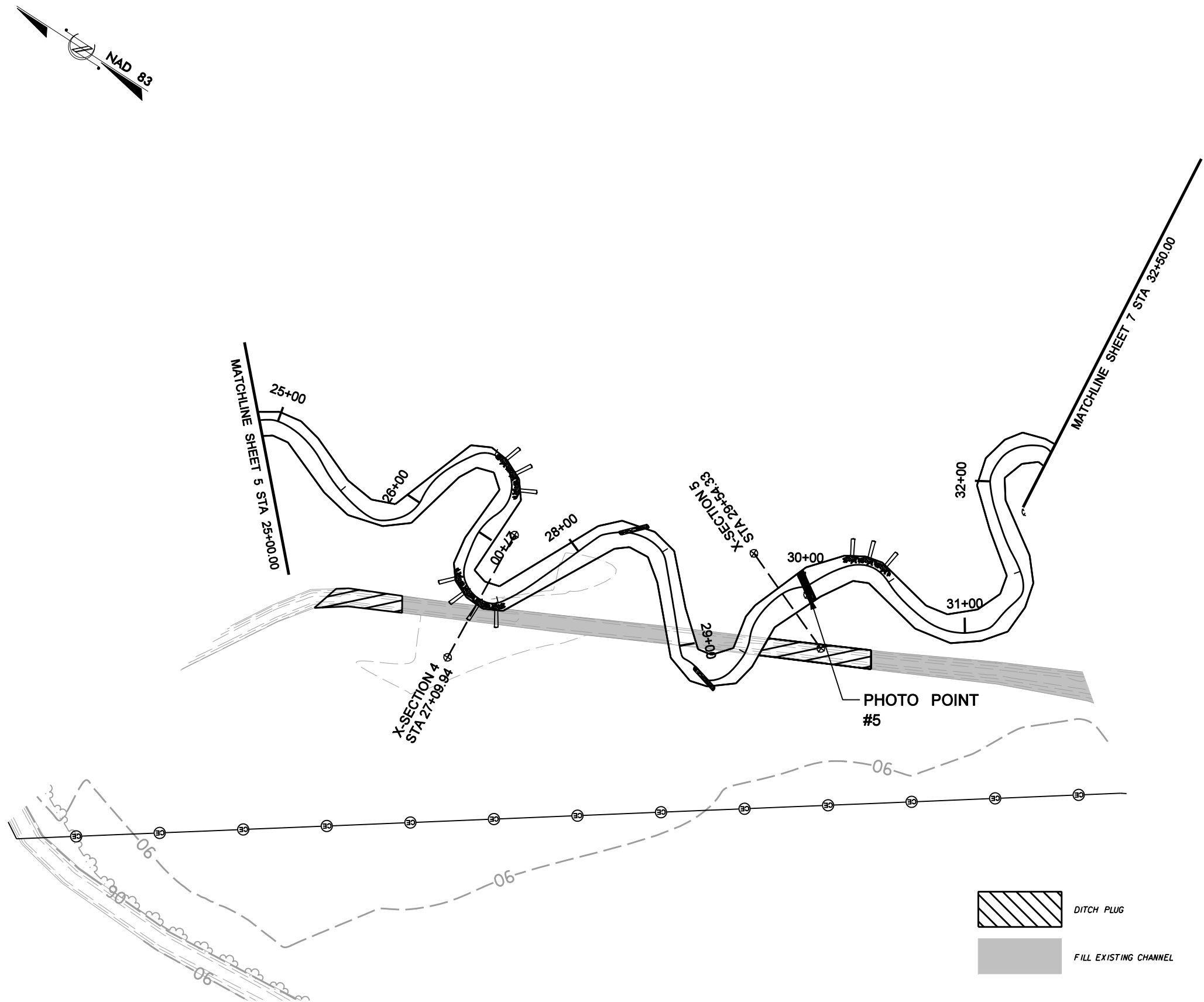
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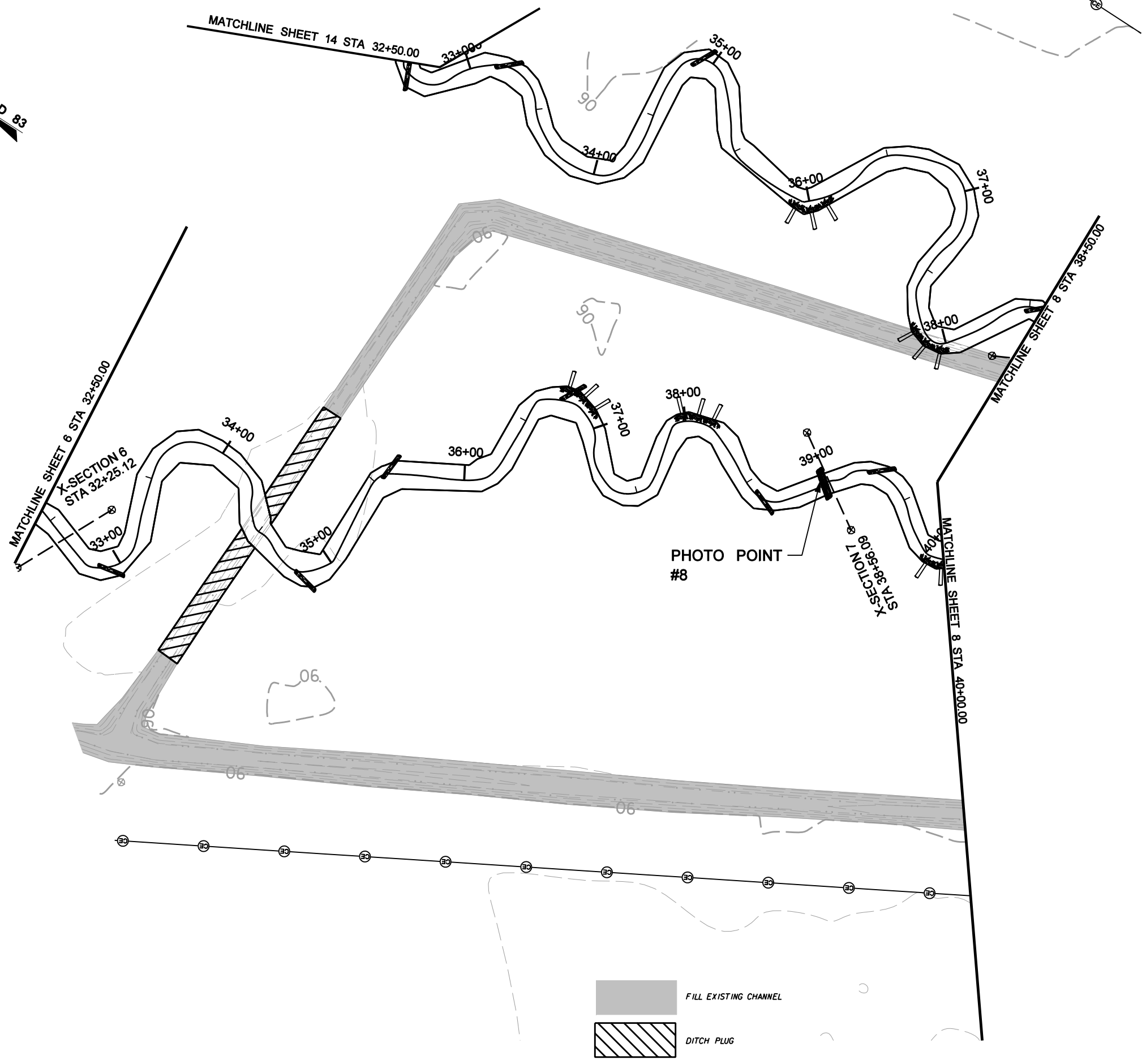
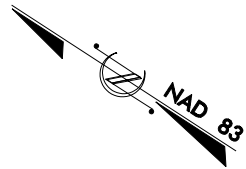
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8000 Regency Parkway Suite 200
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Fax: 919-463-5490



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4/12/2006
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**PLAN VIEW
AS-BUILT**

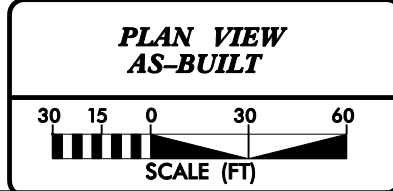
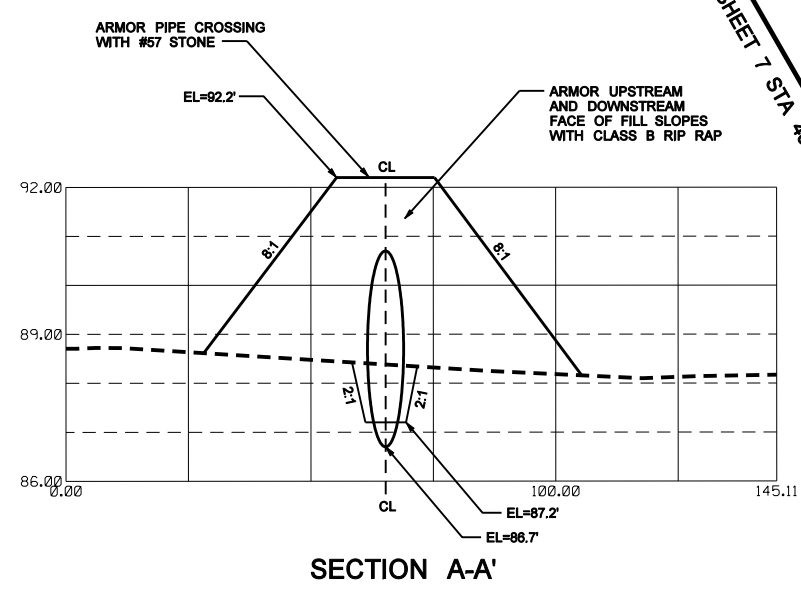
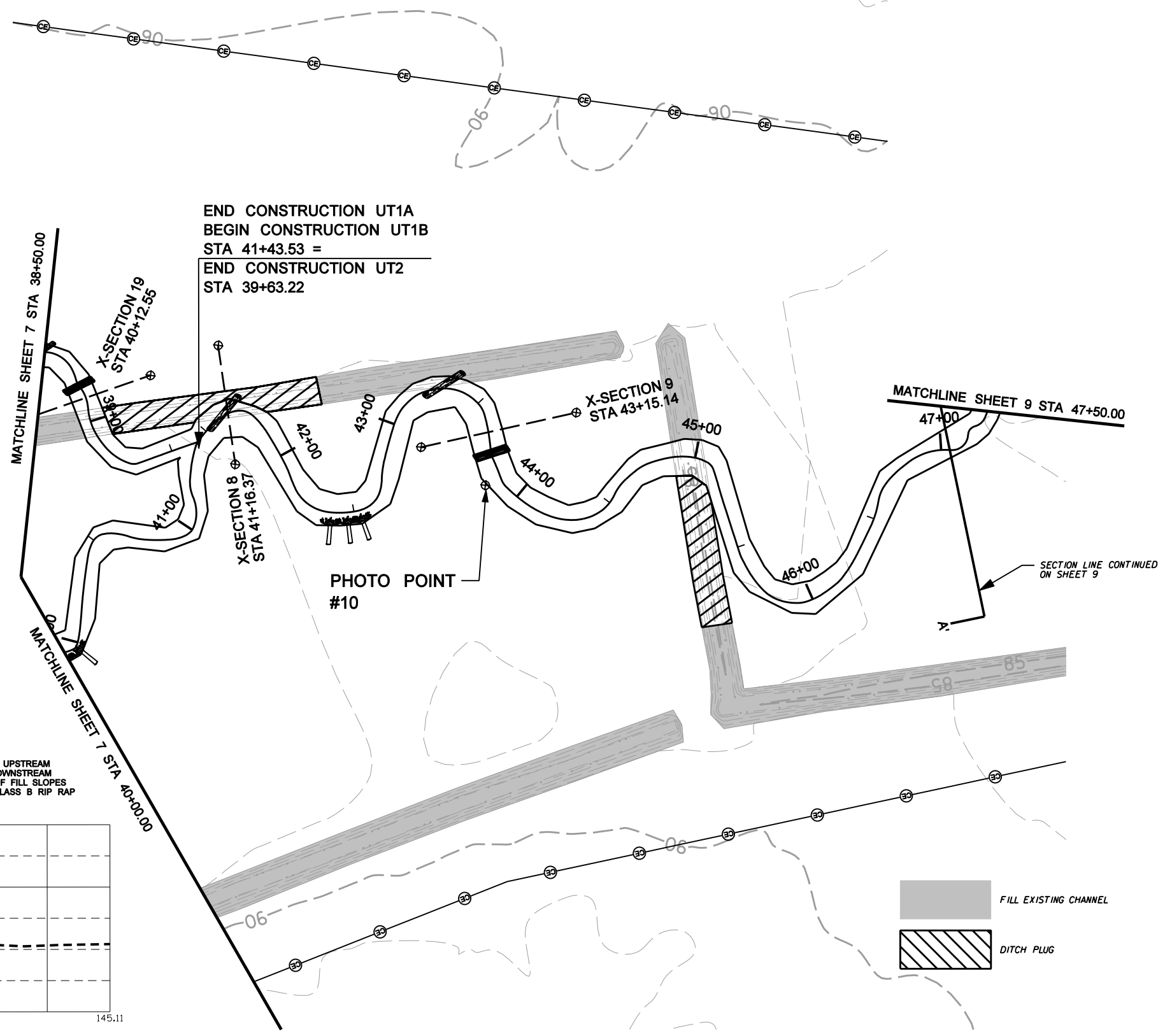
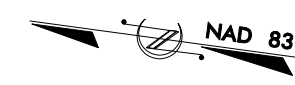
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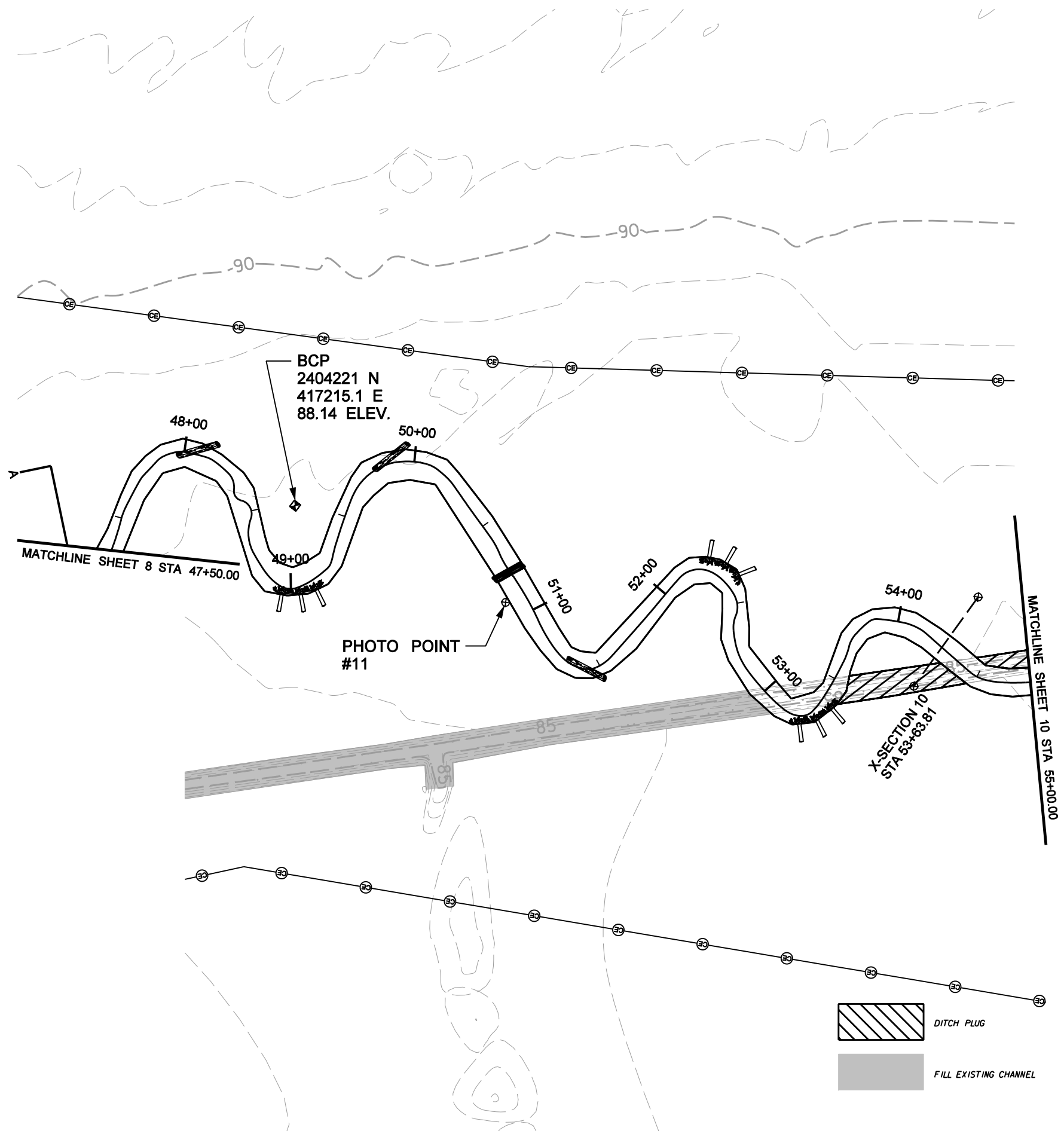
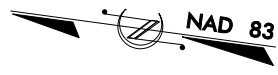


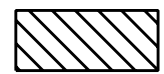
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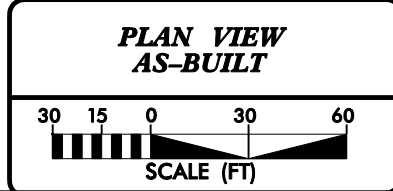
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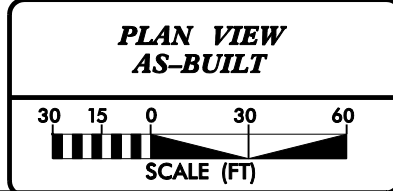
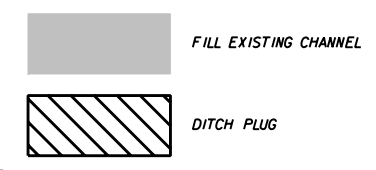
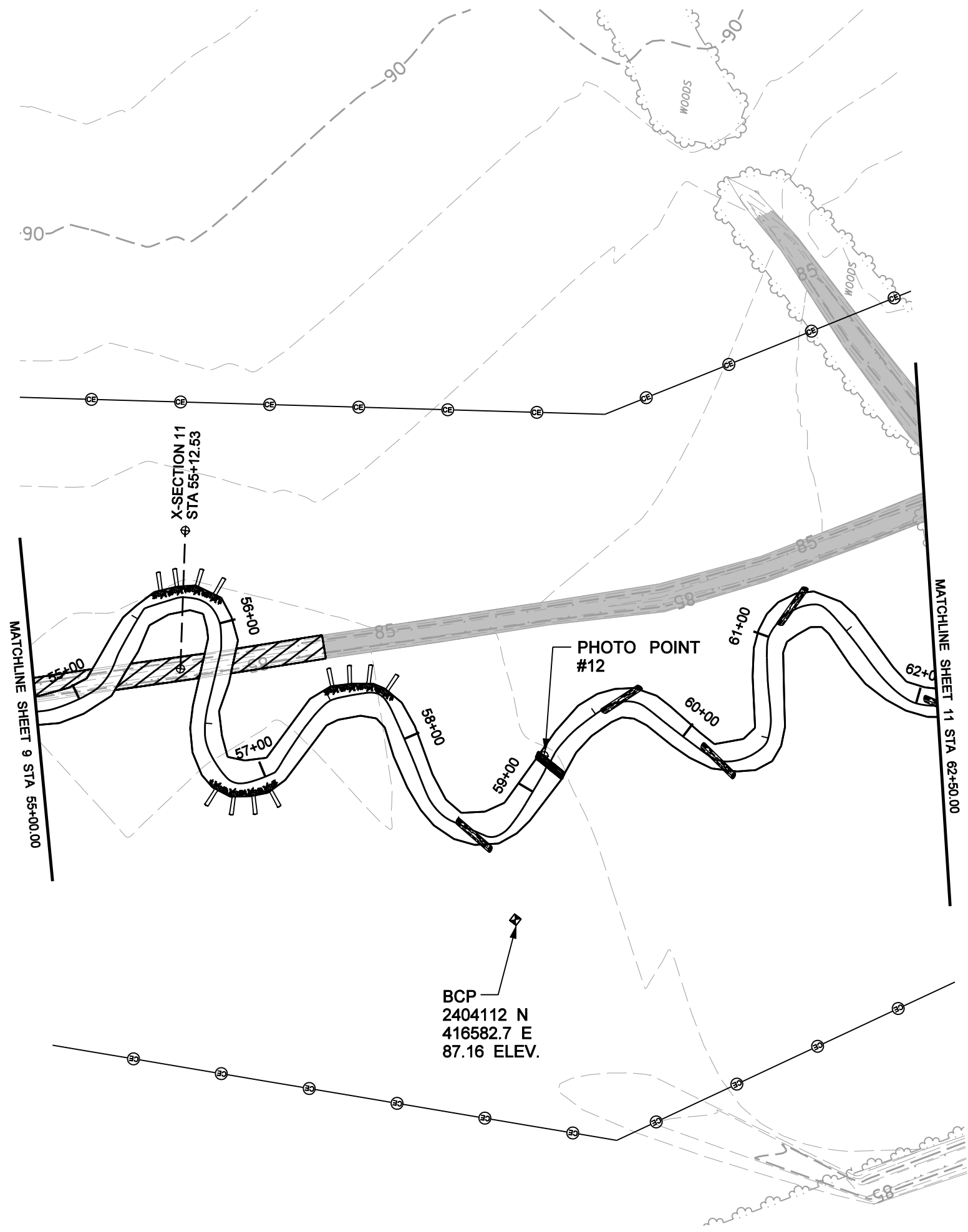
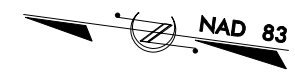
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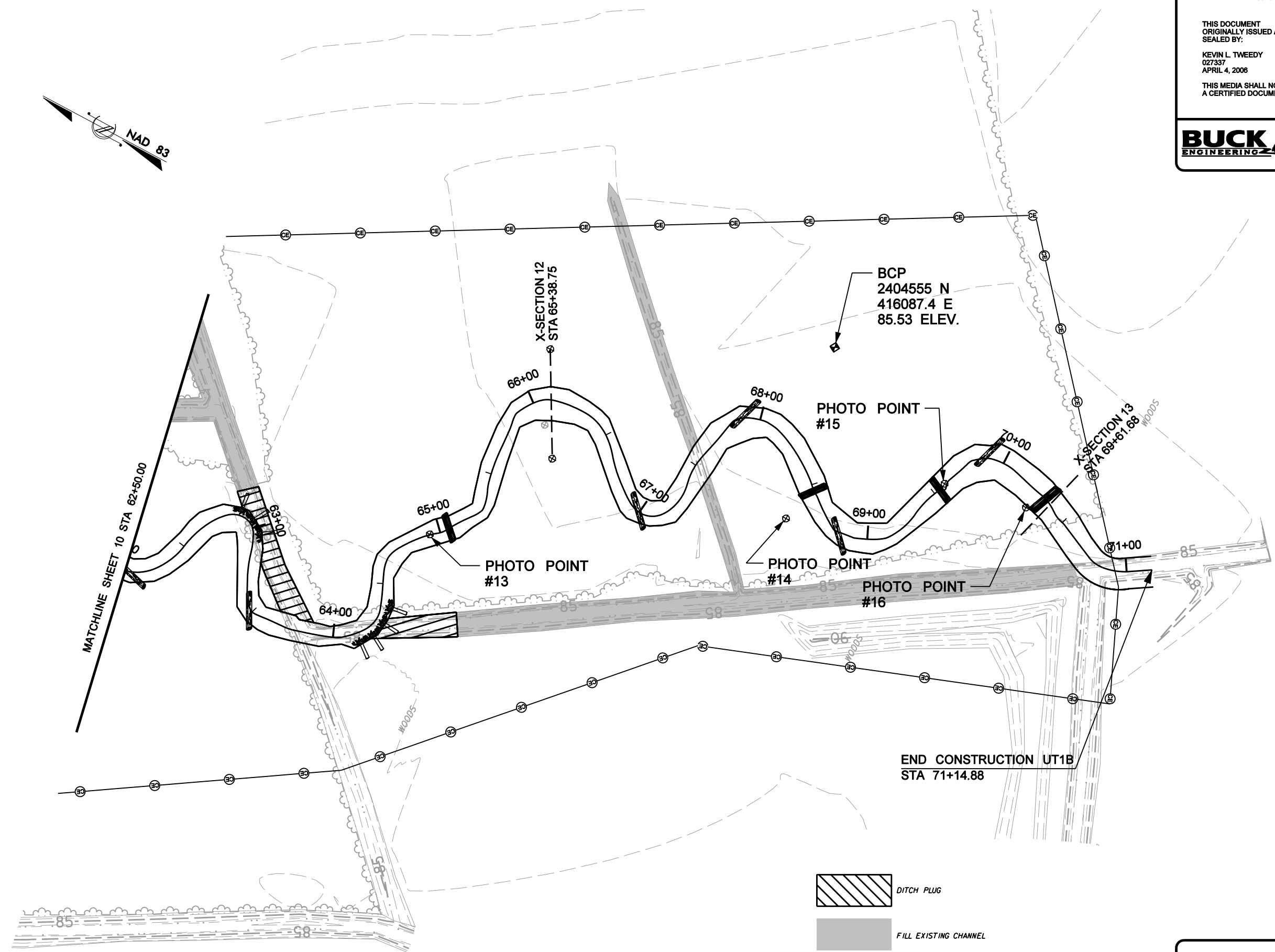
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BUCK ENGINEERING

8000 Regency Parkway Suite 200
Cary, North Carolina 27511
Phone: 919-463-5488
Fax: 919-463-5490



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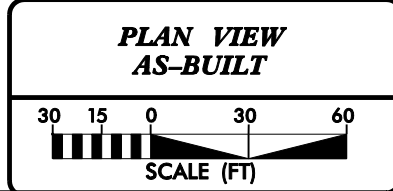
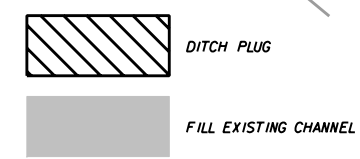
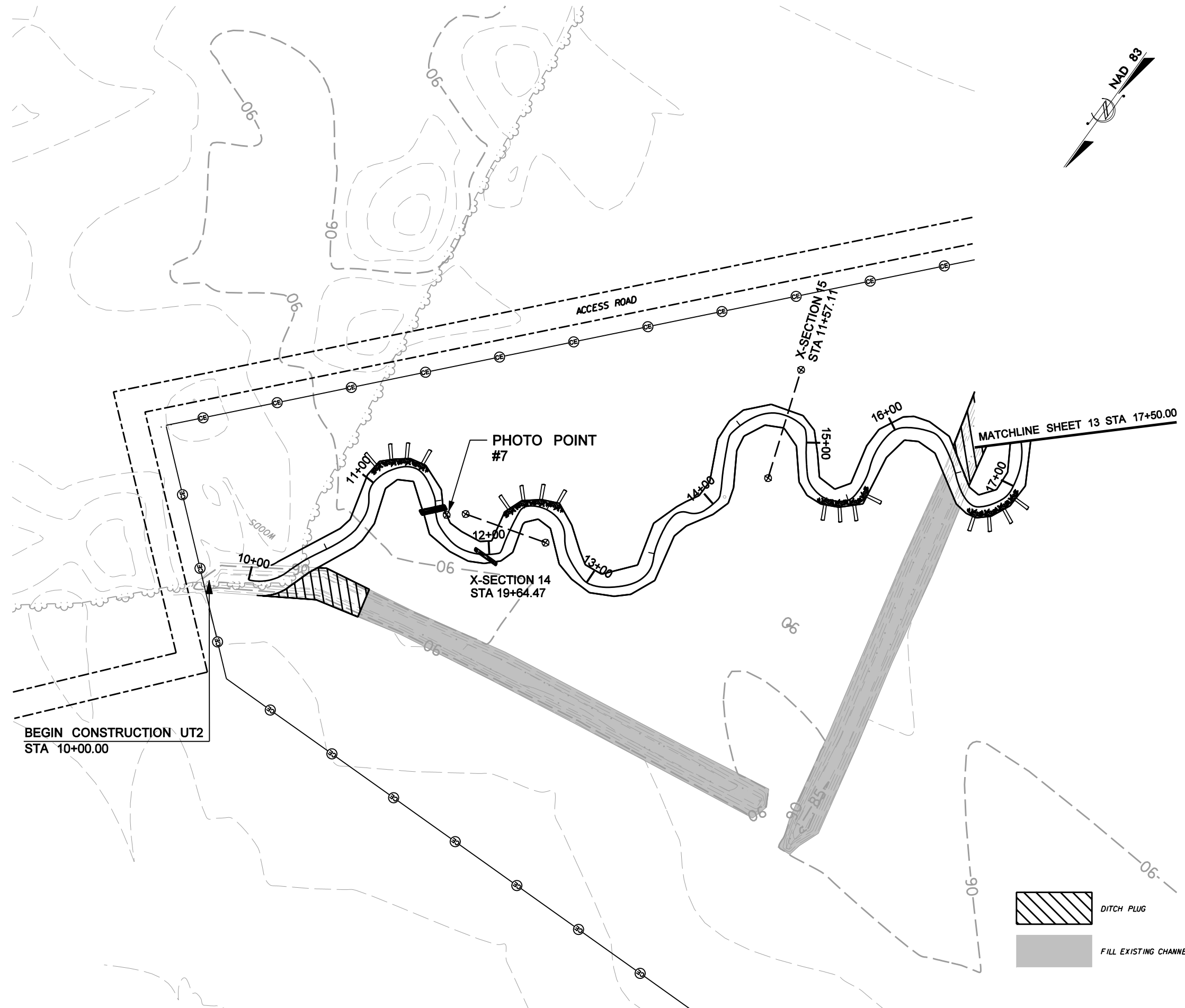
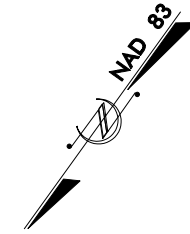
**PLAN VIEW
AS-BUILT**

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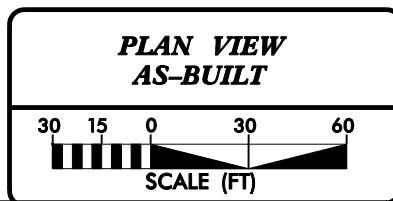
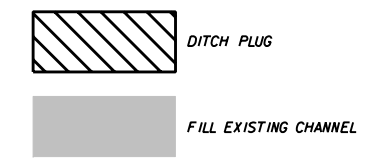
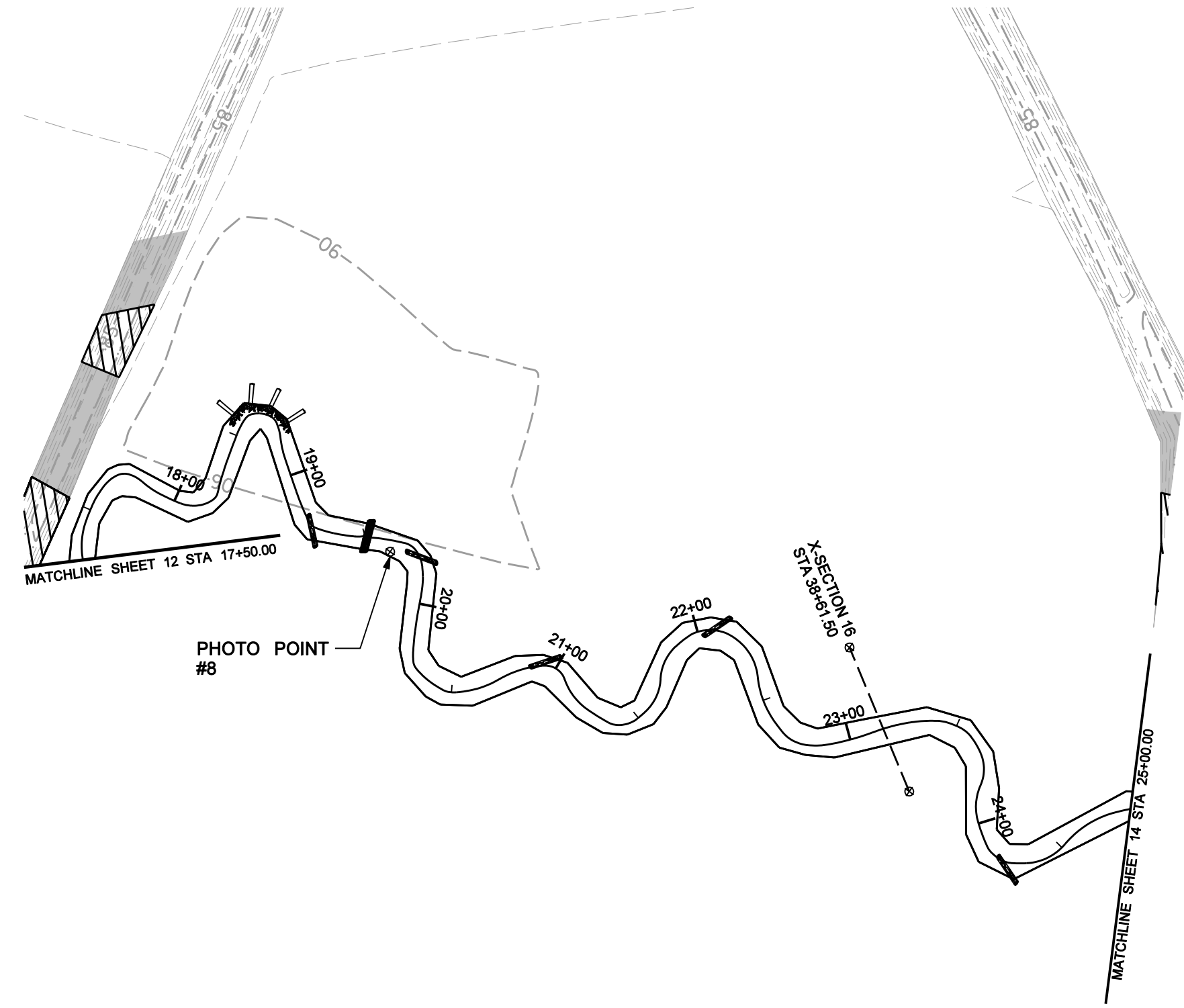
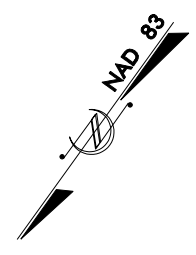


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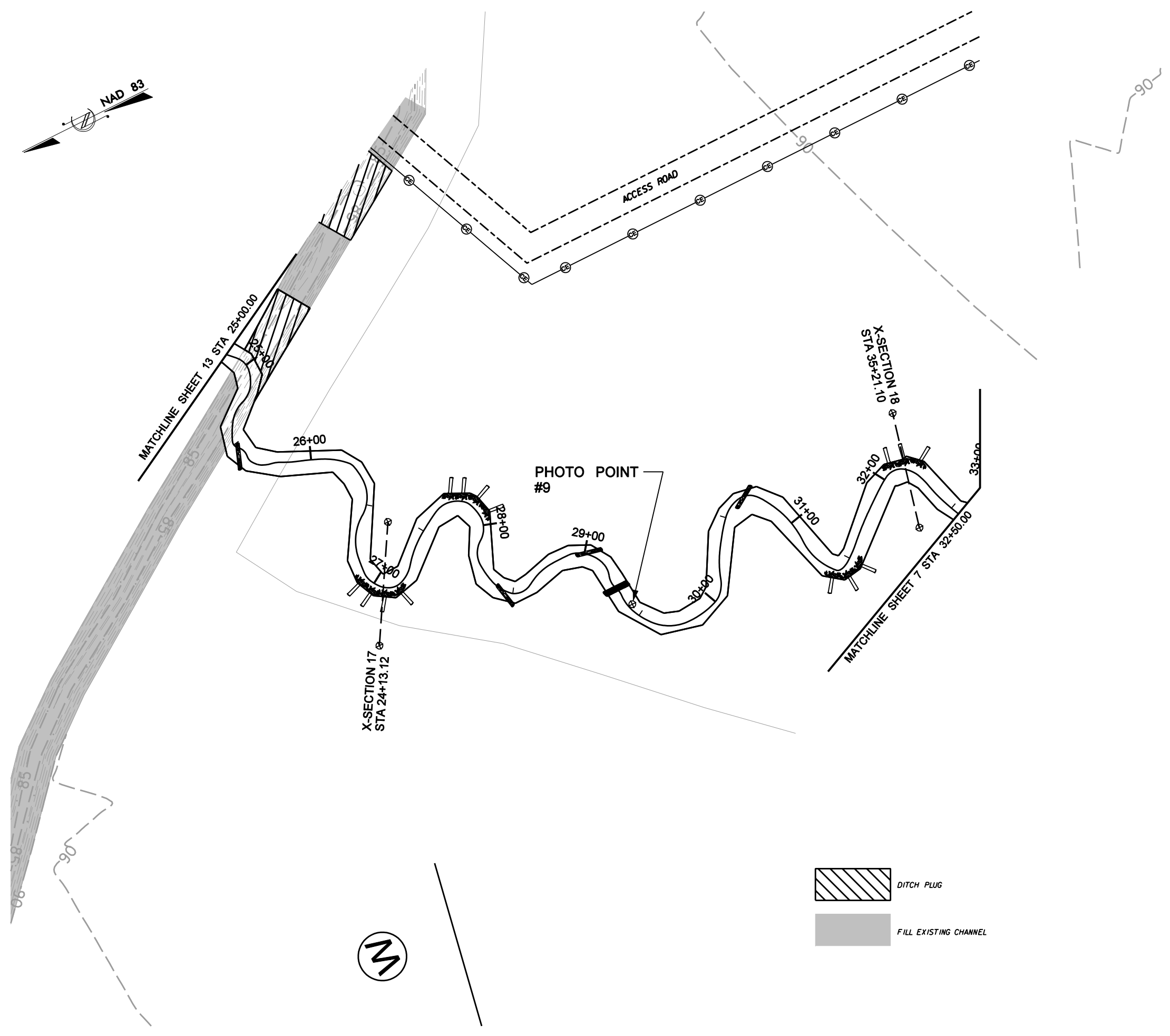
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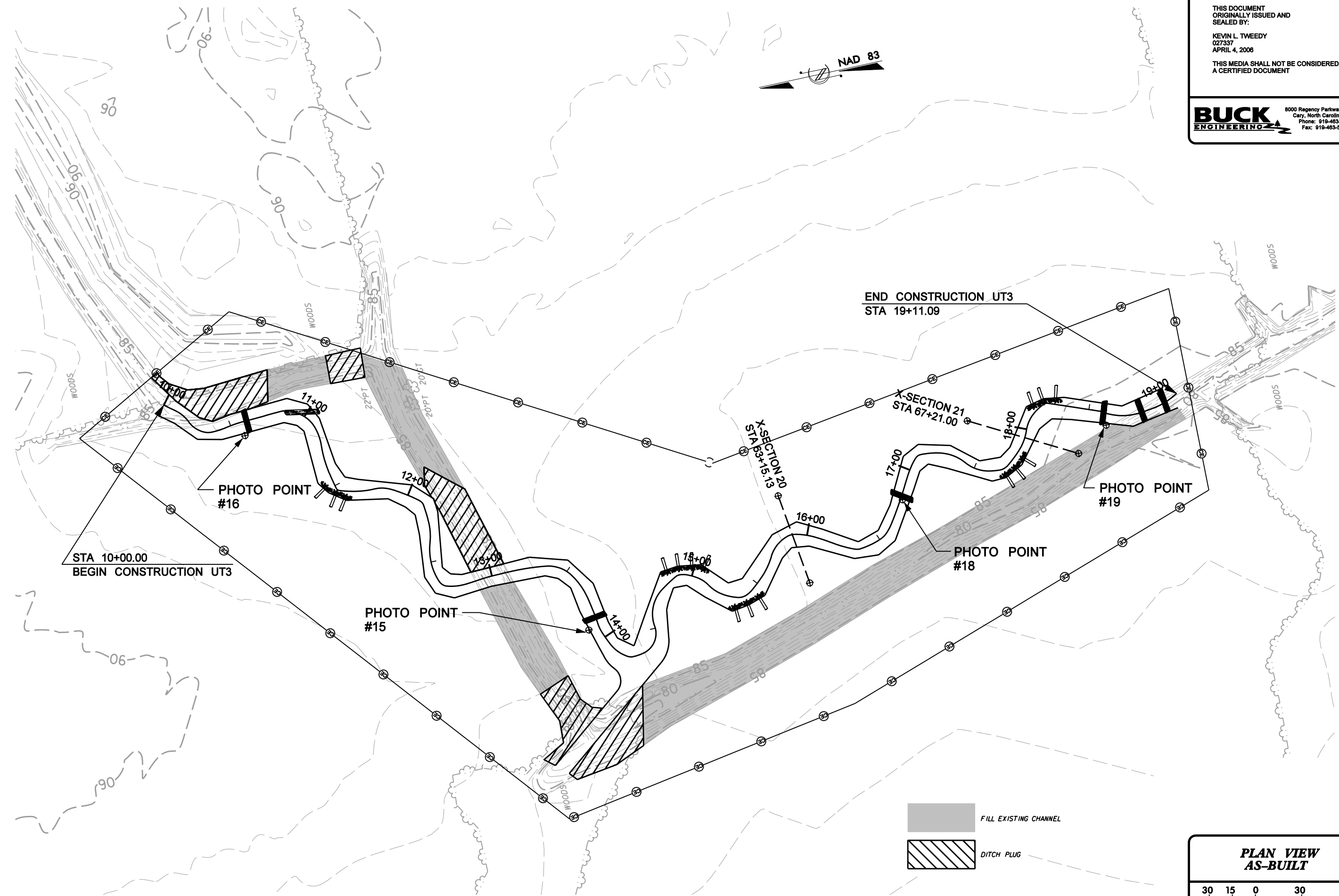
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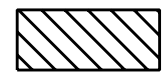
BUCK
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4/12/2006
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	FILL EXISTING CHANNEL
	DITCH PLUG

**PLAN VIEW
AS-BUILT**

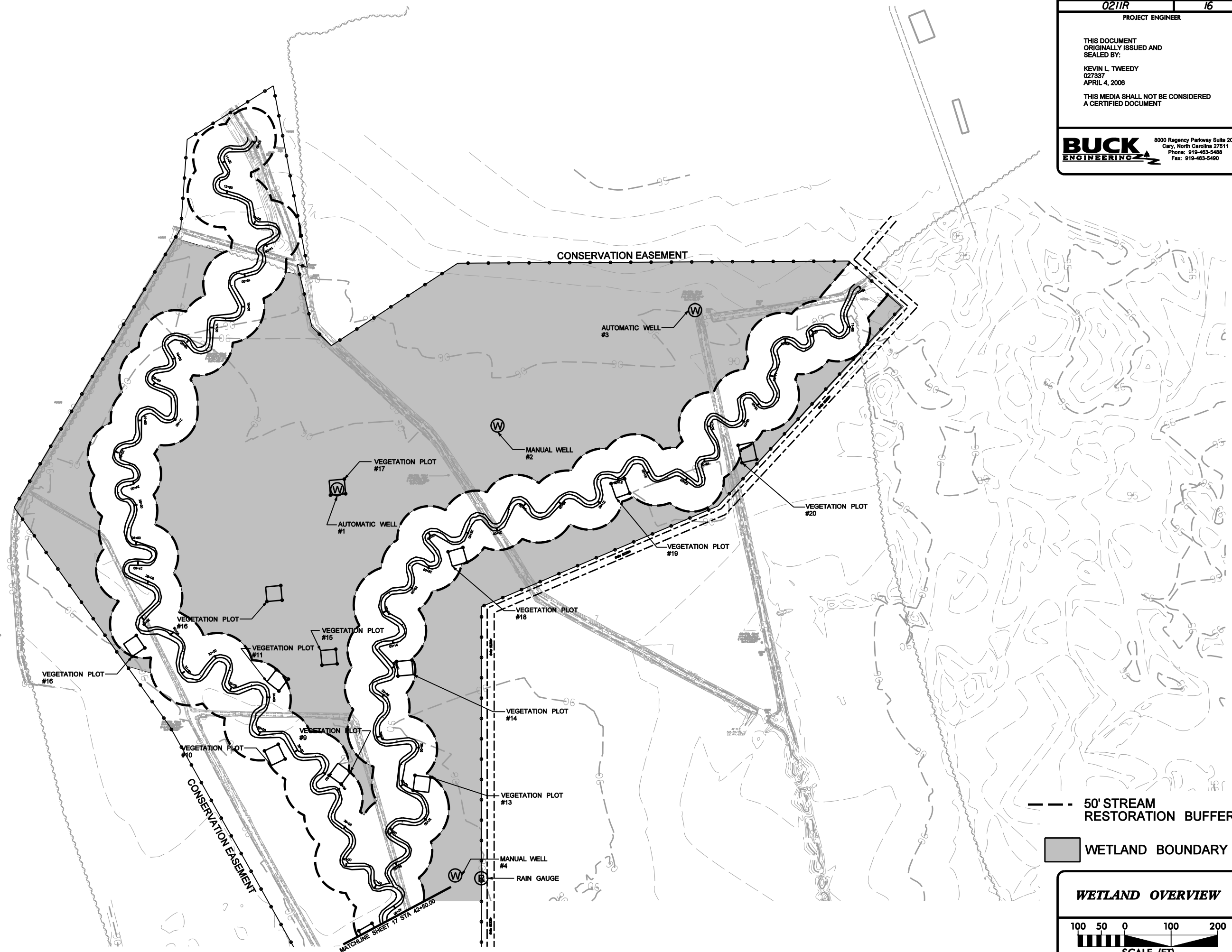


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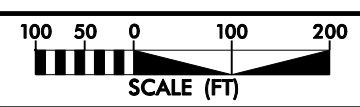
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--- 50' STREAM RESTORATION BUFFER

WETLAND BOUNDARY

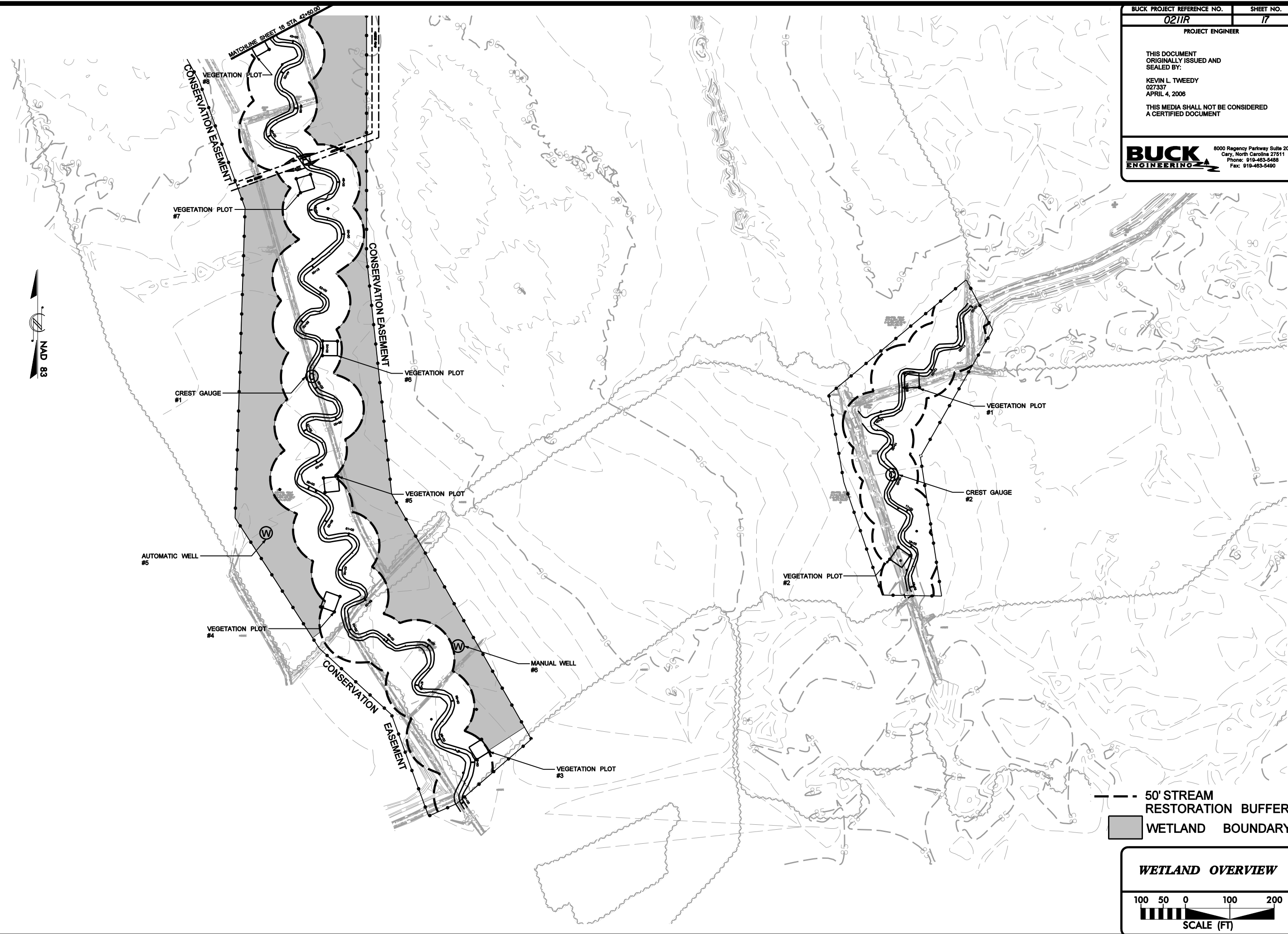
WETLAND OVERVIEW



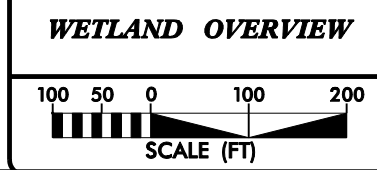
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--- 50' STREAM RESTORATION BUFFER
 [Grey Box] WETLAND BOUNDARY



2/26/03

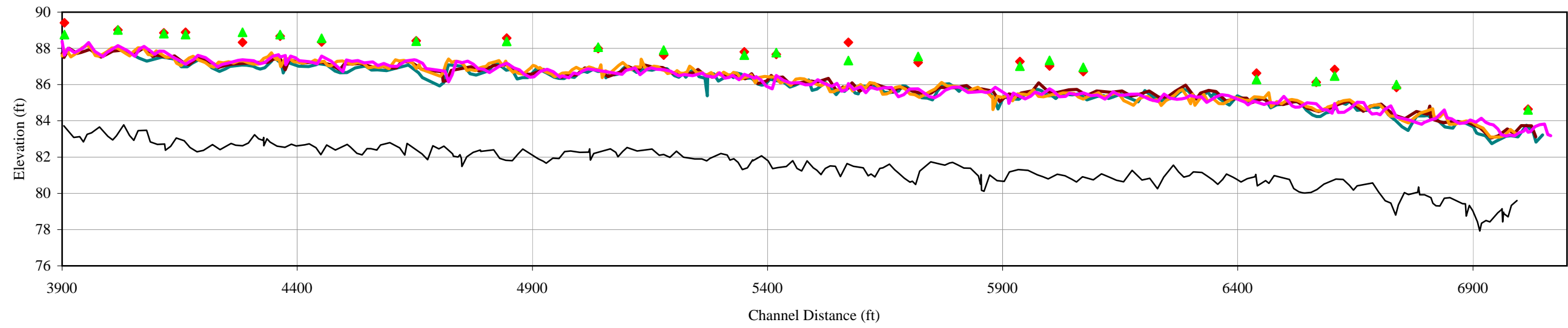
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APPENDIX B

2010 Profile and Cross Section Data

Haw Branch
Year 5 Profile
UT-1 Station 39+00 to 71+00

— As-Built (Offset -4ft) — Year 1 — Year 3 — Year 4 — Year 5 ◆ LTB ▲ RTB

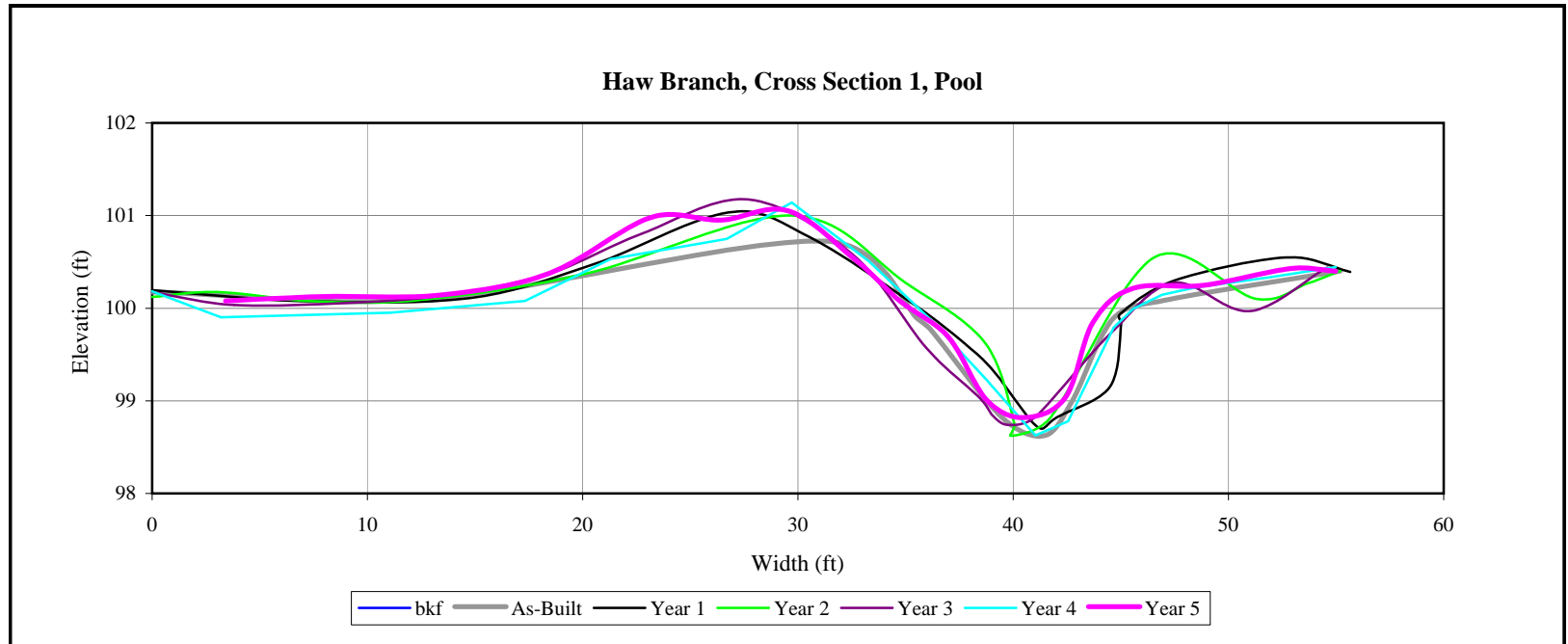




Looking at left bank.



Looking at right bank.

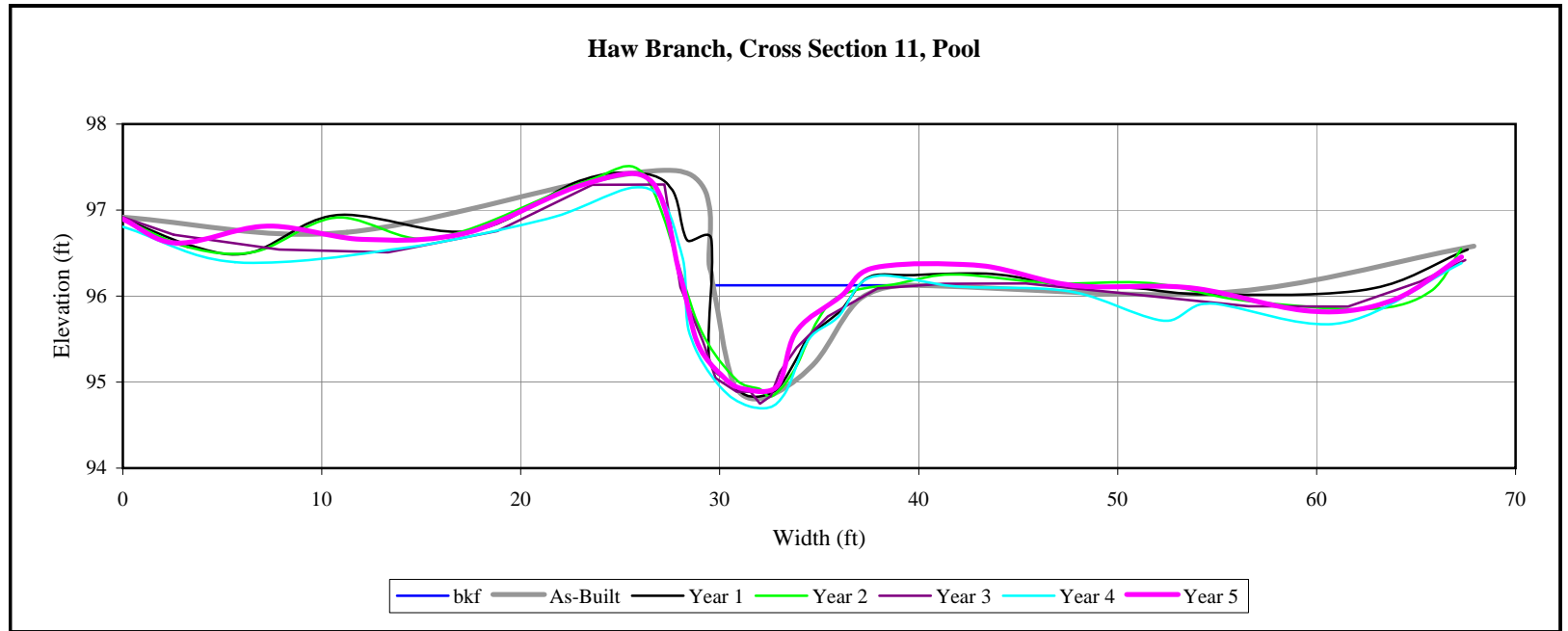




Looking at left bank.



Looking at right bank.

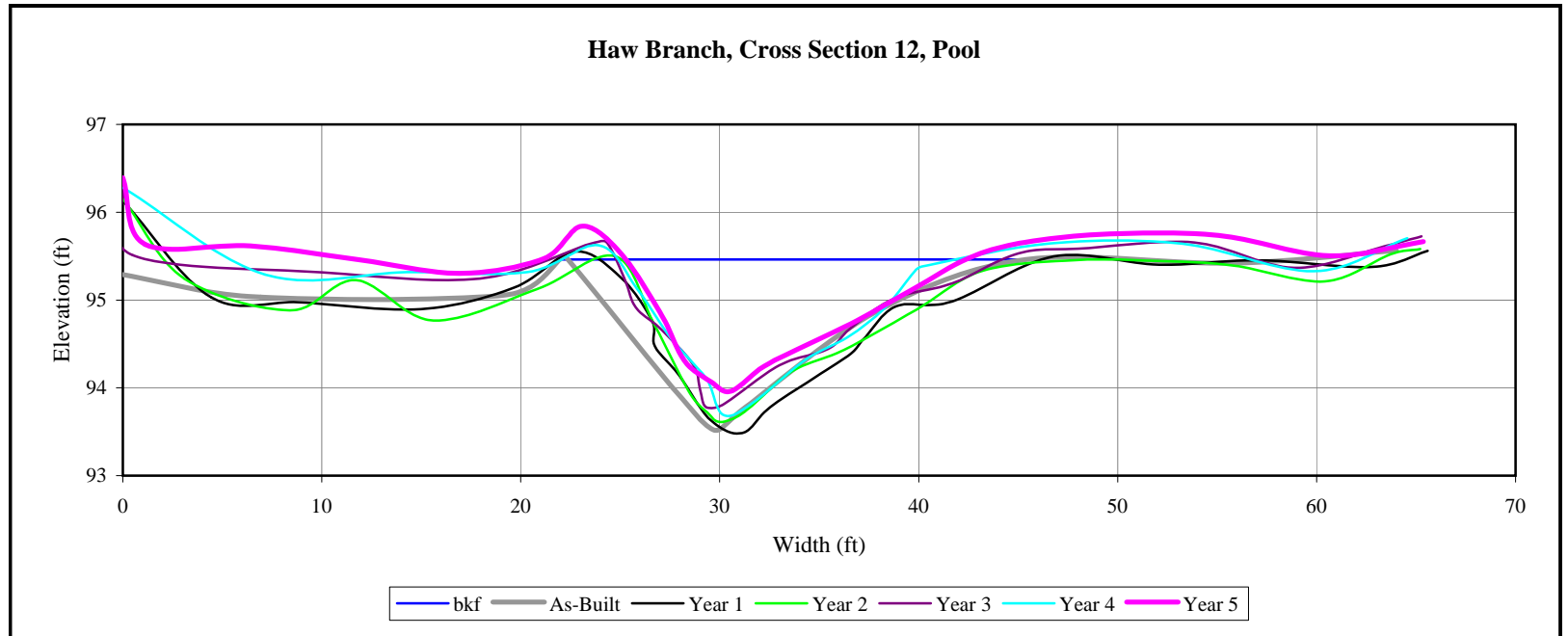




Looking at left bank.



Looking at right bank.

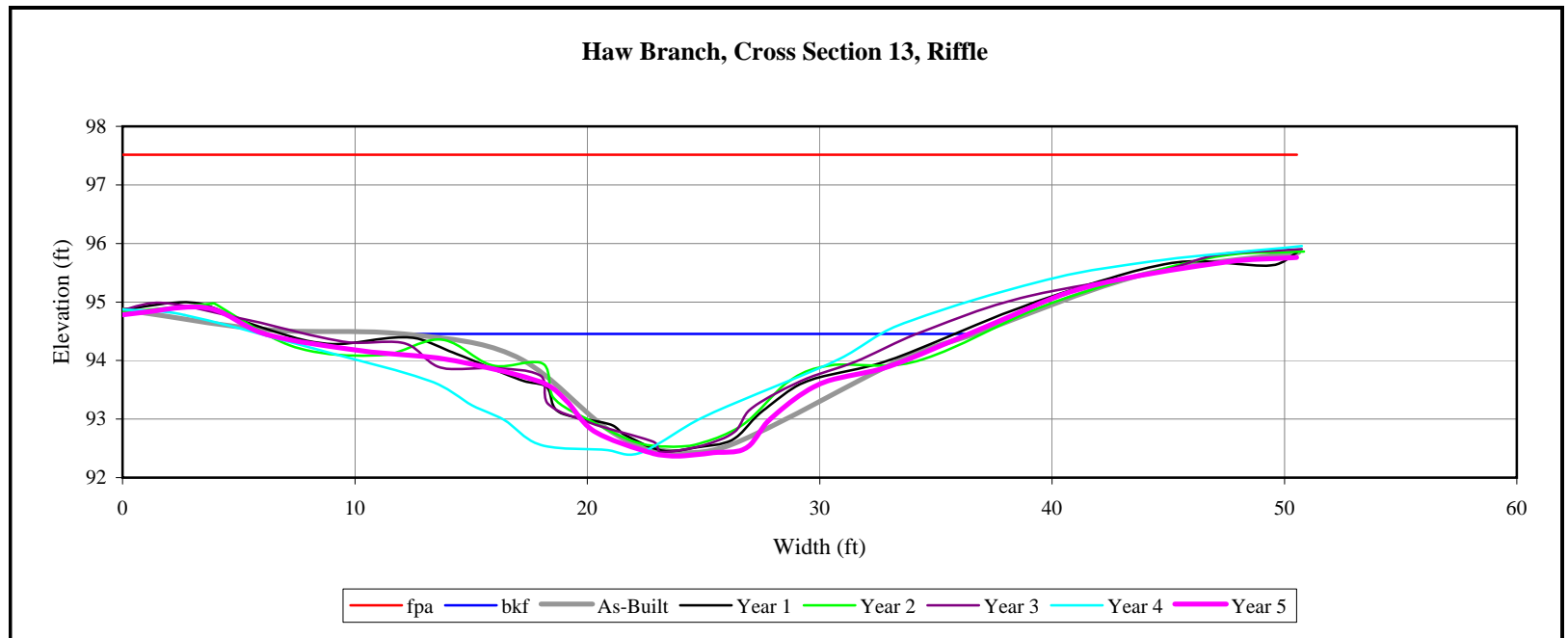




Looking at left bank.



Looking at right bank.

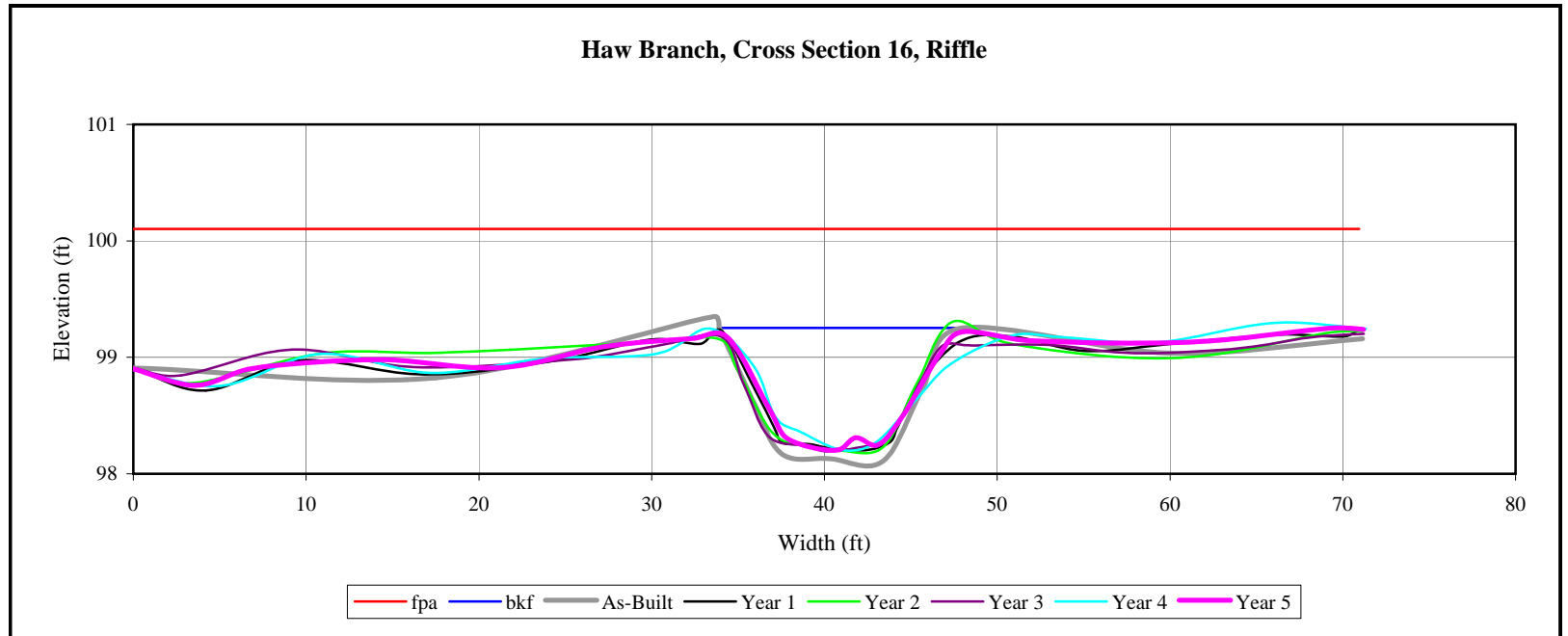




Looking at left bank.



Looking at right bank.

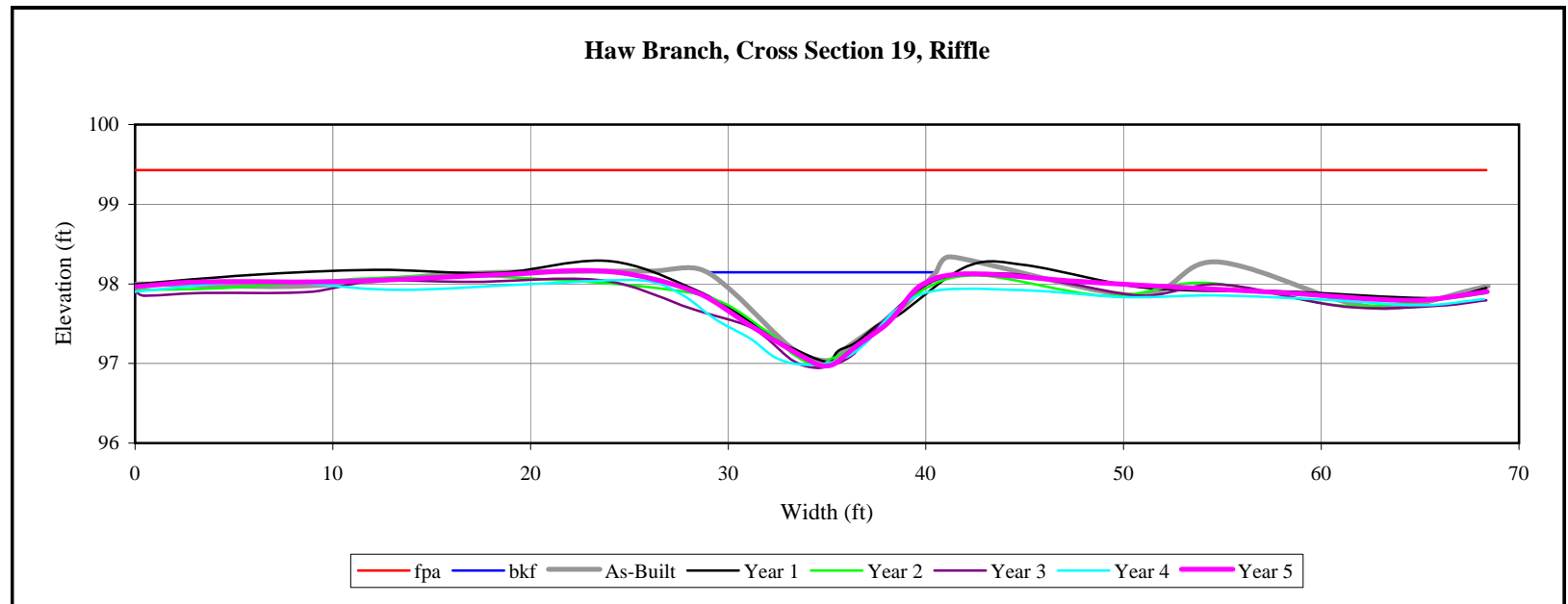




Looking at left bank.



Looking at right bank.



APPENDIX C

2010 Gauge Data

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
1-Jan-2010	06:00:00	2.85	1.93	1.22	2.48	1.36	3.63	-1.10	0.53	-12.63				0.05	
1-Jan-2010	12:00:00	3.04	2.14	0.70	2.96	1.60	3.96	-0.97	0.68	-12.99					
1-Jan-2010	18:00:00	3.10	2.20	0.51	2.21	0.26	2.88	-1.55	0.04	-14.04					
1-Jan-2010	24:00:00	3.21	2.15	0.47	2.53	-0.56	3.06	-1.39	0.20	-14.80					
2-Jan-2010	06:00:00	3.13	1.97	0.38	2.39	-3.09	2.86	-1.24	0.09	-15.78				0.01	
2-Jan-2010	12:00:00	3.03	1.90	0.27	3.08	-4.50	3.36	-1.09	0.41	-16.46					
2-Jan-2010	18:00:00	2.97	1.72	0.25	2.15	-7.06	2.11	-2.30	-0.97	-17.47					
2-Jan-2010	24:00:00	2.89	1.69	0.20	2.75	-7.61	2.62	-1.53	-0.39	-17.67					
3-Jan-2010	06:00:00	2.60	1.54	0.08	2.40	-9.11	2.10	-2.06	-0.91	-18.61				0.00	
3-Jan-2010	12:00:00	2.21	1.36	-0.04	2.54	-9.92	2.04	-2.45	-1.30	-19.02					
3-Jan-2010	18:00:00	1.91	1.26	-0.11	2.00	-11.42	1.29	-3.01	-2.17	-20.08					
3-Jan-2010	24:00:00	1.93	1.35	-0.01	2.36	-11.74	1.48	-2.68	-1.81	-19.99					
4-Jan-2010	06:00:00	1.58	1.20	-0.16	2.14	-12.68	0.91	-2.97	-2.13	-20.47				0.01	
4-Jan-2010	12:00:00	1.27	1.11	-0.26	2.52	-12.77	1.02	-2.96	-1.96	-20.56					
4-Jan-2010	18:00:00	1.23	1.17	-0.28	1.74	-14.34	0.12	-3.41	-3.01	-21.30					
4-Jan-2010	24:00:00	1.06	1.17	-0.27	2.26	-14.09	0.18	-3.03	-2.51	-21.06					
5-Jan-2010	06:00:00	0.77	1.09	-0.29	1.99	-14.82	-0.53	-3.73	-2.68	-21.42				0.00	
5-Jan-2010	12:00:00	0.35	0.84	-0.59	2.26	-14.64	-0.75	-3.50	-2.49	-21.50					
5-Jan-2010	18:00:00	0.67	0.98	-0.23	1.79	-15.77	-1.04	-3.20	-3.65	-22.08					
5-Jan-2010	24:00:00	0.71	1.25	-0.15	2.42	-15.48	-0.95	-3.11	-2.99	-21.61					
6-Jan-2010	06:00:00	0.31	0.93	-0.32	2.00	-15.96	-1.99	-3.97	-3.39	-22.08				0.00	
6-Jan-2010	12:00:00	-0.02	0.89	-0.49	2.27	-15.74	-2.34	-3.88	-3.16	-21.96					
6-Jan-2010	18:00:00	0.37	0.85	-0.37	1.51	-16.97	-2.22	-3.41	-4.31	-22.71					
6-Jan-2010	24:00:00	0.26	1.09	-0.29	2.16	-16.41	-1.93	-3.33	-3.62	-22.34					
7-Jan-2010	06:00:00	0.05	0.96	-0.34	1.90	-16.80	-3.13	-4.15	-4.00	-22.62				0.00	
7-Jan-2010	12:00:00	-0.32	0.71	-0.56	2.24	-16.58	-3.23	-4.05	-3.64	-22.40					
7-Jan-2010	18:00:00	0.16	0.82	-0.41	1.54	-17.69	-2.64	-3.53	-4.88	-22.90					
7-Jan-2010	24:00:00	0.04	0.89	-0.34	2.03	-17.32	-2.10	-3.03	-4.21	-22.83					
8-Jan-2010	06:00:00	0.33	0.98	-0.27	2.00	-17.38	-1.85	-2.98	-4.35	-23.12				0.03	
8-Jan-2010	12:00:00	0.25	1.03	-0.27	2.11	-17.32	-1.38	-2.87	-4.16	-22.88					
8-Jan-2010	18:00:00	0.15	1.07	-0.22	1.68	-17.81	-1.83	-3.87	-4.81	-23.11					
8-Jan-2010	24:00:00	-0.11	1.07	-0.29	2.18	-17.31	-1.81	-3.41	-4.22	-22.74					
9-Jan-2010	06:00:00	-0.22	0.97	-0.32	1.42	-18.03	-3.09	-4.21	-5.06	-23.17				0.00	
9-Jan-2010	12:00:00	-0.46	0.88	-0.50	2.00	-17.57	-3.11	-4.09	-4.77	-23.34					
9-Jan-2010	18:00:00	-0.49	0.73	-0.49	0.90	-18.86	-3.98	-4.70	-5.80	-23.83					
9-Jan-2010	24:00:00	-0.43	0.81	-0.58	1.63	-18.26	-3.83	-4.27	-5.03	-23.48					
10-Jan-2010	06:00:00	-0.79	0.66	-0.69	1.44	-18.39	-4.63	-5.13	-5.30	-23.77				0.00	
10-Jan-2010	12:00:00	-1.16	0.34	-0.99	1.74	-18.09	-4.51	-4.83	-4.95	-23.72					
10-Jan-2010	18:00:00	-0.58	0.54	-0.67	0.84	-19.35	-4.47	-4.75	-6.33	-24.28					
10-Jan-2010	24:00:00	-0.81	0.66	-0.55	1.69	-18.44	-4.45	-4.64	-5.33	-23.70					
11-Jan-2010	06:00:00	-1.30	0.36	-0.76	0.97	-18.92	-5.99	-6.28	-5.79	-23.98				0.00	
11-Jan-2010	12:00:00	-1.97	-0.12	-1.71	1.45	-18.44	-5.89	-6.32	-5.47	-24.01					
11-Jan-2010	18:00:00	-0.67	0.01	-1.11	1.02	-19.36	-4.67	-3.83	-6.28	-24.42					
11-Jan-2010	24:00:00	-0.61	0.54	-0.34	1.90	-18.45	-3.59	-3.49	-5.30	-23.97					
12-Jan-2010	06:00:00	-0.85	0.45	-0.51	1.07	-19.06	-4.11	-3.97	-6.01	-24.30				0.00	
12-Jan-2010	12:00:00	-1.06	0.45	-0.62	1.75	-18.56	-3.79	-3.81	-5.61	-24.12					
12-Jan-2010	18:00:00	-0.97	0.33	-0.69	0.84	-19.64	-3.83	-4.69	-6.67	-24.45					
12-Jan-2010	24:00:00	-1.01	0.53	-0.73	1.66	-18.77	-3.23	-4.12	-5.89	-24.16					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
13-Jan-2010	06:00:00	-1.19	0.54	-0.61	1.07	-19.34	-4.57	-5.09	-6.23	-24.42				0.00	
13-Jan-2010	12:00:00	-1.59	0.35	-0.83	1.42	-18.87	-4.93	-5.01	-5.86	-24.31					
13-Jan-2010	18:00:00	-0.94	0.34	-0.74	0.92	-19.58	-4.19	-4.88	-6.85	-24.90					
13-Jan-2010	24:00:00	-1.10	0.49	-0.61	1.25	-19.31	-4.38	-4.87	-6.51	-24.61					
14-Jan-2010	06:00:00	-1.40	0.36	-0.68	1.01	-19.52	-5.40	-5.29	-6.68	-24.52				0.00	
14-Jan-2010	12:00:00	-1.83	0.17	-0.88	1.54	-18.92	-5.34	-5.12	-6.16	-24.54					
14-Jan-2010	18:00:00	-1.21	0.30	-0.73	1.03	-19.56	-3.98	-4.46	-6.86	-24.98					
14-Jan-2010	24:00:00	-1.23	0.41	-0.53	1.33	-19.17	-3.89	-4.19	-6.40	-24.50					
15-Jan-2010	06:00:00	-1.36	0.29	-0.55	1.02	-19.59	-4.81	-5.09	-6.95	-24.90				0.00	
15-Jan-2010	12:00:00	-1.78	0.17	-0.75	1.37	-19.22	-4.89	-5.00	-6.71	-24.91					
15-Jan-2010	18:00:00	-1.42	0.19	-0.69	0.61	-19.97	-4.33	-5.23	-7.60	-25.18					
15-Jan-2010	24:00:00	-1.39	0.42	-0.57	1.09	-19.42	-4.20	-5.01	-7.07	-24.86					
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16-Jan-2010	12:00:00	-1.87	0.07	-0.80	1.30	-19.28	-4.62	-4.94	-7.07	-24.93					
16-Jan-2010	18:00:00	-1.63	0.11	-0.75	0.71	-19.77	-4.19	-5.20	-7.55	-25.51					
16-Jan-2010	24:00:00	-1.57	0.22	-0.59	1.32	-19.04	-3.63	-4.28	-6.93	-24.87					
17-Jan-2010	06:00:00	-1.18	0.27	-0.53	1.15	-18.98	-1.25	-1.11	-6.10	-24.85				1.41	
17-Jan-2010	12:00:00	1.91	1.15	0.47	3.02	-4.08	4.41	-0.59	0.41	-20.43					
17-Jan-2010	18:00:00	1.46	1.90	0.63	1.55	-5.79	2.55	-2.30	-0.77	-15.10					
17-Jan-2010	24:00:00	1.53	1.63	0.22	2.45	-4.53	3.57	-0.95	0.03	-15.15					
18-Jan-2010	06:00:00	1.31	1.55	0.41	2.12	-6.57	2.85	-1.64	-0.79	-15.90				0.01	
18-Jan-2010	12:00:00	1.24	1.51	0.27	2.72	-7.23	3.43	-1.24	-0.82	-16.78					
18-Jan-2010	18:00:00	0.97	1.35	0.05	1.56	-9.47	1.96	-2.61	-2.68	-18.20					
18-Jan-2010	24:00:00	0.86	1.29	0.01	2.41	-9.68	2.59	-2.01	-2.68	-18.75					
19-Jan-2010	06:00:00	0.80	1.20	0.08	1.90	-11.07	1.96	-2.62	-3.51	-19.72				0.00	
19-Jan-2010	12:00:00	0.61	1.18	-0.08	2.44	-11.40	2.16	-2.21	-3.59	-20.38					
19-Jan-2010	18:00:00	0.43	0.96	-0.14	1.52	-12.87	0.97	-3.41	-4.85	-21.26					
19-Jan-2010	24:00:00	0.52	1.08	-0.05	2.54	-12.57	1.62	-2.75	-4.43	-21.33					
20-Jan-2010	06:00:00	0.38	1.08	-0.02	2.08	-13.60	0.93	-2.98	-5.00	-21.88				0.00	
20-Jan-2010	12:00:00	0.44	1.25	-0.03	2.51	-13.49	1.17	-2.59	-4.73	-22.05					
20-Jan-2010	18:00:00	0.09	0.93	-0.26	1.43	-15.04	-0.29	-4.10	-6.15	-22.94					
20-Jan-2010	24:00:00	0.13	1.02	-0.23	1.96	-14.74	0.05	-3.52	-5.69	-23.00					
21-Jan-2010	06:00:00	0.08	0.93	-0.10	2.11	-14.99	-0.13	-3.28	-5.72	-23.13				0.65	
21-Jan-2010	12:00:00	0.09	1.03	-0.04	2.66	-14.80	0.27	-2.83	-5.29	-23.00					
21-Jan-2010	18:00:00	0.08	0.95	-0.03	2.42	-15.14	0.52	-1.72	-6.08	-23.61					
21-Jan-2010	24:00:00	1.84	1.57	0.82	2.22	-7.64	2.47	-0.85	-1.73	-20.83					
22-Jan-2010	06:00:00	2.31	2.32	2.15	3.05	1.76	4.65	-0.55	1.13	-13.05				0.24	
22-Jan-2010	12:00:00	1.94	2.15	1.03	2.83	1.99	4.23	-0.41	0.92	-12.36					
22-Jan-2010	18:00:00	2.19	1.90	1.09	2.14	1.38	3.41	-1.43	-0.03	-13.12					
22-Jan-2010	24:00:00	2.43	1.75	0.83	2.47	1.34	3.52	-1.37	-0.13	-13.98					
23-Jan-2010	06:00:00	2.59	1.75	0.64	1.87	0.28	2.82	-1.70	-0.85	-15.15				0.00	
23-Jan-2010	12:00:00	2.61	1.77	0.61	3.07	0.04	3.81	-0.70	-0.03	-16.10					
23-Jan-2010	18:00:00	2.49	1.54	0.33	2.02	-3.45	2.37	-2.11	-1.64	-17.46					
23-Jan-2010	24:00:00	2.61	1.54	0.52	3.02	-4.44	3.18	-1.07	-0.98	-17.89					
24-Jan-2010	06:00:00	2.56	1.56	0.39	2.47	-6.57	2.56	-1.49	-1.94	-18.88				0.00	
24-Jan-2010	12:00:00	2.47	1.55	0.47	2.59	-7.68	2.59	-1.41	-2.05	-19.39					
24-Jan-2010	18:00:00	2.11	1.21	0.23	1.90	-9.35	1.73	-2.43	-3.19	-20.26					
24-Jan-2010	24:00:00	2.07	1.32	0.28	2.48	-9.66	2.11	-1.82	-2.63	-20.26					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
25-Jan-2010	06:00:00	2.13	1.27	0.22	1.98	-10.62	1.62	-1.79	-3.07	-20.55					1.12
25-Jan-2010	12:00:00	3.29	2.49	3.32	4.94	4.44	7.51	1.96	3.52	-7.77					
25-Jan-2010	18:00:00	4.54	5.68	3.23	7.63	3.84	9.64	0.79	2.25	2.22					
25-Jan-2010	24:00:00	4.36	4.51	1.90	7.46	4.32	10.21	0.38	2.21	0.12					
26-Jan-2010	06:00:00	4.28	4.06	1.55	5.92	3.21	8.16	-0.05	1.63	-2.41				0.00	
26-Jan-2010	12:00:00	4.16	3.78	1.06	5.54	3.16	7.31	0.23	1.87	-4.83					
26-Jan-2010	18:00:00	4.01	3.46	0.89	3.34	1.28	4.59	-1.53	-0.02	-7.45					
26-Jan-2010	24:00:00	3.87	3.29	0.58	3.53	1.66	4.39	-0.76	0.76	-9.40					
27-Jan-2010	06:00:00	3.75	3.06	0.50	2.83	1.17	3.63	-0.99	0.52	-11.26				0.00	
27-Jan-2010	12:00:00	3.70	2.83	0.38	3.07	1.00	3.93	-0.63	0.97	-12.81					
27-Jan-2010	18:00:00	3.51	2.51	0.17	2.04	-0.99	2.74	-2.12	-0.41	-14.32					
27-Jan-2010	24:00:00	3.49	2.39	0.15	2.46	-2.10	2.97	-1.70	-0.13	-14.79					
28-Jan-2010	06:00:00	3.45	2.16	0.22	2.24	-3.87	2.63	-1.71	-0.14	-15.79				0.00	
28-Jan-2010	12:00:00	3.26	2.03	0.25	2.64	-4.77	3.04	-1.48	0.05	-16.71					
28-Jan-2010	18:00:00	2.96	1.71	0.15	1.27	-7.23	1.35	-3.16	-1.55	-17.76					
28-Jan-2010	24:00:00	2.74	1.59	0.02	2.05	-7.76	2.02	-2.47	-0.63	-17.89					
29-Jan-2010	06:00:00	2.72	1.65	0.19	2.26	-8.93	2.13	-2.51	-0.74	-18.33				0.00	
29-Jan-2010	12:00:00	2.36	1.47	0.08	2.60	-9.62	2.40	-2.24	-0.71	-18.75					
29-Jan-2010	18:00:00	2.05	1.33	0.10	1.75	-11.49	1.07	-3.98	-2.01	-19.71					
29-Jan-2010	24:00:00	1.94	1.36	-0.05	1.99	-11.85	1.29	-3.28	-1.47	-19.44					
30-Jan-2010	06:00:00	1.90	1.43	0.10	2.50	-12.02	1.50	-2.37	-1.36	-20.02				0.75	
30-Jan-2010	12:00:00	1.96	1.65	0.41	2.86	-9.51	2.45	-0.34	-0.45	-19.78					
30-Jan-2010	18:00:00	2.60	2.23	1.60	2.21	-1.31	3.83	-1.37	0.37	-17.07					
30-Jan-2010	24:00:00	2.43	2.34	1.31	2.46	0.24	3.65	-1.23	0.69	-12.26					
31-Jan-2010	06:00:00	2.61	1.98	0.58	2.18	-1.43	2.94	-1.60	0.39	-12.78				0.02	
31-Jan-2010	12:00:00	2.66	1.62	0.29	2.42	-3.54	2.94	-1.31	0.75	-14.18					
31-Jan-2010	18:00:00	2.41	1.55	0.20	2.20	-4.18	2.61	-1.73	0.05	-15.55					
31-Jan-2010	24:00:00	2.44	1.75	0.39	2.62	-5.76	2.74	-1.55	0.37	-15.44					4.30
1-Feb-2010	06:00:00	2.29	1.67	0.22	2.26	-7.70	2.34	-1.99	-0.05	-16.36				0.00	
1-Feb-2010	12:00:00	1.99	1.42	0.09	2.69	-8.93	2.35	-1.82	0.20	-17.18					
1-Feb-2010	18:00:00	2.06	1.44	0.22	1.96	-9.87	1.90	-1.95	-0.62	-18.07					
1-Feb-2010	24:00:00	2.00	1.39	0.28	2.50	-10.38	2.22	-1.71	-0.23	-17.86					
2-Feb-2010	06:00:00	1.79	1.53	0.33	2.41	-11.48	1.98	-1.96	-0.56	-18.60				0.63	
2-Feb-2010	12:00:00	1.61	1.41	0.29	2.68	-11.87	1.99	-1.69	-0.44	-18.87					
2-Feb-2010	18:00:00	1.83	1.48	0.38	2.16	-8.21	2.32	-1.34	-0.51	-19.29					
2-Feb-2010	24:00:00	1.82	1.67	0.88	2.20	-7.60	2.59	-1.22	0.34	-16.29					
3-Feb-2010	06:00:00	1.83	1.72	0.67	2.32	-8.06	2.74	-1.41	0.28	-15.90				0.06	
3-Feb-2010	12:00:00	1.91	1.87	0.59	2.62	-9.10	2.98	-1.09	0.70	-15.81					
3-Feb-2010	18:00:00	1.67	1.61	0.23	2.11	-10.47	2.20	-2.01	-0.26	-16.78					
3-Feb-2010	24:00:00	1.81	1.66	0.41	2.74	-10.90	2.79	-1.49	0.17	-16.98					
4-Feb-2010	06:00:00	1.79	1.56	0.51	2.34	-12.21	2.23	-2.06	-0.58	-17.91				0.00	
4-Feb-2010	12:00:00	1.69	1.55	0.31	2.89	-12.24	2.73	-1.43	-0.32	-18.22					
4-Feb-2010	18:00:00	1.52	1.37	0.23	2.11	-13.42	1.78	-2.54	-1.52	-19.39					
4-Feb-2010	24:00:00	1.49	1.39	0.19	2.66	-13.40	2.01	-2.06	-1.28	-19.26					
5-Feb-2010	06:00:00	1.35	1.21	0.27	2.11	-14.27	1.19	-2.08	-1.41	-20.11				2.20	
5-Feb-2010	12:00:00	1.34	1.39	0.35	2.42	-14.39	1.26	-2.26	-1.75	-19.94					
5-Feb-2010	18:00:00	1.73	1.32	0.44	2.63	-8.79	3.19	-0.26	-0.08	-20.34					
5-Feb-2010	24:00:00	2.74	2.47	2.43	3.44	3.82	8.55	0.29	1.54	-9.78					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
6-Feb-2010	06:00:00	6.50	8.86	6.17	16.97	8.04	20.47	3.63	4.95	5.54					0.07
6-Feb-2010	12:00:00	7.31	6.60	3.69	16.43	8.30	20.51	3.32	3.89	4.16					
6-Feb-2010	18:00:00	6.88	5.82	2.86	13.98	6.81	18.33	2.05	2.53	2.97					
6-Feb-2010	24:00:00	6.28	5.16	2.14	12.32	6.88	17.43	2.53	2.62	2.08					
7-Feb-2010	06:00:00	5.59	4.79	1.88	9.86	5.43	15.17	1.89	1.91	-0.61					0.00
7-Feb-2010	12:00:00	5.13	4.45	1.45	8.62	4.78	12.67	1.70	1.79	-2.55					
7-Feb-2010	18:00:00	4.65	4.23	1.28	6.66	3.44	9.00	0.50	0.75	-4.95					
7-Feb-2010	24:00:00	4.51	4.02	0.95	6.44	3.55	8.38	0.71	1.27	-6.90					
8-Feb-2010	06:00:00	4.34	3.83	1.00	5.11	2.64	6.90	0.10	0.89	-9.12					0.00
8-Feb-2010	12:00:00	4.07	3.66	0.75	4.74	2.70	6.11	-0.11	1.00	-10.88					
8-Feb-2010	18:00:00	3.88	3.40	0.63	3.22	1.41	4.13	-0.85	0.38	-12.57					
8-Feb-2010	24:00:00	3.97	3.36	0.56	3.25	1.71	4.09	-0.67	0.70	-13.11					
9-Feb-2010	06:00:00	3.91	3.18	0.49	2.82	0.96	3.59	-0.59	0.89	-13.96					0.37
9-Feb-2010	12:00:00	3.87	2.89	0.61	3.19	0.57	3.76	-0.58	0.83	-14.77					
9-Feb-2010	18:00:00	3.64	2.62	0.27	2.54	-0.20	3.17	-1.53	-0.02	-15.68					
9-Feb-2010	24:00:00	3.91	2.73	1.22	3.16	1.26	4.14	-0.39	1.30	-13.06					
10-Feb-2010	06:00:00	3.70	2.64	0.94	1.97	-0.28	2.71	-1.70	0.10	-13.10					0.00
10-Feb-2010	12:00:00	3.68	2.57	0.43	3.58	0.51	4.30	-0.26	1.66	-13.23					
10-Feb-2010	18:00:00	3.69	2.40	0.64	2.10	-2.42	2.57	-1.94	0.11	-14.38					
10-Feb-2010	24:00:00	3.58	2.13	0.49	2.63	-3.63	3.04	-1.17	0.58	-14.74					
11-Feb-2010	06:00:00	3.49	1.99	0.39	2.54	-5.24	3.03	-1.43	0.29	-15.64					0.00
11-Feb-2010	12:00:00	3.31	1.79	0.27	2.72	-6.40	3.01	-1.30	0.44	-16.28					
11-Feb-2010	18:00:00	2.99	1.69	0.13	1.73	-8.37	1.89	-2.83	-0.85	-17.26					
11-Feb-2010	24:00:00	2.92	1.60	-0.03	2.35	-9.03	2.26	-2.27	-0.33	-17.74					
12-Feb-2010	06:00:00	2.77	1.48	0.16	2.20	-10.18	2.02	-2.49	-0.47	-17.95					0.00
12-Feb-2010	12:00:00	2.53	1.43	0.08	2.88	-10.30	2.61	-1.93	0.02	-18.20					
12-Feb-2010	18:00:00	2.33	1.38	0.15	1.97	-11.99	1.41	-2.96	-1.05	-18.97					
12-Feb-2010	24:00:00	2.11	1.38	0.19	2.42	-12.21	1.53	-2.00	-0.45	-19.17					
13-Feb-2010	06:00:00	2.11	1.38	0.23	1.75	-13.26	0.97	-2.65	-1.23	-19.47					0.47
13-Feb-2010	12:00:00	2.03	1.45	0.27	2.48	-12.82	1.84	-1.85	-0.33	-19.46					
13-Feb-2010	18:00:00	1.88	1.41	0.22	2.34	-12.72	2.67	-1.55	-0.47	-19.36					
13-Feb-2010	24:00:00	2.17	1.78	1.15	2.68	-11.34	3.03	-1.18	0.17	-18.78					
14-Feb-2010	06:00:00	1.97	1.83	0.64	2.65	-12.10	2.71	-1.39	-0.05	-18.38					0.10
14-Feb-2010	12:00:00	1.72	1.63	0.43	2.72	-12.75	2.61	-1.36	-0.13	-18.50					
14-Feb-2010	18:00:00	1.84	1.49	0.39	2.06	-9.22	2.27	-1.29	-0.73	-19.41					
14-Feb-2010	24:00:00	1.71	1.53	0.47	2.84	-8.88	3.01	-0.88	0.58	-17.32					
15-Feb-2010	06:00:00	1.76	1.77	0.63	2.65	-10.50	2.56	-1.22	0.22	-17.32					0.02
15-Feb-2010	12:00:00	1.57	1.71	0.38	2.89	-11.15	2.69	-1.15	0.20	-17.86					
15-Feb-2010	18:00:00	1.55	1.48	0.35	1.74	-11.45	1.56	-2.00	-0.77	-17.68					
15-Feb-2010	24:00:00	1.52	1.45	0.34	2.53	-11.33	2.34	-1.52	-0.33	-17.65					
16-Feb-2010	06:00:00	1.57	1.62	0.49	2.35	-12.18	2.11	-1.71	-0.49	-17.72					0.00
16-Feb-2010	12:00:00	1.30	1.53	0.38	2.76	-12.58	2.33	-1.30	-0.04	-18.32					
16-Feb-2010	18:00:00	1.10	1.38	0.20	1.90	-14.00	1.12	-2.93	-1.73	-19.09					
16-Feb-2010	24:00:00	0.93	1.33	0.21	2.92	-13.31	1.97	-2.02	-0.82	-19.24					
17-Feb-2010	06:00:00	1.09	1.48	0.23	2.56	-14.16	1.26	-2.62	-1.49	-19.48					0.00
17-Feb-2010	12:00:00	0.86	1.38	0.15	2.92	-14.22	1.44	-2.18	-1.21	-19.80					
17-Feb-2010	18:00:00	0.63	1.29	0.03	1.80	-15.51	0.22	-3.75	-2.59	-20.66					
17-Feb-2010	24:00:00	0.64	1.15	0.05	2.68	-14.97	0.70	-2.89	-1.76	-20.40					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
18-Feb-2010	06:00:00	0.56	1.23	-0.07	1.90	-15.94	-0.12	-3.49	-2.43	-20.78				0.00	
18-Feb-2010	12:00:00	0.43	1.15	0.04	2.39	-15.64	0.13	-3.03	-2.18	-20.78					
18-Feb-2010	18:00:00	0.28	1.05	-0.17	1.66	-16.66	-0.97	-4.31	-3.14	-21.37					
18-Feb-2010	24:00:00	0.15	0.97	-0.31	2.39	-15.99	-0.55	-3.61	-2.45	-21.27					
19-Feb-2010	06:00:00	0.19	1.08	-0.17	1.90	-16.66	-1.35	-4.16	-3.21	-21.37				0.00	
19-Feb-2010	12:00:00	0.05	1.09	-0.26	2.34	-16.43	-1.13	-3.13	-2.43	-21.42					
19-Feb-2010	18:00:00	-0.04	0.95	-0.28	1.46	-17.49	-2.49	-4.95	-3.95	-22.06					
19-Feb-2010	24:00:00	-0.08	0.93	-0.37	2.09	-16.78	-2.12	-4.15	-3.19	-21.76					
20-Feb-2010	06:00:00	-0.21	0.98	-0.27	1.44	-17.49	-2.94	-4.46	-3.75	-21.91				0.00	
20-Feb-2010	12:00:00	-0.31	0.83	-0.32	2.08	-17.16	-2.34	-3.74	-3.29	-22.05					
20-Feb-2010	18:00:00	-0.41	0.73	-0.37	1.30	-18.05	-3.54	-5.27	-4.33	-22.42					
20-Feb-2010	24:00:00	-0.35	0.84	-0.34	2.10	-17.34	-3.06	-4.36	-3.56	-22.29					
21-Feb-2010	06:00:00	-0.37	0.81	-0.22	1.45	-18.09	-3.71	-4.72	-4.15	-22.41				0.00	
21-Feb-2010	12:00:00	-0.52	0.75	-0.29	2.22	-17.39	-2.97	-3.73	-3.35	-22.30					
21-Feb-2010	18:00:00	-0.64	0.61	-0.35	1.33	-18.45	-4.26	-5.41	-4.54	-22.82					
21-Feb-2010	24:00:00	-0.57	0.63	-0.28	1.94	-17.80	-3.61	-4.52	-3.86	-22.63					
22-Feb-2010	06:00:00	-0.55	0.61	-0.19	1.50	-18.23	-4.09	-4.51	-4.28	-22.60				0.74	
22-Feb-2010	12:00:00	-0.58	0.55	-0.31	1.48	-18.33	-3.85	-3.98	-4.16	-22.68					
22-Feb-2010	18:00:00	-0.35	0.40	-0.47	1.84	-15.41	0.27	-0.64	-2.68	-22.87					
22-Feb-2010	24:00:00	1.23	1.43	1.01	2.68	-10.91	2.14	-0.98	0.32	-17.97					
23-Feb-2010	06:00:00	1.09	1.47	0.50	1.91	-12.18	1.29	-2.09	-0.76	-17.78				0.00	
23-Feb-2010	12:00:00	1.04	1.48	0.47	2.82	-12.05	2.16	-1.16	-0.20	-18.12					
23-Feb-2010	18:00:00	0.98	1.51	0.41	2.12	-13.26	1.26	-2.17	-1.57	-18.96					
23-Feb-2010	24:00:00	0.80	1.39	0.28	2.45	-13.46	1.49	-1.79	-1.35	-19.35					
24-Feb-2010	06:00:00	0.79	1.43	0.28	2.30	-14.03	1.09	-2.35	-2.23	-19.83				0.14	
24-Feb-2010	12:00:00	0.69	1.35	0.21	2.59	-14.27	1.11	-2.06	-2.14	-20.26					
24-Feb-2010	18:00:00	0.56	1.29	0.11	2.42	-14.88	0.69	-2.65	-2.79	-20.71					
24-Feb-2010	24:00:00	0.65	1.31	0.13	2.46	-15.08	0.70	-2.08	-2.97	-20.91					
25-Feb-2010	06:00:00	1.57	1.57	0.67	2.42	-13.14	1.27	-1.45	-1.84	-20.28	1.15	2.25		0.06	
25-Feb-2010	12:00:00	1.15	1.55	0.56	2.92	-14.02	0.71	-2.01	-3.21	-20.54					
25-Feb-2010	18:00:00	0.94	1.68	1.04	3.58	-13.91	1.25	-1.61	-2.87	-20.80					
25-Feb-2010	24:00:00	0.86	1.59	0.98	2.84	-15.09	0.04	-2.71	-4.01	-20.94					
26-Feb-2010	06:00:00	0.65	1.55	0.94	3.37	-14.98	0.41	-2.39	-3.65	-21.62				0.00	
26-Feb-2010	12:00:00	0.41	1.43	0.80	2.66	-15.84	-0.77	-3.79	-4.78	-21.76					
26-Feb-2010	18:00:00	0.29	1.44	0.87	3.24	-15.41	-0.31	-3.11	-4.10	-22.46					
26-Feb-2010	24:00:00	0.10	1.41	0.63	2.81	-16.22	-1.17	-3.59	-4.77	-22.54					
27-Feb-2010	06:00:00	0.19	1.30	0.73	3.06	-16.18	-1.05	-3.22	-4.55	-22.88				0.00	
27-Feb-2010	12:00:00	-0.03	1.11	0.57	2.20	-17.28	-2.58	-4.72	-5.60	-22.95					
27-Feb-2010	18:00:00	-0.29	1.06	0.39	2.76	-16.90	-2.17	-3.91	-5.05	-23.62					
27-Feb-2010	24:00:00	-0.32	1.03	0.35	2.30	-17.51	-3.01	-4.48	-5.57	-23.46					
28-Feb-2010	06:00:00	-0.22	1.15	0.49	2.84	-17.12	-2.58	-3.57	-5.02	-23.80				0.00	
28-Feb-2010	12:00:00	-0.21	1.19	0.58	2.08	-17.92	-3.89	-5.31	-6.13	-23.64					
28-Feb-2010	18:00:00	-0.57	1.01	0.34	2.96	-17.20	-3.13	-4.47	-5.24	-24.24					
28-Feb-2010	24:00:00	-0.52	1.01	0.44	2.30	-17.97	-3.99	-4.87	-5.93	-24.01					4.86
1-Mar-2010	06:00:00	-0.63	1.05	0.41	2.99	-17.34	-3.19	-3.79	-5.03	-24.07				0.00	
1-Mar-2010	12:00:00	-0.64	1.03	0.34	2.08	-18.60	-4.69	-5.79	-6.40	-23.96					
1-Mar-2010	18:00:00	-0.81	0.79	0.31	2.53	-18.14	-4.38	-4.84	-5.87	-24.45					
1-Mar-2010	24:00:00	-0.97	0.77	0.15	1.87	-18.75	-4.88	-5.31	-6.46	-24.50					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)										On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall	
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
2-Mar-2010	06:00:00	-0.80	0.91	0.37	2.35	-18.38	-4.25	-4.23	-5.81	-24.46				0.58	
2-Mar-2010	12:00:00	-0.87	0.84	0.32	2.40	-13.89	0.65	-1.06	-5.24	-24.28					
2-Mar-2010	18:00:00	-0.34	0.78	0.37	3.06	-0.87	3.52	-1.18	0.20	-24.99					
2-Mar-2010	24:00:00	1.89	2.47	2.33	3.38	1.38	4.19	-0.85	0.61	-14.05					
3-Mar-2010	06:00:00	2.00	2.43	2.44	3.70	2.14	4.26	-0.59	0.93	-12.84				0.15	
3-Mar-2010	12:00:00	2.54	2.53	1.99	3.05	1.28	3.35	-1.43	-0.10	-11.85					
3-Mar-2010	18:00:00	2.60	2.28	1.40	3.43	1.23	3.63	-0.87	0.14	-13.51					
3-Mar-2010	24:00:00	2.89	2.52	1.31	2.99	0.13	3.03	-1.31	-0.44	-14.40					
4-Mar-2010	06:00:00	3.01	2.50	1.33	3.47	-0.89	3.41	-0.87	-0.22	-15.52				0.00	
4-Mar-2010	12:00:00	3.13	2.40	1.35	2.78	-3.81	2.34	-2.00	-1.55	-16.45					
4-Mar-2010	18:00:00	2.91	2.25	1.03	3.43	-4.91	2.83	-1.39	-1.39	-17.83					
4-Mar-2010	24:00:00	3.11	2.23	1.03	3.14	-6.77	2.29	-1.76	-2.06	-18.36					
5-Mar-2010	06:00:00	3.23	2.19	1.17	3.23	-7.64	2.55	-1.47	-2.15	-19.21				0.00	
5-Mar-2010	12:00:00	3.17	2.11	1.11	2.60	-9.23	1.62	-2.93	-3.38	-19.74					
5-Mar-2010	18:00:00	2.61	1.71	0.82	3.24	-9.60	2.05	-2.38	-3.03	-20.89					
5-Mar-2010	24:00:00	2.62	1.68	0.76	2.74	-10.83	1.48	-2.87	-3.68	-20.97					
6-Mar-2010	06:00:00	2.50	1.60	0.95	3.16	-11.18	1.75	-2.48	-3.49	-21.42				0.00	
6-Mar-2010	12:00:00	2.17	1.51	0.82	2.50	-12.40	0.52	-4.07	-4.63	-21.84					
6-Mar-2010	18:00:00	1.88	1.44	0.65	2.95	-12.41	0.97	-3.45	-4.22	-22.41					
6-Mar-2010	24:00:00	1.65	1.38	0.63	2.48	-13.54	0.13	-3.91	-4.83	-22.34					
7-Mar-2010	06:00:00	1.67	1.50	0.77	2.99	-13.42	0.53	-2.92	-4.40	-22.70				0.00	
7-Mar-2010	12:00:00	1.43	1.50	0.77	2.08	-14.81	-0.92	-4.78	-5.45	-22.60					
7-Mar-2010	18:00:00	1.33	1.21	0.64	2.77	-14.33	-0.41	-3.59	-4.78	-23.47					
7-Mar-2010	24:00:00	1.16	1.23	0.52	2.20	-15.24	-1.22	-4.10	-5.41	-23.25					
8-Mar-2010	06:00:00	1.10	1.14	0.68	2.88	-14.99	-0.85	-3.15	-4.69	-23.44				0.00	
8-Mar-2010	12:00:00	0.97	1.20	0.52	2.10	-15.99	-2.27	-5.13	-5.66	-23.55					
8-Mar-2010	18:00:00	0.71	1.05	0.45	2.59	-15.70	-2.00	-4.19	-5.19	-24.00					
8-Mar-2010	24:00:00	0.63	1.05	0.32	2.20	-16.38	-2.72	-4.18	-5.61	-23.95					
9-Mar-2010	06:00:00	0.67	1.12	0.58	2.63	-16.20	-2.49	-3.57	-5.12	-24.03				0.00	
9-Mar-2010	12:00:00	0.65	1.19	0.65	1.92	-17.13	-3.85	-5.53	-6.08	-23.92					
9-Mar-2010	18:00:00	0.38	0.78	0.43	2.44	-16.59	-3.36	-4.31	-5.45	-24.48					
9-Mar-2010	24:00:00	0.39	1.00	0.51	1.99	-17.32	-3.95	-4.51	-5.87	-24.20					
10-Mar-2010	06:00:00	0.39	0.94	0.57	2.40	-17.01	-3.51	-4.18	-5.56	-24.37				0.00	
10-Mar-2010	12:00:00	0.29	0.87	0.32	1.76	-17.72	-4.63	-5.92	-6.46	-24.43					
10-Mar-2010	18:00:00	-0.13	0.64	0.27	2.17	-17.40	-3.90	-4.24	-6.10	-24.88					
10-Mar-2010	24:00:00	0.03	0.71	0.26	1.88	-17.84	-3.97	-4.09	-6.22	-24.73					
11-Mar-2010	06:00:00	0.20	0.79	0.47	2.18	-17.55	-3.13	-3.46	-6.01	-24.69				0.62	
11-Mar-2010	12:00:00	0.11	0.72	0.43	2.14	-16.61	-1.61	-1.85	-4.85	-24.76					
11-Mar-2010	18:00:00	0.99	0.87	0.83	2.96	-12.95	0.55	-0.68	-2.61	-23.94					
11-Mar-2010	24:00:00	0.99	1.13	1.06	2.98	-10.02	1.84	-1.06	-1.54	-22.65					
12-Mar-2010	06:00:00	1.59	1.61	1.57	3.34	-9.87	2.21	-0.70	-1.00	-19.80				0.15	
12-Mar-2010	12:00:00	1.51	1.84	1.65	2.58	-11.18	1.44	-1.88	-2.49	-18.90					
12-Mar-2010	18:00:00	1.53	1.72	1.41	3.47	-11.00	2.20	-1.29	-2.24	-19.72					
12-Mar-2010	24:00:00	1.35	1.62	1.27	2.39	-12.48	1.05	-2.18	-3.39	-19.95					
13-Mar-2010	06:00:00	1.41	1.75	1.27	3.20	-12.18	1.92	-1.58	-3.15	-20.52				0.02	
13-Mar-2010	12:00:00	1.41	1.67	1.18	2.63	-13.04	1.06	-2.45	-3.99	-20.95					
13-Mar-2010	18:00:00	1.17	1.68	1.24	3.44	-12.84	1.59	-2.11	-3.74	-21.37					
13-Mar-2010	24:00:00	1.04	1.53	1.04	2.56	-14.15	0.55	-2.84	-4.83	-21.61					

													Weatherstation Rainfall Data			
Date	Time	Water Level (inches)												On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2				
14-Mar-2010	06:00:00	1.04	1.53	0.98	3.26	-14.06	0.88	-2.37	-4.40	-22.21					0.00	
14-Mar-2010	12:00:00	0.89	1.49	0.89	2.62	-15.11	-0.31	-4.07	-5.63	-22.44						
14-Mar-2010	18:00:00	0.59	1.36	0.85	2.95	-14.98	-0.20	-3.32	-5.07	-23.31						
14-Mar-2010	24:00:00	0.46	1.27	0.56	2.44	-16.00	-0.93	-3.67	-5.75	-23.35						
15-Mar-2010	06:00:00	0.45	1.35	0.68	2.92	-15.92	-0.79	-3.22	-5.32	-23.80					0.00	
15-Mar-2010	12:00:00	0.45	1.37	0.73	2.23	-16.83	-1.95	-4.65	-6.41	-23.72						
15-Mar-2010	18:00:00	0.19	1.30	0.65	3.08	-16.08	-1.41	-3.61	-5.44	-24.38						
15-Mar-2010	24:00:00	0.04	1.21	0.51	2.10	-17.34	-2.71	-4.33	-6.62	-24.46						
16-Mar-2010	06:00:00	0.10	1.24	0.57	2.51	-17.30	-2.69	-4.22	-6.29	-24.50					0.00	
16-Mar-2010	12:00:00	-0.04	1.21	0.40	2.08	-17.78	-3.61	-5.15	-6.98	-24.70						
16-Mar-2010	18:00:00	-0.08	1.18	0.45	2.56	-17.58	-3.29	-4.34	-6.49	-24.94						
16-Mar-2010	24:00:00	-0.17	1.07	0.33	2.12	-18.22	-4.05	-4.75	-7.10	-24.93						
17-Mar-2010	06:00:00	-0.28	1.15	0.33	2.63	-17.84	-3.67	-3.85	-6.37	-24.97					0.00	
17-Mar-2010	12:00:00	-0.22	1.14	0.50	2.11	-18.46	-4.50	-5.85	-7.41	-25.05						
17-Mar-2010	18:00:00	-0.49	0.89	0.31	2.52	-18.08	-4.09	-4.76	-6.73	-25.40						
17-Mar-2010	24:00:00	-0.51	0.88	0.14	1.81	-18.94	-4.82	-4.96	-7.43	-25.38						
18-Mar-2010	06:00:00	-0.39	1.00	0.37	2.41	-18.42	-3.85	-3.98	-6.83	-25.46					0.06	
18-Mar-2010	12:00:00	-0.15	1.14	0.41	2.12	-18.24	-2.84	-2.87	-6.85	-25.30						
18-Mar-2010	18:00:00	0.77	1.06	0.65	2.56	-17.72	-2.81	-3.22	-6.11	-25.30						
18-Mar-2010	24:00:00	0.09	1.06	0.61	2.35	-18.03	-3.42	-3.76	-6.70	-24.82						
19-Mar-2010	06:00:00	-0.11	1.07	0.67	2.71	-17.93	-3.30	-3.57	-6.43	-24.88					0.01	
19-Mar-2010	12:00:00	-0.33	1.17	0.64	1.93	-18.70	-4.83	-6.14	-7.39	-25.03						
19-Mar-2010	18:00:00	-0.63	0.96	0.45	2.51	-18.26	-4.41	-5.32	-6.89	-25.38						
19-Mar-2010	24:00:00	-1.04	0.78	0.01	1.78	-18.90	-5.06	-5.63	-7.58	-25.46						
20-Mar-2010	06:00:00	-0.97	0.75	0.15	2.38	-18.47	-4.58	-5.05	-7.18	-25.56					0.00	
20-Mar-2010	12:00:00	-1.04	0.76	0.19	1.42	-19.49	-6.01	-7.70	-8.20	-25.64						
20-Mar-2010	18:00:00	-1.47	0.46	-0.09	2.21	-18.60	-5.24	-6.45	-7.40	-26.04						
20-Mar-2010	24:00:00	-1.63	0.37	-0.28	1.45	-19.53	-5.95	-6.55	-8.21	-25.90						
21-Mar-2010	06:00:00	-1.47	0.51	-0.14	1.91	-19.08	-5.39	-5.97	-7.81	-25.99					0.00	
21-Mar-2010	12:00:00	-1.64	0.36	-0.23	1.62	-19.41	-5.95	-7.27	-7.97	-25.93						
21-Mar-2010	18:00:00	-1.79	0.36	-0.40	1.66	-19.25	-5.64	-6.11	-7.83	-26.01						
21-Mar-2010	24:00:00	-1.64	0.20	-0.43	1.43	-19.52	-5.34	-5.66	-8.29	-26.04						
22-Mar-2010	06:00:00	-1.45	0.31	-0.32	2.16	-18.40	-2.69	-2.97	-7.03	-26.19					0.07	
22-Mar-2010	12:00:00	-1.34	0.13	-0.31	1.15	-18.82	-4.26	-5.38	-7.41	-25.82						
22-Mar-2010	18:00:00	-0.70	0.27	0.13	1.74	-18.29	-4.08	-5.42	-7.09	-25.29						
22-Mar-2010	24:00:00	-1.52	0.07	0.15	1.16	-19.10	-5.06	-6.01	-7.82	-25.53						
23-Mar-2010	06:00:00	-1.64	0.22	0.16	1.61	-18.81	-4.76	-6.01	-7.61	-25.64					0.00	
23-Mar-2010	12:00:00	-1.77	0.27	0.04	0.55	-19.94	-6.66	-8.89	-8.79	-25.80						
23-Mar-2010	18:00:00	-2.37	-0.09	-0.21	1.12	-19.41	-6.21	-7.96	-8.26	-26.36						
23-Mar-2010	24:00:00	-2.81	-0.38	-0.62	0.83	-19.77	-6.43	-7.67	-8.27	-26.32						
24-Mar-2010	06:00:00	-2.62	-0.47	-0.59	1.37	-19.32	-5.89	-6.99	-7.95	-26.18					0.00	
24-Mar-2010	12:00:00	-2.65	-0.33	-0.64	0.32	-20.43	-7.55	-10.04	-9.32	-26.14						
24-Mar-2010	18:00:00	-3.20	-0.86	-1.12	0.91	-19.77	-6.93	-8.57	-8.59	-26.71						
24-Mar-2010	24:00:00	-3.41	-1.21	-1.76	0.44	-20.27	-7.17	-8.32	-9.16	-26.62						
25-Mar-2010	06:00:00	-3.14	-1.15	-1.35	1.07	-19.72	-6.43	-7.29	-8.48	-26.60					0.00	
25-Mar-2010	12:00:00	-3.35	-1.33	-1.57	-0.31	-21.03	-8.30	-10.93	-10.01	-26.44						
25-Mar-2010	18:00:00	-3.79	-1.78	-2.19	0.26	-20.34	-7.57	-9.13	-9.15	-27.06						
25-Mar-2010	24:00:00	-3.85	-2.22	-2.95	0.02	-20.57	-7.23	-8.09	-9.49	-26.74						

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)										On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall	
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
26-Mar-2010	06:00:00	-3.28	-1.99	-1.97	0.30	-20.13	-6.06	-6.29	-8.75	-26.78					0.08
26-Mar-2010	12:00:00	-2.11	-1.44	-1.23	-1.18	-21.48	-8.66	-10.52	-10.13	-26.61					
26-Mar-2010	18:00:00	-3.45	-2.29	-1.93	0.38	-19.85	-7.10	-9.21	-8.39	-27.16					
26-Mar-2010	24:00:00	-4.28	-2.66	-2.89	-0.36	-20.62	-7.87	-10.03	-9.47	-26.68					
27-Mar-2010	06:00:00	-4.53	-2.90	-3.28	-0.24	-20.51	-7.67	-9.71	-8.92	-26.82					0.00
27-Mar-2010	12:00:00	-4.66	-2.98	-3.55	-1.29	-21.30	-8.99	-12.04	-10.24	-26.78					
27-Mar-2010	18:00:00	-5.48	-3.80	-4.39	-0.70	-20.55	-8.18	-11.14	-9.34	-27.19					
27-Mar-2010	24:00:00	-5.79	-4.36	-5.19	-1.35	-21.16	-8.75	-11.00	-10.07	-27.15					
28-Mar-2010	06:00:00	-5.71	-4.34	-4.54	-1.06	-20.98	-8.28	-9.95	-9.69	-27.20					0.00
28-Mar-2010	12:00:00	-5.63	-4.26	-4.07	-3.61	-21.35	-9.48	-12.55	-10.35	-26.95					
28-Mar-2010	18:00:00	-6.27	-5.14	-5.24	-3.49	-21.04	-9.17	-11.12	-9.76	-27.28					
28-Mar-2010	24:00:00	-6.17	-5.44	-4.96	-4.18	-21.86	-9.67	-10.54	-10.17	-27.01					
29-Mar-2010	06:00:00	-6.01	-5.40	-4.04	1.50	-12.04	1.31	-0.01	-5.48	-27.16					0.94
29-Mar-2010	12:00:00	-0.82	-2.08	-1.57	2.10	-10.61	1.48	-1.65	-3.13	-26.67					
29-Mar-2010	18:00:00	0.73	0.51	1.21	2.52	-11.50	1.67	-1.81	-3.31	-19.94					
29-Mar-2010	24:00:00	0.07	0.45	0.35	2.23	-12.83	1.09	-2.18	-4.24	-20.18					
30-Mar-2010	06:00:00	-0.19	0.59	0.43	2.65	-13.20	1.08	-2.12	-4.34	-21.20					0.00
30-Mar-2010	12:00:00	-0.40	0.71	0.29	1.72	-14.76	-0.53	-4.66	-6.05	-21.88					
30-Mar-2010	18:00:00	-1.15	0.41	-0.05	2.09	-14.68	-0.49	-4.49	-5.95	-23.22					
30-Mar-2010	24:00:00	-1.66	0.31	-0.11	1.76	-15.58	-1.28	-4.79	-6.80	-23.72					
31-Mar-2010	06:00:00	-1.69	0.41	-0.01	1.68	-15.84	-3.23	-7.22	-7.88	-24.24					0.00
31-Mar-2010	12:00:00	-1.77	0.42	-0.09	1.74	-15.75	-3.71	-6.11	-7.97	-24.69					
31-Mar-2010	18:00:00	-2.55	0.35	-0.50	1.02	-16.73	-4.93	-6.71	-9.05	-25.15	0.00	0.50	2.56		
31-Mar-2010	24:00:00	-2.98	-0.01	-1.06	1.74	-16.22	-4.46	-5.99	-8.33	-25.36					2.68
1-Apr-2010	06:00:00	-2.86	0.11	-0.99	0.78	-17.43	-6.57	-9.39	-9.61	-25.87					0.00
1-Apr-2010	12:00:00	-3.03	-0.01	-1.09	1.55	-16.50	-6.03	-7.81	-9.01	-25.94					
1-Apr-2010	18:00:00	-3.63	-0.31	-1.48	0.73	-17.38	-6.77	-7.85	-9.92	-26.52					
1-Apr-2010	24:00:00	-4.03	-0.56	-2.12	1.20	-17.19	-6.45	-7.35	-9.57	-26.43					
2-Apr-2010	06:00:00	-3.61	-0.56	-1.97	0.53	-18.15	-8.06	-10.91	-10.37	-26.78					0.00
2-Apr-2010	12:00:00	-3.71	-0.62	-2.17	1.25	-17.22	-7.13	-9.07	-9.68	-26.74					
2-Apr-2010	18:00:00	-4.54	-1.10	-2.68	0.35	-18.00	-7.58	-8.87	-10.49	-27.19					
2-Apr-2010	24:00:00	-4.90	-1.55	-4.18	0.84	-17.69	-6.84	-7.87	-10.12	-27.10					
3-Apr-2010	06:00:00	-4.63	-1.63	-3.50	0.37	-18.46	-8.33	-11.77	-10.78	-27.26					0.00
3-Apr-2010	12:00:00	-4.61	-1.88	-3.21	0.35	-18.24	-8.09	-10.17	-10.51	-27.15					
3-Apr-2010	18:00:00	-5.30	-2.38	-3.97	-0.07	-18.77	-8.29	-9.70	-11.06	-27.45					
3-Apr-2010	24:00:00	-5.69	-2.86	-5.43	0.68	-18.11	-7.33	-8.53	-10.01	-27.30					
4-Apr-2010	06:00:00	-5.56	-2.84	-4.31	-0.43	-19.61	-9.51	-13.07	-11.41	-27.50					0.00
4-Apr-2010	12:00:00	-5.67	-2.94	-4.03	0.24	-18.82	-8.90	-11.53	-10.59	-27.24					
4-Apr-2010	18:00:00	-6.52	-3.62	-5.26	-0.34	-19.30	-9.43	-10.95	-11.27	-27.73					
4-Apr-2010	24:00:00	-7.42	-4.69	-7.12	0.26	-18.88	-8.96	-10.19	-10.52	-27.73					
5-Apr-2010	06:00:00	-6.92	-4.30	-5.59	-1.37	-20.13	-11.09	-14.26	-11.65	-27.78					0.00
5-Apr-2010	12:00:00	-7.13	-4.50	-4.96	-1.25	-19.35	-10.56	-13.34	-10.99	-27.46					
5-Apr-2010	18:00:00	-8.33	-5.63	-7.07	-1.65	-19.86	-11.05	-12.65	-11.57	-28.03					
5-Apr-2010	24:00:00	-9.20	-6.62	-8.83	-1.73	-19.67	-10.73	-12.59	-11.27	-28.03					
6-Apr-2010	06:00:00	-8.98	-6.50	-7.37	-7.44	-21.04	-12.99	-15.98	-12.32	-28.10					0.00
6-Apr-2010	12:00:00	-9.13	-6.55	-6.39	-7.99	-20.22	-12.27	-15.37	-11.60	-27.92					
6-Apr-2010	18:00:00	-10.43	-7.73	-8.63	-9.41	-20.88	-13.10	-15.26	-12.49	-28.47					
6-Apr-2010	24:00:00	-11.71	-9.07	-11.43	-9.28	-20.50	-12.69	-14.91	-11.84	-28.64					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOFF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
7-Apr-2010	06:00:00	-11.65	-9.07	-9.34	-10.97	-22.04	-14.67	-17.86	-13.01	-28.75					0.00
7-Apr-2010	12:00:00	-11.98	-9.19	-8.27	-10.91	-21.15	-14.01	-17.15	-12.23	-28.44					
7-Apr-2010	18:00:00	-12.99	-10.25	-10.69	-12.25	-21.63	-14.49	-17.00	-12.92	-29.16					
7-Apr-2010	24:00:00	-13.90	-11.59	-12.56	-12.24	-21.33	-14.06	-16.41	-12.40	-29.17					
8-Apr-2010	06:00:00	-14.01	-11.63	-10.49	-13.72	-22.62	-15.95	-19.12	-13.22	-29.24					0.00
8-Apr-2010	12:00:00	-14.20	-11.71	-9.41	-13.17	-21.68	-15.12	-18.41	-12.53	-28.87					
8-Apr-2010	18:00:00	-14.77	-12.44	-11.43	-14.37	-22.46	-15.44	-18.17	-13.31	-29.41					
8-Apr-2010	24:00:00	-15.59	-13.57	-13.57	-13.79	-21.70	-14.79	-17.15	-12.34	-29.50					
9-Apr-2010	06:00:00	-15.74	-13.84	-11.24	-15.19	-23.07	-16.75	-19.85	-13.06	-29.64					0.23
9-Apr-2010	12:00:00	-15.33	-13.22	-9.08	-14.99	-22.65	-16.47	-19.81	-12.81	-29.18					
9-Apr-2010	18:00:00	-16.10	-14.12	-11.89	-16.06	-23.28	-16.99	-20.48	-13.54	-29.40					
9-Apr-2010	24:00:00	-17.03	-15.16	-14.66	-16.17	-22.66	-16.53	-20.03	-12.94	-29.78					
10-Apr-2010	06:00:00	-17.45	-15.55	-13.61	-17.17	-23.44	-17.96	-21.73	-13.76	-29.88					0.00
10-Apr-2010	12:00:00	-17.67	-15.84	-13.51	-16.90	-23.02	-17.60	-21.52	-13.33	-29.35					
10-Apr-2010	18:00:00	-18.29	-16.38	-14.84	-17.73	-23.72	-18.18	-22.16	-14.14	-29.96					
10-Apr-2010	24:00:00	-18.80	-17.04	-15.70	-17.20	-23.21	-17.48	-21.35	-13.36	-29.94					
11-Apr-2010	06:00:00	-19.10	-17.40	-14.41	-18.49	-24.34	-19.19	-23.35	-14.25	-30.06					0.00
11-Apr-2010	12:00:00	-19.24	-17.70	-13.81	-17.63	-23.28	-18.36	-22.57	-13.52	-29.49					
11-Apr-2010	18:00:00	-19.72	-18.04	-15.21	-18.36	-24.02	-18.95	-23.05	-14.23	-30.04					
11-Apr-2010	24:00:00	-20.18	-18.73	-16.51	-17.95	-23.61	-18.37	-22.27	-13.43	-30.09					
12-Apr-2010	06:00:00	-20.27	-19.09	-15.10	-19.38	-24.92	-20.17	-24.38	-14.45	-30.14					0.00
12-Apr-2010	12:00:00	-20.33	-19.15	-14.32	-18.77	-24.08	-19.85	-24.15	-14.07	-29.50					
12-Apr-2010	18:00:00	-20.95	-19.68	-15.80	-19.15	-24.56	-20.00	-24.22	-14.44	-30.30					
12-Apr-2010	24:00:00	-21.37	-20.32	-17.53	-18.95	-24.26	-19.73	-23.66	-13.78	-30.52					
13-Apr-2010	06:00:00	-21.49	-20.58	-16.24	-19.77	-25.14	-20.78	-25.31	-14.30	-30.36					0.00
13-Apr-2010	12:00:00	-21.61	-20.89	-15.81	-19.71	-24.86	-20.87	-25.33	-14.51	-29.86					
13-Apr-2010	18:00:00	-22.13	-21.37	-17.19	-19.99	-25.31	-21.15	-25.36	-14.98	-30.40					
13-Apr-2010	24:00:00	-22.58	-21.92	-18.41	-19.53	-24.70	-20.49	-24.49	-14.02	-31.00					
14-Apr-2010	06:00:00	-22.71	-22.13	-17.53	-20.40	-25.38	-21.31	-25.83	-14.54	-30.73					0.00
14-Apr-2010	12:00:00	-22.79	-22.19	-16.96	-20.20	-25.26	-21.24	-25.61	-14.43	-30.12					
14-Apr-2010	18:00:00	-23.07	-22.54	-18.01	-20.81	-25.72	-21.61	-25.94	-14.62	-30.45					
14-Apr-2010	24:00:00	-23.35	-22.97	-18.70	-20.34	-25.25	-21.09	-25.09	-13.70	-30.76					
15-Apr-2010	06:00:00	-23.41	-23.10	-18.11	-21.51	-26.56	-22.40	-27.09	-14.81	-30.44					0.00
15-Apr-2010	12:00:00	-23.62	-23.34	-17.97	-20.89	-25.76	-22.26	-26.57	-14.59	-29.84					
15-Apr-2010	18:00:00	-23.90	-23.62	-18.95	-21.31	-26.24	-22.39	-26.48	-14.91	-30.56					
15-Apr-2010	24:00:00	-24.37	-24.12	-19.85	-20.91	-25.98	-22.10	-25.85	-14.23	-31.05					
16-Apr-2010	06:00:00	-24.33	-24.20	-19.03	-21.97	-27.06	-23.40	-27.64	-15.27	-30.74					0.00
16-Apr-2010	12:00:00	-24.44	-24.30	-18.46	-21.25	-26.36	-23.03	-27.50	-15.05	-30.22					
16-Apr-2010	18:00:00	-24.86	-24.79	-19.83	-21.94	-26.98	-23.61	-27.44	-15.57	-31.15					
16-Apr-2010	24:00:00	-25.16	-25.22	-20.73	-21.46	-26.54	-23.05	-27.03	-14.68	-31.56					
17-Apr-2010	06:00:00	-25.19	-25.43	-20.23	-22.31	-27.78	-24.54	-29.00	-16.07	-31.42					0.00
17-Apr-2010	12:00:00	-25.21	-25.43	-19.66	-21.81	-27.15	-24.30	-28.46	-15.70	-30.86					
17-Apr-2010	18:00:00	-25.78	-25.94	-21.27	-22.06	-27.30	-24.43	-28.31	-15.65	-32.00					
17-Apr-2010	24:00:00	-26.09	-26.46	-22.03	-21.84	-27.03	-24.32	-28.03	-14.97	-32.32					
18-Apr-2010	06:00:00	-26.17	-26.64	-21.39	-22.77	-28.17	-25.46	-29.80	-16.09	-32.04					0.00
18-Apr-2010	12:00:00	-26.25	-26.75	-21.41	-21.99	-27.35	-25.05	-29.29	-15.56	-31.63					
18-Apr-2010	18:00:00	-26.74	-27.19	-22.42	-22.97	-28.29	-25.95	-29.71	-16.28	-32.30					
18-Apr-2010	24:00:00	-27.09	-27.65	-23.06	-22.51	-27.95	-25.65	-29.24	-15.59	-32.53					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOFF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
19-Apr-2010	06:00:00	-27.22	-27.79	-22.71	-23.32	-28.68	-26.59	-30.57	-16.22	-32.60				0.00	
19-Apr-2010	12:00:00	-27.57	-27.97	-22.61	-22.65	-28.02	-26.16	-30.08	-16.01	-31.84					
19-Apr-2010	18:00:00	-27.85	-28.21	-23.05	-23.45	-28.91	-26.91	-30.49	-16.51	-32.46					
19-Apr-2010	24:00:00	-27.93	-28.42	-23.77	-23.13	-28.47	-26.49	-29.79	-15.59	-32.80					
20-Apr-2010	06:00:00	-28.22	-28.67	-23.41	-23.95	-29.36	-27.57	-31.37	-16.54	-32.61				0.00	
20-Apr-2010	12:00:00	-28.33	-28.86	-23.07	-23.25	-28.58	-27.05	-30.81	-16.13	-32.02					
20-Apr-2010	18:00:00	-28.59	-29.00	-23.49	-23.82	-29.03	-27.43	-30.61	-16.39	-32.61					
20-Apr-2010	24:00:00	-28.79	-29.24	-24.21	-23.41	-28.60	-26.91	-29.75	-15.55	-32.77					
21-Apr-2010	06:00:00	-28.89	-29.48	-23.81	-24.30	-29.28	-23.77	-23.15	-12.73	-32.61				0.23	
21-Apr-2010	12:00:00	-29.02	-29.54	-23.30	-23.34	-28.31	-21.69	-20.62	-10.37	-32.16					
21-Apr-2010	18:00:00	-27.81	-27.85	-20.17	-23.50	-28.44	-21.72	-21.46	-11.03	-31.54					
21-Apr-2010	24:00:00	-23.87	-23.00	-13.23	-22.84	-27.39	-20.82	-20.89	-10.65	-28.80					
22-Apr-2010	06:00:00	-22.57	-21.48	-13.05	-23.58	-28.07	-21.98	-23.01	-12.03	-27.31				0.00	
22-Apr-2010	12:00:00	-22.39	-21.10	-13.81	-22.92	-27.06	-21.74	-23.49	-12.71	-26.97					
22-Apr-2010	18:00:00	-22.47	-21.30	-14.98	-23.49	-27.63	-22.50	-24.31	-13.87	-28.00					
22-Apr-2010	24:00:00	-22.90	-22.20	-17.54	-23.27	-27.32	-22.38	-24.13	-13.66	-28.95					
23-Apr-2010	06:00:00	-23.17	-22.56	-17.80	-23.70	-27.76	-23.21	-25.41	-14.44	-29.00				0.00	
23-Apr-2010	12:00:00	-23.38	-22.88	-17.95	-23.09	-26.88	-22.93	-25.41	-14.41	-28.82					
23-Apr-2010	18:00:00	-23.68	-23.14	-18.85	-23.74	-27.52	-23.61	-25.96	-15.43	-29.53					
23-Apr-2010	24:00:00	-24.19	-23.93	-20.08	-23.11	-26.98	-23.22	-25.31	-14.61	-30.33					
24-Apr-2010	06:00:00	-24.33	-24.14	-19.67	-23.52	-27.45	-23.89	-26.25	-14.95	-30.36				0.00	
24-Apr-2010	12:00:00	-24.46	-24.32	-19.59	-23.32	-27.28	-23.81	-26.06	-14.89	-29.96					
24-Apr-2010	18:00:00	-24.77	-24.67	-20.13	-23.68	-27.52	-23.83	-26.14	-15.70	-30.39					
24-Apr-2010	24:00:00	-24.88	-24.97	-20.12	-23.39	-27.16	-22.63	-23.35	-13.97	-30.58					
25-Apr-2010	06:00:00	-24.83	-24.89	-19.46	-23.85	-27.84	-23.23	-24.44	-14.21	-30.15				0.08	
25-Apr-2010	12:00:00	-24.14	-24.17	-17.19	-23.14	-27.23	-22.95	-24.85	-14.59	-29.55					
25-Apr-2010	18:00:00	-23.45	-23.22	-16.28	-23.50	-27.57	-23.53	-25.21	-15.32	-29.94					
25-Apr-2010	24:00:00	-23.61	-23.74	-18.62	-23.09	-27.29	-23.22	-24.71	-14.33	-30.56					
26-Apr-2010	06:00:00	-23.93	-24.22	-18.70	-24.09	-28.77	-25.16	-27.58	-15.74	-30.50				0.00	
26-Apr-2010	12:00:00	-23.93	-24.17	-18.40	-23.13	-27.81	-24.91	-27.69	-15.86	-29.96					
26-Apr-2010	18:00:00	-24.57	-24.89	-20.05	-23.70	-28.47	-25.73	-28.33	-16.76	-31.22					
26-Apr-2010	24:00:00	-25.10	-25.80	-22.07	-23.49	-28.35	-25.62	-28.25	-16.19	-32.18					
27-Apr-2010	06:00:00	-25.59	-26.42	-22.57	-24.39	-29.63	-27.23	-30.23	-17.26	-32.20				0.00	
27-Apr-2010	12:00:00	-25.76	-26.60	-22.39	-23.62	-28.80	-26.67	-30.13	-17.14	-31.78					
27-Apr-2010	18:00:00	-26.43	-27.24	-23.49	-24.12	-29.31	-27.43	-30.51	-17.49	-32.83					
27-Apr-2010	24:00:00	-27.07	-28.20	-24.55	-25.03	-30.04	-28.13	-31.59	-17.47	-33.33					
28-Apr-2010	06:00:00	-27.40	-28.42	-24.35	-24.45	-29.31	-27.92	-31.41	-17.45	-33.08	0.00	0.00	0.56	0.04	
28-Apr-2010	12:00:00	-27.70	-28.73	-24.40	-25.23	-30.09	-28.63	-32.17	-17.47	-33.68					
28-Apr-2010	18:00:00	-28.15	-29.15	-25.05	-24.52	-29.31	-28.07	-31.28	-18.13	-33.88					
28-Apr-2010	24:00:00	-28.83	-29.77	-25.88	-25.81	-30.63	-29.51	-32.78	-16.97	-34.30					
29-Apr-2010	06:00:00	-29.21	-30.05	-25.69	-25.18	-29.96	-29.10	-32.51	-18.23	-34.28				0.00	
29-Apr-2010	12:00:00	-29.30	-30.28	-25.61	-25.63	-30.46	-29.65	-32.87	-18.16	-33.74					
29-Apr-2010	18:00:00	-29.57	-30.41	-25.94	-25.32	-30.06	-29.30	-32.20	-18.49	-34.44					
29-Apr-2010	24:00:00	-30.17	-30.94	-26.61	-26.23	-31.24	-30.44	-33.71	-17.53	-35.16					
30-Apr-2010	06:00:00	-30.26	-31.07	-26.33	-25.54	-30.30	-29.85	-33.16	-18.76	-34.93				0.00	
30-Apr-2010	12:00:00	-30.51	-31.37	-26.07	-26.04	-30.82	-30.55	-33.63	-18.58	-34.62					
30-Apr-2010	18:00:00	-30.83	-31.61	-26.57	-26.13	-31.04	-30.73	-33.14	-19.29	-35.47					
30-Apr-2010	24:00:00	-31.07	-31.99	-27.20	-26.80	-32.04	-31.65	-34.52	-18.58	-36.02					0.58

													Weatherstation Rainfall Data	
Date	Time	Water Level (inches)										On-site Raingauge	Hoffmann (NHO) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2		
1-May-2010	06:00:00	-31.28	-32.11	-26.90	-25.91	-31.12	-30.98	-34.11	-19.46	-35.86				0.00
1-May-2010	12:00:00	-31.40	-32.29	-26.54	-26.51	-31.59	-31.55	-34.33	-19.49	-35.54				
1-May-2010	18:00:00	-31.79	-32.53	-27.05	-26.28	-31.34	-31.38	-33.82	-19.81	-36.22				
1-May-2010	24:00:00	-31.90	-32.88	-27.65	-27.13	-32.58	-32.53	-34.75	-18.89	-36.62				
2-May-2010	06:00:00	-32.01	-33.13	-27.49	-26.50	-32.12	-32.12	-34.16	-19.93	-36.48				0.00
2-May-2010	12:00:00	-32.13	-33.22	-27.04	-27.10	-32.73	-32.87	-34.66	-20.27	-36.04				
2-May-2010	18:00:00	-32.49	-33.44	-27.69	-26.89	-32.55	-32.67	-34.64	-20.91	-36.87				
2-May-2010	24:00:00	-32.78	-33.76	-28.41	-26.98	-32.97	-32.97	-34.53	-20.30	-37.21				
3-May-2010	06:00:00	-32.84	-34.03	-28.06	-26.29	-32.31	-32.43	-33.76	-20.47	-37.17				0.00
3-May-2010	12:00:00	-32.66	-34.14	-27.68	-27.57	-33.39	-33.67	-34.91	-20.56	-36.92				
3-May-2010	18:00:00	-32.84	-34.50	-28.41	-27.22	-33.03	-33.32	-34.33	-21.65	-37.39				
3-May-2010	24:00:00	-32.71	-34.73	-28.87	-27.57	-33.27	-33.61	-34.67	-20.30	-37.90				
4-May-2010	06:00:00	-32.73	-34.73	-28.45	-27.21	-32.94	-33.41	-34.25	-20.19	-37.57				0.17
4-May-2010	12:00:00	-32.65	-35.00	-28.19	-27.72	-33.24	-33.68	-34.60	-19.40	-37.41				
4-May-2010	18:00:00	-32.56	-34.86	-27.64	-27.25	-32.66	-33.06	-33.80	-19.36	-37.35				
4-May-2010	24:00:00	-32.61	-34.55	-27.27	-28.21	-33.92	-34.13	-34.76	-18.33	-37.39				
5-May-2010	06:00:00	-32.59	-34.62	-27.25	-27.67	-33.21	-33.63	-33.92	-19.40	-36.91				0.01
5-May-2010	12:00:00	-32.57	-34.46	-27.11	-28.30	-33.77	-34.40	-34.59	-20.12	-36.42				
5-May-2010	18:00:00	-32.71	-34.91	-27.50	-27.95	-33.50	-34.19	-34.25	-20.92	-37.15				
5-May-2010	24:00:00	-32.54	-35.02	-28.89	-28.96	-34.82	-35.25	-34.97	-20.19	-37.54				
6-May-2010	06:00:00	-32.37	-35.22	-28.60	-28.20	-34.06	-34.61	-34.13	-21.02	-37.52				0.00
6-May-2010	12:00:00	-32.50	-35.53	-28.49	-28.87	-34.71	-35.25	-34.69	-21.43	-37.14				
6-May-2010	18:00:00	-32.59	-35.65	-28.97	-28.37	-34.10	-34.81	-34.10	-22.11	-38.02				
6-May-2010	24:00:00	-32.61	-35.95	-29.89	-29.20	-35.33	-35.75	-34.88	-21.14	-38.56				
7-May-2010	06:00:00	-32.54	-36.19	-29.59	-28.78	-35.00	-35.47	-34.07	-22.19	-38.41				0.00
7-May-2010	12:00:00	-32.55	-36.34	-29.45	-29.27	-35.42	-36.03	-34.63	-22.37	-38.08				
7-May-2010	18:00:00	-32.48	-36.72	-30.14	-28.85	-35.08	-35.79	-34.12	-23.08	-38.83				
7-May-2010	24:00:00	-32.44	-36.90	-30.69	-29.82	-36.28	-36.87	-34.83	-22.07	-39.43				
8-May-2010	06:00:00	-32.27	-37.02	-30.17	-29.20	-35.78	-36.07	-34.18	-23.29	-39.07				0.00
8-May-2010	12:00:00	-32.32	-37.10	-29.86	-29.69	-36.15	-36.50	-34.45	-23.53	-38.71				
8-May-2010	18:00:00	-32.43	-37.54	-30.64	-29.37	-35.58	-35.81	-33.97	-24.08	-39.78				
8-May-2010	24:00:00	-32.49	-37.84	-31.43	-30.40	-36.68	-36.54	-34.75	-23.53	-40.58				
9-May-2010	06:00:00	-32.24	-37.66	-31.45	-29.69	-36.15	-35.72	-34.00	-24.47	-40.39				0.00
9-May-2010	12:00:00	-32.32	-37.67	-31.54	-30.53	-36.95	-36.59	-34.99	-24.32	-40.21				
9-May-2010	18:00:00	-32.44	-37.74	-31.93	-30.04	-36.36	-35.97	-34.23	-25.33	-40.95				
9-May-2010	24:00:00	-32.38	-37.66	-32.45	-30.69	-36.94	-36.36	-34.90	-24.16	-41.40				
10-May-2010	06:00:00	-32.36	-37.68	-32.11	-29.70	-35.82	-35.36	-33.77	-24.87	-41.35				0.00
10-May-2010	12:00:00	-32.49	-37.80	-32.11	-30.83	-36.95	-36.29	-34.57	-24.28	-40.84				
10-May-2010	18:00:00	-32.67	-37.85	-32.74	-30.85	-36.90	-36.14	-34.39	-25.18	-41.50				
10-May-2010	24:00:00	-32.51	-37.76	-32.85	-30.90	-37.10	-36.35	-34.79	-24.40	-41.60				
11-May-2010	06:00:00	-32.37	-37.57	-32.44	-30.85	-36.82	-36.06	-34.53	-24.76	-41.61				0.00
11-May-2010	12:00:00	-32.41	-37.58	-32.43	-31.23	-37.18	-36.42	-34.79	-24.86	-41.12				
11-May-2010	18:00:00	-32.54	-37.72	-32.86	-30.42	-36.38	-35.58	-33.93	-24.91	-41.78				
11-May-2010	24:00:00	-32.48	-37.67	-33.01	-31.49	-37.53	-36.24	-34.66	-23.44	-41.82				
12-May-2010	06:00:00	-32.50	-37.61	-32.75	-31.06	-37.14	-35.89	-34.19	-24.39	-41.50				0.00
12-May-2010	12:00:00	-32.43	-37.72	-32.54	-31.53	-37.64	-36.29	-34.40	-24.91	-40.64				
12-May-2010	18:00:00	-32.51	-37.73	-33.20	-31.43	-37.52	-36.07	-34.41	-25.16	-41.54				
12-May-2010	24:00:00	-32.51	-37.81	-33.63	-31.89	-38.20	-36.38	-34.88	-24.81	-42.19				

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHO) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
13-May-2010	06:00:00	-32.37	-37.67	-33.33	-31.36	-37.53	-35.65	-33.93	-25.30	-41.96				0.00	
13-May-2010	12:00:00	-32.41	-37.72	-33.15	-32.13	-38.28	-36.45	-34.88	-24.88	-41.49					
13-May-2010	18:00:00	-32.56	-37.81	-33.83	-31.51	-37.67	-35.67	-34.06	-25.72	-42.19					
13-May-2010	24:00:00	-32.32	-37.62	-33.88	-32.20	-38.87	-36.29	-34.54	-24.31	-42.36					
14-May-2010	06:00:00	-32.36	-37.73	-33.74	-31.66	-38.19	-35.57	-33.85	-25.09	-42.20				0.00	
14-May-2010	12:00:00	-32.31	-37.54	-33.52	-32.87	-39.45	-36.72	-34.96	-25.19	-41.29					
14-May-2010	18:00:00	-32.45	-37.74	-33.99	-31.95	-38.58	-35.69	-34.13	-26.42	-42.22					
14-May-2010	24:00:00	-32.41	-37.80	-34.37	-32.70	-39.68	-36.32	-34.63	-25.27	-42.90					
15-May-2010	06:00:00	-32.30	-37.49	-34.17	-32.17	-39.32	-35.59	-34.13	-25.97	-42.54				0.00	
15-May-2010	12:00:00	-32.41	-37.57	-33.86	-32.69	-39.60	-35.97	-34.34	-26.15	-42.03					
15-May-2010	18:00:00	-32.51	-37.81	-34.65	-32.55	-39.50	-35.84	-34.18	-26.72	-42.97					
15-May-2010	24:00:00	-32.38	-37.61	-35.05	-1.96	-30.48	-21.83	-34.63	-26.09	-43.63					
16-May-2010	06:00:00	-32.24	-37.52	-34.63	-0.85	-29.34	-18.23	-33.86	-22.70	-43.27				0.00	
16-May-2010	12:00:00	-32.30	-37.58	-34.52	-1.37	-29.28	-20.25	-34.34	-7.42	-42.62					
16-May-2010	18:00:00	-32.50	-37.75	-35.17	-1.26	-28.98	-21.17	-34.30	-10.21	-43.72					
16-May-2010	24:00:00	-32.27	-37.50	-31.64	-1.25	-29.26	-20.23	-34.78	-11.69	-14.62					
17-May-2010	06:00:00	-32.24	-37.46	-29.14	-0.43	-27.30	-16.81	-33.49	-11.38	-13.00				0.16	
17-May-2010	12:00:00	-32.32	-37.55	-28.46	-1.01	-27.54	-17.18	-32.47	-10.11	-13.02					
17-May-2010	18:00:00	-32.31	-37.44	-28.06	0.09	-24.30	-10.07	-28.66	-12.14	-13.46					
17-May-2010	24:00:00	-32.41	-36.97	-25.95	-0.26	-24.09	-12.92	-27.40	-4.73	-11.98					
18-May-2010	06:00:00	-32.35	-34.85	-23.51	-0.20	-23.74	-14.01	-26.74	-6.59	-12.15				0.03	
18-May-2010	12:00:00	-32.27	-32.83	-20.89	-0.84	-24.66	-15.65	-27.38	-7.61	-6.59					
18-May-2010	18:00:00	-31.24	-30.10	-18.49	0.54	-19.72	1.33	-24.34	-9.69	-7.91					
18-May-2010	24:00:00	-29.91	-28.68	-18.68	-0.18	-20.28	-1.01	-23.78	-5.05	-9.06					
19-May-2010	06:00:00	-29.42	-27.96	-18.64	1.19	-12.68	3.13	-15.89	-6.88	-10.22				0.16	
19-May-2010	12:00:00	-29.18	-27.68	-18.73	0.88	-13.41	2.17	-17.30	-4.54	-8.50					
19-May-2010	18:00:00	-26.51	-24.56	-14.02	1.08	-14.08	1.66	-17.95	-5.92	-7.49					
19-May-2010	24:00:00	-24.41	-22.31	-10.70	0.56	-15.69	0.24	-20.23	-6.65	-6.04					
20-May-2010	06:00:00	-21.64	-19.57	-9.89	0.94	-15.75	-0.51	-20.69	-8.95	-6.78				0.00	
20-May-2010	12:00:00	-21.19	-19.15	-10.42	0.34	-16.94	-2.54	-21.58	-10.13	-7.79					
20-May-2010	18:00:00	-21.44	-19.64	-12.16	0.55	-17.32	-3.96	-21.81	-11.09	-9.40					
20-May-2010	24:00:00	-21.79	-20.51	-14.50	0.12	-18.59	-7.59	-23.33	-11.33	-11.24					
21-May-2010	06:00:00	-21.92	-20.89	-13.72	0.30	-18.54	-8.67	-23.54	-13.01	-11.74				0.00	
21-May-2010	12:00:00	-22.05	-21.20	-13.47	-0.42	-19.58	-10.15	-24.33	-13.55	-11.88					
21-May-2010	18:00:00	-22.59	-21.86	-15.25	0.26	-19.42	-10.52	-23.90	-13.94	-13.24					
21-May-2010	24:00:00	-22.84	-22.43	-16.41	-0.65	-20.82	-13.21	-25.46	-13.29	-14.02					
22-May-2010	06:00:00	-23.20	-22.80	-15.32	-0.07	-20.39	-13.23	-25.03	-15.20	-14.22				0.00	
22-May-2010	12:00:00	-23.44	-23.09	-14.96	-0.65	-21.24	-14.04	-25.77	-14.80	-14.13					
22-May-2010	18:00:00	-23.78	-23.41	-16.61	-0.48	-21.27	-14.28	-25.47	-14.93	-15.02					
22-May-2010	24:00:00	-24.16	-24.02	-17.43	-0.81	-21.98	-13.64	-26.09	-14.25	-15.81					
23-May-2010	06:00:00	-24.34	-24.23	-16.21	-0.49	-21.72	-14.24	-25.77	-14.57	-15.33				0.00	
23-May-2010	12:00:00	-24.50	-24.38	-15.47	-0.81	-22.41	-14.95	-26.15	-14.38	-14.86					
23-May-2010	18:00:00	-24.75	-24.73	-15.97	-0.48	-22.25	-13.20	-25.82	-14.48	-15.39					
23-May-2010	24:00:00	-24.89	-24.83	-14.91	0.16	-20.62	-3.80	-22.55	-13.85	-15.53					
24-May-2010	06:00:00	-24.97	-24.78	-14.62	1.13	-12.29	3.75	-18.70	-12.95	-15.27				0.03	
24-May-2010	12:00:00	-25.06	-24.85	-14.43	0.97	-12.14	2.59	-17.89	-8.27	-14.86					
24-May-2010	18:00:00	-24.86	-24.55	-11.96	1.19	-12.58	2.32	-17.97	-8.86	-14.76					
24-May-2010	24:00:00	-22.09	-21.37	-8.14	0.97	-14.06	1.24	-19.79	-9.26	-14.82					

													Weatherstation Rainfall Data			
Date	Time	Water Level (inches)												On-site Raingauge	Hoffmann (NHOFF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2				
25-May-2010	06:00:00	-19.21	-18.30	-7.28	0.98	-14.62	0.54	-20.37	-10.52	-10.70					0.00	
25-May-2010	12:00:00	-18.89	-17.68	-7.88	0.49	-15.47	-0.83	-20.92	-11.43	-10.78						
25-May-2010	18:00:00	-19.05	-17.77	-9.86	0.72	-16.88	-4.19	-22.75	-11.86	-11.76						
25-May-2010	24:00:00	-19.52	-18.31	-11.90	1.21	-16.90	-4.19	-22.81	-12.21	-12.74						
26-May-2010	06:00:00	-19.64	-18.24	-11.23	0.83	-17.51	-5.29	-23.09	-12.56	-12.95	0.00	0.00	3.25	0.14		
26-May-2010	12:00:00	-19.60	-18.30	-11.15	0.95	-17.68	-6.26	-23.23	-11.99	-13.16						
26-May-2010	18:00:00	-20.44	-19.38	-12.52	0.71	-18.87	-9.49	-24.64	-12.11	-13.36						
26-May-2010	24:00:00	-20.73	-20.03	-13.40	0.83	-18.98	-10.09	-25.18	-11.87	-13.83						
27-May-2010	06:00:00	-20.84	-20.08	-11.85	0.23	-19.80	-11.03	-26.03	-13.53	-13.52					0.01	
27-May-2010	12:00:00	-21.04	-20.29	-11.98	0.31	-20.08	-11.83	-26.00	-14.32	-13.36						
27-May-2010	18:00:00	-21.58	-21.02	-14.36	-0.19	-21.34	-14.48	-27.23	-14.39	-14.30						
27-May-2010	24:00:00	-22.30	-22.12	-16.29	0.29	-21.00	-14.42	-26.98	-13.65	-15.41						
28-May-2010	06:00:00	-22.63	-22.54	-15.22	0.26	-21.24	-14.61	-27.22	-15.15	-15.26					0.00	
28-May-2010	12:00:00	-23.09	-22.94	-15.13	0.02	-21.76	-15.21	-27.58	-14.99	-14.98						
28-May-2010	18:00:00	-23.56	-23.60	-16.89	-0.45	-22.79	-16.89	-28.42	-14.42	-15.81						
28-May-2010	24:00:00	-24.07	-24.38	-17.91	-0.15	-22.56	-16.92	-28.58	-14.12	-16.61						
29-May-2010	06:00:00	-24.35	-24.56	-17.08	-0.79	-23.45	-17.70	-29.36	-15.32	-16.01					0.00	
29-May-2010	12:00:00	-24.76	-25.04	-16.58	-0.38	-23.40	-17.71	-29.25	-15.79	-15.72						
29-May-2010	18:00:00	-25.31	-25.70	-18.38	-1.74	-24.76	-19.67	-30.21	-15.49	-16.60						
29-May-2010	24:00:00	-25.78	-26.38	-19.34	-1.45	-24.45	-19.46	-30.08	-14.47	-17.36						
30-May-2010	06:00:00	-25.96	-26.51	-18.85	-1.91	-24.90	-19.99	-30.63	-16.40	-17.06					0.00	
30-May-2010	12:00:00	-26.54	-26.96	-18.71	-1.76	-24.90	-19.98	-30.57	-16.71	-16.50						
30-May-2010	18:00:00	-26.90	-27.49	-20.03	-5.05	-26.31	-21.59	-31.57	-16.29	-17.51						
30-May-2010	24:00:00	-27.35	-27.90	-20.97	-5.35	-25.95	-21.57	-31.36	-15.22	-18.72						
31-May-2010	06:00:00	-27.70	-28.25	-20.92	-4.86	-26.12	-21.90	-31.81	-16.91	-18.36					0.00	
31-May-2010	12:00:00	-28.15	-28.55	-20.71	-4.20	-26.26	-21.83	-31.70	-17.18	-17.61						
31-May-2010	18:00:00	-28.54	-29.06	-21.59	-0.98	-26.64	-20.05	-31.59	-16.69	-18.77						
31-May-2010	24:00:00	-28.89	-29.44	-22.57	-1.71	-26.16	-19.49	-30.46	-15.67	-19.49						0.71
1-Jun-2010	06:00:00	-29.06	-29.71	-22.23	-2.63	-26.82	-20.13	-30.75	-14.25	-19.02					0.09	
1-Jun-2010	12:00:00	-29.48	-29.99	-22.16	-2.45	-26.46	-20.03	-30.04	-13.88	-18.53						
1-Jun-2010	18:00:00	-29.60	-30.04	-21.65	-1.27	-26.85	-19.22	-30.46	-14.31	-18.12						
1-Jun-2010	24:00:00	-29.31	-29.69	-19.45	0.04	-26.24	-17.84	-27.82	-13.39	-17.82						
2-Jun-2010	06:00:00	-29.06	-29.46	-19.41	-0.53	-26.48	-18.09	-27.23	-14.37	-16.72					0.37	
2-Jun-2010	12:00:00	-29.07	-29.16	-19.39	-0.29	-26.14	-18.03	-26.48	-13.30	-15.96						
2-Jun-2010	18:00:00	-29.41	-29.69	-20.42	-1.55	-27.08	-19.58	-27.46	-13.16	-17.16						
2-Jun-2010	24:00:00	-27.93	-27.68	-15.43	-1.57	-26.56	-19.69	-27.40	-12.61	-16.49						
3-Jun-2010	06:00:00	-26.86	-26.56	-15.22	-2.10	-27.10	-20.45	-28.01	-13.71	-15.68					0.01	
3-Jun-2010	12:00:00	-26.60	-26.08	-15.74	-0.73	-26.75	-18.80	-27.86	-14.27	-15.20						
3-Jun-2010	18:00:00	-26.63	-26.21	-16.77	-4.32	-27.74	-20.73	-29.06	-14.66	-15.72						
3-Jun-2010	24:00:00	-26.74	-26.62	-18.62	-4.78	-27.03	-20.43	-28.91	-13.19	-16.64						
4-Jun-2010	06:00:00	-26.78	-26.58	-18.67	-4.75	-27.60	-21.08	-29.49	-14.36	-16.40					0.10	
4-Jun-2010	12:00:00	-27.01	-26.80	-18.89	-4.32	-27.42	-21.03	-29.50	-15.16	-15.89						
4-Jun-2010	18:00:00	-27.31	-27.29	-19.71	-8.87	-28.58	-22.61	-30.67	-15.37	-16.67						
4-Jun-2010	24:00:00	-27.59	-27.89	-21.26	-9.55	-28.05	-22.46	-30.69	-14.53	-17.81						
5-Jun-2010	06:00:00	-27.93	-28.06	-21.17	-10.95	-29.14	-23.57	-31.96	-16.10	-17.50					0.00	
5-Jun-2010	12:00:00	-28.36	-28.36	-21.16	-10.65	-28.72	-23.35	-31.65	-17.05	-17.07						
5-Jun-2010	18:00:00	-28.58	-28.93	-22.05	-11.64	-29.82	-24.77	-32.67	-17.75	-18.14						
5-Jun-2010	24:00:00	-28.93	-29.58	-23.27	-11.93	-29.76	-25.02	-32.80	-16.37	-19.60						

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOFF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
6-Jun-2010	06:00:00	-29.42	-30.10	-23.29	-12.72	-30.09	-25.59	-33.69	-17.85	-19.70					0.00
6-Jun-2010	12:00:00	-29.84	-30.29	-23.20	-12.46	-29.61	-25.22	-33.10	-18.93	-19.06					
6-Jun-2010	18:00:00	-30.22	-30.79	-23.97	-13.71	-30.89	-26.69	-34.54	-19.35	-20.50					
6-Jun-2010	24:00:00	-30.63	-31.33	-24.94	-13.44	-30.52	-26.53	-34.01	-17.66	-21.40					
7-Jun-2010	06:00:00	-31.06	-31.73	-25.19	-14.52	-31.25	-27.56	-34.89	-19.06	-21.30					0.00
7-Jun-2010	12:00:00	-31.37	-31.97	-25.19	-14.19	-30.64	-27.06	-34.12	-19.65	-21.23					
7-Jun-2010	18:00:00	-31.88	-32.48	-25.79	-15.22	-31.55	-28.21	-34.59	-20.13	-21.95					
7-Jun-2010	24:00:00	-32.29	-33.00	-26.72	-14.89	-31.22	-28.03	-34.10	-18.80	-22.55					
8-Jun-2010	06:00:00	-32.36	-33.32	-26.62	-15.57	-31.80	-28.74	-34.47	-19.75	-22.52					0.00
8-Jun-2010	12:00:00	-32.39	-33.68	-26.74	-15.84	-31.78	-28.92	-34.31	-20.50	-22.24					
8-Jun-2010	18:00:00	-32.39	-33.94	-27.27	-16.63	-32.69	-29.67	-34.61	-20.60	-22.96					
8-Jun-2010	24:00:00	-32.33	-34.38	-27.98	-16.51	-32.44	-29.58	-34.30	-19.73	-23.20					
9-Jun-2010	06:00:00	-32.26	-34.72	-27.68	-17.17	-33.02	-30.29	-34.71	-20.57	-23.16					0.00
9-Jun-2010	12:00:00	-32.36	-34.88	-27.71	-17.11	-32.81	-30.08	-34.12	-21.22	-22.73					
9-Jun-2010	18:00:00	-32.50	-35.36	-28.41	-18.15	-34.07	-31.13	-34.70	-21.45	-23.57					
9-Jun-2010	24:00:00	-32.37	-35.70	-28.90	-17.82	-33.88	-30.95	-34.22	-20.41	-24.08					
10-Jun-2010	06:00:00	-32.32	-36.01	-28.81	-18.77	-34.42	-31.70	-34.85	-21.65	-23.82					0.00
10-Jun-2010	12:00:00	-32.48	-36.35	-28.87	-18.49	-34.00	-31.32	-34.25	-22.10	-23.44					
10-Jun-2010	18:00:00	-32.50	-36.71	-29.41	-19.26	-35.21	-32.27	-34.81	-22.39	-24.63					
10-Jun-2010	24:00:00	-32.36	-37.06	-29.92	-18.69	-34.62	-31.70	-34.09	-21.05	-25.01					
11-Jun-2010	06:00:00	-32.35	-37.32	-29.96	-19.95	-35.66	-32.95	-35.06	-22.11	-24.88					0.00
11-Jun-2010	12:00:00	-32.36	-37.58	-29.92	-19.45	-34.95	-32.52	-34.04	-22.41	-24.32					
11-Jun-2010	18:00:00	-32.41	-37.79	-30.69	-20.46	-36.32	-33.51	-34.72	-23.29	-25.26					
11-Jun-2010	24:00:00	-32.43	-37.69	-31.39	-19.97	-36.06	-33.29	-34.35	-21.64	-25.96					
12-Jun-2010	06:00:00	-32.32	-37.63	-31.06	-20.41	-36.34	-33.59	-34.54	-22.67	-25.66					0.00
12-Jun-2010	12:00:00	-32.37	-37.75	-30.99	-20.68	-36.42	-33.79	-34.35	-23.31	-25.05					
12-Jun-2010	18:00:00	-32.45	-37.82	-31.69	-21.37	-37.41	-34.55	-34.76	-23.43	-26.07					
12-Jun-2010	24:00:00	-32.30	-37.78	-32.30	-20.86	-36.63	-33.99	-33.92	-22.72	-26.86					
13-Jun-2010	06:00:00	-32.36	-37.61	-32.02	-21.77	-37.49	-34.94	-34.72	-22.81	-26.36					0.14
13-Jun-2010	12:00:00	-32.30	-37.60	-31.82	-21.60	-37.29	-34.83	-34.42	-23.05	-25.72					
13-Jun-2010	18:00:00	-32.37	-37.73	-32.05	-22.12	-38.14	-35.34	-34.54	-23.67	-26.01					
13-Jun-2010	24:00:00	-32.32	-37.68	-32.73	-22.20	-38.22	-35.51	-34.47	-22.79	-27.00					
14-Jun-2010	06:00:00	-32.25	-37.58	-32.66	-22.60	-38.50	-35.82	-34.58	-23.21	-26.67					0.00
14-Jun-2010	12:00:00	-32.27	-37.63	-32.51	-22.59	-38.37	-35.73	-34.30	-24.37	-26.10					
14-Jun-2010	18:00:00	-32.38	-37.76	-33.26	-23.64	-39.83	-36.73	-34.84	-24.69	-26.92					
14-Jun-2010	24:00:00	-32.39	-37.79	-34.01	-23.26	-39.60	-36.01	-34.28	-23.85	-28.04					
15-Jun-2010	06:00:00	-32.20	-37.58	-33.89	-23.86	-39.99	-36.17	-34.47	-24.89	-27.69					0.00
15-Jun-2010	12:00:00	-32.26	-37.69	-33.74	-23.86	-39.90	-35.99	-34.27	-25.35	-27.09					
15-Jun-2010	18:00:00	-32.39	-37.73	-34.57	0.85	-26.78	2.40	-16.71	-25.52	-28.12					
15-Jun-2010	24:00:00	-32.39	-37.67	-35.29	1.40	-25.91	0.54	-21.87	-24.77	-29.18					
16-Jun-2010	06:00:00	-32.35	-37.66	-35.06	0.67	-26.46	-2.36	-22.81	-24.65	-28.58					0.05
16-Jun-2010	12:00:00	-32.35	-37.62	-34.85	0.72	-26.54	-6.30	-23.72	-9.58	-27.78					
16-Jun-2010	18:00:00	-32.35	-37.56	-35.42	0.16	-27.70	-12.17	-25.53	-12.27	-28.58					
16-Jun-2010	24:00:00	-30.61	-30.00	-2.57	0.80	-27.24	-13.82	-25.93	-13.78	-22.14					
17-Jun-2010	06:00:00	-27.02	-28.22	-7.43	0.14	-27.95	-15.62	-27.01	-16.17	-18.75					0.00
17-Jun-2010	12:00:00	-27.59	-27.77	-13.09	0.42	-27.86	-16.31	-27.22	-17.54	-16.13					
17-Jun-2010	18:00:00	-28.15	-27.35	-15.95	-0.35	-29.21	-18.78	-28.73	-18.28	-16.61					
17-Jun-2010	24:00:00	-28.59	-27.34	-17.98	-0.20	-29.00	-19.31	-28.91	-17.84	-17.98					

													Weatherstation Rainfall Data			
Date	Time	Water Level (inches)												On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2				
18-Jun-2010	06:00:00	-28.78	-27.26	-17.51	-0.49	-29.42	-20.10	-29.29	-19.42	-17.99						0.70
18-Jun-2010	12:00:00	-29.07	-27.32	-17.69	-0.06	-29.24	-20.45	-29.27	-19.72	-17.88						
18-Jun-2010	18:00:00	-29.63	-27.97	-19.18	-0.22	-29.72	-20.15	-29.68	-19.53	-19.00						
18-Jun-2010	24:00:00	-29.86	-28.49	-19.70	-0.16	-29.63	-20.61	-29.86	-18.97	-20.08						
19-Jun-2010	06:00:00	-30.07	-28.80	-19.12	-0.89	-30.53	-21.69	-30.41	-18.99	-20.09						0.70
19-Jun-2010	12:00:00	-30.31	-28.84	-19.04	-0.37	-29.96	-21.32	-29.99	-19.65	-19.70						
19-Jun-2010	18:00:00	-30.56	-29.24	-19.04	-1.45	-31.55	-23.17	-31.31	-19.88	-19.80						
19-Jun-2010	24:00:00	-30.91	-29.59	-20.27	1.84	-18.95	5.41	-6.21	-19.03	-20.49						
20-Jun-2010	06:00:00	-30.99	-29.62	-19.87	1.46	-17.07	2.47	-6.10	-20.87	-20.39						0.63
20-Jun-2010	12:00:00	-31.04	-29.84	-19.99	1.74	-17.10	2.20	-6.93	-14.24	-19.86						
20-Jun-2010	18:00:00	-31.41	-30.23	-21.22	1.03	-19.37	0.37	-11.47	-12.02	-20.99						
20-Jun-2010	24:00:00	-31.65	-30.70	-22.51	1.45	-19.17	-0.14	-12.20	-12.71	-22.14						
21-Jun-2010	06:00:00	-17.91	-11.44	0.07	0.66	-20.25	-2.11	-13.36	-15.56	-14.81						0.00
21-Jun-2010	12:00:00	-18.20	-5.34	-0.63	0.00	-23.04	-8.01	-34.53	-17.25	-13.23						
21-Jun-2010	18:00:00	-19.30	-5.77	-1.16	0.46	-23.08	-9.07	-17.48	-18.13	-14.45						
21-Jun-2010	24:00:00	-20.74	-8.57	-2.03	0.68	-23.76	-10.51	-18.21	-18.68	-16.18						
22-Jun-2010	06:00:00	-21.05	-8.87	-2.43	-0.13	-23.43	-11.15	-18.80	-19.24	-16.30						0.00
22-Jun-2010	12:00:00	-21.17	-9.74	-3.26	0.55	-25.46	-14.97	-18.77	-20.18	-16.92	0.00	0.85	3.00			
22-Jun-2010	18:00:00	-21.74	-12.58	-6.59	-0.18	-24.89	-14.39	-21.57	-20.44	-17.54						
22-Jun-2010	24:00:00	-22.48	-15.18	-9.98	0.63	-25.53	-15.38	-20.67	-19.42	-19.06						
23-Jun-2010	06:00:00	-22.85	-15.44	-9.46	-0.13	-25.71	-15.73	-21.04	-21.07	-19.18						0.00
23-Jun-2010	12:00:00	-23.00	-15.59	-9.45	0.20	-27.50	-18.32	-21.32	-21.41	-19.16						
23-Jun-2010	18:00:00	-23.63	-17.12	-12.14	-0.84	-27.30	-18.59	-23.90	-21.92	-20.44						
23-Jun-2010	24:00:00	-24.33	-19.04	-14.74	-0.32	-27.82	-19.25	-24.44	-21.27	-21.33						
24-Jun-2010	06:00:00	-24.57	-18.25	-10.70	-0.74	-28.04	-19.44	-24.80	-22.58	-22.02						0.00
24-Jun-2010	12:00:00	-24.80	-18.79	-10.85	-0.67	-29.80	-21.73	-25.01	-23.13	-21.88						
24-Jun-2010	18:00:00	-25.18	-19.85	-13.85	-1.99	-29.42	-21.79	-27.08	-23.50	-22.89						
24-Jun-2010	24:00:00	-25.95	-21.66	-16.46	-1.63	-29.67	-22.10	-26.60	-23.09	-23.73						
25-Jun-2010	06:00:00	-26.19	-22.14	-15.44	-1.99	-29.31	-21.87	-27.25	-24.37	-23.50						0.00
25-Jun-2010	12:00:00	-26.56	-22.60	-15.23	-1.57	-30.84	-23.76	-26.67	-24.25	-23.26						
25-Jun-2010	18:00:00	-27.10	-23.47	-17.31	-3.93	-30.82	-23.93	-28.09	-24.56	-24.14						
25-Jun-2010	24:00:00	-27.57	-24.49	-18.21	-4.01	-31.46	-24.51	-28.45	-23.37	-24.87						
26-Jun-2010	06:00:00	-28.11	-24.91	-17.43	-4.43	-31.43	-24.60	-29.12	-24.35	-24.71						0.00
26-Jun-2010	12:00:00	-28.30	-25.10	-17.29	-4.04	-32.63	-25.71	-29.07	-25.04	-23.98						
26-Jun-2010	18:00:00	-28.83	-25.78	-19.03	-8.01	-32.51	-25.74	-30.16	-25.52	-25.14						
26-Jun-2010	24:00:00	-29.29	-26.68	-20.20	-9.51	-33.10	-26.40	-30.19	-24.93	-26.09						
27-Jun-2010	06:00:00	-29.66	-27.04	-20.00	-10.81	-33.03	-26.59	-30.64	-25.48	-25.91						0.01
27-Jun-2010	12:00:00	-30.03	-27.32	-19.90	-11.23	-34.24	-27.67	-30.82	-25.97	-25.61						
27-Jun-2010	18:00:00	-30.41	-27.86	-21.03	-12.39	-34.07	-27.43	-31.66	-26.37	-26.56						
27-Jun-2010	24:00:00	-30.79	-28.64	-22.17	-12.23	-34.62	-28.02	-31.65	-25.87	-27.51						
28-Jun-2010	06:00:00	-31.21	-28.88	-21.88	-13.05	-34.89	-28.32	-32.36	-26.55	-27.15						0.15
28-Jun-2010	12:00:00	-31.66	-29.10	-21.81	-13.62	-36.88	-30.03	-32.44	-26.91	-26.69						
28-Jun-2010	18:00:00	-32.17	-29.95	-23.07	-15.24	-35.02	-28.38	-34.12	-27.55	-27.83						
28-Jun-2010	24:00:00	-32.53	-30.49	-23.98	-13.50	-35.81	-28.65	-32.84	-27.16	-29.04						
29-Jun-2010	06:00:00	-32.45	-30.90	-23.91	-6.45	-36.42	-29.06	-33.29	-28.51	-28.84						1.08
29-Jun-2010	12:00:00	-32.48	-31.10	-23.78	-7.08	-36.46	-27.49	-33.23	-27.35	-28.40						
29-Jun-2010	18:00:00	-32.57	-31.87	-24.87	-8.05	-35.79	-21.49	-33.59	-26.44	-29.63						
29-Jun-2010	24:00:00	-32.41	-32.35	-25.54	-3.49	-35.87	-21.75	-32.71	-25.16	-30.00						

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
30-Jun-2010	06:00:00	-32.44	-32.59	-24.15	-3.63	-35.63	-21.69	-32.24	-24.97	-28.86				0.86	
30-Jun-2010	12:00:00	-32.49	-32.66	-23.65	-2.74	-36.58	-23.06	-31.52	-17.26	-28.08					
30-Jun-2010	18:00:00	-32.71	-32.78	-23.89	-6.58	-36.54	-23.49	-32.25	-18.56	-27.56					
30-Jun-2010	24:00:00	-32.50	-32.64	-23.03	-8.92	-37.07	-24.24	-32.50	-18.67	-24.22					4.89
1-Jul-2010	06:00:00	-32.47	-32.03	-21.86	-10.50	-36.87	-24.47	-32.97	-19.73	-23.16				0.06	
1-Jul-2010	12:00:00	-32.45	-31.63	-21.53	-11.22	-37.66	-25.73	-33.01	-20.49	-22.37					
1-Jul-2010	18:00:00	-32.50	-31.93	-22.16	-12.24	-37.61	-25.91	-34.03	-20.97	-22.24					
1-Jul-2010	24:00:00	-32.42	-32.17	-23.29	-12.63	-38.04	-26.58	-33.97	-20.73	-22.10					
2-Jul-2010	06:00:00	-32.44	-32.52	-23.43	-13.48	-37.50	-26.45	-34.64	-21.79	-21.95				0.00	
2-Jul-2010	12:00:00	-32.41	-32.57	-23.55	-13.54	-38.54	-27.90	-33.98	-22.27	-21.63					
2-Jul-2010	18:00:00	-32.49	-32.90	-24.63	-14.75	-38.24	-28.04	-34.63	-22.69	-22.22					
2-Jul-2010	24:00:00	-32.53	-33.35	-25.89	-14.68	-38.94	-28.68	-34.18	-21.97	-22.96					
3-Jul-2010	06:00:00	-32.30	-33.43	-25.73	-15.43	-38.68	-28.64	-34.48	-23.15	-22.94				0.00	
3-Jul-2010	12:00:00	-32.33	-33.64	-25.81	-15.63	-39.87	-29.93	-34.16	-23.62	-22.49					
3-Jul-2010	18:00:00	-32.55	-34.03	-26.71	-16.77	-39.52	-29.73	-34.59	-24.07	-23.30					
3-Jul-2010	24:00:00	-32.57	-34.52	-27.43	-16.62	-40.18	-30.47	-34.09	-23.55	-24.34					
4-Jul-2010	06:00:00	-32.42	-34.60	-27.20	-17.41	-40.20	-30.67	-34.49	-24.43	-24.30				0.00	
4-Jul-2010	12:00:00	-32.38	-34.72	-27.09	-17.76	-41.12	-31.61	-34.22	-24.88	-23.84					
4-Jul-2010	18:00:00	-32.44	-35.29	-27.89	-18.85	-40.72	-31.45	-34.70	-25.55	-24.71					
4-Jul-2010	24:00:00	-32.55	-35.74	-28.89	-18.52	-41.15	-32.11	-34.28	-25.04	-25.97					
5-Jul-2010	06:00:00	-32.44	-35.94	-28.54	-19.51	-40.73	-32.13	-34.78	-25.93	-25.86				0.00	
5-Jul-2010	12:00:00	-32.44	-36.24	-28.65	-19.48	-41.12	-33.01	-34.31	-26.38	-25.62					
5-Jul-2010	18:00:00	-32.60	-36.49	-29.51	-20.34	-40.71	-33.00	-34.67	-27.11	-26.52					
5-Jul-2010	24:00:00	-32.65	-37.03	-30.29	-20.25	-41.07	-33.53	-34.33	-26.47	-27.75					
6-Jul-2010	06:00:00	-32.57	-37.20	-30.05	-20.82	-40.91	-33.65	-34.55	-27.19	-27.77				0.00	
6-Jul-2010	12:00:00	-32.60	-37.54	-30.02	-21.03	-41.09	-34.51	-34.31	-27.75	-27.20					
6-Jul-2010	18:00:00	-32.74	-37.80	-30.97	-21.69	-40.46	-34.27	-34.61	-28.19	-28.16					
6-Jul-2010	24:00:00	-32.61	-37.67	-31.59	-21.46	-41.20	-35.07	-34.17	-27.76	-29.55					
7-Jul-2010	06:00:00	-32.53	-37.62	-31.21	-22.31	-40.68	-34.95	-34.63	-28.37	-29.21				0.00	
7-Jul-2010	12:00:00	-32.48	-37.66	-31.15	-22.13	-41.00	-35.71	-34.22	-28.78	-28.58					
7-Jul-2010	18:00:00	-32.63	-37.86	-32.20	-22.86	-40.74	-35.81	-34.55	-29.50	-29.81					
7-Jul-2010	24:00:00	-32.55	-37.73	-32.90	-22.81	-41.09	-36.49	-34.31	-28.76	-30.90					
8-Jul-2010	06:00:00	-32.39	-37.61	-32.65	-23.37	-40.72	-36.06	-34.51	-29.24	-30.46				0.00	
8-Jul-2010	12:00:00	-32.41	-37.58	-32.59	-23.39	-41.12	-36.50	-34.30	-29.32	-29.73					
8-Jul-2010	18:00:00	-32.59	-37.78	-33.49	-24.30	-40.76	-36.11	-34.71	-29.51	-30.53					
8-Jul-2010	24:00:00	-32.42	-37.64	-33.88	-24.23	-41.31	-36.63	-34.43	-28.75	-31.07					
9-Jul-2010	06:00:00	-32.43	-37.73	-33.82	-25.02	-40.80	-36.11	-35.06	-29.44	-30.45				0.00	
9-Jul-2010	12:00:00	-32.49	-37.70	-33.80	-24.87	-41.42	-36.67	-34.39	-29.84	-29.55					
9-Jul-2010	18:00:00	-32.55	-37.69	-34.55	-25.75	-40.76	-36.03	-35.03	-30.61	-30.60					
9-Jul-2010	24:00:00	-32.51	-37.68	-35.24	-25.43	-39.54	-35.42	-34.22	-29.55	-31.71					
10-Jul-2010	06:00:00	-32.53	-37.66	-35.35	-10.49	-40.20	-35.11	-34.84	-30.41	-31.38				0.38	
10-Jul-2010	12:00:00	-32.48	-37.69	-35.24	-12.28	-41.09	-35.61	-34.34	-30.20	-30.57					
10-Jul-2010	18:00:00	-32.67	-37.78	-35.80	-13.91	-40.71	-35.61	-34.55	-29.08	-31.40					
10-Jul-2010	24:00:00	-32.45	-37.61	-36.19	-14.59	-41.19	-36.20	-34.45	-26.53	-31.98					
11-Jul-2010	06:00:00	-32.43	-37.74	-36.15	-15.75	-40.84	-36.11	-34.76	-26.61	-30.32				0.19	
11-Jul-2010	12:00:00	-32.41	-37.67	-34.99	-16.15	-41.19	-36.59	-34.34	-27.16	-28.94					
11-Jul-2010	18:00:00	-32.57	-37.67	-35.21	-17.38	-40.98	-36.37	-34.70	-27.75	-28.76					
11-Jul-2010	24:00:00	-32.53	-37.72	-35.98	-17.87	-41.12	-36.44	-34.64	-27.10	-29.98					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
12-Jul-2010	06:00:00	-32.48	-37.68	-35.71	-18.71	-40.92	-36.21	-34.84	-27.64	-29.48				0.00	
12-Jul-2010	12:00:00	-32.44	-37.69	-35.56	-19.03	-40.92	-36.19	-34.16	-28.17	-28.78					
12-Jul-2010	18:00:00	-32.65	-37.86	-36.14	-19.83	-40.50	-36.00	-34.10	-28.46	-29.37					
12-Jul-2010	24:00:00	-32.45	-37.75	-36.65	-5.39	-41.07	-36.43	-33.97	-27.93	-30.00					
13-Jul-2010	06:00:00	-32.37	-37.64	-36.44	-5.22	-26.21	2.46	-34.46	-28.31	-29.80				0.28	
13-Jul-2010	12:00:00	-32.41	-37.46	-36.31	1.50	-24.72	1.41	-9.15	-26.36	-28.92					
13-Jul-2010	18:00:00	-32.47	-37.78	-36.99	1.16	-23.96	1.12	-9.63	-24.70	-29.98					
13-Jul-2010	24:00:00	-32.41	-37.61	-37.48	1.50	-24.20	-0.36	-10.07	-6.25	-30.29					
14-Jul-2010	06:00:00	-32.39	-37.57	-36.15	0.67	-23.86	-0.87	-11.69	-9.87	-27.84				0.95	
14-Jul-2010	12:00:00	-32.47	-33.37	-8.03	1.12	-24.96	-4.20	-12.77	-11.77	-19.40					
14-Jul-2010	18:00:00	-23.79	-13.08	-0.97	0.73	-24.76	-6.14	-15.57	-14.48	-12.28					
14-Jul-2010	24:00:00	-24.23	-7.69	-1.63	0.79	-25.32	-8.12	-16.70	-15.55	-11.82					
15-Jul-2010	06:00:00	-24.81	-7.64	-3.35	-0.01	-25.10	-9.56	-17.77	-17.36	-12.45				1.28	
15-Jul-2010	12:00:00	-24.85	-8.75	-5.97	0.32	-26.80	-13.46	-17.92	-18.46	-13.02					
15-Jul-2010	18:00:00	-25.16	-12.01	-8.84	-0.31	-26.54	-14.36	-20.77	-19.23	-14.51					
15-Jul-2010	24:00:00	-25.47	-13.74	-11.05	0.06	-26.98	-15.26	-21.59	-18.91	-15.65					
16-Jul-2010	06:00:00	-25.54	-14.23	-11.51	-0.28	-27.21	-15.91	-22.31	-20.36	-15.90				0.00	
16-Jul-2010	12:00:00	-25.49	-14.64	-11.91	-0.43	-28.84	-18.38	-22.69	-20.77	-16.08					
16-Jul-2010	18:00:00	-25.81	-16.20	-14.35	-1.25	-28.80	-17.84	-24.93	-20.96	-17.06					
16-Jul-2010	24:00:00	-26.41	-18.59	-16.57	-0.65	-29.15	-17.66	-23.00	-20.68	-18.27					
17-Jul-2010	06:00:00	-26.63	-19.22	-16.11	-0.72	-28.86	-17.89	-22.04	-22.12	-18.48				0.15	
17-Jul-2010	12:00:00	-26.72	-19.54	-15.97	-0.46	-29.62	-18.60	-22.04	-21.64	-18.09					
17-Jul-2010	18:00:00	-27.27	-21.08	-18.19	-0.82	-27.39	-9.23	-24.37	-21.57	-19.58					
17-Jul-2010	24:00:00	-27.62	-22.19	-16.35	0.70	-27.24	-10.65	-9.17	-20.66	-20.57					
18-Jul-2010	06:00:00	-27.68	-20.41	-13.46	0.35	-26.40	-11.27	-11.06	-21.71	-20.63				0.43	
18-Jul-2010	12:00:00	-27.34	-20.00	-14.30	0.91	-28.01	-14.89	-12.38	-15.41	-19.95					
18-Jul-2010	18:00:00	-27.69	-21.35	-16.99	0.23	-27.59	-15.57	-17.01	-16.41	-20.76					
18-Jul-2010	24:00:00	-27.02	-16.02	-4.42	0.54	-28.23	-16.49	-18.21	-16.34	-19.83					
19-Jul-2010	06:00:00	-22.65	-12.18	-5.39	-0.15	-28.07	-16.92	-19.22	-18.67	-14.93				0.00	
19-Jul-2010	12:00:00	-22.05	-12.65	-6.69	0.25	-29.80	-19.47	-19.73	-19.58	-13.48					
19-Jul-2010	18:00:00	-22.23	-14.95	-9.75	-0.42	-29.37	-19.56	-22.53	-19.95	-14.90					
19-Jul-2010	24:00:00	-23.07	-17.36	-13.45	0.24	-30.15	-20.49	-23.24	-19.60	-16.44					
20-Jul-2010	06:00:00	-23.13	-18.05	-13.21	-0.53	-30.12	-20.48	-24.16	-21.29	-16.47				0.00	
20-Jul-2010	12:00:00	-23.29	-18.37	-13.41	-0.32	-31.29	-22.35	-24.35	-21.82	-16.52					
20-Jul-2010	18:00:00	-23.97	-19.98	-15.83	-1.04	-30.82	-19.41	-26.27	-22.22	-17.81					
20-Jul-2010	24:00:00	-24.92	-22.09	-18.22	-0.08	-31.36	-18.09	-25.76	-21.68	-19.65					
21-Jul-2010	06:00:00	-25.35	-22.58	-17.66	-0.05	-31.05	-18.15	-16.57	-22.99	-19.68				0.49	
21-Jul-2010	12:00:00	-25.55	-22.90	-17.53	0.22	-32.13	-20.59	-17.89	-23.03	-19.49					
21-Jul-2010	18:00:00	-26.13	-24.06	-19.63	-0.20	-31.70	-21.00	-21.29	-23.03	-20.86					
21-Jul-2010	24:00:00	-26.91	-25.28	-21.07	0.16	-32.21	-21.83	-22.33	-22.18	-22.05					
22-Jul-2010	06:00:00	-24.56	-18.94	-9.57	-0.55	-31.88	-21.69	-23.15	-23.01	-22.08				0.01	
22-Jul-2010	12:00:00	-23.37	-17.89	-10.82	-0.13	-33.24	-23.61	-23.03	-23.72	-21.63					
22-Jul-2010	18:00:00	-23.60	-19.40	-14.03	-1.02	-32.84	-23.59	-25.58	-24.09	-22.42					
22-Jul-2010	24:00:00	-24.29	-21.53	-16.88	-0.53	-33.33	-24.26	-26.03	-23.19	-23.20					
23-Jul-2010	06:00:00	-24.52	-21.97	-16.45	-1.18	-33.15	-24.12	-26.73	-24.57	-23.21				0.00	
23-Jul-2010	12:00:00	-24.59	-22.42	-16.75	-0.97	-34.04	-25.41	-26.66	-24.73	-22.84					
23-Jul-2010	18:00:00	-25.11	-23.48	-18.49	-2.49	-34.28	-25.81	-28.22	-25.05	-23.48					
23-Jul-2010	24:00:00	-25.95	-25.10	-20.55	-3.30	-34.22	-26.05	-28.90	-24.47	-23.78					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
24-Jul-2010	06:00:00	-26.32	-25.52	-20.31	-3.23	-34.61	-26.35	-29.17	-25.36	-23.69				0.00	
24-Jul-2010	12:00:00	-26.63	-25.88	-20.44	-3.53	-35.61	-27.45	-29.30	-26.08	-23.49					
24-Jul-2010	18:00:00	-27.17	-26.70	-21.75	-7.54	-35.22	-27.32	-30.79	-26.19	-24.21					
24-Jul-2010	24:00:00	-27.99	-27.70	-23.18	-7.85	-35.84	-28.11	-30.86	-25.88	-25.08					
25-Jul-2010	06:00:00	-28.40	-28.15	-22.95	-7.91	-35.80	-28.14	-31.61	-26.97	-24.84				0.00	
25-Jul-2010	12:00:00	-28.76	-28.40	-23.07	-7.79	-36.66	-29.06	-31.82	-27.19	-24.38					
25-Jul-2010	18:00:00	-29.36	-29.11	-23.99	-9.96	-36.40	-28.91	-32.77	-27.81	-25.64					
25-Jul-2010	24:00:00	-29.91	-29.96	-25.25	-10.63	-36.65	-29.33	-32.74	-27.47	-26.31					
26-Jul-2010	06:00:00	-30.29	-30.29	-25.16	-11.74	-36.52	-29.47	-33.38	-28.04	-26.12				0.00	
26-Jul-2010	12:00:00	-30.87	-30.67	-25.29	-12.22	-37.12	-30.08	-33.27	-28.06	-25.95					
26-Jul-2010	18:00:00	-31.27	-31.18	-26.08	-13.12	-36.36	-29.57	-33.77	-28.45	-26.84					
26-Jul-2010	24:00:00	-31.75	-31.68	-26.68	-13.01	-37.11	-30.43	-33.33	-27.89	-27.21					
27-Jul-2010	06:00:00	-32.13	-31.91	-26.62	-14.09	-37.10	-30.31	-34.16	-28.06	-26.87				0.00	
27-Jul-2010	12:00:00	-32.32	-32.18	-26.63	-14.33	-38.02	-31.22	-33.95	-27.29	-26.42					
27-Jul-2010	18:00:00	-32.77	-32.52	-27.10	-15.28	-37.73	-31.13	-34.72	-27.79	-26.78					
27-Jul-2010	24:00:00	-32.84	-32.74	-27.28	-15.28	-38.31	-31.70	-34.27	-27.16	-26.79					
28-Jul-2010	06:00:00	-32.66	-32.69	-27.10	-16.20	-38.00	-31.50	-34.75	-28.05	-26.28				0.00	
28-Jul-2010	12:00:00	-32.73	-32.92	-27.25	-16.14	-38.50	-31.93	-34.33	-28.57	-25.86					
28-Jul-2010	18:00:00	-32.83	-33.29	-27.95	-16.79	-38.39	-32.21	-34.23	-29.30	-26.91					
28-Jul-2010	24:00:00	-32.80	-33.84	-28.83	-17.16	-39.46	-33.25	-34.57	-28.47	-27.83					
29-Jul-2010	06:00:00	-32.72	-34.01	-28.60	-18.41	-37.67	-31.93	-35.43	-28.42	-27.64				1.43	
29-Jul-2010	12:00:00	-32.68	-34.10	-28.61	-17.75	-38.57	-32.88	-34.25	-29.13	-27.09					
29-Jul-2010	18:00:00	-32.78	-34.49	-29.18	-18.96	-38.37	-32.82	-34.83	-29.39	-27.58					
29-Jul-2010	24:00:00	-32.85	-34.66	-28.96	-18.94	-39.03	-33.45	-34.33	-27.92	-27.89					
30-Jul-2010	06:00:00	-32.73	-34.68	-29.05	-19.86	-38.49	-32.94	-34.71	-28.76	-27.39	0.00	0.75	4.50	0.01	
30-Jul-2010	12:00:00	-32.72	-34.81	-29.15	-19.56	-39.06	-33.61	-34.18	-29.42	-26.73					
30-Jul-2010	18:00:00	-32.84	-35.12	-29.65	-20.11	-39.28	-33.75	-34.33	-29.96	-27.47					
30-Jul-2010	24:00:00	-32.84	-35.56	-30.62	-20.40	-39.80	-34.14	-34.30	-29.33	-28.82					
31-Jul-2010	06:00:00	-32.71	-35.78	-30.62	-20.80	-39.95	-34.23	-34.25	-29.71	-28.60				0.00	
31-Jul-2010	12:00:00	-32.43	-35.80	-30.50	-21.09	-40.40	-34.74	-34.17	-30.15	-27.86					
31-Jul-2010	18:00:00	-32.65	-36.28	-31.17	-21.78	-40.23	-34.55	-34.45	-30.38	-28.88					
31-Jul-2010	24:00:00	-32.61	-36.52	-31.76	-21.58	-40.91	-35.33	-33.97	-29.87	-29.66					5.66
1-Aug-2010	06:00:00	-32.54	-36.73	-31.63	-22.36	-40.72	-35.10	-34.28	-29.87	-29.14				0.11	
1-Aug-2010	12:00:00	-32.61	-36.84	-31.83	-22.26	-41.04	-35.76	-33.80	-29.74	-28.82					
1-Aug-2010	18:00:00	-32.68	-37.21	-32.17	-22.98	-40.49	-35.51	-34.39	-29.91	-28.85					
1-Aug-2010	24:00:00	-32.73	-37.52	-32.59	-22.74	-41.02	-36.32	-33.73	-29.12	-29.50					
2-Aug-2010	06:00:00	-32.62	-37.69	-32.56	-23.65	-40.72	-36.14	-34.21	-29.78	-28.94				0.00	
2-Aug-2010	12:00:00	-32.65	-37.79	-32.66	-23.65	-41.19	-36.61	-33.94	-30.10	-28.24					
2-Aug-2010	18:00:00	-32.63	-37.87	-33.10	-24.37	-40.46	-36.01	-34.37	-30.82	-29.03					
2-Aug-2010	24:00:00	-32.60	-37.82	-33.87	-24.31	-40.84	-36.37	-33.98	-30.44	-30.26					
3-Aug-2010	06:00:00	-32.45	-37.54	-33.77	-24.87	-40.38	-35.95	-34.21	-31.04	-29.96				0.00	
3-Aug-2010	12:00:00	-32.51	-37.67	-33.67	-24.58	-40.84	-36.36	-33.75	-31.31	-29.44					
3-Aug-2010	18:00:00	-32.78	-37.93	-34.42	-25.33	-40.11	-35.72	-34.23	-31.72	-30.40					
3-Aug-2010	24:00:00	-32.68	-37.76	-34.96	-25.06	-39.99	-35.67	-33.53	-30.83	-31.17					
4-Aug-2010	06:00:00	-32.48	-37.56	-34.71	-25.06	-36.94	-30.26	-33.80	-31.51	-30.83				0.00	
4-Aug-2010	12:00:00	-32.51	-37.67	-34.76	-0.18	-38.04	-30.84	-33.43	-31.65	-30.04					
4-Aug-2010	18:00:00	-32.72	-37.82	-35.51	-0.83	-37.13	-30.06	-33.58	-31.83	-31.36					
4-Aug-2010	24:00:00	-32.55	-37.78	-35.92	0.16	-38.51	-31.25	-33.07	-26.95	-32.07					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
5-Aug-2010	06:00:00	-32.63	-37.85	-36.11	-1.11	-37.95	-30.86	-34.25	-26.78	-32.06					0.13
5-Aug-2010	12:00:00	-32.56	-37.73	-33.44	-0.53	-39.28	-32.07	-33.57	-27.19	-28.06					
5-Aug-2010	18:00:00	-32.75	-36.78	-30.69	-1.81	-38.66	-31.55	-34.83	-28.54	-27.72					
5-Aug-2010	24:00:00	-32.54	-36.38	-31.03	-1.14	-39.32	-32.19	-33.97	-27.49	-28.77					
6-Aug-2010	06:00:00	-32.57	-35.96	-30.99	-1.69	-39.35	-32.19	-34.34	-28.64	-28.65					0.00
6-Aug-2010	12:00:00	-32.53	-35.76	-30.91	-1.69	-40.22	-33.14	-34.17	-28.43	-27.88					
6-Aug-2010	18:00:00	-32.69	-35.90	-31.12	-3.30	-39.88	-32.82	-34.57	-28.81	-28.36					
6-Aug-2010	24:00:00	-32.60	-36.12	-31.88	-2.95	-41.06	-33.83	-34.04	-28.58	-29.56					
7-Aug-2010	06:00:00	-32.56	-36.20	-31.84	-3.70	-40.47	-33.50	-34.58	-29.17	-29.14					0.00
7-Aug-2010	12:00:00	-32.47	-36.20	-31.81	-3.08	-41.07	-34.55	-34.01	-29.19	-28.38					
7-Aug-2010	18:00:00	-32.72	-36.52	-32.44	-6.45	-40.38	-34.35	-34.73	-29.72	-28.90					
7-Aug-2010	24:00:00	-32.69	-36.91	-33.26	-6.30	-40.98	-35.11	-34.11	-28.95	-29.87					
8-Aug-2010	06:00:00	-32.57	-37.06	-33.16	-6.88	-40.41	-34.93	-34.49	-29.99	-29.44					0.00
8-Aug-2010	12:00:00	-32.54	-37.14	-33.21	-5.82	-40.86	-35.93	-34.09	-29.99	-28.59					
8-Aug-2010	18:00:00	-32.62	-37.62	-33.77	-9.70	-40.52	-35.91	-34.52	-30.73	-29.39					
8-Aug-2010	24:00:00	-32.74	-37.93	-34.60	-11.01	-40.66	-36.43	-34.16	-30.07	-30.90					
9-Aug-2010	06:00:00	-32.61	-37.75	-34.69	-12.49	-40.43	-36.11	-34.36	-30.87	-30.32					0.00
9-Aug-2010	12:00:00	-32.57	-37.74	-34.77	-13.19	-40.91	-36.69	-34.15	-31.16	-29.81					
9-Aug-2010	18:00:00	-32.77	-37.92	-35.31	-14.57	-40.24	-36.08	-34.60	-31.48	-30.46					
9-Aug-2010	24:00:00	-32.67	-37.91	-36.25	-14.69	-40.53	-36.38	-34.15	-31.03	-31.90					
10-Aug-2010	06:00:00	-32.55	-37.78	-36.14	-15.63	-40.22	-36.02	-34.35	-31.87	-31.42					0.00
10-Aug-2010	12:00:00	-32.45	-37.74	-36.01	-16.05	-41.03	-36.66	-34.12	-32.17	-30.42					
10-Aug-2010	18:00:00	-32.50	-37.76	-36.56	-17.59	-40.20	-36.12	-34.67	-32.65	-31.58					
10-Aug-2010	24:00:00	-32.63	-37.86	-37.52	-17.69	-40.50	-36.31	-33.87	-32.19	-32.69					
11-Aug-2010	06:00:00	-32.54	-37.78	-37.37	-18.39	-40.31	-36.12	-34.41	-33.13	-32.68					0.00
11-Aug-2010	12:00:00	-32.45	-37.72	-37.40	-18.84	-40.96	-36.81	-34.03	-33.13	-31.85					
11-Aug-2010	18:00:00	-32.56	-37.87	-37.88	-20.11	-40.25	-36.11	-34.66	-33.70	-32.78					
11-Aug-2010	24:00:00	-32.65	-37.87	-38.56	-20.03	-41.07	-36.90	-33.87	-32.97	-32.54					
12-Aug-2010	06:00:00	-32.43	-37.73	-38.54	-21.16	-40.40	-36.19	-34.58	-34.11	-32.48					0.00
12-Aug-2010	12:00:00	-32.45	-37.66	-38.49	-20.93	-40.70	-36.54	-34.16	-33.77	-32.54					
12-Aug-2010	18:00:00	-32.68	-37.80	-39.05	-21.78	-40.24	-35.97	-34.49	-34.59	-32.75					
12-Aug-2010	24:00:00	-32.62	-37.72	-39.53	-21.70	-40.40	-36.15	-33.81	-33.74	-32.55					
13-Aug-2010	06:00:00	-32.47	-37.66	-39.46	-22.33	-40.53	-36.43	-34.24	-34.00	-32.36					0.42
13-Aug-2010	12:00:00	-32.53	-37.73	-39.37	-22.97	-40.90	-36.69	-34.22	-33.93	-32.60					
13-Aug-2010	18:00:00	-32.65	-37.73	-40.04	-23.83	-40.14	-36.02	-34.58	-34.25	-32.66					
13-Aug-2010	24:00:00	-32.43	-37.69	-40.48	-23.52	-40.52	-36.29	-33.71	-34.09	-32.36					
14-Aug-2010	06:00:00	-32.47	-37.68	-40.53	-24.35	-40.32	-36.15	-34.33	-34.51	-32.64					0.01
14-Aug-2010	12:00:00	-32.44	-37.69	-40.43	-24.45	-41.02	-36.78	-33.86	-34.19	-32.57					
14-Aug-2010	18:00:00	-32.78	-38.02	-41.13	-25.47	-40.24	-35.88	-34.67	-34.95	-32.88					
14-Aug-2010	24:00:00	-32.54	-37.81	-41.39	-25.06	-40.67	-36.33	-33.80	-34.23	-32.49					
15-Aug-2010	06:00:00	-32.43	-37.60	-41.21	-25.92	-40.25	-36.08	-34.22	-35.12	-32.45					0.00
15-Aug-2010	12:00:00	-32.47	-37.61	-41.20	-25.86	-41.16	-36.75	-33.81	-34.81	-32.44					
15-Aug-2010	18:00:00	-32.72	-37.81	-41.85	-27.05	-40.38	-36.01	-34.60	-35.45	-32.80					
15-Aug-2010	24:00:00	-32.67	-37.87	-42.31	-26.70	-40.72	-36.21	-33.93	-34.83	-32.48					
16-Aug-2010	06:00:00	-32.49	-37.57	-42.09	-27.46	-40.12	-35.79	-34.24	-35.71	-32.50					0.00
16-Aug-2010	12:00:00	-32.44	-37.61	-42.04	-27.40	-41.00	-36.42	-33.86	-35.50	-32.40					
16-Aug-2010	18:00:00	-32.63	-37.85	-42.64	-28.65	-40.22	-35.71	-34.64	-35.97	-32.80					
16-Aug-2010	24:00:00	-32.65	-37.69	-43.11	-28.33	-40.72	-36.24	-33.81	-35.37	-32.43					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOFF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
17-Aug-2010	06:00:00	-32.53	-37.75	-43.03	-29.19	-40.28	-35.93	-34.17	-36.19	-32.51					0.00
17-Aug-2010	12:00:00	-32.47	-37.68	-43.01	-29.01	-40.91	-36.59	-33.73	-36.10	-32.33					
17-Aug-2010	18:00:00	-32.59	-37.79	-43.43	-30.16	-40.22	-35.77	-34.71	-36.67	-32.56					
17-Aug-2010	24:00:00	-32.53	-37.78	-43.93	-29.59	-39.76	-36.60	-34.12	-35.79	-32.51					
18-Aug-2010	06:00:00	-32.45	-37.69	-43.70	-4.32	-40.26	-35.83	-34.57	-36.79	-32.60					0.00
18-Aug-2010	12:00:00	-32.48	-37.81	-43.76	-7.73	-40.90	-36.39	-33.86	-35.24	-32.32					
18-Aug-2010	18:00:00	-32.69	-37.88	-43.97	-11.11	-40.67	-36.18	-34.48	-33.57	-32.68					
18-Aug-2010	24:00:00	-32.57	-37.64	-43.81	-12.94	-41.01	-36.49	-34.01	-31.54	-31.84					
19-Aug-2010	06:00:00	-32.54	-37.66	-43.79	-13.38	-40.20	-35.79	-34.25	-31.89	-30.87					0.06
19-Aug-2010	12:00:00	-32.43	-37.63	-43.40	-6.78	-40.82	-36.48	-33.70	-31.37	-30.34					
19-Aug-2010	18:00:00	-32.57	-37.73	-43.23	-10.19	-40.52	-36.13	-34.35	-31.34	-30.62					
19-Aug-2010	24:00:00	-32.61	-37.69	-43.54	-12.23	-40.78	-36.32	-33.86	-30.39	-30.62					
20-Aug-2010	06:00:00	-32.51	-37.73	-43.31	-13.95	-40.19	-35.73	-34.22	-30.89	-30.56					0.74
20-Aug-2010	12:00:00	-32.44	-37.58	-43.05	-14.35	-40.88	-36.39	-33.63	-30.71	-29.87					
20-Aug-2010	18:00:00	-32.65	-37.85	-43.24	-16.09	-40.26	-35.91	-34.43	-31.03	-29.92					
20-Aug-2010	24:00:00	-32.75	-37.82	-43.73	-16.49	-41.13	-36.54	-33.85	-30.11	-30.57					
21-Aug-2010	06:00:00	-32.48	-37.67	-43.53	-18.10	-40.32	-35.89	-34.70	-31.11	-30.26					0.07
21-Aug-2010	12:00:00	-32.36	-37.60	-43.28	-18.27	-41.01	-36.59	-33.88	-31.07	-29.43					
21-Aug-2010	18:00:00	-32.74	-37.82	-43.82	-19.81	-40.44	-36.01	-34.64	-32.05	-29.99					
21-Aug-2010	24:00:00	-32.45	-37.63	-43.81	-0.32	-40.62	-36.25	-33.77	-30.86	-30.72					
22-Aug-2010	06:00:00	-32.54	-37.66	-43.88	-0.53	-40.31	-35.83	-34.28	-31.82	-30.93					0.01
22-Aug-2010	12:00:00	-32.60	-37.76	-43.97	-0.19	-40.70	-36.20	-33.86	-30.93	-30.26					
22-Aug-2010	18:00:00	-32.68	-37.72	-44.01	-0.76	-40.06	-35.63	-34.48	-30.82	-30.56					
22-Aug-2010	24:00:00	-32.45	-37.66	-43.87	-0.41	-41.00	-36.38	-33.65	-29.96	-30.78					
23-Aug-2010	06:00:00	-32.56	-37.70	-39.39	-1.19	-40.52	-35.97	-34.30	-30.14	-30.45					0.11
23-Aug-2010	12:00:00	-32.41	-37.58	-38.15	-0.85	-40.76	-36.26	-34.03	-29.66	-29.40					
23-Aug-2010	18:00:00	-32.54	-37.79	-37.88	-1.42	-40.28	-35.87	-34.24	-30.08	-29.38					
23-Aug-2010	24:00:00	-32.55	-37.73	-37.61	-0.73	-40.62	-36.20	-33.79	-29.47	-29.64					
24-Aug-2010	06:00:00	-32.32	-37.66	-37.29	-0.81	-40.11	-35.72	-34.17	-29.49	-29.13					0.88
24-Aug-2010	12:00:00	-32.37	-37.63	-37.00	-0.60	-40.82	-36.27	-33.57	-28.83	-28.68					
24-Aug-2010	18:00:00	-32.50	-37.74	-36.91	-1.43	-40.44	-35.96	-34.33	-28.31	-28.30					
24-Aug-2010	24:00:00	-32.42	-37.60	-36.76	-1.29	-40.64	-36.15	-33.86	-27.32	-28.08					
25-Aug-2010	06:00:00	-32.42	-37.72	-36.64	-1.97	-40.34	-35.99	-34.19	-28.05	-27.72					0.01
25-Aug-2010	12:00:00	-32.35	-37.52	-36.14	-2.05	-40.86	-36.30	-34.03	-28.16	-27.09					
25-Aug-2010	18:00:00	-32.65	-37.79	-36.19	-3.93	-40.31	-36.01	-34.48	-28.54	-27.28					
25-Aug-2010	24:00:00	-32.51	-37.80	-36.46	-3.54	-40.66	-36.17	-33.93	-28.19	-27.89					
26-Aug-2010	06:00:00	-32.48	-37.68	-36.10	-3.79	-40.42	-35.85	-34.16	-29.06	-27.77					0.00
26-Aug-2010	12:00:00	-32.35	-37.56	-35.89	-3.64	-40.85	-36.50	-34.04	-29.31	-27.15					
26-Aug-2010	18:00:00	-32.65	-37.93	-36.44	-6.52	-40.43	-35.99	-34.42	-29.67	-27.68					
26-Aug-2010	24:00:00	-32.57	-37.84	-36.88	-6.17	-40.71	-36.30	-33.93	-29.29	-28.74					
27-Aug-2010	06:00:00	-32.50	-37.72	-36.80	-6.58	-40.28	-35.77	-34.29	-30.13	-28.68					0.00
27-Aug-2010	12:00:00	-32.47	-37.55	-36.59	-5.85	-41.04	-36.44	-33.69	-30.29	-28.14					
27-Aug-2010	18:00:00	-32.53	-37.81	-37.05	-10.30	-40.26	-35.75	-34.49	-30.62	-28.58					
27-Aug-2010	24:00:00	-32.51	-37.74	-37.58	-11.11	-40.82	-36.30	-33.76	-29.90	-29.75					
28-Aug-2010	06:00:00	-32.55	-37.75	-37.49	-12.76	-40.24	-35.66	-34.12	-30.95	-29.40					0.08
28-Aug-2010	12:00:00	-32.43	-37.55	-37.33	-12.93	-41.03	-36.47	-33.63	-30.88	-28.83					
28-Aug-2010	18:00:00	-32.71	-37.76	-37.83	-14.63	-40.35	-35.94	-34.48	-31.28	-29.42					
28-Aug-2010	24:00:00	-32.56	-37.68	-38.56	-14.79	-40.80	-36.25	-33.95	-30.69	-30.38					

													Weatherstation Rainfall Data		
Date	Time	Water Level (inches)											On-site Raingauge	Hoffmann (NHOF) Daily Rainfall	Hoffmann Monthly Rainfall
dd-mmm-yyyy	hh:mm:ss	AW1	AW2	AW3	AW4	AW5	AW6	AW7	REF-BP	REF-WO	GC1	CG2			
29-Aug-2010	06:00:00	-32.33	-37.43	-38.31	-15.93	-40.17	-35.71	-34.19	-31.69	-29.97				0.00	
29-Aug-2010	12:00:00	-32.59	-37.57	-38.48	-16.15	-40.86	-36.39	-33.71	-31.96	-29.55					
29-Aug-2010	18:00:00	-32.75	-37.86	-39.08	-17.75	-40.30	-35.67	-34.39	-32.44	-30.29					
29-Aug-2010	24:00:00	-32.67	-37.78	-39.80	-17.81	-40.80	-36.30	-33.85	-31.79	-31.61					
30-Aug-2010	06:00:00	-32.39	-37.50	-39.65	-18.85	-40.30	-35.70	-34.33	-32.65	-31.35				0.00	
30-Aug-2010	12:00:00	-32.35	-37.72	-39.69	-18.93	-40.96	-36.43	-33.69	-32.93	-30.66					
30-Aug-2010	18:00:00	-32.59	-37.68	-40.18	-20.29	-40.26	-35.71	-34.59	-33.51	-31.38					
30-Aug-2010	24:00:00	-32.50	-37.62	-40.95	-20.07	-40.79	-36.27	-33.73	-32.77	-32.48					
31-Aug-2010	06:00:00	-32.45	-37.48	-40.91	-20.97	-40.80	-36.30	-34.41	-33.97	-32.55				0.00	
31-Aug-2010	12:00:00	-32.51	-37.56	-40.87	-18.93	-40.30	-35.70	-33.69	-33.87	-31.80					
31-Aug-2010	18:00:00	-32.67	-37.82	-41.45	-20.29	-40.96	-36.43	-34.59	-34.72	-32.76					
31-Aug-2010	24:00:00	-32.61	-37.68	-42.32	-20.07	-40.26	-35.71	-33.73	0.00	-32.58					2.63
1-Sep-2010	06:00:00	-32.50	-37.43	-42.22	-20.97	-40.79	-36.27	-34.41	0.00	-32.66	0.00	0.00	3.55	0.00	
1-Sep-2010	12:00:00	-32.42	-37.48	-42.03					0.00	0.00					
1-Sep-2010	18:00:00														
1-Sep-2010	24:00:00														
2-Sep-2010	06:00:00													0.30	
2-Sep-2010	12:00:00														
2-Sep-2010	18:00:00														
2-Sep-2010	24:00:00														

APPENDIX D

2010 Site Photos

Haw Branch Stream Observation Area Photos



ID #1 – Beaver dam, STA 10+50



ID #2 – Beaver dam, STA 12+20

Haw Branch Vegetation Plot Photos



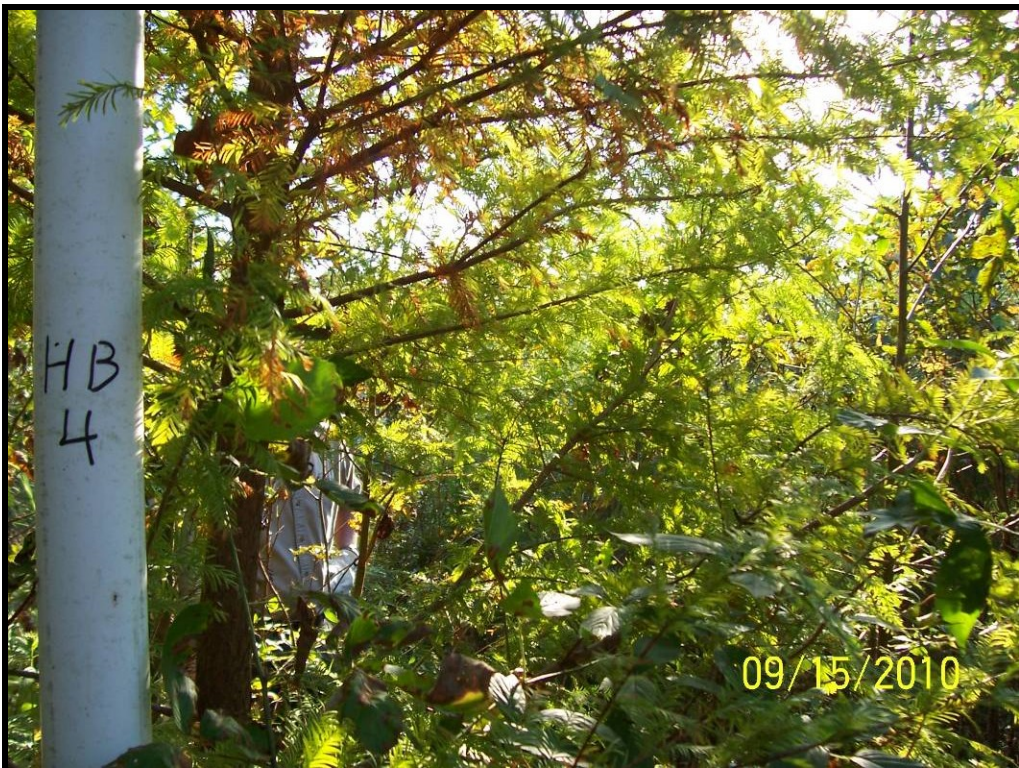
Haw Branch Vegetation Plot 1



Haw Branch Vegetation Plot 2



Haw Branch Vegetation Plot 3



Haw Branch Vegetation Plot 4



Haw Branch Vegetation Plot 5



Haw Branch Vegetation 6



Haw Branch Vegetation Plot 7



Haw Branch Vegetation 8



Haw Branch Vegetation Plot 9



Haw Branch Vegetation 10



Haw Branch Vegetation Plot 11



Haw Branch Vegetation 12



Haw Branch Vegetation Plot 13



Haw Branch Vegetation 14



Haw Branch Vegetation Plot 15



Haw Branch Vegetation 16



Haw Branch Vegetation Plot 17



Haw Branch Vegetation 18



Haw Branch Vegetation Plot 19



Haw Branch Vegetation 20