ANNUAL REPORT FOR 2005

Croatan Wetland Mitigation Bank
Craven County, North Carolina

Prepared for:

The Ecosystem Enhancement Program
EEP Project No. 103

January 2006

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SUMMARY

The following report summarizes the monitoring and construction activities that have occurred prior to and during 2005 at the 4035-acre Croatan Wetland Mitigation Bank (CWMB). The CWMB site is expected to provide compensatory wetland mitigation for several NCDOT projects in the Neuse River Basin (Hydrologic Unit 03020204). This site was designed and implemented in two phases, Phase I (1469.3 acres) and Phase II (2565.3 acres). Phase I construction was completed in the winter of 2001 and Phase II construction was completed in the spring of 2002. Each Phase has been divided into Management Units (MU) to aid in the report presentation. In 2005, hydrologic and vegetative monitoring in Phase II (MU 1-11) continued into the third year and monitoring in Phase I (MU 12A-18) continued into the fourth year.

The CWMB contains both non-riverine mitigation areas and riverine mitigation areas; non-riverine and riverine mitigation areas are tracked separately. In addition, pursuant to the request of the Mitigation Banking Review Team (MBRT), there are separate hydrologic monitoring success criteria for the non-riverine mineral and organic soils. Non-riverine mineral soils are expected to make jurisdictional hydrology for a minimum of 12.5 percent (%) of the growing season (Success Criterion 1) and be within 50% of the Reference Range for years one through three and 20% of the Reference Range for years four and five (Success Criterion 2). Non-riverine organic soils and riverine restoration/enhancement areas are expected to make jurisdictional hydrology for a minimum of 25% of the growing season and be within 50% of the reference range for years one through three and 20% of the Reference Range for years four and five.

Prior to the beginning of the 2005 growing season 286 ground water monitoring gauges were installed throughout Phase I and II for monitoring success. A total of 33 reference gauges were installed either onsite or offsite in areas of minimal disturbance to provide a range of reference conditions for the ten hydric soil mapping units present on the CWMB. Rain Gauge 2 was used for hydrologic analysis. Rain Gauge 3 malfunctioned several times and Rain Gauge 4 malfunctioned during Hurricane Ophelia, therefore these gauges were not used for data analyses.

The majority of the gauges in the CWMB showed that groundwater levels dropped below 12 inches of the ground surface either in June or the beginning of September and then rose to within 12 inches of the ground surface at the end of September due to hurricane events.

Entire Growing Season (March-November)

Hydrologic monitoring in 2005 showed 243 of 286 (84.6%) monitoring gauges in the CWMB met both respective hydrologic success criteria [$\geq$ 12.5 % (mineral soils) or $\geq$ 25 % (organic/riverine soils) of the growing season and within 20% and 50% of Reference Range] (Figures 3a and 3b). Of the 43 gauges that did not meet both of its respective success criteria, 30 made jurisdictional hydrology for $\geq$ 12.5% of the growing season, 10 made jurisdictional hydrology between 5 and 12.5% of the growing season, and three (Gauges 75, 144, and 287) did not make jurisdictional hydrology for at least 5% of the growing season.

Of the 204 monitoring gauges in non-riverine mineral soils, 166 met both hydrologic success criteria and 12 did not meet either hydrologic success criterion; the remaining 26 gauges met Success Criterion 1 only. Of the 62 monitoring gauges in non-riverine organic soils, 61 met both hydrologic success criteria and only one gauge (Gauge 159) did not meet either of its success criteria. However, Gauge 159 met jurisdictional hydrology for 22.3% of the growing season. Of the 12 monitoring gauges in riverine organic soils, 11 met both hydrologic success criteria and only one gauge (Gauge 227) did not meet either of its hydrologic success criteria. Of the eight monitoring gauges in riverine mineral soils five met both hydrologic success criteria, one gauge (Gauge 256) met Success Criterion 1 only and the remaining two gauges (Gauges 102 and 243) did not meet either hydrologic success criterion.

Hydrologic monitoring in 2005 showed 81 of 102 (79.4%) monitoring gauges in Phase I met both respective hydrologic success criteria. Of the 71 monitoring gauges in non-riverine mineral soils, 51 met both hydrologic success criteria and six did not meet either hydrologic success criterion; the remaining 14 gauges met Success Criterion 1 only. Of the 14 gauges in Phase I that met only Success Criterion 1, 10 made jurisdictional hydrology for between 36.3 and 42.2% of the growing season. Of the 31 monitoring gauges in Phase I in non-riverine organic soils, 30 met both hydrologic success criteria and the remaining gauge (Gauge 159) did not meet either of its hydrologic success criterion. However, Gauge 159 met jurisdictional hydrology for 22.3% of the growing season.

Hydrologic monitoring in 2005 showed 162 of 184 (88.0%) monitoring gauges in Phase II met both respective hydrologic success criteria. Of the 133 monitoring gauges in non-riverine mineral soils, 115 met both hydrologic success criteria and 6 did not meet either hydrologic success criterion; the remaining 12 gauges met Success Criterion 1 only. Of the 31 of the monitoring gauges in non-riverine organic soils, all 31 met both hydrologic success criteria. Of the 12 monitoring gauges in riverine organic soils, 11 met both hydrologic success criteria and the remaining gauge (Gauge 227) met Success Criterion 1 only. Of the eight monitoring gauges in riverine mineral soils, five met both hydrologic success criteria, two gauges (Gauges 102 and 256) did not meet either hydrologic success criterion, and the remaining gauge (Gauge 259) met Success Criterion 1. Of the 184 monitoring gauges in Phase II, 139 (75.5%) met both of their respective hydrologic success criteria established for years one through three and met the hydrologic success criteria established for years four and five [≥ 12.5 % (mineral soils) or ≥ 25 % (organic/riverine soils) of the growing season and within 20% of Reference Range] under normal rainfall conditions.

Of the 43 monitoring gauges that did not meet both of their respective hydrologic success criteria, 28 met Success Criterion 1 and the remaining 15 did not meet either of their respective hydrologic success criteria. In years with normal rainfall these areas may not be returned to jurisdictional hydrology. The non-jurisdictional areas around these monitoring gauges may need to be delineated and removed from mitigation credits if they are not returned to jurisdictional hydrology in years four and five.

Rainfall

Overall, the rainfall for the 2005 growing season was normal (≥ 28.7 to 39.0 inches onsite compared to normal 28.7 to 49.9 inches). Rainfall between November 2004 and February 2005 was on the low side of normal (10.5 inches at the New Bern Airport compared to normal 10.2 to 18.4 inches).

Vegetation

The vegetative success criterion states that there must be a minimum of 320 trees per acre surviving for three consecutive years. Ecosystem Enhancement Program (EEP) has agreed to continue monitoring this site for the remainder of the five years or until success criteria are met. The required survival criterion will decrease by 10% per year after the third year of vegetation monitoring (*i.e.,* for an expected 288 stems per acre for year four, and 260 stems per acre for year five), such that there are 260 5-year old planted stems per acre at the end of year five.

Of the 4,035-acre CWMB, approximately 224.5 acres were involved in tree planting for Phase I and 466.0 acres were involved in tree planting for Phase II. There were 25 vegetation monitoring plots established throughout the Phase I planting areas, and 23 vegetation monitoring plots established throughout the Phase II planting areas. The 2005 vegetation monitoring of the Phase I portion of the site revealed an average tree density of 349 trees/ acre, which exceeds the minimum success criteria of 288 trees/acre for year four. The vegetation monitoring of the Phase II portion of the site revealed an average tree density of 357 trees/acre, which exceeds the minimum success criteria of 320 trees per acre for year three.

Recommendations

It is recommended that monitoring of Phase I and II continue into 2006. However, due to the high rate of hydrologic success under normal rainfall conditions, Environmental Services, Inc., (ESI) recommends that selected interior gauges that are meeting success criteria for years four and five be removed from monitoring. Seventy-three interior gauges should be considered for removal from hydrologic monitoring. Figures 6a and 6b (in Appendix E) designate the gauges that should be considered for early removal from hydrologic monitoring. Figures 7a and 7b (in Appendix E) depict how the remaining gauges will provide representative coverage across the CWMB. Each of the gauges considered for early removal has met or exceeded both expected hydrologic success criteria in each year of monitoring. The majority of these gauges have met jurisdictional hydrology for 100% of the growing season in years with normal rainfall. Mitigative measures have successfully enhanced and/or restored the areas represented by these gauge locations. The areas represented by these gauges sites should be considered to have successfully met all success criteria through year five as established by the MBRT.

Gauge sites that should be monitored through years four and five include: gauges that are adjacent to roads and point plugged ditches, areas where riverine credit might be gained, areas that are not meeting the success criteria established for years four and five, and areas that provide representative coverage across the CWMB.

ESI documented that many of the gauges along transects 258-260 (MU 3/4A), 286-287 (MU 10C), and 182-183 (MU 12B) did not meet both expected hydrologic success criteria. Additional gauges may need to be installed along these transects in order to capture the zone of influence that may remain adjacent to the open areas of the ditch. ESI also recommends that additional areas in MU 6, 5, and 2B (for example Gauges 241, 240, 242, and 251) be re-evaluated for riverine function. These areas showed prolonged surface flooding and flowing water throughout much of the growing season and may be considered riverine mitigation areas due to the surface connection with the unnamed tributary to East Prong Brice Creek.

It is recommended that Rain Gauge 3 be replaced due to repeated malfunction and unreliable data collected during 2005. For subsequent years, it is recommended that additional follow-up trips be scheduled after routine gauge downloads to check gauges that malfunction, particularly reference gauges, and take appropriate measures to avoid extended and frequent data gaps, especially for Ecotone gauges. Ecotone gauges tended to have frequent gauge malfunctions, including dead batteries, chewed external wires, and broken battery connections.

Of the vegetation surveys performed in the CWMB, 10 plots in Phase I and 12 plots in Phase II do not meet the established success criteria. The Non-Riverine Swamp Forest Target Community in Phase 1 does not meet the success criteria of 288 trees/acre for year four. The Non-Riverine Wet Hardwood Forest Types A and B Target Communities in Phase II do not meet the success criteria of 320 trees/acre for year three. Further investigation may be needed in these Target Communities to determine why success criteria are not being met. Vegetation surveys should continue to be conducted in 2006.

1.0 INTRODUCTION

1.1 Project Description

The Croatan Wetland Mitigation Bank (CWMB) is located in Craven County, North Carolina approximately 3.6 miles northwest of Havelock. The site is situated west of US 70 and south of Catfish Lake Road (SR 1100) (Figure 1). The CWMB was created to provide compensatory mitigation for several projects in the Neuse River Basin (Hydrologic Unit 03020204). The site encompasses approximately 4,035 acres and was designed and implemented in two phases (Phase I and Phase II). Each phase was divided into Management Units (MU) to aid in planning, and this is continued for presentation of monitoring results. Phase I is approximately 1469.3 acres and contains approximately 1446.5 acres targeted for a combination of non-riverine wetland restoration (311.6 acres), enhancement (1026.9 acres), and preservation (108.0 acres). The remaining 22.8 acres of Phase I consists of non-hydric soils (3.9 acres) and areas considered non-restorable (18.9 acres). Phase II is approximately 2565.3 acres and contains approximately 2333.5 acres targeted for a combination of non-riverine wetland restoration (1123.6 acres), enhancement (956.9 acres), and preservation (253.0 acres). Approximately 179 acres are targeted for a combination of riverine restoration (49.6 acres), enhancement (91.6 acres), and preservation (37.8 acres). The remaining 52.8 acres of Phase II consists of non-hydric soils (25.7 acres) and areas considered non-restorable (27.1 acres). In 2005, hydrologic and vegetative monitoring continued for a third year in Phase II and continued for a fourth year in Phase I.

1.2 Purpose

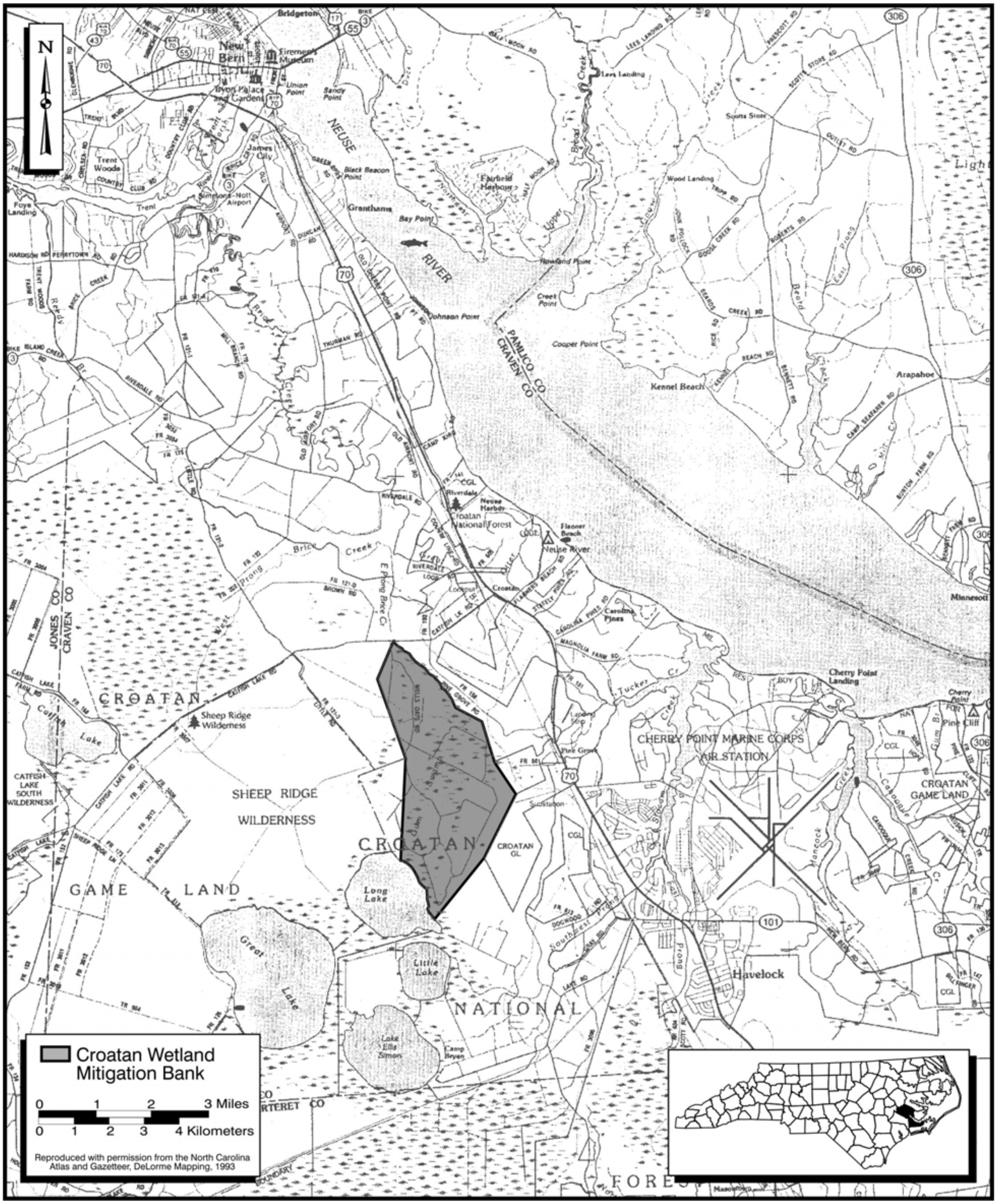
In order to demonstrate successful mitigation, vegetative and hydrologic monitoring will be conducted for a minimum of five years. Success criteria were established by the Mitigation Bank Review Team (MBRT). The following report describes the results of the hydrologic and vegetation monitoring for Phase I and II during the 2005 growing season at the CWMB. Included in this report are analyses of both hydrologic and vegetative monitoring results, as well as local climate conditions throughout the growing season and site photographs.

1.3 Project History

	Phase I
1998-2000	Gauges Installed to Aid Delineation
November 2000	Drum-chopping of Phase I Planting Areas
December 2000	Herbicide of Phase I Planting Areas
February 2001	Planting of Phase I
September 2001 – February 2002	Construction of Phase I
February 2002	Additional Monitoring Gauges Installed
March – November 2002	Hydrologic Monitoring (1 yr.)
July 2002	Vegetation Monitoring (1 yr.)
March – November 2003	Hydrologic Monitoring (2 yr.)
August 2003	Vegetation Monitoring (2 yr.)
March – November 2004	Hydrologic Monitoring (3 yr.)
August 2004	Vegetation Monitoring (3 yr.)
March – November 2005	Hydrologic Monitoring (4 yr.)
August 2005	Vegetation Monitoring (4 yr.)

	Phase II
1999-2000	Gauges Installed to Aid Delineation
August 2001	Drum-chopping of Phase II Planting Areas
December 2001 – June 2002	Construction of Phase II
July 2002	Herbicide of Phase II Planting Areas
February –March 2003	Additional Monitoring Gauges Installed
February 2003	Tree Planting
March - November 2003	Hydrologic Monitoring (1 yr.)
August 2003	Vegetative Monitoring (1 yr.)
March - November 2004	Hydrologic Monitoring (2 yr.)
August 2004	Vegetative Monitoring (2 yr.)
March - November 2005	Hydrologic Monitoring (3 yr.)
August 2005	Vegetative Monitoring (3 yr.)

Figure 1. Site Location Map



2.0 HYDROLOGY

2.1 Success Criteria

In accordance with federal guidelines for wetland mitigation, success criteria for hydrology states that the area must be inundated or saturated (within 12 inches of the surface) by surface or groundwater for at least a consecutive 12.5% of the growing season. Areas inundated less than 5% are always classified as non-wetlands. Areas inundated between 5% and 12.5% of the growing season can be classified as wetlands depending upon factors such as the presence of hydrophytic vegetation and hydric soils.

The MBRT required additional conditions to the hydrologic monitoring requirements for the CWMB beyond the minimum established by the federal guideline for wetland mitigation success criteria.

Hydrologic success criteria will include both of the following:

> 1) inundation or saturation within 12 inches of the surface for at least 12.5% of the growing season for mineral soils and 25% of the growing season for organic soils and riverine restoration/enhancement areas (**Success Criterion 1**); and
>
> 2) the hydroperiod for restoration/enhancement areas shall be within 50% of reference saturation or inundation depth, duration and frequency for the first three years and shall be within 20% for years four and five (**Success Criterion 2**).

If the 50% and 20% reference goals are not attained, a site visit will be conducted by the MBRT to determine the viability of the site.

The growing season in Craven County begins March 18 and ends November 14. These dates correspond to a 50% probability that air temperatures will drop to 28° F or lower after March 18 and before November 14. Thus, the growing season is 242 days. A jurisdictional hydroperiod of 12.5% of the growing season is approximately 30 days. A jurisdictional hydroperiod of 25% of the growing season is approximately 60 days. However, the site must also experience average climatic conditions for the data to be valid. Use of reference gauge data collected concurrently with site data for evaluating success is expected to provide more meaningful means for evaluating success following initial site re-hydration regardless of rainfall conditions. Table 1 provides a summary of hydrologic success criteria.

Table 1. Expected Wetland Conditions 2005

Wetland Type	Soil Mapping Unit	Success Criterion 1	Success Criterion 2	MUs with Representative Gauges
Non-riverine, Mineral	Bayboro (Ba)	≥ 12.5 %	Phase I 20% 55.7-100% Phase II 50% 34.7-100%	1, 2A, 2B, 3, 4A, 4B, 5, 6, 7, 8, 9, 10A, 10B, 11, 12A, 13A, 13B, 14, 15, 17
	Leaf (La)	≥ 12.5 %	Phase I 20% 31.8-86% Phase II 50% 19.8-100%	1, 2A, 2B, 3, 5, 6
	Leon (Ln)	≥ 12.5 %	Phase I 20% 12.4-19.4% Phase II 50% 7.9-24.4%	13B, 16, 18
	Murville (Mu)	≥ 12.5 %	Phase I 20% 57.9-100% Phase II 50% 36.2-100%	12A, 12B, 13A, 13B, 15, 16
	Pantego (Pa)	≥ 12.5 %	Phase I 20% 22.3-100% Phase II 50% 14.1-100%	1, 2B, 4B, 5, 6, 7, 8, 10B, 10C, 11, 12A, 12B, 13A, 13B, 14, 15, 16, 17, 18
	Rains (Ra)	≥ 12.5 %	Phase I 20% 20.7-86.8% Phase II 50% 13.2-100%	5, 6, 10B, 10C, 12A
Non-riverine, Organic	Croatan (CT)	≥ 25.0 %	Phase I 20% 24-100% Phase II 50% 14.9-100%	4B, 6, 8, 9, 10A, 10B, 10C, 11, 12B, 13A, 15, 16, 17, 18
	Dare (DA)	≥ 25.0 %	Phase I 20% 80.2-100% Phase II 50% 50-100%	16, 17
Riverine	Dorovan (DO)	≥ 25.0 %	Phase I 20% 80.2-100% Phase II 50% 50-100%	6
	Masontown/Muckalee (MM)	≥ 25.0 %	Phase I 20% 57.9-100% Phase II 50% 36.2-100%	5, 6

2.2 Hydrologic Description

Phase I construction was completed prior to the onset of the 2002 growing season. Phase I began monitoring for hydrologic success in 2002 and continued into 2005. Phase II construction was completed in the spring of 2002 and hydrologic monitoring began in the spring of 2003. Hydrologic monitoring was conducted in 2005 by Environmental Services, Inc. (ESI). In 2005, 286 monitoring gauges were monitored (Figures 2a and 2b). Gauges consist of a combination of Remote Data Systems (RDS) WL-20, WL-40, and Ecotone monitoring gauges. In addition, three to four monitoring gauges were monitored per soil mapping unit in areas of minimal disturbance to provide reference conditions for the CWMB (a total of 33 reference monitoring gauges located onsite and offsite); reference gauges are also either RDS WL-20, WL-40, or Ecotone monitoring gauges. The automatic monitoring gauges record the depth to the groundwater level and duration of jurisdictional hydrology. Daily readings were taken throughout the growing season. Three Infinity rain gauges are spaced across the site; however, one rain gauge (Rain Gauge 4) malfunctioned repeatedly in 2005 and Rain Gauge 3 malfunctioned during Hurricane Ophelia, therefore the data for these two gauges could not be used. Data for Rain Gauge 2 were used for the entire site.

The CWMB is being tracked by riverine and non-riverine wetland restoration (R), enhancement (E), and preservation (P) areas (Figures 2a and 2b). The monitoring gauges installed throughout the CWMB between 1998 and 2000 were used to collect data in support of jurisdictional determinations and to assist in mitigation planning. Additional gauges were installed in Phase I in 2002 and Phase II in 2003 after mitigation construction activities were completed and used to supplement the previous gauges for monitoring success.

Gauges established in Phase I in 2002 and Phase II in 2003 were installed in transects across the different mitigation treatments in order to monitor the success of these treatments in the major soil types present. These treatments can be summarized as areas where: 1) ditches have been reach-plugged and the road remains; 2) ditches have been point-plugged and the road remains; 3) ditches have been reach-plugged and the road removed; and 4) ditches have been point-plugged and the road removed. Reach-plugging is the back-filling of the entire ditch or extensive section of the ditch. Point-plugging involves shorter plugs of fill spaced along the length of the ditch to render the drainage system inoperable. Six additional gauges were installed in Phase I in 2003 to document hydrologic changes resulting from the removal of the road and/or ditch along the phase boundary during Phase II construction.

In 2004, one additional gauge (Gauge 321) was installed to document hydrology between Gauges 84 and 85, and Gauge 196 was removed due to safety concerns (alligator).

Table 2 provides a list of gauge locations within each MU and the number of gauges within each mitigation type.

Figure 2a. Hydrologic Monitoring Gauge Location Map, Phase II

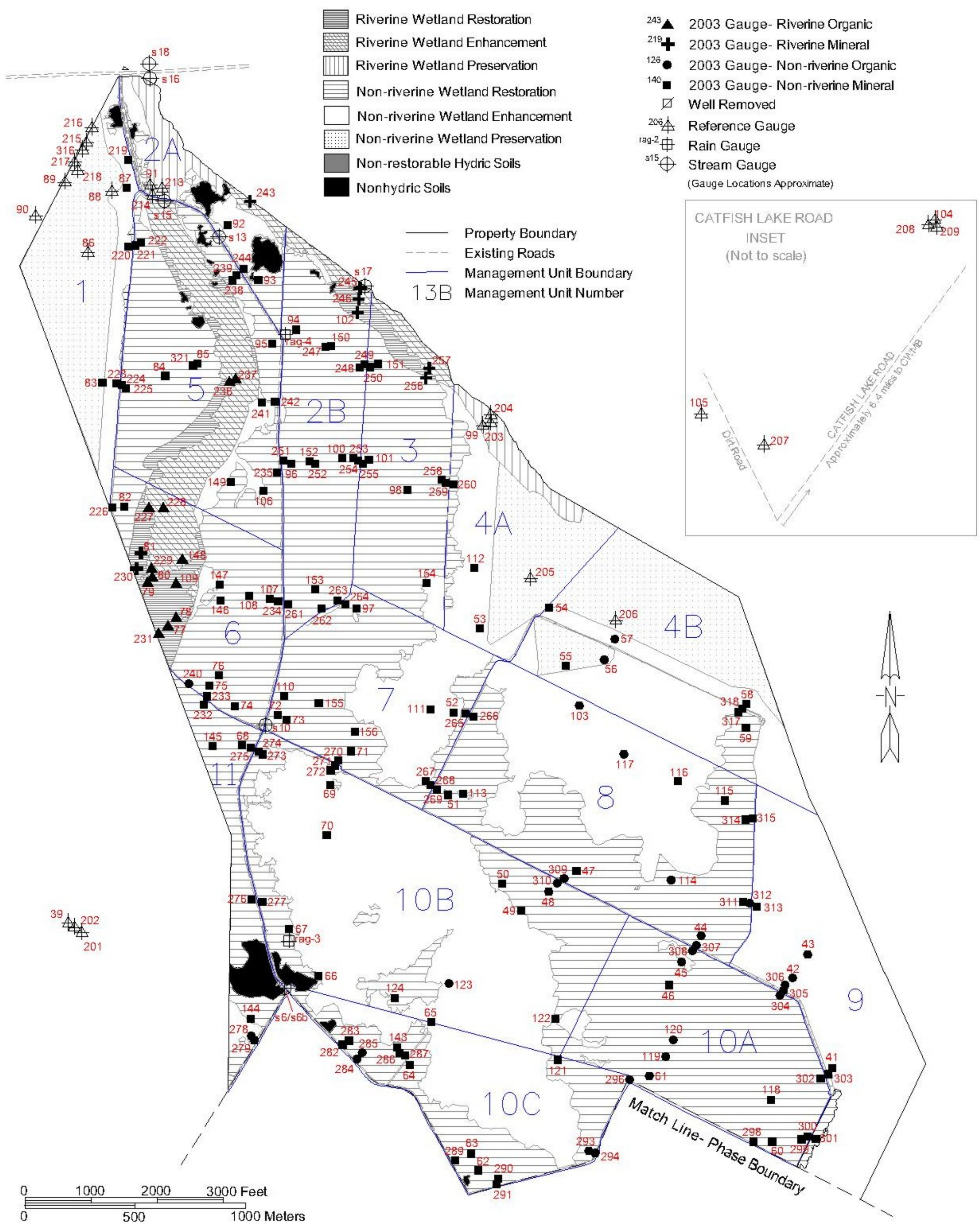


Figure 2b. Hydrologic Monitoring Gauge Location Map, Phase I

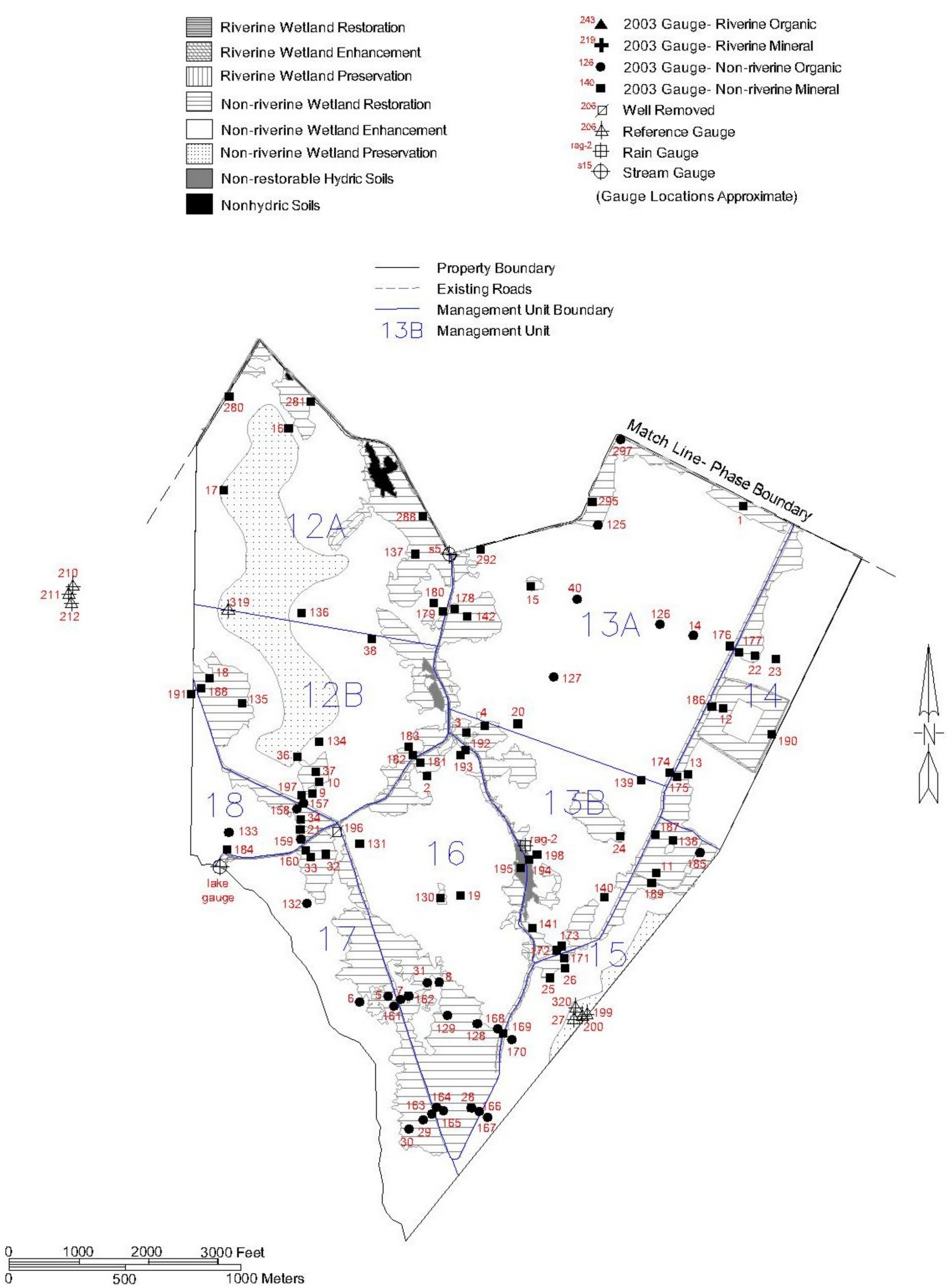


Table 2. Phase II (MU: 1-11) and I (MU: 12A-18) Gauge Locations

Phase II			
MU	**Location**	**Total # of Gauges**	**# of Gauges per Mitigation Type (NR, NE, NP,RR, RE, RP)[a]**
1	Northwestern portion of Phase II along western boundary	5 (+ 8 Reference)	NE–4, NP-1 + 8*
2A	Northern portion of Phase II adjacent to Catfish Lake Rd. and East Prong Brice Creek	4 (+3 Reference)	NR-1, NE-2, RE-1, and RP-3*
2B	North-central portion of Phase II east of 2A and west of 3	19	NR-17, RE-2
3	North-central portion of Phase II east of 2B and west of 4A	10	NR-7, NE-1, RE-1, RR-1
4A	North-central portion of Phase II east of 3 and west of 4B	3 (+4 Reference)	NR-1, NE-2, NP-1*, and RP-3*
4B	Northeastern portion of Phase II along the boundary north of transmission line	8 (+ 1 Reference)	NR-3, NE-3, and NP-2 + 1*
5	Northwestern portion of Phase II east of 1 and north of transmission line	17	NR-13[b], NE-2, RR-1, RE-1
6	West-central portion of Phase II south of the transmission lime along the western boundary	24	NR-11, NE-1 RR-8, RE-4
7	Central portion of Phase II east of 6 and west of 8	14	NR-11, NE-3
8	Central portion of Phase II east of 7 and west of 9	17	NR-11, NE-6
9	Southeastern portion of Phase II along the eastern boundary	8	NR-3, NE-5
10A	Southeastern portion of Phase II, along Phase boundary	14	NR-14
10B	Southern portion of Phase II, east of 11 and north of 10C	17	NR-13, NE-4
10C	Southern portion of Phase II, south of 10B and north of 13A	16	NR-16
11	Southwestern portion of Phase II, along western boundary	8	NR-7, NE-1
Table 2 Continues.			

Table 2 Concluded.			
Phase I			
MU	**Location**	**Total # of Gauges**	**# of Gauges per Mitigation Type (R, E, P)[a]**
12A	Northwestern portion of Phase I along western boundary	9 (+1 Reference)	NR-4, NE-5, NP-1
12B	Western portion of Phase I south of 12A	13	NR-9, NE-4
13A	Center of Phase I adjacent to the northern Phase I Boundary	15	NR-9, NE-6
13B	Center of Phase I south of 13A	10	NR-4, NE-6
14	Northeastern portion of Phase I along eastern boundary	8	NR-7, NE-1
15	Southeastern portion of Phase I south of 14	10 (+ 4 Reference)	NR-8, NE-2, and NP-4*
16	Center of Phase I south of 13B	20	NR-17, NE-3
17	Southeastern portion of Phase I adjacent to Long Lake	10	NR-8, NE-2[c]
18	Southwestern portion of Phase I adjacent to Long Lake	7	NR-3, NE-4
Off-site	Catfish Lake Road	5 Reference	N/A
Off-site	Forest Service Land adjacent to the Croatan WMB western boundary	7 Reference	N/A

[a] Mitigation Type: NR = Non-riverine Restoration, NE = Non-riverine Enhancement, NP = Non-riverine Preservation, RR = Riverine Restoration, RE = Riverine Enhancement, RP = Riverine Preservation (* = Reference)
[b] Gauge 321 in MU 5 was installed in 2004.
[c] Gauge 196 in MU 17 was removed due to safety concerns (alligator).
* Onsite Reference gauges

Appendix A contains a numerical list of all monitoring and references gauges monitored in 2005. Appendix A also contains a plot of the water depth for each of the monitoring gauges. Due to the number of gauges within the CWMB some gauges have been plotted on the same graph. The gauges that are plotted on the same graph are within the same MU and soil series. Reference gauges are plotted individually in the Reference section of Appendix A. Precipitation events are included on each graph as bars. Historical precipitation data used for establishing rainfall normalcy were obtained from the North Carolina State Climate Office rain gauge in New Bern, Craven County, North Carolina. Rainfall data for 2005 came from one onsite rain gauge (Rain Gauge 2).

2.3 Results of Hydrologic Monitoring

2.3.1 Site Data

As described previously, each monitoring gauge must meet both of its respective hydrologic success criteria based on soil type in order to achieve hydrologic success. In order to achieve Success Criterion 1 monitoring gauges in mineral soils must have jurisdictional hydrology for 12.5% of the growing season and monitoring gauges in riverine or organic soils must have jurisdictional hydrology for 25% of the growing season. In order to achieve Success Criterion 2 each monitoring gauge must be within 50% of the Reference Range for its respective soil series for years one through three and within 20% of the Reference Range for its respective soil series for years four and five.

Reference Gauges

Overall, the reference gauges met or exceeded the number of days and time of year for the high water table values published for each soil type in the Craven County soil survey (pre and post hurricane events). The reference gauges for Leon soils did not meet the published values for the high water table during the early part of the growing season (pre-hurricane events), but exceeded the published values for the high water table during the later part of the growing season (post hurricane events).

Appendix A contains a table with the reference gauges within each soils series, the maximum number of consecutive days that jurisdictional hydrology was met and the percentage of the 242-day growing season that jurisdictional hydrology was met. These reference gauges have been used to establish a reference range. Table A1 provides the 50% and 20% range from reference conditions in days and percentage of the growing season. This is the number of days in which each soil series must have jurisdictional hydrology in order to achieve Success Criterion 2. Success Criterion 2 is based on restoring the jurisdictional hydroperiod for each soil series to within 50% of the Reference Range for years one through three and 20% of the Reference Range for years four and five (Appendix D).

For example, in 2005 all monitoring gauges within the Bayboro (mineral) soil series must have jurisdictional hydrology for 12.5% of the growing season in order to achieve Success Criterion 1. A gauge in Phase I must also have jurisdictional hydrology between 134 and 242 days (55.4% to 100%) of the growing season to achieve Success Criterion 2. A gauge in Phase II must also have jurisdictional hydrology between 84 and 242 days (34.7% to 100%) of the growing season to achieve Success Criterion 2. Thus, a gauge could achieve success for overall percentage of the growing season (Criterion 1), but not achieve the expected percentage of the Reference Range (Criterion 2).

Monitoring Gauges

Phase II is separated into 15 MUs, identified as MU 1 through 11 and Phase I is separated into nine MUs, identified as MU 12A through MU 18. Tables 3 through 26 and Figures 3a and 3b provide overviews of which monitoring gauges achieved hydrologic success. Each table lists gauges within each MU, the soil series in which the gauge is installed, mitigation type, expected jurisdictional hydroperiod, actual jurisdictional hydroperiod, and whether the gauge met both respective hydrologic success criteria.

Several of the monitoring gauges have missing data because there were no gauges available for installation to replace non-functioning gauges at the beginning of the growing season. In addition, several of the monitoring gauges have missing data due to the lack of available gauges for installation to replace broken or malfunctioning gauges later in the growing season. ESI replaced these gauges as the gauges were made available by Ecosystem Enhancement Program (EEP). Where reasonable, ESI extrapolated the missing data for each gauge by using reference gauges, nearby gauges in the same soil type, rainfall events, and adjacent data points. ESI analyzed the hydrographic response to rainfall events prior to and subsequent to the missing data gap and then extrapolated the missing data based on comparison to data for a comparable gauge that exhibited similar groundwater levels and hydrographic responses to precipitation events. Missing data are discussed in the report relative to the largest number of consecutive days $\geq$ 12.5% of the growing season.

Non-riverine minerals soils, such as Bayboro, Pantego, Leaf, and Rains, occupy a large portion of the CWMB. These soil types typically have a high water table that is within 12 inches of the ground surface during the winter and early spring. The water table tends to drop below 12 inches of the ground surface in late spring or early summer. Therefore these soil types should meet the jurisdictional hydrology requirement in the spring and early summer (the critical defining hydroperiod for many wetlands in eastern North Carolina).

The majority of the gauges in the CWMB demonstrated that groundwater levels dropped below 12 inches of the ground surface at the end of May/beginning of June and then rose to within 12 inches of the ground surface in September due to a hurricane event.

Figure 3a. 2005 Hydrologic Monitoring Results, Phase II

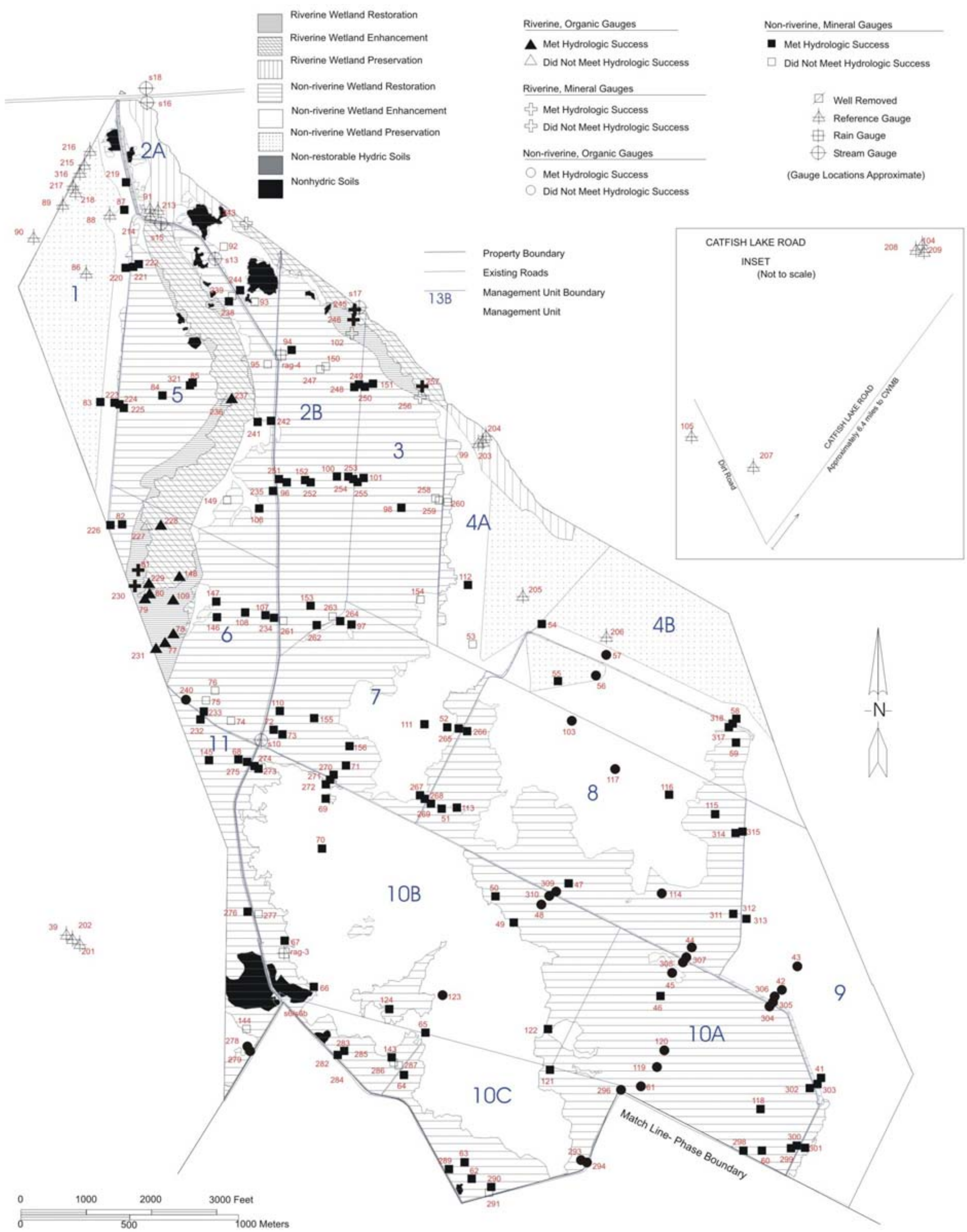


Figure 3b. 2005 Hydrologic Monitoring Results, Phase I

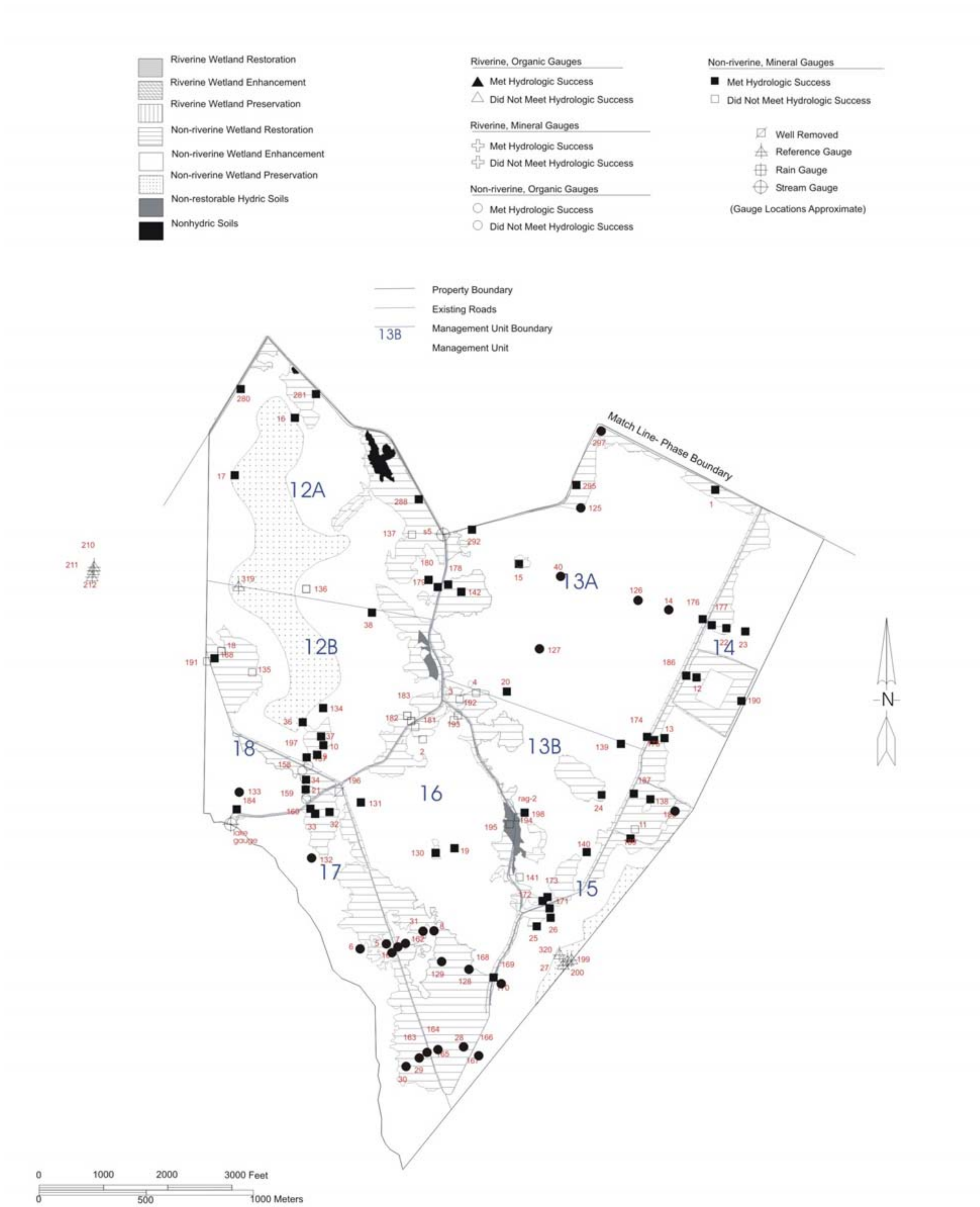


Table 3. Hydrologic Monitoring Results – MU 1

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
83	Pa/NP	100[b]	√	√	√ [d]
87	La/NE	38.4	√	√	√ [d]
219	Ra/NE	42.6	√	√	√ [d]
220	La/NE	≥29.8[c]	√	√	√
223	Pa/NE	100	√	√	√ [d]

[a] Soils: Pa – Pantego, La – Leaf, and Ra – Rains.
Mitigation Types: Non-riverine Enhancement – NE, and Non-riverine Preservation – NP.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge was not installed for a portion of the 2005 growing season. Data could not be extrapolated with any degree of certainty.
[d]Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 3 MU 1 Discussion
March-November

All five monitoring gauges in MU 1 met both of their expected hydrologic success criteria for Year 3. In addition, four of the five gauges met the hydrologic success criteria established for years one through three (≥ 12.5 % of the growing season and within 50% of Reference Range) and the success criteria established for years four and five (≥ 12.5 % of the growing season and within 20% of Reference Range). Gauges 83 and 220 have missing data because there were no replacement gauges available for installation at the beginning of the growing season.

Gauge 220 has missing data during critical drawn-down periods and the hydrograph is too flashy to extrapolate missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available.

Gauge 83 has recorded data for 127 consecutive days (52.5% of the growing season) and one data gap. Using Gauge 223, it can be assumed that Gauge 83 would have made jurisdictional hydrology for approximately 100% of the growing season.

In the past three years, four of the five monitoring gauges in MU 1 have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI recommends that a portion of the gauges in MU 1 be removed and leave gauges in representative areas to be monitored through years four and five. Gauges 83 and 223 should be considered for removal from hydrologic monitoring. The remaining gauges in MU 1 are located adjacent to existing roads or along transects where roads have been removed and these areas should be monitored through years four and five.

Table 4. Hydrologic Monitoring Results – MU 2A

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
92	La/NE	14.5	√	–	–
93	La/NR	12.8	√	–	–
244	La/NE	≥22.3[b]	√	√	√
Riverine, Mineral (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
243	Ba/RE	≥22.3[b]	–	–	–

[a] Soils: Ba – Bayboro and La – Leaf.
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, and Riverine Enhancement – RE.
[b] Gauge was not installed for a portion of the 2005 growing season. Data could not be extrapolated with any degree of certainty.

Table 4 MU 2A Discussion
March-November

Only one of the four monitoring gauges in MU 2A met both of their expected hydrologic success criteria for Year 3. Gauges 243 and 244 have missing data because there were no replacement gauges available for installation at the beginning of the growing season.

Gauges 92 and 93 met jurisdictional hydrology for at least 12.5% of the growing season and therefore met Success Criterion 1. However, these gauges did not meet Success Criterion 2 (50% of Reference Range) for the Leaf soil series (19.8 - 100% of the growing season). Mitigative measures appear to be successful at returning jurisdictional hydrology to these gauges, but were not successful at returning these gauge sites to within 50% of reference conditions under the normal rainfall conditions. Additional mitigative measures may need to be addressed if jurisdictional hydrology is not restored in years four and five.

Gauge 243 was not installed for the majority of the 2005 growing season and the hydrograph for this gauge is too flashy to extrapolate missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available. Gauge 243 did not meet either of its expected hydrologic success criteria. In a year with normal rainfall, Gauge 243 made jurisdictional hydrology ($\geq$12.5% of the growing season), but did not meet either of its expected success criteria for riverine mineral soils ($\geq$25% of the growing season and 50% of Reference Range).

In 2005, none of the gauges in MU 2A met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the low rate of hydrologic success, ESI recommends that all of the gauges in MU 2A be monitored through years four and five.

Table 5. Hydrologic Monitoring Results – MU 2B

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
94	Pa/NR	≥16.1[b]	√	√	√
96	La/NR	42.2	√	√	√[d]
100	La/NR	40.9[c]	√	√	√[d]
150	La/NR	16.5	√	–	–
152	Ba/NR	57.0[c]	√	√	√[d]
153	Ba/NR	70.7[c]	√	√	√[d]
247	La/NR	≥14.5[b]	√	–	–
248	La/NR	≥21.1[b]	√	√	√
249	La/NR	40.9	√	√	√[d]
251	Ba/NR	70.3	√	√	√[d]
252	Ba/NR	41.3	√	√	√
253	Ba/NR	40.5	√	√	√
254	Ba/NR	41.3	√	√	√
261	Ba/NR	≥30.6[b]	√	–	–
262	Ba/NR	74.0[c]	√	√	√[d]
263	Ba/NR	≥25.6[b]	√	–	–
Riverine, Mineral (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
102	Ba/RR	10.3	–	–	–
245	Ba/RE	100	√	√	√[d]
246	La/RE	≥26.0[b]	√	√	√

[a] Soils: Pa – Pantego, Ba – Bayboro, and La – Leaf.
Mitigation Types: Non-riverine Restoration – NR, Riverine Restoration – RR, and Riverine Enhancement – RE.
[b] Gauge was not installed for a portion of the 2005 growing season. Data could not be extrapolated with any degree of certainty.
[c] Actual %: Missing data extrapolated from comparable gauges.
[d] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 5 MU 2B Discussion

March-November

Fourteen of the nineteen monitoring gauges in MU 2B met both of their expected hydrologic success criteria for Year 3. Eight gauges that met the hydrologic success criteria established for years one through three, also met the success criteria established for years four and five. Gauges 94, 246, 248, 252, and 253 met the hydrologic success criteria established for years one through three, but did not met the success criteria established for years four and five. Gauges 100, 153, and 262 have missing data due to gauge malfunction. Gauges 94, 152, 246, 247, 248, 261, and 263 have missing data because there were no replacement gauges available for installation at the beginning of the growing season.

Gauges 94, 246, 247, 248, 261, and 263 have missing data during critical drawn-down periods and the hydrographs for these gauges are too flashy to extrapolate missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available.

Gauges 150 and 247 made jurisdictional hydrology for at least 12.5% of the growing season, and therefore met Success Criterion 1. However, these gauges did not meet Success Criterion 2 (50% of Reference Range) for the Leaf soil series (19.8 - 100% of the growing season). Mitigative measures appear to be successful at returning jurisdictional hydrology to Gauges 150 and 247, but were not successful at returning the gauge site to within 50% of reference conditions under the normal rainfall conditions.

Gauges 261 and 263 made jurisdictional hydrology for at least 12.5% of the growing season, and therefore met Success Criterion 1. However, these gauges did not meet Success Criterion 2 (50% of Reference Range) for the Bayboro soil series (34.7 - 100% of the growing season). Mitigative measures appear to be successful at returning jurisdictional hydrology to Gauges 261 and 263, but were not successful at returning the gauge site to within 50% of reference conditions under the normal rainfall conditions.

Gauge 102 did not meet either of its expected hydrologic success criteria. In a year with normal rainfall the areas around Gauge 102 did not make jurisdictional hydrology. This gauge is located on the upper edge of the floodplain and may be on a topographic high. Additional measures may need to be addressed if jurisdictional hydrology is not restored in years four and five.

Gauge 100 has recorded data for 61 consecutive days (25.2% of the growing season) and one data gap. Using nearby Gauge 96 and adjacent data points to extrapolate missing data, it can be assumed that Gauge 100 would have made jurisdictional hydrology for approximately 40.9% of the growing season.

Gauge 152 has recorded data for 98 consecutive days (40.5% of the growing season) and one data gap. Using nearby Gauge 252 and adjacent data points to extrapolate missing data, it can be assumed that Gauge 152 would have made jurisdictional hydrology for approximately 57.0% of the growing season.

Gauge 153 has recorded data for 75 consecutive days (31.0% of the growing season) and two data gaps. Using adjacent data points and rainfall events to extrapolate missing data, it can be assumed that Gauge 153 would have made jurisdictional hydrology for approximately 70.7% of the growing season.

Gauge 262 has recorded data for 68 consecutive days (28.1% of the growing season) and one data gap. Using Reference Gauges 203 and 204, it can be assumed that Gauge 262 would have made jurisdictional hydrology for approximately 74.0% of the growing season.

In the past three years of monitoring, eight of the nineteen monitoring gauges in MU 2B have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. The overall hydrologic success rate of MU 2B is not as high as other portions of Phase II. Therefore, ESI would recommend that all of the gauges in MU 2B be monitored through years four and five.

Table 6. Hydrologic Monitoring Results – MU 3

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
98	Ba/NR	39.3	√	√	√
101	Ba/NR	39.7[b]	√	√	√
151	La/NR	39.3	√	√	√
154	Ba/NE	≥25.2[c]	√	–	–
250	La/NR	64.1[b]	√	√	√[d]
255	Ba/NR	64.9[b]	√	√	√[d]
258	Ba/NR	≥17.4[e]	√	–	–
259	Ba/NR	≥16.1[e]	√	–	–
Riverine, Mineral (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
256	Ba/RR	≥27.3[c]	√	–	–
257	Ba/RE	100[b]	√	√	√[d]

[a] Soils: Ba – Bayboro and La – Leaf.
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Restoration – RR, and Riverine Enhancement – RE.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge was not installed for a portion of the 2005 growing season. Data could not be extrapolated with any degree of certainty.
[d] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.
[e] Missing data could not be extrapolated with any degree of certainty.

Table 6 MU 3 Discussion

March-November

Six of the ten monitoring gauges in MU 3 met both of their expected hydrologic success criteria for Year 3. Only Gauges 250, 255, and 257 met the hydrologic success criteria established for years one through three and met the success criteria established for years four and five. Gauges 154 and 256 have missing data because there were no replacement gauges available for installation at the beginning of the growing season. Gauges 101, 250, 255 257, 258, and 259 have missing data due to gauge malfunction.

Gauges 154, 256, 258, and 259 have missing data during critical drawn-down periods and the hydrographs for these gauges are too flashy to extrapolate missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available.

Gauges 154, 258, and 259 met jurisdictional hydrology for at least 12.5% of the growing season and therefore met Success Criterion 1. However, these gauges did not meet Success Criterion 2 (50% of Reference Range) for the Bayboro soil series (34.7 - 100% of the growing season). Mitigative measures appear to be successful at returning jurisdictional hydrology to these gauges, but were not successful at returning these gauge sites to within 50% of reference conditions under the normal rainfall conditions.

Gauge 256 met jurisdictional hydrology for at least 25% of the growing season and therefore met Success Criterion 1. However, this gauge did not meet Success Criterion 2 (50% of Reference Range) for the Bayboro soil series (34.7 - 100% of the growing season). Mitigative measures appear to be successful at returning jurisdictional hydrology to Gauge 256, but were not successful at returning the gauge site to within 50% of reference conditions under the normal rainfall conditions.

Gauge 101 has recorded data for 69 consecutive days (28.5% of the growing season) and multiple data gaps. Using nearby Gauge 255 to extrapolate missing data, it can be assumed that Gauge 101 would have made jurisdictional hydrology for approximately 39.7% of the growing season.

Gauge 250 has recorded data for 52 consecutive days (21.5% of the growing season) and multiple data gaps. Using nearby Gauge 151 to extrapolate missing data, it can be assumed that Gauge 250 would have made jurisdictional hydrology for approximately 64.0% of the growing season.

Gauge 255 has recorded data for 146 consecutive days (60.3% of the growing season) and one data gap. Using nearby Gauge 254 to extrapolate missing data, it can be assumed that Gauge 255 would have made jurisdictional hydrology for approximately 64.9% of the growing season.

Gauge 257 has recorded data for 96 consecutive days (39.8% of the growing season) and one data gap. Using nearby Gauge 256 to extrapolate missing data, it can be assumed that Gauge 257 would have made jurisdictional hydrology for approximately 100% of the growing season.

In 2005, only Gauges 255 and 257 met the hydrologic success criteria established for years one through three and met the success criteria established for years four and five. Due to the low rate of hydrologic success, ESI would recommend that all of the gauges in MU 3 be monitored through years four and five.

Table 7. Hydrologic Monitoring Results – MU 4A

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
53	Ba/NE	67.8[b]	√	√	√[c]
112	Ba/NE	39.3	√	√	√
260	Ba/NR	17.4[b]	√	–	–

[a] Soils: Ba – Bayboro.
Mitigation Types: Non-riverine Restoration – NR, and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 7 MU 4A Discussion
March-November

Two of the three monitoring gauges (Gauges 53 and 112) in MU 4A met both of their expected hydrologic success criteria for Year 3. Only Gauge 53 met the hydrologic success criteria established for years one through three and met the success criteria established for years four and five for the Bayboro soil series. Gauges 53 and 260 have missing data due to gauge malfunction.

Gauge 53 has recorded data for 68 consecutive days (28.1 % of the growing season) and one data gap. Using nearby Gauge 112 and Reference Gauges 99 and 203 to extrapolate missing data, it can be assumed that Gauge 53 would have made jurisdictional hydrology for approximately 67.8% of the growing season.

Gauge 260 has recorded data for 36 consecutive days (14.9% of the growing season) and one data gap. Using nearby Reference Gauges 99 and 204 to extrapolate missing data, it can be assumed that Gauge 260 would have made jurisdictional hydrology for approximately 17.4% of the growing season. Gauge 260 made jurisdictional hydrology for 17.4% of the growing season, and therefore met Success Criterion 1. However, this gauge did not meet Success Criterion 2 (50% of Reference Range) for the Bayboro soil series (34.7 - 100% of the growing season). Mitigative measures appear to be successful at returning jurisdictional hydrology to Gauge 260, but were not successful at returning the gauge site to within 50% of reference conditions under the normal rainfall conditions.

Due to the low rate of hydrologic success in 2005, ESI recommends that all of the gauges in MU 4A continue to be monitored in years four and five.

Table 8. Hydrologic Monitoring Results – MU 4B

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
54	Pa/NP	68.6	√	√	√[c]
55	Ba/NE	100[b]	√	√	√[c]
58	Ba/NE	39.7	√	√	√
59	Ba/NR	69.0	√	√	√[c]
317	Ba/NR	69.0	√	√	√[c]
318	Ba/NR	65.3	√	√	√[c]
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
56	CT/NP	100[b]	√	√	√[c]
57	CT/NE	72.7[b]	√	√	√[c]

[a] Soils: Ba – Bayboro, CT – Croatan, and Pa - Pantego.
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, and Non-riverine Preservation – NP.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 8 MU 4B Discussion

March-November

All eight monitoring gauges in MU 4B met both of their expected hydrologic success criteria for Year 3. In addition, seven of the eight monitoring gauges that met the hydrologic success criteria established for years one through three also met the success criteria established for years four and five. Gauges 55, 56, and 57 have missing data because there were no replacement gauges available for installation at the beginning of the growing season.

Gauge 55 has recorded data for 147 consecutive days (60.7% of the growing season) and one data gap. Using Reference Gauge 99 to extrapolate missing data, it can be assumed that Gauge 55 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 56 has recorded data for 147 consecutive days (60.7% of the growing season) and one data gap. Using nearby Reference Gauge 206 to extrapolate missing data, it can be assumed that Gauge 56 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 57 has recorded data for 80 consecutive days (33.1% of the growing season) and one data gap. Using nearby Reference Gauge 206 to extrapolate missing data, it can be assumed that Gauge 57 would have made jurisdictional hydrology for approximately 72.7% of the growing season.

In all three years of monitoring, all of the gauges in MU 4B, except Gauge 58, have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI would recommend that a portion of the gauges in MU 4B be removed and leave gauges in representative areas to be monitored through years four and five. Gauges 54, 55, and 56 should be considered for removal from hydrologic monitoring.

Table 9. Hydrologic Monitoring Results – MU 5

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
84	Ra/NR	≥27.7[b]	√	√	√[e]
85	Pa/NR	14.1	√	√	√
95	La/NR	≥13.2[c]	√	–	–
106	Ba/NE	71.1[d]	√	√	√[e]
149	Pa/NR	5.4	–	–	–
221	La/NR	≥30.2[c]	√	√	√
222	La/NR	37.6[d]	√	√	√[e]
224	Pa/NR	100	√	√	√[e]
225	Pa/NR	100[d]	√	√	√[e]
235	Ba/NR	71.1	√	√	√[e]
238	Ra/NR	≥14.5[c]	√	√	√
239	Ra/NR	13.6	√	√	√
241	Ra/NE	100	√	√	√[e]
242	La/NR	69.4[d]	√	√	√[e]
321	Pa/NR	100	√	√	√[e]
Riverine, Mineral (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
236	MM/RR	39.3[d]	√	√	√
237	MM/RE	100	√	√	√[e]

[a] Soils: Ra – Rains, Pa – Pantego, Ba – Bayboro, La –Leaf, and MM –Masontown/Muckalee. Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Restoration – RR, and Riverine Enhancement – RE.
[b] Missing data could not be extrapolated with any degree of certainty.
[c] Gauge was not installed for a portion of the 2005 growing season. Data could not be extrapolated with any degree of certainty.
[d] Actual %: Missing data extrapolated from comparable gauges.
[e] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 9 MU 5 Discussion

March-November

Fifteen of the seventeen monitoring gauges in MU 5 met both of their expected hydrologic success criteria for Year 3. Ten monitoring gauges met the hydrologic success criteria established for years one through three and met the success criteria established for years four and five. Gauges 95, 221, and 238 have missing data because there were no replacement gauges available for installation at the beginning of the growing season. Gauges 84, 106, 222, 224, 236, and 242 have missing data due to gauge malfunction.

Gauges 84, 95, 221, and 238 have missing data during critical drawn-down periods and the hydrographs for these gauges are too flashy to extrapolate missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available.

Gauge 95 made jurisdictional hydrology for 13.2% of the growing season, and therefore met Success Criterion 1. However, this gauge did not meet Success Criterion 2 (50% of Reference Range) for the Leaf soil series (19.8 - 100% of the growing season). Mitigative measures appear to be successful at returning jurisdictional hydrology to Gauge 95, but were not successful at returning the gauge site to within 50% of reference conditions under the normal rainfall conditions.

Gauge 149 did not meet either of its expected hydrologic success criteria. In a year with normal rainfall, Gauge 149 did not make jurisdictional hydrology. This gauge is located on the upper edge of the floodplain and may be on a topographic high. Additional measures may need to be addressed if jurisdictional hydrology is not restored in years four and five.

Gauge 106 has recorded data for 67 consecutive days (27.7% of the growing season) and multiple data gaps. Using nearby Gauge 235 to extrapolate missing data, it can be assumed that Gauge 106 would have made jurisdictional hydrology for approximately 71.7% of the growing season.

Gauge 225 has recorded data for 119 consecutive days (49.2% of the growing season) and one data gap. Using nearby Gauge 224 to extrapolate missing data, it can be assumed that Gauge 225 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 236 has recorded data for 83 consecutive days (34.3% of the growing season) and one data gap. Using nearby Gauge 237 to extrapolate missing data, it can be assumed that Gauge 236 would have made jurisdictional hydrology for approximately 39.3% of the growing season.

Gauge 242 has recorded data for 112 consecutive days (46.3% of the growing season) and two data gaps. Using adjacent data points and rainfall events to extrapolate missing data, it can be assumed that Gauge 242 would have made jurisdictional hydrology for approximately 69.4% of the growing season.

Ten of the seventeen monitoring gauges in MU 5 have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI recommends that a portion of the gauges in MU 5 be removed and leave gauges in representative areas to be monitored through years four and five. Gauges 224 and 225 should be considered for removal from hydrologic monitoring. The remaining gauges in MU 5 are located adjacent to existing roads or along transects where roads have been removed and these areas should be monitored through years four and five.

Table 10. Hydrologic Monitoring Results – MU 6

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
74	Ba/NR	16.9	√	–	–
75	Ba/NR	2.5	–	–	–
76	Ba/NR	10.3	–	–	–
82	Pa/NR	100	√	√	√[d]
107	Ba/NR	72.3[b]	√	√	√[d]
108	Ba/NR	71.5[b]	√	√	√[d]
146	La/NR	37.2	√	√	√[d]
147	Ba/NE	100[b]	√	√	√[d]
226	Pa/NR	100[b]	√	√	√[d]
233	Ra/NR	37.6	√	√	√[d]
234	Ba/NR	72.3[b]	√	√	√[d]
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
240	CT/NR	100[b]	√	√	√[d]
Riverine, Mineral (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
81	Ba/RR	100	√	√	√[d]
230	Ba/RR	100[b]	√	√	√[d]

Table 10 Continues

Table 10 Concluded.

Riverine, Organic, Mineral (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
77	CT/RE	100	√	√	√[d]
78	MM/RR	100[b]	√	√	√[d]
79	DO/RR	100	√	√	√[d]
80	DO/RR	100[b]	√	√	√[d]
109	MM/RR	100	√	√	√[d]
148	MM/RE	100	√	√	√[d]
227	MM/RR	≥17.8[c]	–	–	–
228	MM/RE	100[b]	√	√	√[d]
229	CT/RE	100[b]	√	√	√[d]
231	CT/RR	100	√	√	√[d]

[a] Soils: Ra – Rains, Pa – Pantego, Ba – Bayboro, La –Leaf, MM –Masontown/Muckalee, CT – Croatan, and DO - Dorovan.
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Restoration – RR, and Riverine Enhancement – RE.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge was not installed for a portion of the 2005 growing season. Data could not be extrapolated with any degree of certainty.
[d] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 10 MU 6 Discussion
March-November

Twenty of the twenty-four monitoring gauges in MU 6 met both of their expected hydrologic success criteria for Year 3. All twenty of the monitoring gauges that met the hydrologic success criteria established for years one through three also met the success criteria established for years four and five. Gauges 107, 108, 226, 227, 229, 234, and 240 have missing data because there were no replacement gauges available for installation for a portion of the growing season. Gauges 74, 78, 80, 147, 228, and 230 have missing data due to gauge malfunction.

Gauges 74 and 227 have missing data during critical draw-down periods and the hydrographs for these gauges are too flashy to extrapolate missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available.

Gauge 74 made jurisdictional hydrology for 16.9% of the growing season, and therefore met Success Criterion 1. However, this gauge did not meet Success Criterion 2 (50% of Reference Range) for the Bayboro soil series (34.7 - 100% of the growing season). Gauge 74 is missing data during the initial draw-down period, but the hydrograph is too flashy to extrapolate data with any certainty.

Gauges 75 and 76 did not meet either of their expected hydrologic success criteria. In a year with normal rainfall Gauges 75 and 76 did not make jurisdictional hydrology. These gauges are located on the upper edge of the floodplain and may be on a topographic high. Additional measures may need to be addressed if jurisdictional hydrology is not restored in years four and five.

Gauge 227 did not meet either of its expected hydrologic success criteria. Mitigative measures appear to be successful at exceeding jurisdictional hydrology (12.5% of the growing season) to Gauge 227, but was not successful at returning jurisdictional hydrology to the gauge site for 25% of the growing season (Criterion 1) or to within 50% of reference conditions under the normal rainfall conditions in 2005. Gauge 227 may be on a topographic high compared to the surrounding landscape. Adjacent Gauge 228 showed 7 to 20 inches of surface water for the entire year and Gauge 82 showed 1 to 3 inches of surface water for extended periods during the beginning and later parts of the growing season. Due to its location in the landscape, Gauge 227 may not meet success criteria in years with normal rainfall.

Gauge 78 has recorded data for 127 consecutive days (52.5% of the growing season) and two data gaps. Using nearby Gauges 80, 81, 229, and 230 to extrapolate missing data, it can be assumed that Gauge 78 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 80 has recorded data for 216 consecutive days (89.3% of the growing season) and one data gap. Using nearby Gauges 79, 81, 229, and 230 to extrapolate missing data, it can be assumed that Gauge 80 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 107 has recorded data for 79 consecutive days (32.6% of the growing season) and one data gap. Using Reference Gauges 99, 203, and 204 and rainfall events to extrapolate missing data, it can be assumed that Gauge 107 would have made jurisdictional hydrology for approximately 72.3% of the growing season.

Gauge 108 has recorded data for 77 consecutive days (31.8% of the growing season) and one data gap. Using Reference Gauges 99, 203, and 204 and rainfall events to extrapolate missing data, it can be assumed that Gauge 108 would have made jurisdictional hydrology for approximately 71.5% of the growing season.

Gauge 147 has recorded data for 185 consecutive days (76.5% of the growing season) and one data gap. Using adjacent data points and rainfall events to extrapolate missing data, it can be assumed that Gauge 147 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 226 has recorded data for 146 consecutive days (60.3% of the growing season) and one data gap. Using nearby Gauge 82 to extrapolate missing data, it can be assumed that Gauge 226 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 227 has recorded data for 43 consecutive days (17.8% of the growing season) and multiple data gaps. The hydrograph for Gauge 227 is too flashy to extrapolate the missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available.

Gauge 228 has recorded data for 215 consecutive days (88.8% of the growing season) and one data gap. Using Reference Gauges 213 and 214 and rainfall events to extrapolate missing data, it can be assumed that Gauge 228 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 229 has recorded data for 130 consecutive days (53.7% of the growing season) and one data gap. Using nearby Gauges 231, 240, and 80 to extrapolate missing data, it can be assumed that Gauge 229 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 230 has recorded data for 130 consecutive days (53.7% of the growing season) and two data gaps. Using Reference Gauges 99, 203, and 204 and rainfall events to extrapolate missing data, it can be assumed that Gauge 230 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 234 has recorded data for 54 consecutive days (22.3% of the growing season) and multiple data gaps. Using nearby Gauge 107 and References Gauges 99, 203, and 204 to extrapolate missing data, it can be assumed that Gauge 234 would have made jurisdictional hydrology for approximately 72.3% of the growing season.

Gauge 240 has recorded data for 165 consecutive days (68.2% of the growing season) and one data gap. Using nearby Gauges 229 and 230 to extrapolate missing data, it can be assumed that Gauge 240 would have made jurisdictional hydrology for approximately 100% of the growing season.

In all three years of monitoring, all of the gauges in MU 6, except Gauges 74, 75, 76, and 227 have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, a portion of the gauges in MU 6 could be removed from hydrologic monitoring. However, the majority of the gauges in MU 6 are located in riverine wetland restoration areas or adjacent to existing roads. Therefore, all of the gauges in MU 6 should be monitored through years four and five.

Table 11. Hydrologic Monitoring Results – MU 7

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
52	Ba/NE	73.6[b]	√	√	√[c]
71	Ba/NR	71.1[b]	√	√	√[c]
72	Ba/NR	71.5[b]	√	√	√[c]
73	Pa/NR	70.3	√	√	√[c]
97	Ba/NR	71.1	√	√	√[c]
110	Pa/NR	71.1	√	√	√[c]
111	Ba/NE	100[b]	√	√	√[c]
155	Ba/NR	40.5[b]	√	√	√
156	Ba/NR	71.1[b]	√	√	√[c]
264	Ba/NR	70.7[b]	√	√	√[c]
265	Ba/NR	73.6[b]	√	√	√[c]
267	Ba/NE	70.7	√	√	√[c]
268	Ba/NR	72.3	√	√	√[c]
270	Ba/NR	100	√	√	√[c]

[a] Soils: Pa – Pantego and Ba – Bayboro.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 11 MU 7 Discussion

March-November

All fourteen of the monitoring gauges in MU 7 met both of their expected hydrologic success criteria for Year 3. In addition, thirteen monitoring gauges that met the hydrologic success criteria established for years one through three also met the success criteria established for years four and five. Gauges 52, 155, and 264 have missing data because there were no replacement gauges available for installation for a portion of the growing season. Gauges 71, 72, 111,156, and 265 have missing data due to gauge malfunction.

Gauge 52 has recorded data for 78 consecutive days (32.2% of the growing season) and two data gaps. Using nearby Gauges 71 and 155 to extrapolate missing data, it can be assumed that Gauge 52 would have made jurisdictional hydrology for approximately 73.6% of the growing season.

Gauge 71 has recorded data for 96 consecutive days (39.7% of the growing season) and one data gap. Using nearby Gauges 52 and 156 to extrapolate missing data, it can be assumed that Gauge 71 would have made jurisdictional hydrology for approximately 71.1% of the growing season.

Gauge 72 has recorded data for 78 consecutive days (32.2% of the growing season) and one data gap. Using nearby Gauge 71 to extrapolate missing data, it can be assumed that Gauge 72 would have made jurisdictional hydrology for approximately 71.5% of the growing season.

Gauge 11 has recorded data for 116 consecutive days (47.9% of the growing season) and one data gap. Using nearby Gauge 71 to extrapolate missing data, it can be assumed that Gauge 111 would have made jurisdictional hydrology for approximately 100% of the growing season.

Gauge 155 has recorded data for 61 consecutive days (25.2% of the growing season) and two data gaps. Using nearby Gauges 72 and 156 to extrapolate missing data, it can be assumed that Gauge 155 would have made jurisdictional hydrology for approximately 40.5% of the growing season.

Gauge 156 has recorded data for 62 consecutive days (25.6% of the growing season) and two data gaps. Using nearby Gauges 71 and 155 to extrapolate missing data, it can be assumed that Gauge 156 would have made jurisdictional hydrology for approximately 71.1% of the growing season.

Gauge 264 has recorded data for 75 consecutive days (31.0% of the growing season) and one data gap. Using nearby Gauge 97 to extrapolate missing data, it can be assumed that Gauge 264 would have made jurisdictional hydrology for approximately 70.7% of the growing season.

Gauge 265 has recorded data for 94 consecutive days (38.8% of the growing season) and one data gap. Using nearby Gauge 267 to extrapolate missing data, it can be assumed that Gauge 265 would have made jurisdictional hydrology for approximately 73.6% of the growing season.

In all three years of monitoring, all of the gauges in MU 7, except Gauge 155, have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI would recommend that a portion of the gauges in MU 7 be removed and leave gauges in representative areas to be monitored through years four and five. Gauges 52, 111, 156, and 265 should be considered for removal from hydrologic monitoring.

Table 12. Hydrologic Monitoring Results – MU 8

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
47	Ba/NR	73.1	√	√	√[c]
51	Ba/NE	100[b]	√	√[c]	√[c]
113	Ba/NE	100[b]	√	√	√[c]
115	Pa/NR	60.3	√	√	√[c]
116	Pa/NE	71.5	√	√	√[c]
266	Ba/NR	100[b]	√	√	√[c]
269	Ba/NE	100	√	√	√[c]
311	Ba/NR	70.7	√	√	√[c]
314	Ba/NR	65.3	√	√	√[c]
315	Ba/NR	69.0	√	√	√[c]
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
44	CT/NR	70.3	√	√	√[c]
103	CT/NE	100[b]	√	√	√[c]
114	CT/NR	70.7[b]	√	√	√[c]
117	CT/NE	100	√	√	√[c]
307	CT/NR	70.3[b]	√	√	√[c]
309	CT/NR	72.7	√	√	√[c]
312	CT/NR	70.7	√	√	√[c]

[a] Soils: Pa – Pantego, Ba – Bayboro, and CT - Croatan.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 12 MU 8 Discussion

March-November

All seventeen monitoring gauges in MU 8 met both of their expected hydrologic success criteria for Year 3. In addition, all seventeen gauges that met the hydrologic success criteria established for years one through three also met the success criteria established for years four and five. Gauges 103 and 266 have missing data because there were no replacement gauges available for installation for a portion of the growing season. Gauges 51, 113, 114, and 307 have missing data due to gauge malfunction.

Gauge 51 has recorded data for a minimum of 89 consecutive days (36.8%) and multiple data gaps. Using nearby Gauges 113 and 266 to extrapolate the missing data, it can be assumed that Gauge 51 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 103 has recorded data for a minimum of 160 consecutive days (66.1%) and one data gap. Using nearby Gauges 56 and 117 to extrapolate the missing data, it can be assumed that Gauge 103 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 113 has recorded data for a minimum of 146 consecutive days (60.3%) and one data gap. Using nearby Gauge 266 to extrapolate the missing data, it can be assumed that Gauge 113 would have made jurisdictional hydrology 100% of the growing season.

Gauge 114 has recorded data for a minimum of 151 consecutive days (62.4%) and one data gap. Using nearby Gauges 44 and 312 to extrapolate the missing data, it can be assumed that Gauge 114 would have made jurisdictional hydrology for 70.7% of the growing season.

Gauge 266 has recorded data for a minimum of 147 consecutive days (60.7%) and one data gap. Using nearby Gauges 113 and 265 to extrapolate the missing data, it can be assumed that Gauge 266 would have made jurisdictional hydrology 100% of the growing season.

Gauge 307 has recorded data for a minimum of 114 consecutive days (47.1%) and one data gap. Using nearby Gauge 309 to extrapolate the missing data, it can be assumed that Gauge 307 would have made jurisdictional hydrology 70.3% of the growing season.

In all three years of monitoring, all of the gauges in MU 8 have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI would recommend that a portion of the gauges in MU 8 be removed and leave gauges in representative areas to be monitored through years four and five. Gauges 47, 103, 113, 114, 117, 266, and 309 should be considered for removal from hydrologic monitoring.

Table 13. Hydrologic Monitoring Results – MU 9

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
41	Ba/NE	70.3	√	√	√ [c]
301	Ba/NR	100[b]	√	√	√ [c]
303	Ba/NR	69.8[b]	√	√	√ [c]
313	Ba/NE	70.7[b]	√	√	√ [c]
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
42	CT/NE	69.0	√	√	√ [c]
43	CT/NE	65.3	√	√	√ [c]
305	CT/NR	69.0	√	√	√ [c]
306	CT/NE	72.7	√	√	√ [c]

[a] Soils: Ba – Bayboro and CT - Croatan.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 13 MU 9 Discussion

March-November

All eight of the monitoring gauges in MU 9 met both of their expected hydrologic success criteria for Year 3. All eight of the monitoring gauges met the hydrologic success criteria established for years one through three and met the success criteria established for years four and five. Gauge 301 has missing data because there were no replacement gauges available for installation for a portion of the growing season. Gauges 303 and 313 have missing data due to gauge malfunction.

Gauge 301 has recorded data for a minimum of 59 consecutive days (24.4%) and two data gaps. Using nearby Gauges 299 and 300 to extrapolate the missing data, it can be assumed that Gauge 301 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 303 has recorded data for a minimum of 76 consecutive days (31.4%) and one data gap. Using nearby Gauges 302 and 313 to extrapolate the missing data, it can be assumed that Gauge 303 would have made jurisdictional hydrology for 69.8% of the growing season.

Gauge 313 has recorded data for a minimum of 146 consecutive days (60.3%) and one data gap. Using nearby Gauges 311 and 312 to extrapolate the missing data, it can be assumed that Gauge 313 would have made jurisdictional hydrology for 70.7% of the growing season.

In all three years of monitoring, all of the gauges in MU 9 have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI recommends that a portion of the gauges in MU 9 be removed and leave gauges in representative areas to be monitored through years four and five. Gauges 41, 301, and 303 should be considered for removal from hydrologic monitoring.

Table 14. Hydrologic Monitoring Results – MU 10A

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
60	Ba/NR	100	√	√	√[c]
118	Ba/NR	71.9	√	√	√[c]
298	Ba/NR	100[b]	√	√	√[c]
299	Ba/NR	100[b]	√	√	√[c]
300	Ba/NR	100[b]	√	√	√[c]
302	Ba/NR	100[b]	√	√	√[c]
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
45	CT/NR	100[b]	√	√	√[c]
46	CT/NR	70.3[b]	√	√	√[c]
61	CT/NR	69.0	√	√	√[c]
119	CT/NR	65.3[b]	√	√	√[c]
120	CT/NR	65.3[b]	√	√	√[c]
296	CT/NR	69.8[b]	√	√	√[c]
304	CT/NR	70.3	√	√	√[c]
308	CT/NR	100[b]	√	√	√[c]

[a] Soils:, Ba – Bayboro and CT – Croatan.
Mitigation Types: Non-riverine Restoration – NR.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 14 MU 10A Discussion

March-November

All fourteen monitoring gauges in MU 10A met both of their expected hydrologic success criteria for Year 3. All fourteen of the monitoring gauges met the hydrologic success criteria established for years one through three and met the success criteria established for years four and five. Gauges 119, 120, 298, 299, and 302 have missing data because there were no replacement gauges available for installation at the beginning of the growing season. Gauges 45, 46, 296, 300, and 308 have missing data due to gauge malfunction.

Gauge 45 has recorded data for a minimum of 148 consecutive days (61.2%) and one data gap. Using nearby Gauge 61 to extrapolate the missing data, it can be assumed that Gauge 45 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 46 has recorded data for a minimum of 143 consecutive days (59.1%) and one data gap. Using nearby Gauge 45 to extrapolate the missing data, it can be assumed that Gauge 46 would have made jurisdictional hydrology for 70.3% of the growing season.

Gauge 119 has recorded data for a minimum of 74 consecutive days (30.6%) and two data gaps. Using nearby Gauge 120 to extrapolate the missing data, it can be assumed that Gauge 119 would have made jurisdictional hydrology for 65.3% of the growing season.

Gauge 120 has recorded data for a minimum of 63 consecutive days (26.0%) and one data gap. Using nearby Gauge 119 to extrapolate the missing data, it can be assumed that Gauge 120 would have made jurisdictional hydrology for 65.3% of the growing season.

Gauge 296 has recorded data for a minimum of 74 consecutive days (30.6%) and two data gaps. Using nearby Gauge 61 to extrapolate the missing data, it can be assumed that Gauge 296 would have made jurisdictional hydrology for 69.8% of the growing season.

Gauge 298 has recorded data for a minimum of 146 consecutive days (60.3%) and one data gap. Using nearby Gauge 299 to extrapolate the missing data, it can be assumed that Gauge 298 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 299 has recorded data for a minimum of 147 consecutive days (60.7%) and one data gap. Using nearby Gauge 298 to extrapolate the missing data, it can be assumed that Gauge 299 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 300 has recorded data for a minimum of 95 consecutive days (39.3%) and one data gap. Using nearby Gauge 302 to extrapolate the missing data, it can be assumed that Gauge 300 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 302 has recorded data for a minimum of 147 consecutive days (60.7%) and one data gap. Using nearby Gauge 300 to extrapolate the missing data, it can be assumed that Gauge 302 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 308 has recorded data for a minimum of 235 consecutive days (97.1%) and one data gap. Using nearby Gauge 300 to extrapolate the missing data, it can be assumed that Gauge 308 would have made jurisdictional hydrology for 100% of the growing season.

In all three years of monitoring, all of the gauges in MU 10A have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI recommends that a portion of the gauges in MU 10A be removed and leave gauges in representative areas to be monitored through years four and five. Gauges 119, 120, 299, 300, and 302 should be considered for removal from hydrologic monitoring.

Table 15. Hydrologic Monitoring Results – MU 10B

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
49	Ba/NR	73.1	√	√	√[c]
50	Ba/NR	100	√	√	√[c]
65	Pa/NE	69.4	√	√	√[c]
66	Ra/NE	100[b]	√	√	√[c]
67	Pa/NR	40.9[b]	√	√	√[c]
69	Ba/NR	70.3	√	√	√[c]
70	Ba/NE	70.3	√	√	√[c]
122	Pa/NR	38.0[b]	√	√	√[c]
124	Pa/NR	38.0	√	√	√[c]
271	Ba/NR	100	√	√	√[c]
272	Ba/NR	100[b]	√	√	√[c]
273	Ba/NR	71.1[b]	√	√	√[c]
274	Ba/NR	71.1[b]	√	√	√[c]
277	Ra/NR	16.5	√	√	√
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
48	CT/NR	100	√	√	√[c]
123	CT/NE	69.8	√	√	√[c]
310	CT/NR	73.1[b]	√	√	√[c]

[a] Soils:, Ba – Bayboro, CT – Croatan, Ra – Rains, and Pa - Pantego.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table15 MU 10B Discussion

March-November

All seventeen monitoring gauges in MU 10B met both of their expected hydrologic success criteria for Year 3. In addition, sixteen of the seventeen monitoring gauges that met the hydrologic success criteria established for years one through three and met the success criteria established for years four and five. Gauges 122, 272, 273, 274, and 310 have missing data because there were no replacement gauges available for installation at the beginning of the growing season. Gauges 66, 67, and 227 have missing data due to gauge malfunction.

Gauge 66 has recorded data for a minimum of 127 consecutive days (52.5%) and one data gap. Using adjacent data points and rainfall events to extrapolate the missing data, it can be assumed that Gauge 66 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 67 has recorded data for a minimum of 64 consecutive days (26.5%) and one data gap. Using nearby Gauge 65 to extrapolate the missing data, it can be assumed that Gauge 67 would have made jurisdictional hydrology for 40.9% of the growing season.

Gauge 122 has recorded data for a minimum of 64 consecutive days (26.5%) and one data gap. Using nearby Gauge 124 to extrapolate the missing data, it can be assumed that Gauge 122 would have made jurisdictional hydrology for 38.0% of the growing season.

Gauge 272 has recorded data for a minimum of 146 consecutive days (60.3%) and one data gap. Using nearby Gauge 271 to extrapolate the missing data, it can be assumed that Gauge 272 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 273 has recorded data for a minimum of 54 consecutive days (22.3%) and multiple data gaps. Using nearby Gauge 274 to extrapolate the missing data, it can be assumed that Gauge 273 would have made jurisdictional hydrology for 71.1% of the growing season.

Gauge 274 has recorded data for a minimum of 77 consecutive days (31.8%) and one data gap. Using nearby Gauge 273 to extrapolate the missing data, it can be assumed that Gauge 274 would have made jurisdictional hydrology for 71.1% of the growing season.

Gauge 310 has recorded data for a minimum of 81 consecutive days (33.5%) and one data gap. Using nearby Gauge 123 to extrapolate the missing data, it can be assumed that Gauge 310 would have made jurisdictional hydrology for 73.1% of the growing season.

In all three years of monitoring, all of the monitoring gauges, except 277, in MU 10B have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI recommends that a portion of the gauges in MU 10B be removed and leave gauges in representative areas to be monitored through years four and five. Gauges 48, 49, 50, 122, and 310 should be considered for removal from hydrologic monitoring.

Table 16. Hydrologic Monitoring Results – MU 10C

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
62	Ra/NR	≥14.5[b]	√	√	√
63	Pa/NR	65.7[c]	√	√	√
64	Ra/NR	39.7	√	√	√[e]
121	Pa/NR	72.3	√	√	√[e]
143	Pa/NR	40.9[c]	√	√	√[e]
282	Pa/NR	70.7[c]	√	√	√[e]
283	Pa/NR	70.7[c]	√	√	√[e]
286	Ra/NR	10.3	–	–	–
287	Ra/NR	3.7	–	–	–
289	Pa/NR	≥16.5[b]	√	√	√
290	Pa/NR	40.9[c]	√	√	√[e]
291	Pa/NR	≥16.1[d]	√	√	√
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
284	CT/NR	70.3[c]	√	√	√[e]
285	CT/NR	73.1[c]	√	√	√[e]
293	CT/NR	100	√	√	√[e]
294	CT/NR	100[c]	√	√	√[e]

[a] Soils:, Pa - Pantego, CT – Croatan, and Ra – Rains.
Mitigation Types: Non-riverine Restoration – NR.
[b] Missing data could not be extrapolated with any degree of certainty.
[c] Actual %: Missing data extrapolated from comparable gauges.
[d] Gauge was not installed for a portion of the 2005 growing season. Data could not be extrapolated with any degree of certainty.
[e] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 16 MU 10C Discussion
March-November
Fourteen of the sixteen monitoring gauges in MU 10C met both of their expected hydrologic success criteria for Year 3. Ten of the fourteen monitoring gauges that met the hydrologic success criteria established for years one through three also met the success criteria established for years four and five. Gauges 286 and 287 did not meet either of their expected hydrologic success criteria. Gauges 63, 143, 282, 283, 284 285, 291, and 294 have missing data because there were no replacement gauges available for installation at the beginning of the growing season. Gauges 62, 284, 289, and 290 have missing data due to gauge malfunction.

Gauges 62, 289, and 291 have missing data during critical draw-down periods and the hydrographs for these gauges are too flashy to extrapolate missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available.

Gauge 63 has recorded data for a minimum of 112 consecutive days (46.3%) and two data gaps. Using nearby Gauge 143 to extrapolate the missing data, it can be assumed that Gauge 63 would have made jurisdictional hydrology for 65.7% of the growing season.

Gauge 143 has recorded data for a minimum of 61 consecutive days (25.2%) and one data gap. Using nearby Gauge 63 to extrapolate the missing data, it can be assumed that Gauge 143 would have made jurisdictional hydrology for 40.9% of the growing season.

Gauge 282 has recorded data for a minimum of 56 consecutive days (23.1%) and two data gaps. Using nearby Gauges 283 and 285 to extrapolate the missing data, it can be assumed that Gauge 282 would have made jurisdictional hydrology for 70.7% of the growing season.

Gauge 283 has recorded data for a minimum of 95 consecutive days (39.3%) and one data gap. Using nearby Gauge 285 to extrapolate the missing data, it can be assumed that Gauge 283 would have made jurisdictional hydrology for 70.7% of the growing season.

Gauge 284 has recorded data for a minimum of 94 consecutive days (38.8%) and one data gap. Using nearby Gauge 285 to extrapolate the missing data, it can be assumed that Gauge 284 would have made jurisdictional hydrology for 70.3% of the growing season.

Gauge 285 has recorded data for a minimum of 101 consecutive days (41.7%) and three data gaps. Using adjacent data points and rainfall event to extrapolate the missing data, it can be assumed that Gauge 285 would have made jurisdictional hydrology for 73.1% of the growing season.

Gauge 290 has recorded data for a minimum of 74 consecutive days (30.6%) and three data gaps. Using nearby Gauge 289 to extrapolate the missing data, it can be assumed that Gauge 290 would have made jurisdictional hydrology for 40.9% of the growing season.

Gauge 294 has recorded data for a minimum of 165 consecutive days (68.2%) and one data gap. Using nearby Gauge 293 to extrapolate the missing data, it can be assumed that Gauge 294 would have made jurisdictional hydrology for 100% of the growing season.

Gauges 286 and 287 did not meet either of their expected hydrologic success criteria. These gauges are located on either side of the ditch adjacent to the removed roadbed. Point-plugs instead of reach plugs were used to fill this ditch. The point plugs do not appear to be successful at returning jurisdictional hydrology within the zone of influence off the western side of the former ditch.

In all three years of monitoring, 10 of the sixteen monitoring gauges in MU 10C have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI recommends that a portion of the gauges in MU 10C be removed and leave gauges in representative areas to be monitored through years four and five. Gauges 121, 293 and 294 should be considered for removal from hydrologic monitoring. The majority of the remaining gauges in MU 10C are adjacent to existing roads or in transects along removed roads. These areas should be monitored through years four and five.

Table 17. Hydrologic Monitoring Results – MU 11

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 50% of Reference Range)					
68	Ba/NR	39.7	√	√	√ [c]
144	Pa/NR	3.7	–	–	–
145	Ba/NR	70.3 [b]	√	√	√ [c]
232	Ra/NR	38.8 [b]	√	√	√ [c]
275	Ba/NR	70.7	√	√	√ [c]
276	Ra/NR	37.6 [b]	√	√	√ [c]
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 50% of Reference Range)					
278	CT/NE	100	√	√	√ [c]
279	CT/NR	100	√	√	√ [c]

[a] Soils: Pa – Pantego, Ba – Bayboro, Ra – Rains, and CT - Croatan.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge meets or exceeds both Hydrologic Success Criteria for years four and five.

Table 17 MU 11 Discussion

March-November

Seven of the eight monitoring gauges in MU 11 met both of their expected hydrologic success criteria for Year 3. All seven monitoring gauges met the hydrologic success criteria established for years one through three and met the success criteria established for years four and five. Gauge 144 did not meet either of its expected hydrologic success criteria. Gauges 145 and 276 have missing data because there were no replacement gauges available for installation at the beginning of the growing season. Gauge 232 has missing data due to gauge malfunction.

Gauge 145 has recorded data for a minimum of 70 consecutive days (28.9%) and one data gap. Using nearby Gauge 68 to extrapolate the missing data, it can be assumed that Gauge 145 would have made jurisdictional hydrology for 70.3% of the growing season.

Gauge 232 has recorded data for a minimum of 41 consecutive days (16.9%) and two data gaps. Using nearby Gauge 276 to extrapolate the missing data, it can be assumed that Gauge 232 would have made jurisdictional hydrology for 37.6% of the growing season.

Gauge 276 has recorded data for a minimum of 40 consecutive days (16.5%) and one data gap. Using nearby Gauges 232 and 277 to extrapolate the missing data, it can be assumed that Gauge 276 would have made jurisdictional hydrology for 37.6% of the growing season.

In all three years of monitoring, all of the gauges in MU 11, except Gauge 144, have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, a portion of the gauges in MU 11 could be considered for removal. However, the majority of the gauges in MU 11 are adjacent to existing roads and these areas should be monitored through years four and five.

Table 18. Hydrologic Monitoring Results – MU 12A

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥12.5% of Growing Season; ≤ 20% of Reference Range)					
16	Pa/NE	72.3[b]	√	√	√
17	Pa/NP	69.8 [b]	√	√	√
136	Mu/NE	42.2	√	–	–
137	Mu/NR	10.7	–	–	–
179	Pa/NR	69.4	√	√	√
180	Ba/NE	59.1 [b]	√	√	√
280	Pa/NE	100 [b]	√	√	√
281	Ra/NE	39.3 [b]	√	√	√
288	Ra/NR	37.6 [b]	√	√	√

[a] Soils: Pa – Pantego, Mu – Murville, Ba – Bayboro, and Ra - Rains.
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, and Non-riverine Preservation – NP.
[b] Actual %: Missing data extrapolated from comparable gauges.

Table 18 MU 12A Discussion

March-November

Seven of the nine monitoring gauges in MU 12A met both of their expected hydrologic success criteria for Year 4. Gauges 16, 180, and 280 have missing data because there were no replacement gauges available for installation at the beginning of the growing season. Gauges 17, 281, and 288 have missing data due to gauge malfunction.

Gauge 137 did not meet either of its expected hydrologic success criteria established for the Murville soil series for Year 4, but did have a hydroperiod between 5 and 12.5% of the growing season.

Gauge 136 made jurisdictional hydrology for 42.2% of the growing season, and therefore met Success Criterion 1. However, this gauge did not meet Success Criterion 2 (20% of Reference Range) for the Murville soil series (57.9 - 100% of the growing season).

Gauge 16 has recorded data for a minimum of 99 consecutive days (40.9%) and two data gaps. Using Gauge 17 to extrapolate the missing data, it can be assumed that Gauge 16 would have made jurisdictional hydrology for 72.3% of the growing season.

Gauge 17 has recorded data for a minimum of 115 consecutive days (47.5%) and one data gap. Using Gauge 16 to extrapolate the missing data, it can be assumed that Gauge 17 would have made jurisdictional hydrology for 69.8% of the growing season.

Gauge 180 has recorded data for a minimum of 68 consecutive days (28.1%) and one data gap. Using Gauge 179 to extrapolate the missing data, it can be assumed that Gauge 180 would have made jurisdictional hydrology for 59.1% of the growing season.

Gauge 280 has recorded data for a minimum of 166 consecutive days (68.6%) and one data gap. Using Gauges 16 and 17 to extrapolate the missing data, it can be assumed that Gauge 280 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 281 has recorded data for a minimum of 61 consecutive days (25.2%) and one data gap. Using adjacent data points and rainfall events to extrapolate the missing data, it can be assumed that Gauge 281 would have made jurisdictional hydrology for 39.3% of the growing season.

Gauge 288 has recorded data for a minimum of 41 consecutive days (16.9%) and one data gap. Using adjacent data points and rainfall events to extrapolate the missing data, it can be assumed that Gauge 288 would have made jurisdictional hydrology for 37.6% of the growing season.

All of the gauges in MU 12A, except Gauges 136 and 137, have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, a portion of the gauges in MU 12A could be considered for removal. However, the majority of the gauges in MU 12A are adjacent to existing roads and these areas should be monitored through year five.

Table 19. Hydrologic Monitoring Results – MU 12B

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥ 12.5% of Growing Season; ≤ 20% of Reference Range)					
9	Pa/NR	40.5	√	√	√
10	Pa/NR	40.9	√	√	√
18	Pa/NR	19.4	√	–	–
36	Pa/NE	70.3	√	√	√
37	Pa/NR	39.3	√	√	√
38	Mu/NE	71.5	√	√	√
134	Pa/NE	40.5	√	√	√
135	Pa/NR	16.5	√	–	–
182	Mu/NR	5.0	–	–	–
183	Mu/NR	5.4	–	–	–
188	Pa/NR	37.2	√	√	√
197	Pa/NE	64.9	√	√	√
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 20% of Reference Range)					
157	CT/NR	71.9	√	√	√

[a] Soils: Pa – Pantego, Mu – Murville, and CT – Croatan.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.

Table 19 MU 12B Discussion

March-November

Nine of the thirteen monitoring gauges in MU 12B met both of their expected hydrologic success criteria for Year 4.

Gauges 18 and 135 made jurisdictional hydrology for at least 12.5% of the growing season, and therefore met Success Criterion 1. Neither of the gauges met Success Criterion 2 (20% of Reference Range) for the Pantego soil series (22.3 - 100% of the growing season).

Gauges 182 and 183 did not meet either of their expected hydrologic success criteria, but did achieve hydroperiods between 5 and 12.5% of the growing season. These gauges are located adjacent to the north-south ditch that maintains the main access road. Point-plugs instead of reach-plugs were used to fill this ditch. The point-plugs may be successful at returning jurisdictional hydrology to some areas within the zone of influence of the ditch and not in others. The ditch adjacent to 182 and 183 may still have a zone of influence extending a greater distance off the ditch than can be measured with existing gauges. Another gauge installed along the same transect may capture the zone of influence.

Nine of the thirteen monitoring gauges in MU 12B have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, a portion of the gauges in MU 12B could be considered for removal. However, the majority of the gauges in MU 12B met jurisdictional hydrology for less than 50% of the growing season and these areas should be monitored through year five.

Table 20. Hydrologic Monitoring Results – MU 13A

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥ 12.5% of Growing Season; ≤ 20% of Reference Range)					
1	Ba/NR	100[b]	√	√	√
15	Pa/NR	70.7	√	√	√
20	Pa/NE	69.8[b]	√	√	√
142	Pa/NR	38.8	√	√	√
174	Ba/NR	100	√	√	√
176	Ba/NR	100 [b]	√	√	√
178	Mu/NR	64.9	√	√	√
292	Pa/NE	40.9 [b]	√	√	√
295	Pa/NR	100 [b]	√	√	√
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 20% of Reference Range)					
14	CT/NE	100	√	√	√
40	CT/NE	73.1	√	√	√
125	CT/NR	100	√	√	√
126	CT/NE	100	√	√	√
127	CT/NE	72.7	√	√	√
297	CT/NR	73.1	√	√	√

[a] Soils: Ba – Bayboro, Pa – Pantego, Mu – Murville, and CT – Croatan.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.

Table 20 MU 13A Discussion

March-November

All fifteen monitoring gauges in MU 13A met both of their expected hydrologic success criteria for Year 4. Gauges 1 and 176 have missing data due to gauge malfunction. Gauges 20, 292, and 295 have missing data because there were no replacement gauges available for installation at the beginning of the growing season.

Gauge 1 has recorded data for a minimum of 102 consecutive days (42.2%) and two data gaps. Using Gauge 60 to extrapolate the missing data, it can be assumed that Gauge 1 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 176 has recorded data for a minimum of 105 consecutive days (43.4%) and two data gaps. Using Gauge 174 to extrapolate the missing data, it can be assumed that Gauge 176 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 20 has recorded data for a minimum of 94 consecutive days (38.8%) and one data gap. Using Gauge 15 to extrapolate the missing data, it can be assumed that Gauge 20 would have made jurisdictional hydrology for 69.8% of the growing season.

Gauge 292 has recorded data for a minimum of 61 consecutive days (25.2%) and one data gap. Using nearby Gauges 290 and 291 to extrapolate the missing data, it can be assumed that Gauge 292 would have made jurisdictional hydrology 40.9% of the growing season.

Gauge 295 has recorded data for a minimum of 165 consecutive days (68.2%) and one data gap. Using nearby Gauges 293, 294, and 292 to extrapolate the missing data, it can be assumed that Gauge 295 would have made jurisdictional hydrology for 100% of the growing season.

All of the gauges in MU 13A have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI recommends that Gauges 14, 125, 126, 127, 174, 176, and 295 be considered for removal from hydrologic monitoring.

Table 21. Hydrologic Monitoring Results – MU 13B

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥ 12.5% of Growing Season; ≤ 20% of Reference Range)					
3	Mu/NR	5.4	–	–	–
4	Mu/NR	≥14.5[b]	√	–	–
24	Mu/NR	12.4	–	–	–
139	Ba/NE	72.7	√	√	√
140	Pa/NE	63.6[c]	√	√	√
141	Pa/NE	16.9	√	–	–
172	Ba/NR	41.3[c]	√	–	–
173	Ba/NE	72.7[c]	√	√	√
194	Mu/NE	36.4[c]	√	–	–
198	Ln/NE	38.0[b]	√	√	√

[a] Soils: Ba – Bayboro, Pa – Pantego, Mu – Murville, and Ln - Leon.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Gauge was not installed for a portion of the 2005 growing season. Data could not be extrapolated with any degree of certainty.
[c] Actual %: Missing data extrapolated from comparable gauges.

Table 21 MU 13B Discussion
March-November
Four of the ten monitoring gauges in MU 13B met both of their expected hydrologic success criteria for Year 4. Gauges 3 and 24 did not meet either of its expected hydrologic success criteria for Year 4, but did achieve hydroperiods between 5 and 12.5% of the growing season. Gauges 4 and 198 have missing data because there were no replacement gauges available for installation at the beginning of the growing season. Gauges 140, 172, 173, 194, and 198 have missing data due to gauge malfunction.

Gauges 4 and 198 have missing data during critical draw-down periods and the hydrographs for these gauges are too flashy to extrapolate missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available.

Gauges 4 and 194 made jurisdictional hydrology for at least 12.5% of the growing season, and therefore met Success Criterion 1. Neither of the gauges met Success Criterion 2 (20% of reference) for the Murville soil series (57.9 to 100% of the growing season).

Gauge 141 made jurisdictional hydrology for at least 12.5% of the growing season, and therefore met Success Criterion 1. However, Gauge 141 did not meet Success Criterion 2 (20% of reference) for the Pantego soil series (22.3 to 100% of the growing season).

Gauge 172 made jurisdictional hydrology for at least 12.5% of the growing season, and therefore met Success Criterion 1. However, Gauge 172 did not meet Success Criterion 2 (20% of reference) for the Bayboro soil series (55.4 to 100% of the growing season).

Gauge 140 has recorded data for a minimum of 79 consecutive days (32.6%) and two data gaps. Using nearby Gauge 141 to extrapolate the missing data, it can be assumed that Gauge 140 would have made jurisdictional hydrology for 63.6% of the growing season.

Gauge 172 has recorded data for a minimum of 70 consecutive days (28.9%) and one data gap. Using nearby Gauge 173 to extrapolate the missing data, it can be assumed that Gauge 172 would have made jurisdictional hydrology for 41.3% of the growing season.

Gauge 173 has recorded data for a minimum of 99 consecutive days (40.9%) and one data gap. Using nearby Gauge 139 to extrapolate the missing data, it can be assumed that Gauge 173 would have made jurisdictional hydrology for 72.7% of the growing season.

Gauge 194 has recorded data for a minimum of 51 consecutive days (21.1%) and one data gap. Using nearby adjacent data points and rainfall events to extrapolate the missing data, it can be assumed that Gauge 194 would have made jurisdictional hydrology for 36.4% of the growing season.

The hydrologic success rate in MU 13B is not has high as in the remainder of Phase I. The majority of the gauges in MU 13B are adjacent to existing roads and these areas should be monitored through year five.

Table 22. Hydrologic Monitoring Results – MU 14

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥ 12.5% of Growing Season; ≤ 20% of Reference Range)					
12	Pa/NR	100 [b]	√	√	√
13	Ba/NR	100 [b]	√	√	√
22	Pa/NR	100	√	√	√
23	Pa/NE	100	√	√	√
175	Ba/NR	72.3	√	√	√
177	Pa/NR	100	√	√	√
186	Pa/NR	100 [b]	√	√	√
190	Pa/NR	100	√	√	√

[a] Soils: Ba – Bayboro and Pa – Pantego.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.

Table 22 MU 14 Discussion
March-November
All eight monitoring gauges in MU 14 met both of their expected hydrologic success criteria for Year 4. Most of the gauges had between 2 to 15 inches of surface water for the majority of the growing season. Gauge 12 has missing data because there were no replacement gauges available for installation at the beginning of the growing season. Gauges 13 and 186 have missing data due to gauge malfunction.

Gauge 12 has recorded data for a minimum of 166 consecutive days (68.6%) and one data gap. Using nearby Gauge 186 to extrapolate the missing data, it can be assumed that Gauge 12 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 13 has recorded data for a minimum of 143 consecutive days (59.1%) and one data gap. Using nearby Gauge 175 to extrapolate the missing data, it can be assumed that Gauge 13 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 186 has recorded data for a minimum of 110 consecutive days (45.5%) and one data gap. Using nearby Gauge 12 to extrapolate the missing data, it can be assumed that Gauge 186 would have made jurisdictional hydrology for 100% of the growing season.

Gauges 175 and 177 are interior gauges that have met jurisdictional hydrology for 50 to 100% of the growing season for the past 3 years. The surrounding gauges meet jurisdictional hydrology for 100% of the growing season. The gauges are located adjacent to reach-filled ditches where the road has been removed. The jurisdictional hydrology for these gauge sites may differ from surrounding gauges due to a small zone of influence in the removed roadbed and ditch or they may be on topographic highs.

All of the gauges in MU 14 have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI recommends that Gauges 12, 13, 22, 23, 175, 177, 186, and 190 be considered for removal from hydrologic monitoring. All of the gauges are located in non-riverine restoration or enhancement mitigation areas indicating that mitigative measures have been successful at returning or enhancing the jurisdictional hydrology in these areas.

Table 23. Hydrologic Monitoring Results – MU 15

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥ 12.5% of Growing Season; ≤ 20% of Reference Range)					
11	Pa/NR	13.2	√	–	–
25	Pa/NR	38.4	√	√	√
26	Mu/NR	40.1	√	–	–
138	Pa/NR	65.3	√	√	√
171	Ba/NR	38.8	√	–	–
187	Ba/NR	100 [b]	√	√	√
189	Pa/NR	40.5	√	√	√
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 20% of Reference Range)					
167	CT/NE	100	√	√	√
170	CT/NE	100	√	√	√
185	CT/NR	71.9	√	√	√

[a] Soils: Ba – Bayboro, CT – Croatan, Mu – Murville, and Pa – Pantego.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.

Table 23 MU 15 Discussion

March-November

Seven of the ten monitoring gauges in MU 15 met both of their expected hydrologic success criteria for Year 4. Gauge 187 has missing data due to gauge malfunction.

Gauge 11 made jurisdictional hydrology for at least 12.5% of the growing season, and therefore met Success Criterion 1. However, Gauge 11 did not meet Success Criterion 2 (20% of reference) for the Pantego soil series (22.3 to 100% of the growing season).

Gauge 26 made jurisdictional hydrology for at least 12.5% of the growing season, and therefore met Success Criterion 1. However, Gauge 26 did not meet Success Criterion 2 (20% of reference) for the Murville soil series (57.9 to 100% of the growing season).

Gauge 171 made jurisdictional hydrology for at least 12.5% of the growing season, and therefore met Success Criterion 1. However, Gauge 171 did not meet Success Criterion 2 (20% of reference) for the Bayboro soil series (55.4 to 100% of the growing season).

Gauge 187 has recorded data for a minimum of 170 consecutive days (70.3%) and one data gap. Using adjacent data points and rainfall events to extrapolate the missing data, it can be assumed that Gauge 187 would have made jurisdictional hydrology for 100% of the growing season.

Gauges 11, 26, and 171 are located in non-riverine restoration mitigation areas. Mitigative measures have been successful at returning jurisdictional hydrology to these areas. However, these gauges may never meet Success Criterion 2 (20% of reference) for their respective soil series.

Due to the high rate of hydrologic success in portions of MU 15 over the past 3 years, ESI recommends that Gauges 167 and 170 be considered for removal from hydrologic monitoring. Both gauges are interior gauges that have met jurisdictional hydrology for 100% of the growing season for the past three years. However, the hydrologic success rate in MU 15 is not has high as in the remainder of Phase I and the majority of the gauges in MU 15 should be monitored through year five.

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Table 24. Hydrologic Monitoring Results – MU 16

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥ 12.5% of Growing Season; ≤ 20% of Reference Range)					
2	Mu/NE	38.0	√	–	–
19	Pa/NE	100	√	√	√
130	Pa/NR	100	√	√	√
131	Mu/NE	100	√	√	√
169	Pa/NR	100[b]	√	√	√
181	Mu/NR	37.2	√	–	–
192	Mu/NR	40.1	√	–	–
193	Mu/NR	40.9	√	–	–
195	Ln/NR	≥12.8[c]	√	√	√
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 20% of Reference Range)					
7	CT/NR	100	√	√	√
8	CT/NR	100	√	√	√
28	DA/NR	100	√	√	√
31	CT/NR	100	√	√	√
128	CT/NR	100	√	√	√
129	CT/NR	100	√	√	√
162	CT/NR	100[b]	√	√	√
164	CT/NR	100	√	√	√
165	CT/NR	100	√	√	√
166	DA/NR	100[b]	√	√	√
168	CT/NR	100	√	√	√

[a] Soils: DA – Dare, CT – Croatan, Ln – Leon, Mu – Murville, and Pa – Pantego.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Hydrograph is too flashy to extrapolate missing data with any degree of certainty.

Table 24 MU 16 Discussion

March-November

Sixteen of the twenty monitoring gauges in MU 16 met both of their expected hydrologic success criteria for Year 4. Gauges 162, 166, 169, and 195 have missing data due to gauge malfunction.

Gauge 195 has missing data during critical draw-down periods and the hydrograph for this gauge are too flashy to extrapolate missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available.

Gauges 2, 181, 192, and 193 made jurisdictional hydrology for at least 12.5% of the growing season, and therefore met Success Criterion 1. None of these gauges met Success Criterion 2 (20% of reference) for the Murville soil series (57.9 to 100% of the growing season).

Gauge 162 has recorded data for a minimum of 186 consecutive days (76.9%) and one data gap. Using nearby Gauge 161 to extrapolate the missing data, it can be assumed that Gauge 162 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 166 has recorded data for a minimum of 167 consecutive days (69.0%) and one data gap. Using nearby Gauge 28 to extrapolate the missing data, it can be assumed that Gauge 166 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 169 has recorded data for a minimum of 189 consecutive days (78.1%) and one data gap. Using nearby Gauges 168 and 170 to extrapolate the missing data, it can be assumed that Gauge 169 would have made jurisdictional hydrology for 100% of the growing season.

Gauges 181, 192, and 193 are located in non-riverine restoration mitigation areas. Mitigative measures have been successful at increasing the jurisdictional hydrology in these areas from < 5% of the growing season to >37% of the growing season. These gauges are located adjacent to existing roads and point-plugged ditches. Jurisdictional hydrology has been returned to these areas. However, these gauges may never meet Success Criterion 2 (20% of reference) for the Murville soil series.

Sixteen of the twenty monitoring gauges in MU 16 have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI would recommend that a portion of the gauges in MU 16 be removed and leave gauges in representative areas to be monitored through year five. Gauges 7, 8, 19, 28, 31, 128, 129, 130, 131, 162, 164, 165, 166, 168, and 169 should be considered for removal from hydrologic monitoring. The majority of the gauges are located in non-riverine restoration mitigation areas indicating that jurisdictional hydrology has been successfully restored to these areas.

Table 25. Hydrologic Monitoring Results – MU 17

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥ 12.5% of Growing Season; ≤ 20% of Reference Range)					
32	Ba/NR	100	√	√	√
33	Ba/NR	64.9	√	√	√
160	Ba/NR	71.9	√	√	√
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 20% of Reference Range)					
5	DA/NR	100	√	√	√
6	DA/NE	100	√	√	√
29	CT/NR	100	√	√	√
30	DA/NR	100 [b]	√	√	√
132	CT/NE	40.1	√	√	√
161	CT/NR	100	√	√	√
163	CT/NR	100 [b]	√	√	√

[a] Soils: Ba – Bayboro, DA – Dare, and CT – Croatan.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.

Table 25 MU 17 Discussion

March-November

All ten of the monitoring gauges in MU 17 met both of their expected hydrologic success criteria for Year 4. Gauge 196 was removed from monitoring due to safety concerns (alligator). Gauge 196 was in a semi-permanently ponded area. Gauges 30 and 163 have missing data due to gauge malfunctions.

Gauge 30 has recorded data for a minimum of 216 consecutive days (89.3%) and one data gap. Using nearby Gauge 29 to extrapolate the missing data, it can be assumed that Gauge 30 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 163 has recorded data for a minimum of 167 consecutive days (69.0%) and one data gap. Using nearby Gauge 161 to extrapolate the missing data, it can be assumed that Gauge 163 would have made jurisdictional hydrology for 100% of the growing season.

All of the gauges in MU 17 have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, ESI would recommend that a portion of the gauges in MU 17 be removed and leave gauges in representative areas to be monitored through year five. Gauges 5, 6, 29, 30, 132, 161, and 163 should be considered for removal from hydrologic monitoring. The majority of the gauges are located in non-riverine restoration mitigation areas indicating that jurisdictional hydrology has been successfully restored to these areas.

Table 26. Hydrologic Monitoring Results – MU 18

Gauge	Soil Series and Mitigation Type[a]	Actual %	Criterion 1 Met (% of Growing Season)	Criterion 2 Met (% of Reference Range)	Hydrologic Success Met
Non-riverine, Mineral (Success = Saturation/inundation ≥ 12.5% of Growing Season; ≤ 20% of Reference Range)					
21	Pa/NE	100[b]	√	√	√
34	Pa/NR	69.8	√	√	√
184	Ln/NE	≥16.1[d]	√	√	√
191	Pa/NE	12.4	–	–	–
Non-riverine, Organic (Success = Saturation/inundation ≥ 25% of Growing Season; ≤ 20% of Reference Range)					
133	CT/NE	36.8	√	√	√
158	CT/NR	71.1	√	√	√
159	CT/NR	≥22.3[c]	–	–	–

[a] Soils: CT – Croatan, Ln – Leon, and Pa – Pantego.
Mitigation Types: Non-riverine Restoration – NR and Non-riverine Enhancement – NE.
[b] Actual %: Missing data extrapolated from comparable gauges.
[c] Gauge was not installed for a portion of the 2005 growing season. Missing data could not be extrapolated with any degree of certainty.
[d] Hydrograph is too flashy to extrapolate missing data with any degree of certainty.

Table 26 MU 18 Discussion

March-November

Five of the seven monitoring gauges in MU 18 met both of their expected hydrologic success criteria for Year 4. Gauges 159 and 191 did not meet either of their expected hydrologic success criteria for Year 4. Gauge 159 has missing data because there were no replacement gauges available for installation at the beginning of the growing season. Gauges 21 and 184 have missing data due to gauge malfunction.

Gauges 159 and 184 have missing data during critical draw-down periods and the hydrographs for these gauges are too flashy to extrapolate missing data with any certainty. As a result, the hydroperiod reported is the longest for which data are available.

Gauge 21 has recorded data for a minimum of 215 consecutive days (88.8%) and one data gap. Using nearby Gauge 34 to extrapolate the missing data, it can be assumed that Gauge 21 would have made jurisdictional hydrology for 100% of the growing season.

Gauge 159 has recorded data for a minimum of 54 consecutive days (22.3%) and multiple data gaps. Gauge 159 was not installed until the end of June and then malfunctioned during August and September. At a minimum, mitigative measures have been successful at returning the area represented by Gauge 159 to jurisdictional hydrology.

Gauge 191 did not meet either of its expected hydrologic success criteria, but did achieve a hydroperiod of 12.4% of the growing season. Point-plugs were used to fill the adjacent ditch and the ditch is open on the adjacent U.S. Forest Service property. The point plugs appear to be successful at enhancing hydrology, but may not be enough to return jurisdictional hydrology to the area represented by this gauge site.

Five of the seven monitoring gauges in MU 18 have met the hydrologic success criteria established for years one through three and the success criteria established for years four and five. Due to the high rate of hydrologic success, a portion of the gauges in MU 18 could be removed. However, the majority of the gauges in MU 18 met jurisdictional hydrology for less than 50% of the growing season and these areas should be monitored through year five.

2.3.2 Climatic Data

Figure 4 is a comparison of 2005 monthly rainfall to historical precipitation for the area. The two lines represent the 30th and 70th percentiles of monthly precipitation for Craven County, North Carolina. The bars are monthly rainfall totals for the 2005 growing season as well as the rainfall for November and December of 2004. The historical data were collected from the North Carolina State Climate Office rain gauge in Craven County, North Carolina. An onsite rain gauge (Rain Gauge 2) provided 2005 rainfall data.

Rain Gauge 3 malfunctioned multiple times during the 2005 growing season. Rain Gauge 4 was clogged after Hurricane Ophelia and the data collected from Rain Gauge 4 in August and September 2005 is unreliable when compared to the data collected from the other on-site rain gauges during the hurricane events. Rain Gauge 3 was not used to determine normal rainfall, due to the malfunctions and unreliable data. The onsite rain gauges were not monitored in the end of November and December 2004, January and February 2005. Therefore, the rainfall data for this period is from the New Bern Airport.

Overall, the rainfall for the 2005 growing season was normal ($\geq$ 28.7 to 39.0 inches onsite compared to normal 28.7 to 49.9 inches). Rainfall between November 2004 and February 2005 was on the low side of normal (10.5 inches at the New Bern Airport compared to normal 10.2 to 18.4 inches).

2.4 Conclusions

The majority of the monitoring gauges showed that groundwater levels dropped below 12 inches of the ground surface either in June through the beginning of September and then rose to within 12 inches of the ground surface at the end of September due to a hurricane rainfall event. Therefore, the longest number of consecutive days reported for success criteria occurred during the critical defining hydroperiod for many of the non-riverine minerals soils that occupy a large portion of the CWMB.

Entire Growing Season (March-November)
Hydrologic monitoring in 2005 showed 243 of 286 (84.6%) monitoring gauges in the CWMB met both respective hydrologic success criteria [≥ 12.5 % (mineral soils) or ≥ 25 % (organic/riverine soils) of the growing season and within 20% and 50% of Reference Range] (Figures 3a and 3b). Of the 43 gauges that did not meet both of its respective success criteria, 30 made jurisdictional hydrology for ≥ 12.5% of the growing season, 10 made jurisdictional hydrology 5 – 12.5% of the growing season, and three (Gauges 75, 144, and 287) did not make jurisdictional hydrology for at least 5% of the growing season.

Of the 204 monitoring gauges in non-riverine mineral soils, 166 met both hydrologic success criteria and 12 did not meet either hydrologic success criterion; the remaining 26 gauges met Success Criterion 1 only. Of the 62 monitoring gauges in non-riverine organic soils, 61 met both hydrologic success criteria and only one gauge (Gauge 159) did not meet either of its success criteria. However, Gauge 159 met jurisdictional hydrology for 22.3% of the growing season. Of the 12 monitoring gauges in riverine organic soils, 11 met both hydrologic success criteria and only one gauge (Gauge 227) did not meet either of its hydrologic success criteria. Of the eight monitoring gauges in riverine mineral soils five met both hydrologic success criteria, one gauge (Gauge 256) met Success Criterion 1 only and the remaining two gauges (Gauges 102 and 243) did not meet either hydrologic success criterion.

Hydrologic monitoring in 2005 showed 81 of 102 (79.4%) monitoring gauges in Phase I met both respective hydrologic success criteria. Of the 71 monitoring gauges in non-riverine mineral soils, 51 met both hydrologic success criteria and six did not meet either hydrologic success criterion; the remaining 14 gauges met Success Criterion 1 only. Of the 14 gauges in Phase I that met only Success Criterion 1, 10 made jurisdictional hydrology for between 36.3 and 42.2% of the growing season. Of the 31 monitoring gauges in Phase I in non-riverine organic soils, 30 met both hydrologic success criteria and the remaining gauge (Gauge 159) did not meet either of its hydrologic success criterion. However, Gauge 159 met jurisdictional hydrology for 22.3% of the growing season.

Hydrologic monitoring in 2005 showed 162 of 184 (88.0%) monitoring gauges in Phase II met both respective hydrologic success criteria. Of the 133 monitoring gauges in non-riverine mineral soils, 115 met both hydrologic success criteria and 12 did not meet either hydrologic success criterion; the remaining 12 gauges met Success Criterion 1 only. Of the 31 of the monitoring gauges in non-riverine organic soils, all 31 met both hydrologic success criteria. Of the 12 monitoring gauges in riverine organic soils, 11 met both hydrologic success criteria and the remaining gauge (Gauge 227) met Success Criterion 1 only. Of the eight monitoring gauges in riverine mineral soils, five met both hydrologic success criteria, two gauges (Gauges 102 and 256) did not meet either hydrologic success criterion, and the remaining gauge (Gauge 259) met Success Criterion 1. Of the 184 monitoring gauges in Phase II, 139 (75.5%) met both of their respective hydrologic success criteria established for years one through three and met the hydrologic success criteria established for years four and five [≥ 12.5 % (mineral soils) or ≥ 25 % (organic/riverine soils) of the growing season and within 20% of Reference Range] under normal rainfall conditions.

Of the 43 monitoring gauges that did not meet both of their respective hydrologic success criteria, 28 met Success Criterion 1 and the remaining 15 did not meet either of their respective hydrologic success criteria. In years with normal rainfall these areas may not achieve 20% of Reference Range. The non-jurisdictional areas around the monitoring gauges that do not meet jurisdictional criteria may need to be delineated and removed from mitigation credits if they are not returned to jurisdictional hydrology by year five.

Areas of Concern

Gauges 4, 95, 260, 258, 259, 154, 263, 261, 247, 243, 227, 256, 172, and 159 met jurisdictional hydrology (≥ 12.5% of the growing season). These gauges are missing data because there where no replacement gauges available for installation and the hydrograph is too flashy to extrapolate the missing data with any degree of certainty

Gauges 92, 93, 95, 261, 260, 258, 259, 286, 287, and 141 occur adjacent to ditches that remain partially open where point-plugs were used to fill the ditch. These gauges were placed in non-jurisdictional areas within the zone of influence of the ditch. These gauges met jurisdictional hydrology (≥ 12.5% of the growing season), but may not meet Success Criterion 2 (% of Reference Range) within the zone of influence off the former ditch under normal rainfall conditions. These partially open ditches may still have a zone of influence extending a greater distance off the ditch than can be measured with existing gauges. Another gauge installed along the same transect may capture the zone of influence or measures should be taken to remove these non-jurisdictional areas around these monitoring gauges (may need to be delineated) from mitigation credits if they are not returned to jurisdictional hydrology in years four and five.

Gauges 3, 137, 182, 183, 191, 286, and 287 occur adjacent to ditches that remain partially open where point-plugs were used to fill the ditch. These gauges were placed in non-jurisdictional areas within the zone of influence of the ditch. These gauges sites did not achieve jurisdictional hydrology greater than 12.5% of the growing season within the zone of influence off the former ditch under normal rainfall conditions. These partially open ditches may still have a zone of influence extending a greater distance off the ditch than can be measured with existing gauges. Another gauge installed along the same transect may capture the zone of influence or measures should be taken to remove these non-jurisdictional areas around these monitoring gauges (may need to be delineated) from mitigation credits if they are not returned to jurisdictional hydrology in years four and five.

Gauges 102, 149, 227, 74, 75, 76, 24, and 11 appear to be located on topographic highs compared to the surrounding landscape. In years with normal rainfall these areas may not achieve hydroperiods greater than 12.5% of the growing season, but all except Gauge 75 achieved at least 5% of the growing season. The non-jurisdictional areas around these monitoring gauges may need to be delineated and removed from mitigation credits if they are not returned to jurisdictional hydrology in years four and/or five.

Gauges 2, 26, 136, 172, 171, 194, 181, 192, and 193 met jurisdictional hydrology for between 36.3 and 42.2% of the growing season. These gauges met Success Criterion 1, but did not meet Success Criterion 2. Mitigative measures have been successful at returning jurisdictional hydrology to these areas, but these gauges may never meet Success Criterion 2 (20% of reference) for their respective soil series because of their location adjacent to existing roads and point-plugged ditches or on topographic highs.

Of the 20 monitoring gauges in riverine areas, two (Gauges 102 and 227) did not show evidence of surface water throughout much of the growing season. These gauge sites may be too high in the landscape to function as riverine influenced wetlands. However, additional areas in MU 6, 5, and 2B (for example Gauges 241, 240, 242, and 251) showed prolonged surface flooding and flowing water throughout much of the growing season. These areas are headwater wetlands that have a surface connection to the unnamed tributary to East Prong Brice Creek and should be re-evaluated for riverine function and credit.

Rainfall
Overall, the rainfall for the 2005 growing season was normal ($\geq$ 28.7 to 39.0 inches onsite compared to normal 28.7 to 49.9 inches). Rainfall between November 2004 and February 2005 was on the low side of normal (10.5 inches at the New Bern Airport compared to normal 10.2 to 18.4 inches).

Recommendations
It is recommended that monitoring of Phase I and II continue into 2006. However, due to the high rate of hydrologic success under normal rainfall conditions, ESI would recommend that selected interior gauges that are meeting success criteria for years four and five be removed from monitoring. Seventy-three interior gauges should be considered for removal from hydrologic monitoring. Figures 6a and 6b (in Appendix E) designate the gauges that should be considered for early removal from hydrologic monitoring. Figures 7a and 7b (in Appendix E) depict how the remaining gauges will provide representative coverage across the CWMB. Each of the gauges considered for early removal has met or exceeded both expected hydrologic success criteria in each year of monitoring. The majority of these gauges have met jurisdictional hydrology for 100% of the growing season in years with normal rainfall. Mitigative measures have successfully enhanced and/or restored jurisdictional hydrology to the areas represented by these gauge sites. The areas represented by these gauges sites should be considered to have successfully met all success criteria through year five established by the MBRT.

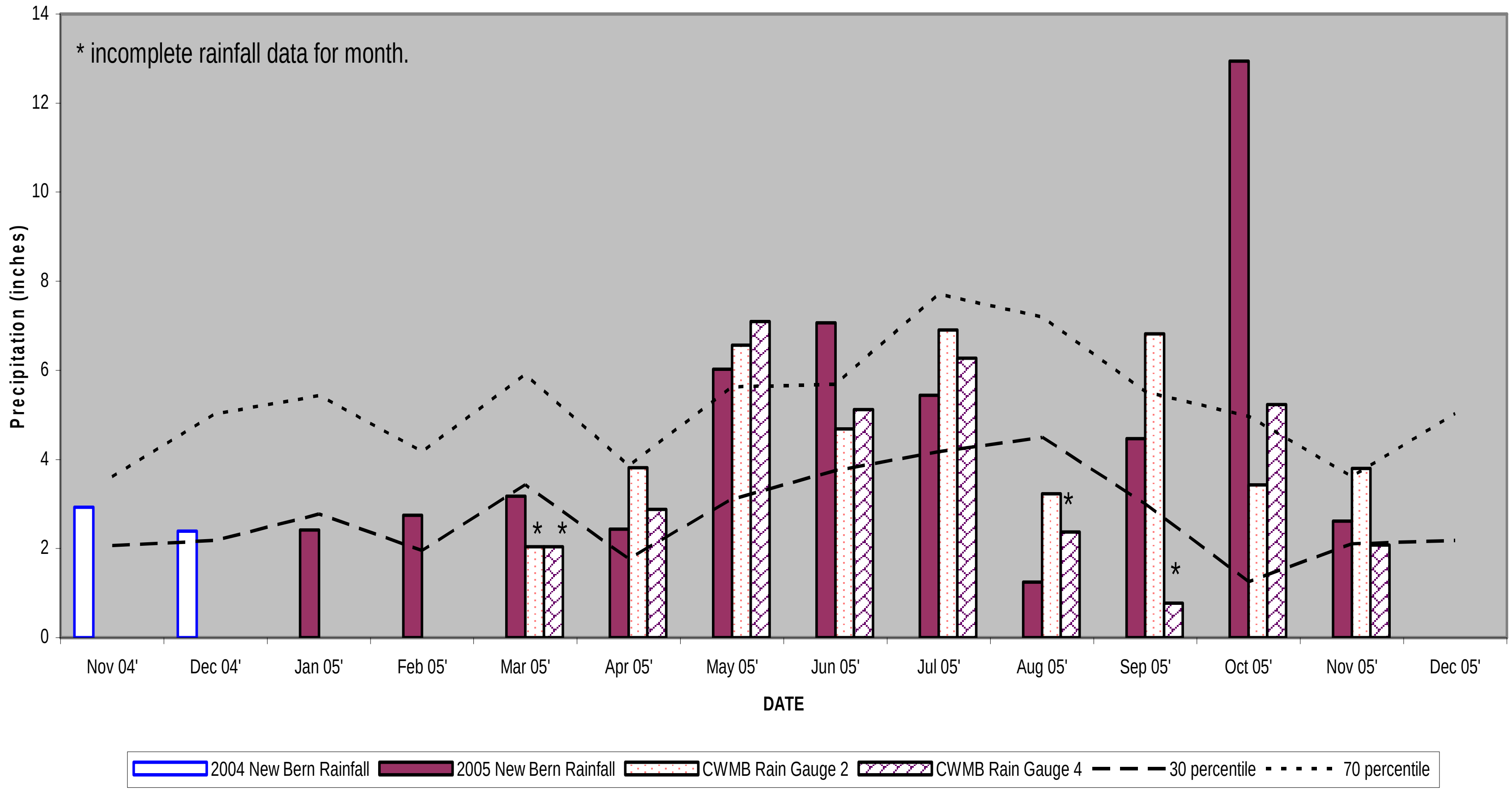
Gauge sites adjacent to roads or point-plugged ditches, areas where riverine credit may be gained, areas that are not meeting the success criteria established for years four and five, and representative areas across the CWMB should continue to be monitored through years four and five.

ESI documented that many of the gauges along transects 258-260 (MU 3/4A), 286-287 (MU 10C), and 182-183 (MU 12B) did not meet both expected hydrologic success criteria. Additional gauges may need to be installed along these transects in order to capture the zone of influence that may remain adjacent to the open areas of the ditch. ESI also recommends that additional areas in MU 6, 5, and 2B (for example Gauges 241, 240, 242, and 251) be re-evaluated for riverine function. These areas showed prolonged surface flooding and flowing water throughout much of the growing season and may be considered riverine mitigation due to the surface connection with the unnamed tributary to East Prong Brice Creek.

It is recommended that Rain Gauge 3 be replaced due to repeated malfunction and unreliable data collected during 2005. For subsequent years, it is recommended that additional follow-up trips be scheduled after routine gauge downloads to check gauges that malfunction, particularly reference gauges, and take appropriate measures to avoid extended and frequent data gaps, especially for Ecotone gauges. Ecotone gauges tended to have frequent gauge malfunctions, including dead batteries, chewed external wires, and broken battery connections.

Consideration should be given to evaluating the need for one or more additional reference gauges. For instance, existing Bayboro reference gauges achieve hydroperiods between 69 and 100% of the growing season, yet the expected hydroperiod from the published county soil survey is approximately 30%. Many of the gauges in Phase II that achieved Criterion 1, but not Criterion 2 (% of Reference Range) are in Bayboro soils and would achieve hydroperiods within 20% of the published seasonal high water table duration.

Figure 4. Croatan WMB 30-70 Percentile Graph



3.0 VEGETATION

3.1 Success Criteria

Success Criteria state that there must be a minimum of 320 trees per acre surviving for three consecutive years. The required survival criterion will decrease by 10% per year after the third year of vegetation monitoring (i.e., for an expected 288 trees/acre for year 4, and 260 trees/acre for year 5), such that at the end of year 5, there are at least 260 5-year old trees per acre.

3.2 Description of Species

The listing below provides a listing of tree species that were planted in each mitigation area. Specific information regarding tree counts in each plot is provided in Tables 27a and 27b associated with Section 3.3. Summaries for 2005 stem counts, plot density, and success criteria for each plot, target community (also known as planting zones) and phase is provided in Tables 28a and 28b associated with Section 3.3. Other observations concerning each Target Community are presented in Section 3.4. Figures 5a and 5b depict the vegetation plot locations, Target Communities, and photo locations.

<u>Phase I</u>

Target Community: Wet Pine Flat (63.2 acres)

Pinus taeda, loblolly pine
Pinus palustris, longleaf pine
Pinus serotina, pond pine

Target Community: Pond Pine Woodland (89.3 acres)

Pinus taeda, loblolly pine
Pinus serotina, pond pine

Target Community: Non-Riverine Wet Hardwood Forest (Type A) (60.6 acres)

Quercus falcata var*. pagodifolia*, cherrybark oak
Quercus laurifolia, laurel oak
Quercus lyrata, overcup oak
Nyssa aquatica, water tupelo
Quercus michauxii, swamp chestnut oak
Quercus nigra, water oak
Quercus phellos, willow oak

Target Community: Non-Riverine Swamp Forest (11.4 acres)

Taxodium distichum, bald cypress
Fraxinus pennsylvanica, green ash
Nyssa aquatica, water tupelo
Pinus serotina, pond pine
Chamaecyparis thyoides, Atlantic white cedar

Phase II

Target Community: Wet Pine Flat

Pinus taeda, loblolly pine
Pinus palustris, longleaf pine
Pinus serotina, pond pine

Target Community: Mesic Pine Flat

Pinus palustris, longleaf pine

Target Community: Non-Riverine Wet Hardwood Forest (Type A)

Quercus falcata var*. pagodifolia*, cherrybark oak
Quercus laurifolia, laurel oak
Quercus lyrata, overcup oak
Nyssa sylvatica var*. biflora,* swamp blackgum
Quercus nigra, water oak
Quercus phellos, willow oak

Target Community: Non-Riverine Wet Hardwood Forest (Type B)

Quercus falcata var*. pagodifolia*, cherrybark oak
Quercus laurifolia, laurel oak
Quercus lyrata, overcup oak
Nyssa sylvatica var*. biflora,* swamp Blackgum
Quercus nigra, water oak
Quercus phellos, willow oak
Pinus serotina, pond pine

Target Community: Coastal Plain Small Stream Swamp

Nyssa sylvatica var*. biflora,* swamp blackgum
Pinus serotina, pond pine
Quercus laurifolia, laurel oak
Taxodium distichum, bald cypress
Fraxinus pennsylvanica, green ash

3.3 Results of Vegetation Monitoring

Vegetation monitoring was conducted in 2005 by Environmental Services, Inc. and by David Dummond, a botanist utilized as a sub-consultant to conduct more qualitative assessments of herbaceous vegetation in the monitoring plots. Figures 6a and 6b depict the monitoring results for the vegetation plot and overall Target Communities by Phase. These results are shown in Appendix B along with photo pages that depict the changing vegetation patterns from years 2003 to 2005. Previous vegetation monitoring was conducted for NCDOT by another consultant.

Figure 5a. Target Communities and Vegetative Plot Location Map, Phase II

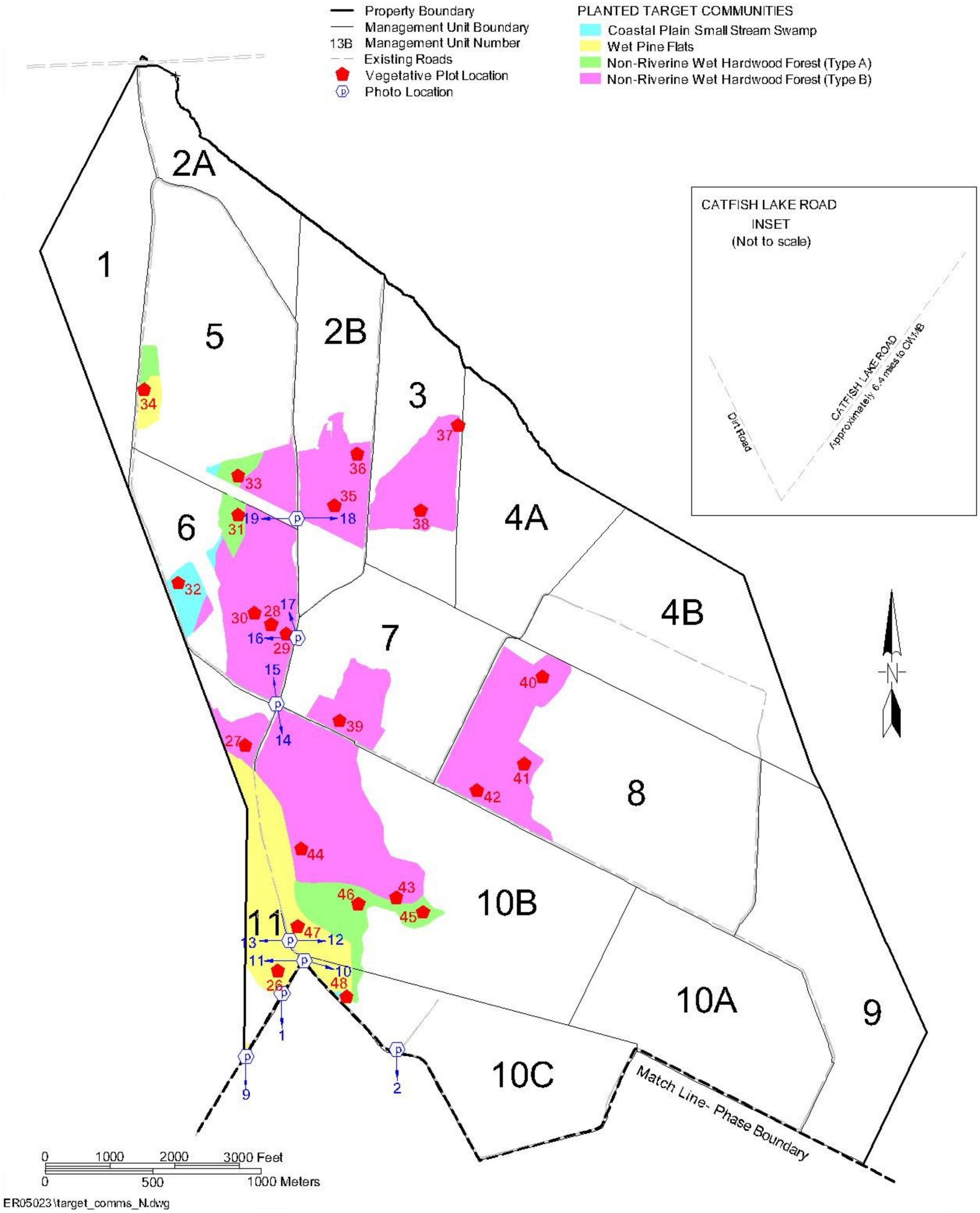


Figure 5b. Target Communities and Vegetative Plot Location Map, Phase I

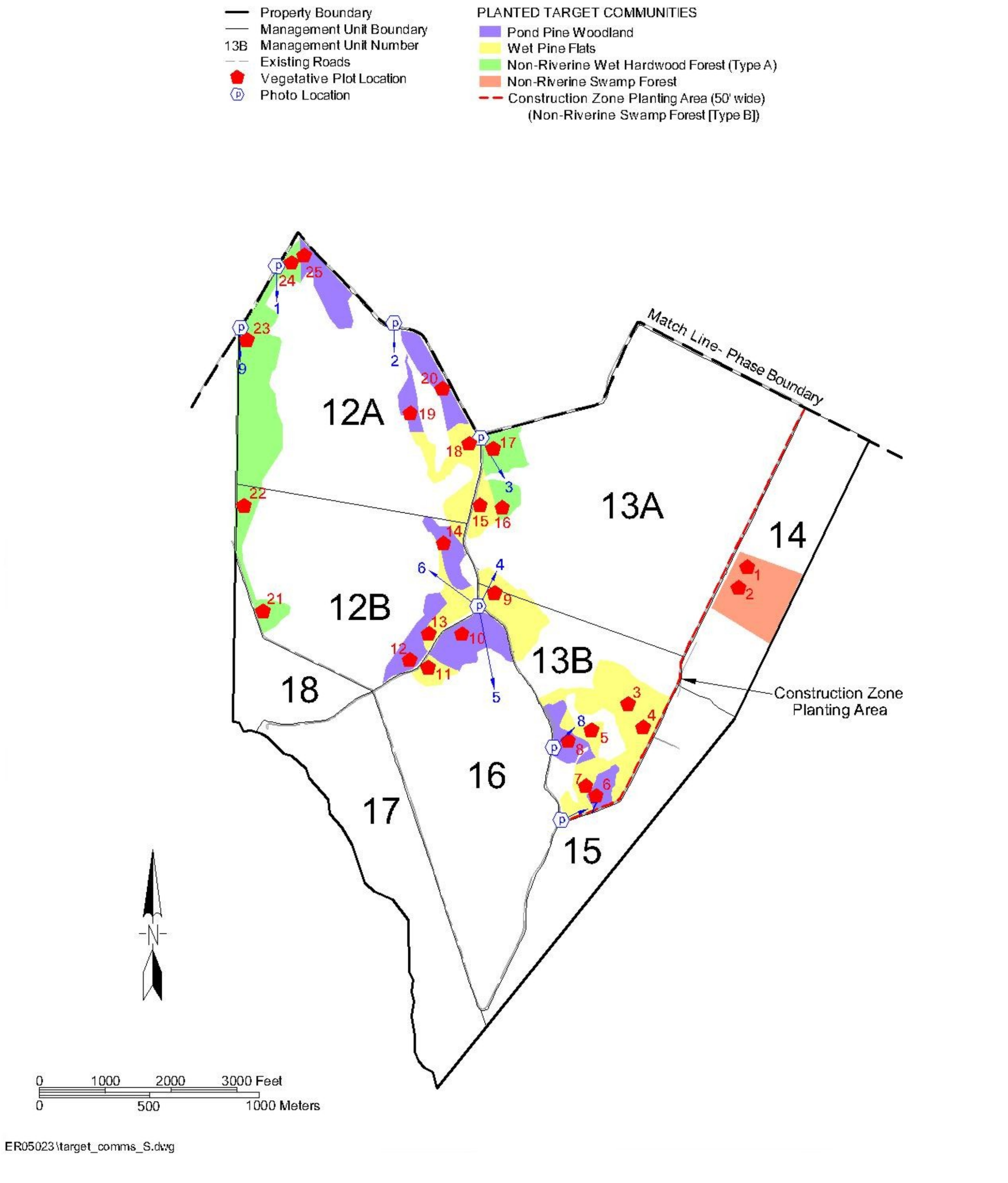


Table 27a. Phase I Vegetation Monitoring Statistics 2005

Target Community[a]	Plot Number	Cherrybark Oak	Laurel Oak	Overcup Oak	Water Tupelo	Swamp Chestnut Oak	Water Oak	Willow Oak	Oak sp. (no leaves)	Pond Pine	Longleaf Pine	Bald cypress	Green Ash	Pond/Loblolly Pine	Atlantic White Cedar	Total 2005 (Year 4)	Total (at planting)
WPF	6													27		27	36
	8										7			33		40	42
	10													26		26	30
	12													23		23	31
	14													14		14	28
	19[b]													38		38	35
	20													25		25	33
	25													15		15	44
PPW	3													20		20	24
	4													10		10	22
	5													7		7	12
	7													17(2)		19	21
	9													22		22	36
	11													14		14	30
	13													25		25	40
	15[b]													24		24	23
	18													29		29	32
NRWH (A)	16[c]	1	6	2		1(1)	9	5								25	30
	17	2				3	7									12	16
	21			4(1)		6										11	27
	22[d]			6	1		9	6								22	30
	23	4		13(2)		16	1	2								38	76
	24					2	1	2						1		6	40
NRSF	1											2				2	40
	2									2		4	1			7	37

a- Target Community: WPF – Wet Pine Flat, PPW – Pond Pine Woodland, NRWH (A) – Non-Riverine Wet Hardwood Forest (Type A), NRSF – Non-Riverine Swamp Forest.

b- Total flagged and/or tagged trees found exceeded the original amount planted.

c- One water oak was previously labeled as cherrybark oak, four water oaks were previously labeled as overcup oaks, one laurel oak was previously labeled as overcup oak.

d- *Five water oaks were previously labeled as overcup oaks.*

Notes: The counts for pond pine and loblolly pine have been combined due to the difficulty in differentiating between the two species at such an early age. Longleaf pine was only planted in the higher areas of the Wet Pine Flat Target Community. Specific information regarding each Target Community is presented after the tables. All stem count numbers in parenthesis represent unflagged and untagged tree species that appear to be planted. These tree species are believed to be planted due to their appearance in rows with planted trees, similar size/ages with planted trees, and/or lack of naturally occurring species of the same type within the immediate vicinity.

Table 27b. Phase II Vegetation Monitoring Statistics 2005

Target Community[a]	Plot Number	Cherrybark Oak	Laurel Oak	Overcup Oak	Water Tupelo	Swamp Chestnut Oak	Water Oak	Willow Oak	Oak sp. (no leaves)	Pond Pine	Longleaf Pine	Bald cypress	Green Ash	Pond/Loblolly Pine	Atlantic White Cedar	Total 2005 (Year 3)	Total (at planting)
WPF	26													34		34	39
	34													8		8	39
	47										4(1)			47		52	39
NRWH (A)	31[a]	4		1	11				1(1)			(1)		3		22	39
	33[b]		1				2									3	39
	45			1(1)	5(1)									2		10	39
	46			4(1)	9(4)							1				19	39
NRWH (B)	27[c]			4			2			3			9(5)			23	39
	28[b]	8(2)		17			1			8			2(1)			39	39
	29	3		2(1)	1		1					3	4			15	39
	30	1(1)		6	1		1	1(2)		13			1			27	39
	35	1								7						8	39
	36	2	1	2	6					19			3			33	39
	37	2	1	1			1	1(1)								7	39
	38		2		4					5			5			16	39
	39			2						(1)		1	5			9	39
	40				11(8)											19	39
	41				1											1	39
	42													1		1	39
	43				6(5)								3			14	39
	44[b]		2		4					5						11	39
CPSSS	32				5					16		22	1			44	39
	48[d]						28			10	18					56	39

a- Target Community: WPF – Wet Pine Flat, PPW – Pond Pine Woodland, NRWH (A) – Non-Riverine Wet Hardwood Forest (Type A), NRWH (B) – Non-Riverine Wet Hardwood (Type B), CPSSS – Coastal Plain Small Stream Swamp.
b- Two oak sp. were flagged and/or tagged but too small to differentiate between overcup or cherrrybark oaks.
c- One water oak was previously labeled as overcup oak.
d- Two titi were previously labeled as laurel oak, one water oak was previously labeled as laurel oak
e- The 25 water oaks found in 2005 were apparently previously identified as overcup oaks.

Notes: The counts for pond pine and loblolly pine have been combined due to the difficulty in differentiating between the two species at such an early age. Specific information regarding each Target Community is presented after the tables. No “at-planting counts” were conducted for Phase II since no consultants were under contract during that period. Therefore, it is assumed that 39 total stems were planted in each plot. All stem count numbers in parenthesis represent unflagged and untagged tree species that appear to be planted. These tree species are believed to be planted due to their appearance in rows with planted trees, similar sizes/ages as planted trees, and/or lack of naturally occurring species of the same type within the immediate vicinity.

Table 28a. Phase I 2005 Summaries

Target Community[a]	**Plot Number**	**Total (at planting)**	**Total 2005 (Year 4)**	**Plot Density 2005 (Trees/Acre)**	**Meets Success Criteria (Y/N)**
WPF	6	36	27	470	Y
	8	42	40	697	Y
	10	30	26	453	Y
	12	31	23	401	Y
	14	28	14	244	N
	19[b]	35	38	662	Y
	20	33	25	436	Y
	25	44	15	261	N
Wet Pine Flat Average				**453**	**Y**
PPW	3	24	20	348	Y
	4	22	10	174	N
	5[c]	12	7	122	N
	7	21	19	331	Y
	9	36	22	383	Y
	11	30	14	244	N
	13	40	25	436	Y
	15[b]	23	24	418	Y
	18	32	29	505	Y
Pond Pine Woodland Average				**329**	**Y**
NRWH (A)	16	30	25	436	Y
	17[c]	16	12	209	N
	21	27	11	192	N
	22	30	22	383	Y
	23	76	38	662	Y
	24	40	6	105	N
Non-Riverine Wet Hardwood (Type A) Average				**331**	**Y**
NRSF	1	40	2	35	N
	2	37	7	122	N
Non-Riverine Swamp Forest Average				**79**	**N**
Phase I Average				**349**	**Y**

a- *Target Community: WPF – Wet Pine Flat, PPW – Pond Pine Woodland, NRWH (A) – Non-Riverine Wet Hardwood Forest (Type A), NRSF – Non-Riverine Swamp Forest.*
b- *Total flagged and/or tagged trees found exceeded the original amount planted.*
c- *Total trees at planting do not meet plot density (trees/acre) success criteria for year four of 288 trees/acre.*

Notes: Density calculations were completed by taking the number of trees counted in 2005 and dividing by the plot size in acres (0.0573921ac). Specific information regarding each Target Community is presented after the tables. Environmental Services, Inc. began Croatan vegetation monitoring in 2005, therefore all data and calculations prior to 2005 were obtained from previous consultants.

Table 28b. Phase II 2005 Summaries

Target Community[a]	**Plot Number**	**Total (at planting)**	**Total 2005 (Year 3)**	**Plot Density 2005 (Trees/Acre)**	**Meets Success Criteria (Y/N)**
WPF	26	39	34	592	Y
	34	39	8	139	N
	47[b]	39	52	906	Y
Wet Pine Flat Average				**546**	**Y**
NRWH (A)	31	39	22	383	Y
	33	39	3	52	N
	45	39	10	174	N
	46	39	19	331	Y
Non-Riverine Wet Hardwood (Type A) Average				**235**	**N**
NRWH (B)	27	39	23	401	Y
	28	39	39	680	Y
	29	39	15	261	N
	30	39	27	470	Y
	35	39	8	139	N
	36	39	33	575	Y
	37	39	7	122	N
	38	39	16	279	N
	39	39	9	157	N
	40	39	19	331	Y
	41	39	1	17	N
	42	39	1	17	N
	43	39	14	244	N
	44	39	11	192	N
Non-Riverine Wet Hardwood (Type B) Average				**278**	**N**
CPSSS	32[b]	39	44	767	Y
	48[b]	39	56	976	Y
Coastal Plain Small Stream Swamp Average				**872**	**Y**
Phase II Average				**357**	**Y**

a- Target Community: WPF – Wet Pine Flat, PPW – Pond Pine Woodland, NRWH (A) – Non-Riverine Wet Hardwood Forest (Type A), NRWH (B) – Non-Riverine Wet Hardwood Forest (Type B), CPSSS – Coastal Plain Small Stream Swamp.
b- Total flagged and/or tagged trees found exceeded the original amount planted.

Notes: Density calculations were completed by taking the number of trees counted in 2005 and dividing by the plot size in acres (0.0573921ac). Specific information regarding each Target Community is presented after the tables. No “at-planting counts” were conducted for Phase II since no consultants were under contract during that period. Therefore, it is assumed that 39 total stems were planted in each plot. Environmental Services, Inc. began Croatan vegetation monitoring in 2005, therefore all data and calculations prior to 2005 were obtained from previous consultants.

Figure 6a. Target Communities and Vegetative Plot Monitoring Results Map, Phase II

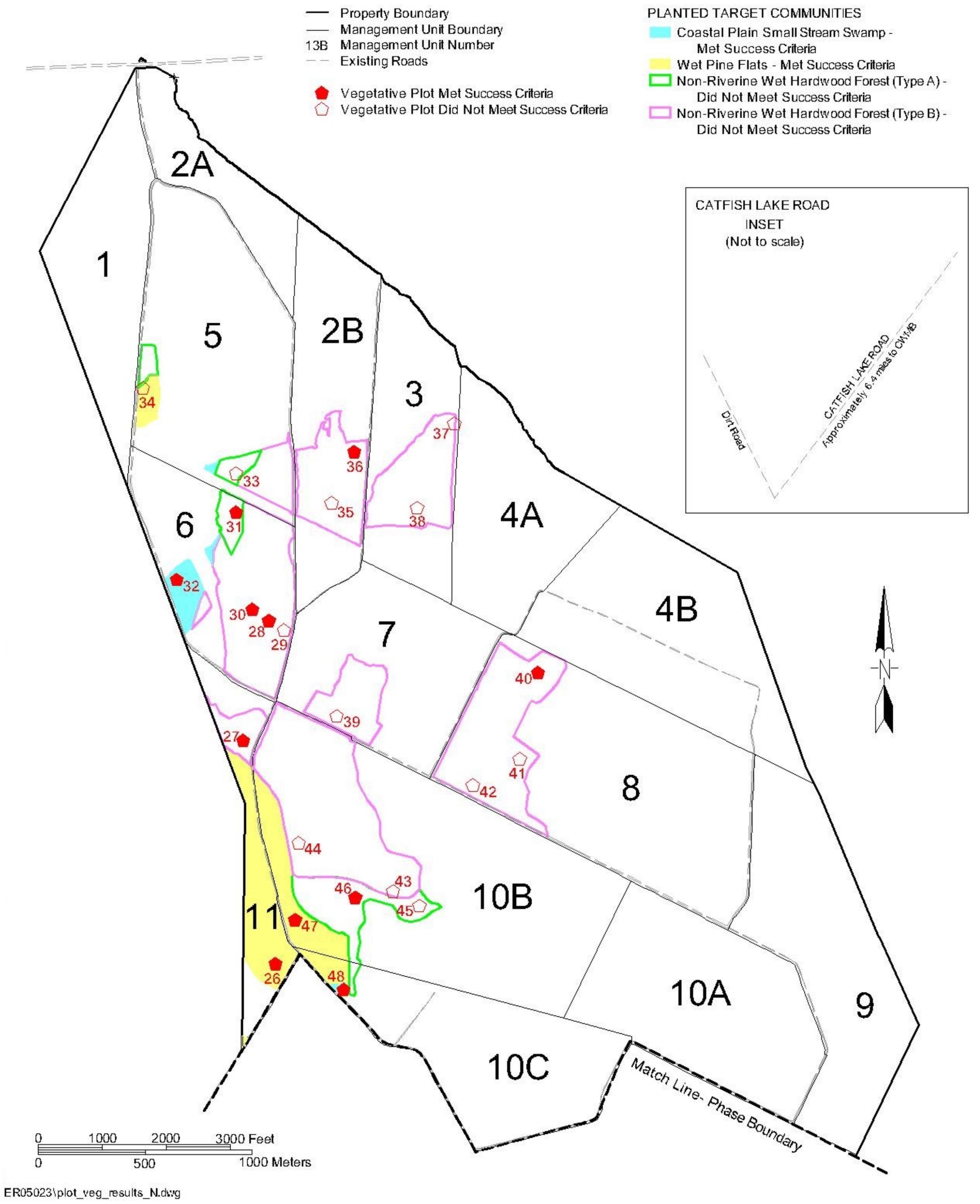
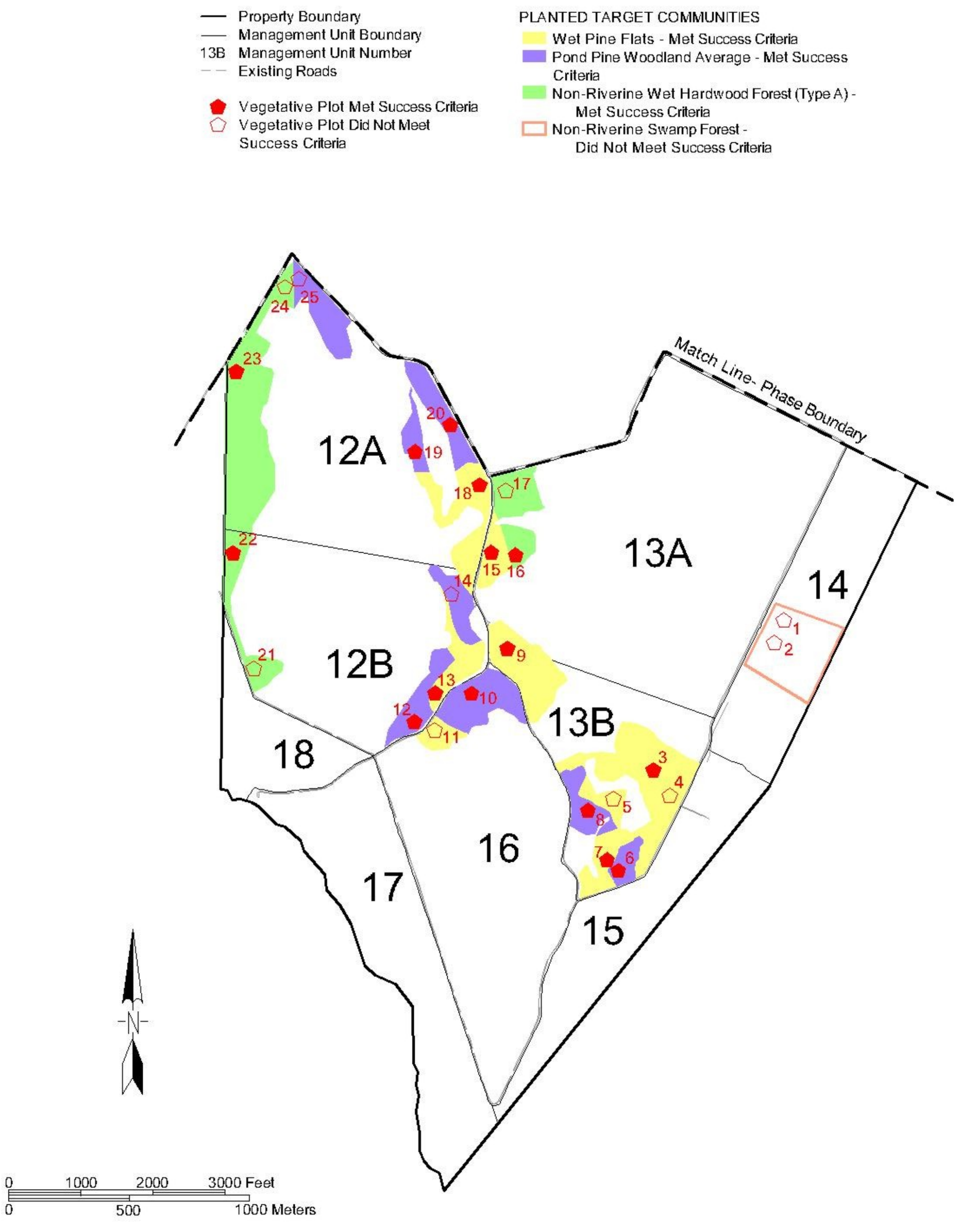


Figure 6b. Target Communities and Vegetative Plot Monitoring Results Map, Phase I



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3.4 Plot Descriptions

Qualitative assessments for vegetative species composition in each plot were conducted concurrently by sub-consultant Dave Dummond. Mr. Dummond gave each species identified a subjective, non-quantitative designation of relative abundance of either dominant or co-dominant (D), common (C), uncommon (U), or rare (R). These results can be found in Appendix B, *Relative Abundance of Vascular Plant Species Recorded within 50' x 50' Plots at the Croatan Mitigation Bank.* The qualitative assessment was requested by EEP to provide better documentation as to the vegetative species re-colonizing the planting areas.

The Phase I assessment included fourth year vegetation surveys associated with the existing 25 total plots. Commonly observed (D) species in the Wet Pine Flat Target Community, in addition to the planted species, included blue huckleberry (*Gaylussacia frondosa*), shinyleaf (*Lyonia lucida*), swamp bay (*Persea palustris*), northern bracken fern (*Pteridium aquilinum* var. *pseudocaudatum*), creeping blueberry (*Vaccinium crassifolium*), and Virginia chain fern (*Woodwardia virginica*). Overall the Wet Pine Flat Target Community meets the average success criteria for year four with an average density of 453 trees/acre, only plots 14 and 25 do not meet success criteria. Commonly observed (D) species in Pond Pine Woodland Target Community, in addition to the planted species, included blue huckleberry, swamp bay, and northern bracken fern. Overall the Pond Pine Woodland Target Community meets the average success criteria for year four with an average density of 329 trees/acre, only plots 4, 5, and 11 do not meet success criteria. Of those three plots not meeting success criteria, plot 5 was not originally planted dense enough to meet the success criteria. Commonly observed (D) species in the Non-Riverine Wet Hardwood (Type A) Target Community, in addition to the planted species, included swamp titi (*Cyrilla racemiflora*) and sweet-gum (*Liquidambar styraciflua*). Overall the Non-Riverine Wet Hardwood (Type A) Target Community meets the average success criteria for year four with an average density of 331 trees/acre, only plots 17, 21, and 24 do not meeting success criteria. Of those three plots not meeting success criteria plot 17 was not originally planted dense enough to meet the success criteria. Commonly observed (D) species in the Non-Riverine Swamp Forest Target Community, in addition to the planted species, included Canadian rush (*Juncus canadensis*), lamp rush (*Juncus effusus*), and cottongrass bulrush (*Scirpus cyperinus*). The Non-Riverine Swamp Forest Target Community with an average density of 79 trees/acre falls well below the success criteria of 288 trees/acre for year four, with neither plot 1 or 2 meeting success criteria. Plots 1 and 2 are located in an area that remains inundated year round and contains dense emergent vegetation. These two factors may be preventing the success of planted species.

The Phase II assessment included third year vegetation surveys associated with 23 established plots covering four of five planted Target Communities. Commonly observed (D) species in the Wet Pine Flat Target Community, in addition to the planted species, included slender goldentop (*Euthamia caroliniana*). Overall the Wet Pine Flat Target Community meets the average success criteria of 320 trees/acre for year three. With an average density of 546 trees/acre, only plot 34 does not meet success criteria. Commonly observed (D) species in the Non-Riverine Wet Hardwood Forest (Type A) Target Community, in addition to the planted species, included red maple (*Acer rubrum*), southern waxy sedge (*Carex glaucescens*), and woolly rosette grass (*Dichanthelium scabriusculum*). The Non-Riverine Wet Hardwood Forest (Type A) Target Community does not meet success criteria of 320 trees/acre for year three. Non-Riverine Wet Hardwood Forest (Type A) Target Community has an average density of 235 trees/acre, both plots 33 and 45 do not meet success criteria. Additional investigation may be needed to determine why this Target Community is not meeting minimum success criteria and if further action is needed. Commonly observed (D) species in the Non-Riverine Wet Hardwood Forest (Type B) Target Community, in addition to the planted species, included cypress rosette grass (*Dichanthelium dichotomum*), small dog-fennel (*Eupatorium capillifolium*), slender goldentop, cottongrass bulrush, and pine-barren goldenrod (*Solidago fistulosa*). The Non-Riverine Wet Hardwood Forest (Type B) Target Community does not meet the success criteria of 320 trees/acre for year three. With an average density of 278 trees/acre, plots 29, 35, 37, 38, 39, 41, 42, 43, and 44 all fail to meet the success criteria. The Non-Riverine Wet Hardwood Forest (Type B) Target Community with 14 plots is the largest Target Community in Phase II, with nine plots failing to meet success criteria; further investigation may be needed to determine why success criteria are not being met. Commonly observed (D) species in the Coastal Plain Small Stream Swamp Target Community, in addition to the planted species, included small dog-fennel. Overall the Coastal Plain Small Stream Swamp Target Community meets the average success criteria of 320 trees/acre for year four with an average density of 872 trees/acre.

3.5 Conclusions

Of the 4,035-acre CWMB, approximately 224.5 acres were involved in tree planting for Phase I and 466.0 acres were involved in tree planting for Phase II. There were 25 vegetation monitoring plots established throughout the Phase I planting areas, and 23 vegetation monitoring plots established throughout the Phase II planting areas. The 2005 vegetation monitoring of the Phase I portion of the site revealed an average tree density of 349 trees/ acre, which exceeds the minimum success criteria of 288 trees/acre for year four. The vegetation monitoring of the Phase II portion of the site revealed an average tree density of 357 trees/acre, which exceeds the minimum success criteria of 320 trees per acre for year three.

4.0 OVERALL CONCLUSIONS/RECOMMENDATIONS

Monitoring of Phase I hydrology and vegetation should continue in 2006 (Year 5) and Phase II hydrology and vegetation will continue in 2006 (Year 4). Monitoring is required to continue for a minimum of 5 years in each phase. However, due to the high rate of hydrologic success under normal rainfall conditions, it is recommended to the MBRT that selected interior gauge sites that are already meeting success criteria for years four and five be removed from monitoring. Gauge sites adjacent to roads, point-plugged ditches, areas where riverine credit may be gained, areas that are not meeting the success criteria established for years four and five, and representative areas across the CWMB should continue to be monitored through years four and five. Figures 7a and 7b depict the monitoring results for the monitoring gauges, vegetation plots, and overall Target Communities by Phase.

It is recommended that Rain Gauge 3 be replaced due to repeated malfunction and unreliable data collected during 2005. For 2005 and subsequent years, it is recommended that additional follow-up trips be scheduled after routine gauge downloads to check gauges that malfunction, particularly reference gauges, and take appropriate measures to avoid extended and frequent data gaps, especially for Ecotone gauges. Ecotone gauges tended to have frequent gauge malfunctions, including dead batteries, chewed external wires, and broken battery connections.

Of the vegetation surveys performed in the CWMB, 10 plots in Phase I and 12 plots in Phase II do not meet the established success criteria. The Non-Riverine Swamp Forest Target Community in Phase 1 does not meet the success criteria of 288 trees/acre for year four. The Non-Riverine Wet Hardwood Forest Types A and B Target Communities in Phase II do not meet the success criteria of 320 trees/acre for year three. Further investigation may be needed in these Target Communities to determine why success criteria are not being met. Vegetation surveys should continue to be conducted in 2006.

Figure 7a. Overall Monitoring Results Map, Phase II

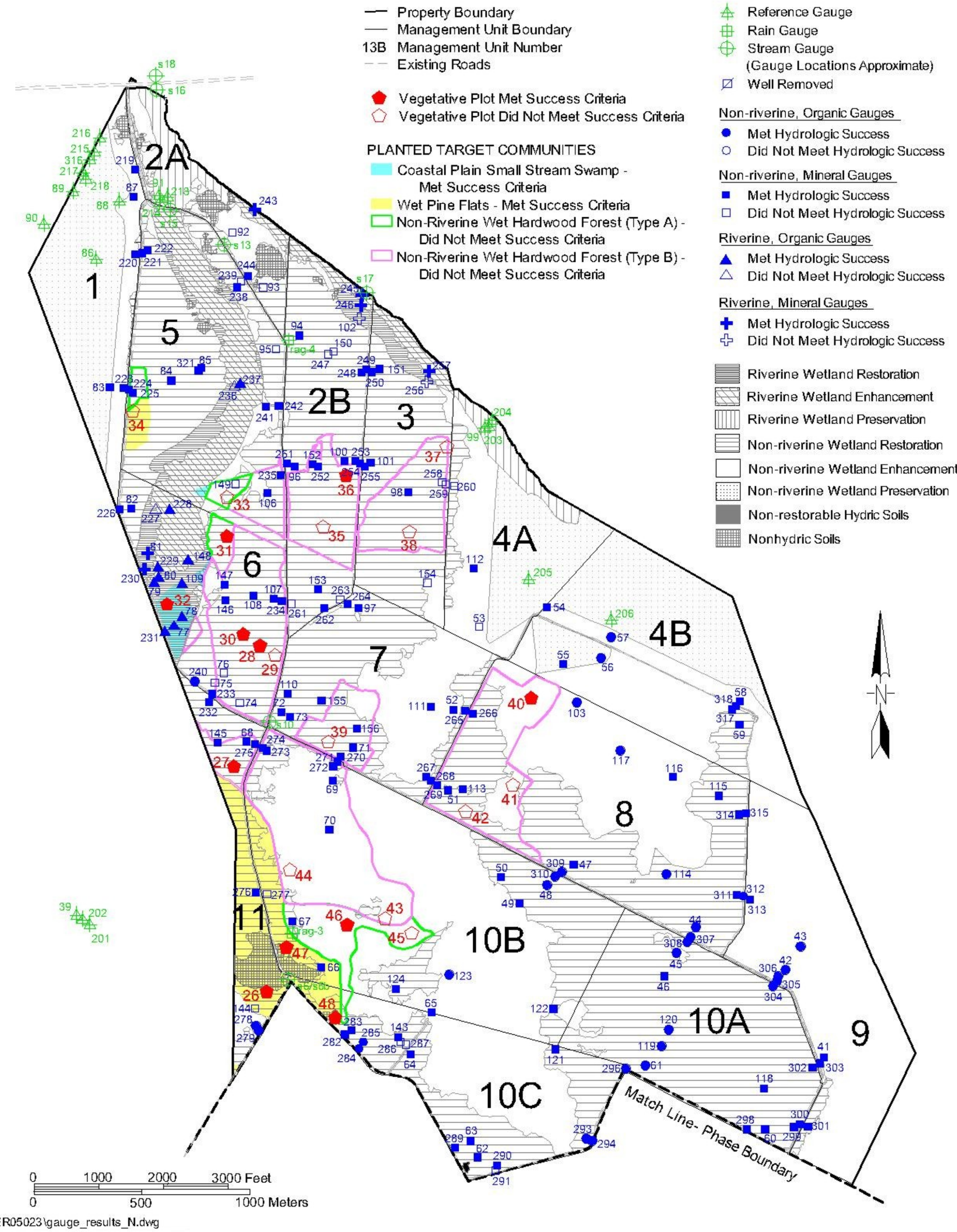
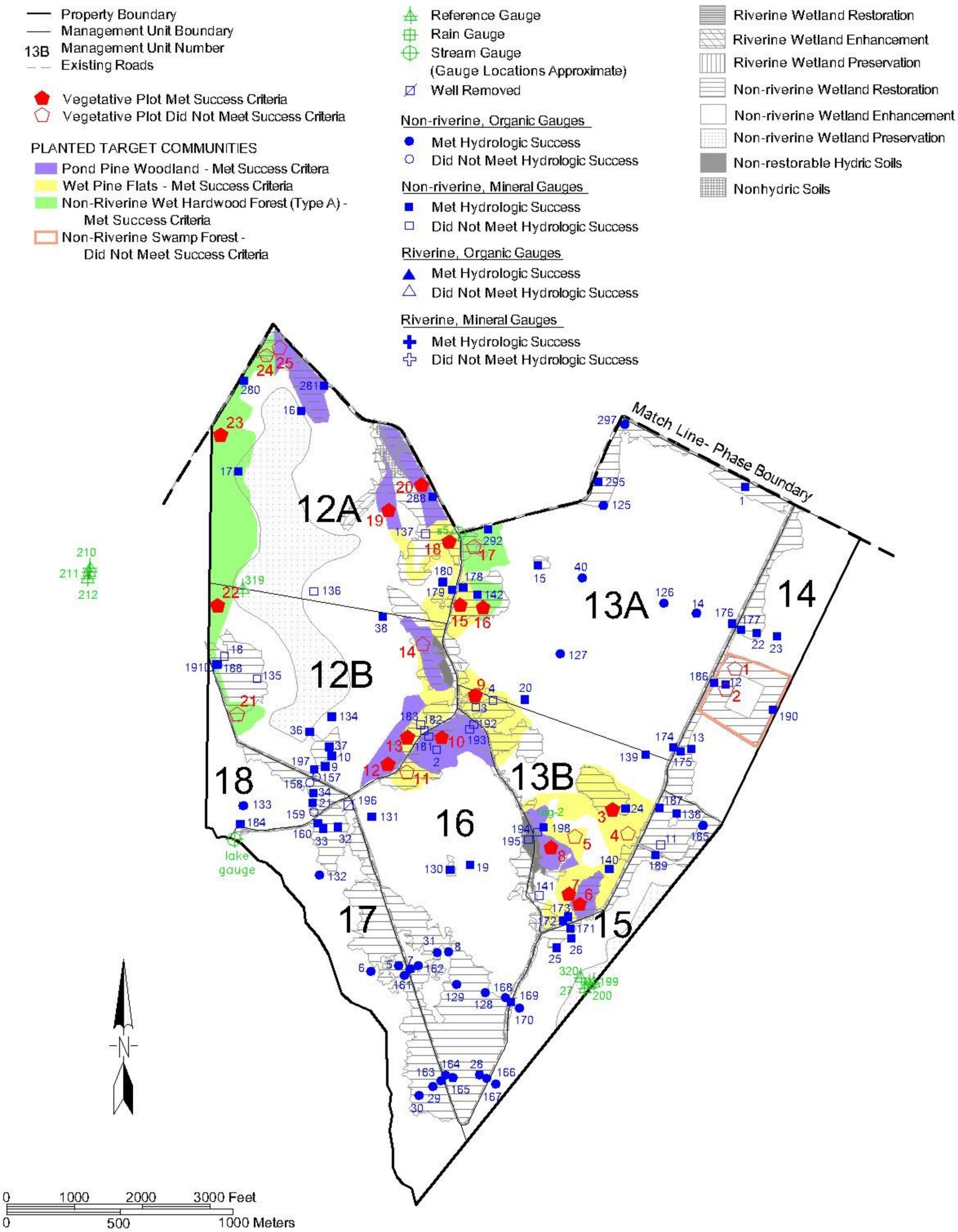


Figure 7b. Overall Monitoring Results Map, Phase I



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Click on the Desired Link Below

Appendix A

Appendix B

Appendix C

Appendix D

Appendix E

Appendix A
2005 Gauge Data
Depth to Groundwater Plots
2005 Rainfall Plots
2005 Reference Data

Table A1. 2005 Reference Gauge Data and Reference Ranges			
Soil Mapping Series	**Reference Gauge Site**	**Max. No. of Consecutive Days With Jurisdictional Hydrology**	**Percentage of Growing Season**
Bayboro (Ba) [a]	99	167	69.0
	203	242	100.0
	204	242[c]	100.0
50% of Reference Range (Days):	84-242		
50% of Reference Range (%):	34.7-100.0		
20% of Reference Range (Days):	134-242		
20% of Reference Range (%):	55.4-100.0		
Croatan (CT) [b]	105	242[c]	100.0
	206	176	72.7
	207	72	29.8
50% of Reference Range (Days):	36-242		
50% of Reference Range (%):	14.9-100.0		
20% of Reference Range (Days):	58-242		
20% of Reference Range (%):	24.0-100.0		
Dare (DA) [b]	104	242	100.0
	208	242[c]	100.0
	209	242	100.0
50% of Reference Range (Days):	121-242		
50% of Reference Range (%):	50-100.0		
20% of Reference Range (Days):	194-242		
20% of Reference Range (%):	80.2-100.0		
Dorovan (DO) [b]	39	242	100.0
	201	242	100.0
	202	242	100.0
50% of Reference Range (Days):	121-242		
50% of Reference Range (%):	50.0-100.0		
20% of Reference Range (Days):	194-242		
20% of Reference Range (%):	80.2-100.0		
Leaf (La) [a]	86	173	71.5
	216	96	39.7
	217	99	40.9
	218	172[c]	71.1
50% of Reference Range (Days):	48-242		
50% of Reference Range (%):	19.8-100.0		
20% of Reference Range (Days):	77-208		
20% of Reference Range (%):	31.8-86.0		
Leon (Ln) [a]	210	39	16.1
	211	38	15.7
	212	38	15.7
50% of Reference Range (Days):	19-59		
50% of Reference Range (%):	7.9-24.4		
20% of Reference Range (Days):	30-47		
20% of Reference Range (%):	12.4-19.4		

Table A1 continued. 2005 Reference Data and Reference Ranges			
Soil Mapping Unit	**Reference Gauge Site**	**Max. No. of Consecutive Days With Jurisdictional Hydrology**	**Percentage of Growing Season**
Masontown/Muckalee (MM)[a]	91	242	100.0
	213	242[c]	100.0
	214	175	72.3
50% of Reference Range (Days):	88-242		
50% of Reference Range (%):	36.2-100.0		
20% of Reference Range (Days):	140-242		
20% of Reference Range (%):	57.9-100.0		
Murville (Mu)[a]	27	242	100.0
	199	175	72.3
	200	177	73.1
	320	178	73.6
50% of Reference Range (Days):	88-242		
50% of Reference Range (%):	36.2-100.0		
20% of Reference Range (Days):	140-242		
20% of Reference Range (%):	57.9-100.0		
Pantego (Pa)[a]	88	68	28.1
	90	242	100.0
	205	166	68.6
	319	94	38.8
50% of Reference Range (Days):	34-242		
50% of Reference Range (%):	14.1-100.0		
20% of Reference Range (Days):	54-242		
20% of Reference Range (%):	22.3-100.0		
Rains (Ra)[a]	89	175	72.3
	215	96	39.7
	316	63	26.0
50% of Reference Range (Days):	32-242		
50% of Reference Range (%):	13.2-100.0		
20% of Reference Range (Days):	50-210		
20% of Reference Range (%):	20.7-86.8		

[a] Mineral soils.
[b] Organic soils.
[c] Missing data extrapolated from other reference gauges.

Figure A1. Croatan WMB 30-70 Percentile Graph

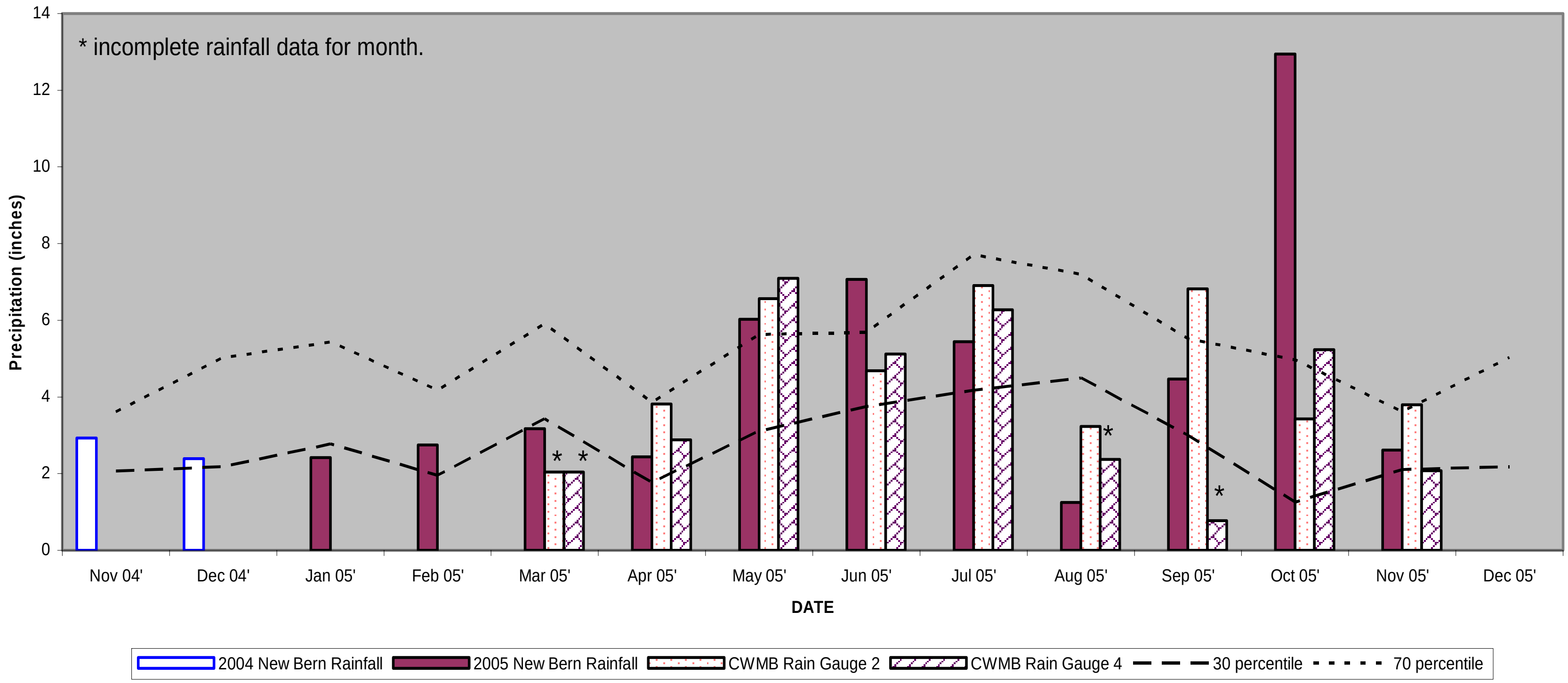


Table A2. WETS Table for 2004.

	30 Year Precipitation Values*						Rain Gauge 2 2004 Data		Rain Gauge 3 2004 Data		Rain Gauge 4[a] 2004 Data	
	Average Monthly Total (in)*		3 Years in 10 Rainfall Less Than (in)*		3 Years in 10 Rainfall Greater Than (in)*		Monthly Total (in)	Above or Below Normal Rainfall	Monthly Total (in)	Above or Below Normal Rainfall	Monthly Total (in)	Above or Below Normal Rainfall
Jan	4.30		3.14		5.06		1.44	Below	1.34	Below		INC
Feb	4.24		2.99		5.03		4.21	Normal	5.88	Above		INC
Mar	3.89		2.76		4.60		1.54	Below	2.43	Below		INC
Apr	3.21		2.20		3.83		4.19	Above	3.62	Normal		INC
May	4.62		3.29		5.47		3.72	Normal	3.51	Normal		INC
Jun	5.38		3.82		6.37		4.72	Normal	3.98	Normal		INC
Jul	7.02		5.35		8.16		7.47	Normal	8.16	Normal		INC
Aug	6.56		4.56		7.80		10.92	Above	10.96	Above		INC
Sep	5.13		3.05		6.22		8.29	Above	8.50	Above		INC
Oct	3.02		1.68		3.68		1.54	Normal	0.99	Below		INC
Nov	3.15		1.93		3.81		2.31	Normal	3.57	Normal		INC
Dec	3.68		2.13		4.47			INC		INC		INC
								INC		INC		INC
Total	54.19		49.98		57.89		50.35		52.94			INC

* From Values Published by NRCS

[a] Rain Gauge 4 malfunctioned repeatedly throughout 2004 and data is not being used.

Table A3. WETS Table for 2005.

	30 Year Precipitation Values*			Rain Gauge 2 2005 Data		Rain Gauge 3[a] 2005 Data		Rain Gauge 4[b] 2005 Data	
	Average Monthly Total (in)*	3 Years in 10 Rainfall Less Than (in)*	3 Years in 10 Rainfall Greater Than (in)*	Monthly Total (in)	Above or Below Normal Rainfall	Monthly Total (in)	Above or Below Normal Rainfall	Monthly Total (in)	Above or Below Normal Rainfall
Jan	4.30	3.14	5.06	INC		INC		INC	
Feb	4.24	2.99	5.03	INC		INC		INC	
Mar	3.89	2.76	4.60	2.04+	Normal	INC		2.04+	Normal
Apr	3.21	2.20	3.83	3.82	Normal	INC		2.88	Normal
May	4.62	3.29	5.47	6.05	Above	INC		7.09	Above
Jun	5.38	3.82	6.37	4.96	Normal	INC		5.12	Normal
Jul	7.02	5.35	8.16	6.91	Normal	INC		6.27	Normal
Aug	6.56	4.56	7.80	3.23	Below	INC		2.37+	N/A[b]
Sep	5.13	3.05	6.22	6.82	Above	INC		0.77+	N/A[b]
Oct	3.02	1.68	3.68	3.43	Normal	INC		5.23	Above
Nov	3.15	1.93	3.81	3.80	Normal	INC		2.08	Normal
Dec	3.68	2.13	4.47						
Total	54.19	49.98	57.89	39.02	Normal[c]	0.00	INC	28.67	Normal[c]
March-Nov	41.97	41.72	43.33						

* From Values Published by NRCS

[a] Rain Gauge 3 malfunctioned repeatedly throughout 2005 and data is not being used.

b Rain Gauge 4 was clogged during Hurricane Ophelia. The data for August and September is greater than what was recorded.

c Normal is calculated using data from March through November.

Table A4. 2005 Gauge Data Summary						
Gauge	Soil Type[a]	Status	No. Days <12" March 18-November 14[b]	Success Criteria Met		Hydrologic Success Met
				1 % Growing Season	2 % of Reference	
1	Ba	>12.5%	102 (242)	Y	Y	Y
2	Mu	>12.5%	92	Y	N	N
3	Mu	5-12.5%	13	N	N	N
4	Mu	>12.5%	35[c]	Y	N	N
5	DA	>12.5%	242	Y	Y	Y
6	DA	>12.5%	242	Y	Y	Y
7	CT	>12.5%	242	Y	Y	Y
8	CT	>12.5%	242	Y	Y	Y
9	Pa	>12.5%	98	Y	Y	Y
10	Pa	>12.5%	99	Y	Y	Y
11	Pa	>12.5%	32	Y	N	N
12	Pa	>12.5%	166 (242)	Y	Y	Y
13	Ba	>12.5%	132 (242)	Y	Y	Y
14	CT	>12.5%	242	Y	Y	Y
15	Pa	>12.5%	171	Y	Y	Y
16	Pa	>12.5%	99 (175)	Y	Y	Y
17	Pa	>12.5%	115 (169)	Y	Y	Y
18	Pa	>12.5%	47	Y	N	N
19	Pa	>12.5%	242	Y	Y	Y
20	Pa	>12.5%	94 (169)	Y	Y	Y
21	Pa	>12.5%	215 (242)	Y	Y	Y
22	Pa	>12.5%	242	Y	Y	Y
23	Pa	>12.5%	242	Y	Y	Y
24	Mu	>12.5%	30	N	N	N
25	Pa	>12.5%	93	Y	Y	Y
26	Mu	>12.5%	97	Y	N	N
27*	Mu	>12.5%	242	N/A	N/A	REF
28	DA	>12.5%	242	Y	Y	Y
29	CT	>12.5%	242	Y	Y	Y
30	DA	>12.5%	216 (242)	Y	Y	Y
31	CT	>12.5%	242	Y	Y	Y
32	Ba	>12.5%	242	Y	Y	Y
33	Ba	>12.5%	157	Y	Y	Y
34	Pa	>12.5%	169	Y	Y	Y
35*	To	N/A	Removed	N/A	N/A	N/A
36	Pa	>12.5%	170	Y	Y	Y
37	Pa	>12.5%	95	Y	Y	Y
38	Mu	>12.5%	173	Y	Y	Y
39*	DO	>12.5%	242	N/A	N/A	REF
40	CT	>12.5%	177	Y	Y	Y
41	Ba	>12.5%	170	Y	Y	Y
42	CT	>12.5%	167	Y	Y	Y

Table A4 continues.

Table A4 continued.

Gauge	Soil Type[a]	Status	No. Days <12" March 18-November 14[b]	Success Criteria 1 % Growing Season	Success Criteria 2 % of Reference	Hydrologic Success Met
43	CT	>12.5%	158	Y	Y	Y
44	CT	>12.5%	170	Y	Y	Y
45	CT	>12.5%	148 (242)	Y	Y	Y
46	CT	>12.5%	143 (170)	Y	Y	Y
47	Ba	>12.5%	177	Y	Y	Y
48	CT	>12.5%	242	Y	Y	Y
49	Ba	>12.5%	177	Y	Y	Y
50	Ba	>12.5%	242	Y	Y	Y
51	Ba	>12.5%	89 (242)	Y	Y	Y
52	Ba	>12.5%	78 (178)	Y	Y	Y
53	Ba	>12.5%	68 (164)	Y	Y	Y
54	Pa	>12.5%	166	Y	Y	Y
55	Ba	>12.5%	147 (242)	Y	Y	Y
56	CT	>12.5%	147 (242)	Y	Y	Y
57	CT	>12.5%	80 (176)	Y	Y	Y
58	Ba	>12.5%	96	Y	Y	Y
59	Ba	>12.5%	167	Y	Y	Y
60	Ba	>12.5%	242	Y	Y	Y
61	CT	>12.5%	167	Y	Y	Y
62	Ra	>12.5%	35[c]	Y	Y	Y
63	Pa	>12.5%	112 (159)	Y	Y	Y
64	Ra	>12.5%	96	Y	Y	Y
65	Pa	>12.5%	168	Y	Y	Y
66	Ra	>12.5%	127 (242)	Y	Y	Y
67	Pa	>12.5%	64 (99)	Y	Y	Y
68	Ba	>12.5%	96	Y	Y	Y
69	Ba	>12.5%	170	Y	Y	Y
70	Ba	>12.5%	170	Y	Y	Y
71	Ba	>12.5%	96 (172)	Y	Y	Y
72	Ba	>12.5%	78 (173)	Y	Y	Y
73	Pa	>12.5%	170	Y	Y	Y
74	Ba	>12.5%	41	Y	N	N
75	Ba	<5%	6	N	N	N
76	Ba	5-12.5%	25	N	N	N
77	CT	>12.5%	242	Y	Y	Y
78	MM	>12.5%	127 (242)	Y	Y	Y
79	DO	>12.5%	242	Y	Y	Y
80	DO	>12.5%	216 (242)	Y	Y	Y
81	Ba	>12.5%	242	Y	Y	Y
82	Pa	>12.5%	242	Y	Y	Y
83	Pa	>12.5%	127 (242)	Y	Y	Y
84	Ra	>12.5%	67	Y	Y	Y

Table A4 continues.

Table A4 continued.

Gauge	Soil Type[a]	Status	No. Days <12" March 18-November 14 [b]	Success Criteria 1 % Growing Season	Success Criteria 2 % of Reference	Hydrologic Success Met
85	Pa	>12.5%	34	**Y**	**Y**	**Y**
86*	La	>12.5%	173	**N/A**	**N/A**	**REF**
87	La	>12.5%	93	**Y**	**Y**	**Y**
88*	Pa	>12.5%	68	**N/A**	**N/A**	**REF**
89*	Ra	>12.5%	175	**N/A**	**N/A**	**REF**
90*	Pa	>12.5%	242	**N/A**	**N/A**	**REF**
91*	MM	>12.5%	242	**N/A**	**N/A**	**REF**
92	La	>12.5%	35	**Y**	**N**	**N**
93	La	>12.5%	31	**Y**	**N**	**N**
94	Pa	>12.5%	39[c]	**Y**	**Y**	**Y**
95	La	>12.5%	32 [c]	**Y**	**N**	**N**
96	La	>12.5%	102	**Y**	**Y**	**Y**
97	Ba	>12.5%	172	**Y**	**Y**	**Y**
98	Ba	>12.5%	95	**Y**	**Y**	**Y**
99*	Ba	>12.5%	167	**N/A**	**N/A**	**REF**
100	La	>12.5%	61 (99)	**Y**	**Y**	**Y**
101	Ba	>12.5%	69 (96)	**Y**	**Y**	**Y**
102	Ba	5-12.5%	25	**N**	**N**	**N**
103	CT	>12.5%	160 (242)	**Y**	**Y**	**Y**
104*	DA	>12.5%	242	**N/A**	**N/A**	**REF**
105*	CT	>12.5%	147 (105)	**N/A**	**N/A**	**REF**
106	Ba	>12.5%	67 (172)	**Y**	**Y**	**Y**
107	Ba	>12.5%	79 (175)	**Y**	**Y**	**Y**
108	Ba	>12.5%	77 (173)	**Y**	**Y**	**Y**
109	MM	>12.5%	242	**Y**	**Y**	**Y**
110	Pa	>12.5%	172	**Y**	**Y**	**Y**
111	Ba	>12.5%	116 (242)	**Y**	**Y**	**Y**
112	Ba	>12.5%	95	**Y**	**Y**	**Y**
113	Ba	>12.5%	146 (242)	**Y**	**Y**	**Y**
114	CT	>12.5%	151	**Y**	**Y**	**Y**
115	Pa	>12.5%	146	**Y**	**Y**	**Y**
116	Pa	>12.5%	173	**Y**	**Y**	**Y**
117	CT	>12.5%	242	**Y**	**Y**	**Y**
118	Ba	>12.5%	174	**Y**	**Y**	**Y**
119	CT	>12.5%	74 (158)	**Y**	**Y**	**Y**
120	CT	>12.5%	63 (158)	**Y**	**Y**	**Y**
121	Pa	>12.5%	175	**Y**	**Y**	**Y**
122	Pa	>12.5%	64 (92)	**Y**	**Y**	**Y**
123	CT	>12.5%	169	**Y**	**Y**	**Y**
124	Pa	>12.5%	92	**Y**	**Y**	**Y**
125	CT	>12.5%	242	**Y**	**Y**	**Y**
126	CT	>12.5%	242	**Y**	**Y**	**Y**

Table A4 continues.

Table A4 continued.

Gauge	Soil Type[a]	Status	No. Days <12" March 18-November 14 [b]	Success Criteria 1 % Growing Season	Success Criteria 2 % of Reference	Hydrologic Success Met
127	CT	>12.5%	176	**Y**	**Y**	**Y**
128	CT	>12.5%	242	**Y**	**Y**	**Y**
129	CT	>12.5%	242	**Y**	**Y**	**Y**
130	Pa	>12.5%	242	**Y**	**Y**	**Y**
131	Mu	>12.5%	242	**Y**	**Y**	**Y**
132	CT	>12.5%	97	**Y**	**Y**	**Y**
133	CT	>12.5%	89	**Y**	**Y**	**Y**
134	Pa	>12.5%	98	**Y**	**Y**	**Y**
135	Pa	>12.5%	40	**Y**	**N**	**N**
136	Mu	>12.5%	102	**Y**	**N**	**N**
137	Mu	5-12.5%	26	**N**	**N**	**N**
138	Pa	>12.5%	158	**Y**	**Y**	**Y**
139	Ba	>12.5%	176	**Y**	**Y**	**Y**
140	Pa	>12.5%	79 (154)	**Y**	**Y**	**Y**
141	Pa	>12.5%	41	**Y**	**N**	**N**
142	Pa	>12.5%	94	**Y**	**Y**	**Y**
143	Pa	>12.5%	61 (99)	**Y**	**Y**	**Y**
144	Pa	<5%	9	**N**	**N**	**N**
145	Ba	>12.5%	70 (170)	**Y**	**Y**	**Y**
146	La	>12.5%	90	**Y**	**Y**	**Y**
147	Ba	>12.5%	185 (242)	**Y**	**Y**	**Y**
148	MM	>12.5%	242	**Y**	**Y**	**Y**
149	Pa	5-12.5%	13	**N**	**N**	**N**
150	La	>12.5%	40	**Y**	**N**	**N**
151	La	>12.5%	95	**Y**	**Y**	**Y**
152	Ba	>12.5%	98 (138)	**Y**	**Y**	**Y**
153	Ba	>12.5%	75 (171)	**Y**	**Y**	**Y**
154	Ba	>12.5%	61[c]	**Y**	**N**	**N**
155	Ba	>12.5%	61 (98)	**Y**	**Y**	**Y**
156	Ba	>12.5%	62 (172)	**Y**	**Y**	**Y**
157	CT	>12.5%	174	**Y**	**Y**	**Y**
158	CT	>12.5%	172	**Y**	**Y**	**Y**
159	CT	>12.5%	54[c]	**N**	**N**	**N**
160	Ba	>12.5%	174	**Y**	**Y**	**Y**
161	CT	>12.5%	242	**Y**	**Y**	**Y**
162	CT	>12.5%	186 (242)	**Y**	**Y**	**Y**
163	CT	>12.5%	167 (242)	**Y**	**Y**	**Y**
164	CT	>12.5%	242	**Y**	**Y**	**Y**
165	CT	>12.5%	242	**Y**	**Y**	**Y**
166	DA	>12.5%	167 (242)	**Y**	**Y**	**Y**
167	CT	>12.5%	242	**Y**	**Y**	**Y**
168	CT	>12.5%	242	**Y**	**Y**	**Y**

Table A4 continues.

Table A4 continued.

Gauge	Soil Type[a]	Status	No. Days <12" March 18-November 14 [b]	Success Criteria 1 % Growing Season	Success Criteria 2 % of Reference	Hydrologic Success Met
169	Pa	>12.5%	189 (242)	**Y**	**Y**	**Y**
170	CT	>12.5%	242	**Y**	**Y**	**Y**
171	Ba	>12.5%	94	**Y**	**N**	**N**
172	Ba	>12.5%	70 (100)	**Y**	**N**	**N**
173	Ba	>12.5%	99 (176)	**Y**	**Y**	**Y**
174	Ba	>12.5%	242	**Y**	**Y**	**Y**
175	Ba	>12.5%	175	**Y**	**Y**	**Y**
176	Ba	>12.5%	105 (242)	**Y**	**Y**	**Y**
177	Pa	>12.5%	242	**Y**	**Y**	**Y**
178	Mu	>12.5%	157	**Y**	**Y**	**Y**
179	Pa	>12.5%	168	**Y**	**Y**	**Y**
180	Ba	>12.5%	68 (143)	**Y**	**Y**	**Y**
181	Mu	>12.5%	90	**Y**	**N**	**N**
182	Mu	5-12.5%	12	**N**	**N**	**N**
183	Mu	5-12.5%	13	**N**	**N**	**N**
184	Ln	>12.5%	39[c]	**Y**	**Y**	**Y**
185	CT	>12.5%	174	**Y**	**Y**	**Y**
186	Pa	>12.5%	110 (242)	**Y**	**Y**	**Y**
187	Ba	>12.5%	170 (242)	**Y**	**Y**	**Y**
188	Pa	>12.5%	90	**Y**	**Y**	**Y**
189	Pa	>12.5%	98	**Y**	**Y**	**Y**
190	Pa	>12.5%	242	**Y**	**Y**	**Y**
191	Pa	5-12.5%	30	**N**	**N**	**N**
192	Mu	>12.5%	97	**Y**	**N**	**N**
193	Mu	>12.5%	99	**Y**	**N**	**N**
194	Mu	>12.5%	51 (88)	**Y**	**N**	**N**
195	Ln	>12.5%	31 [c]	**Y**	**Y**	**Y**
196	Pa	N/A	Removed	**N/A**	**N/A**	**N/A**
197	Pa	>12.5%	157	**Y**	**Y**	**Y**
198	Ln	>12.5%	92[c]	**Y**	**Y**	**Y**
199*	Mu	>12.5%	175	**N/A**	**N/A**	**REF**
200*	Mu	>12.5%	177	**N/A**	**N/A**	**REF**
201*	DO	>12.5%	242	**N/A**	**N/A**	**REF**
202*	DO	>12.5%	242	**N/A**	**N/A**	**REF**
203*	Ba	>12.5%	242	**N/A**	**N/A**	**REF**
204*	Ba	N/A	124 (242)	**N/A**	**N/A**	**REF**
205*	Pa	N/A	166	**N/A**	**N/A**	**REF**
206*	CT	N/A	176	**N/A**	**N/A**	**REF**
207*	CT	>12.5%	72	**N/A**	**N/A**	**REF**
208*	DA	>12.5%	121 (242)	**N/A**	**N/A**	**REF**
209*	DA	>12.5%	242	**N/A**	**N/A**	**REF**
210*	Ln	>12.5%	39	**N/A**	**N/A**	**REF**

Table A4 continues.

Table A4 continued.

Gauge	Soil Type[a]	Status	No. Days <12" March 18-November 14 [b]	Success Criteria 1 % Growing Season	Success Criteria 2 % of Reference	Hydrologic Success Met
211*	Ln	>12.5%	38	**N/A**	**N/A**	**REF**
212*	Ln	>12.5%	38	**N/A**	**N/A**	**REF**
213*	MM	>12.5%	145 (242)	**N/A**	**N/A**	**REF**
214*	MM	>12.5%	175	**N/A**	**N/A**	**REF**
215*	Ra	>12.5%	96	**N/A**	**N/A**	**REF**
216*	La	>12.5%	96	**N/A**	**N/A**	**REF**
217*	La	>12.5%	99	**N/A**	**N/A**	**REF**
218*	La	>12.5%	116 (172)	**N/A**	**N/A**	**REF**
219	Ra	>12.5%	103	**Y**	**Y**	**Y**
220	La	>12.5%	72 [c]	**Y**	**Y**	**Y**
221	La	>12.5%	73 [c]	**Y**	**Y**	**Y**
222	La	>12.5%	86 (91)	**Y**	**Y**	**Y**
223	Pa	>12.5%	242	**Y**	**Y**	**Y**
224	Pa	>12.5%	242	**Y**	**Y**	**Y**
225	Pa	>12.5%	119 (242)	**Y**	**Y**	**Y**
226	Pa	>12.5%	146 (242)	**Y**	**Y**	**Y**
227	MM	>12.5%	43 [c]	**N**	**N**	**N**
228	MM	>12.5%	215 (242)	**Y**	**Y**	**Y**
229	CT	>12.5%	130 (242)	**Y**	**Y**	**Y**
230	Ba	>12.5%	130 (242)	**Y**	**Y**	**Y**
231	CT	>12.5%	242	**Y**	**Y**	**Y**
232	Ra	>12.5%	41 (91)	**Y**	**Y**	**Y**
233	Ra	>12.5%	91	**Y**	**Y**	**Y**
234	Ba	>12.5%	54 (175)	**Y**	**Y**	**Y**
235	Ba	>12.5%	172	**Y**	**Y**	**Y**
236	MM	>12.5%	83 (95)	**Y**	**Y**	**Y**
237	MM	>12.5%	242	**Y**	**Y**	**Y**
238	Ra	>12.5%	35 [c]	**Y**	**Y**	**Y**
239	Ra	>12.5%	33	**Y**	**Y**	**Y**
240	CT	>12.5%	165 (242)	**Y**	**Y**	**Y**
241	Ra	>12.5%	242	**Y**	**Y**	**Y**
242	La	>12.5%	112 (168)	**Y**	**Y**	**Y**
243	Ba	>12.5%	54[c]	**N**	**N**	**N**
244	La	>12.5%	54[c]	**Y**	**Y**	**Y**
245	Ba	>12.5%	242	**Y**	**Y**	**Y**
246	La	>12.5%	63[c]	**Y**	**Y**	**Y**
247	La	>12.5%	35 [c]	**Y**	**N**	**N**
248	La	>12.5%	51 [c]	**Y**	**Y**	**Y**
249	La	>12.5%	99	**Y**	**Y**	**Y**
250	La	>12.5%	52 (155)	**Y**	**Y**	**Y**
251	Ba	>12.5%	170	**Y**	**Y**	**Y**

Table A4 continues.

Table A4 continued.

Gauge	Soil Type[a]	Status	No. Days <12" March 18-November 14 [b]	Success Criteria 1 % Growing Season	Success Criteria 2 % of Reference	Hydrologic Success Met
252	Ba	>12.5%	100	**Y**	**Y**	**Y**
253	Ba	>12.5%	98	**Y**	**Y**	**Y**
254	Ba	>12.5%	157	**Y**	**Y**	**Y**
255	Ba	>12.5%	146 (157)	**Y**	**Y**	**Y**
256	Ba	>12.5%	66[c]	**Y**	**N**	**N**
257	Ba	>12.5%	96 (242)	**Y**	**Y**	**Y**
258	Ba	>12.5%	42[C]	**Y**	**N**	**N**
259	Ba	>12.5%	39[C]	**Y**	**N**	**N**
260	Ba	>12.5%	36 (42)	**Y**	**N**	**N**
261	Ba	>12.5%	74[c]	**Y**	**N**	**N**
262	Ba	>12.5%	68 (179)	**Y**	**Y**	**Y**
263	Ba	>12.5%	62[C]	**Y**	**N**	**N**
264	Ba	>12.5%	75 (171)	**Y**	**Y**	**Y**
265	Ba	>12.5%	94 (178)	**Y**	**Y**	**Y**
266	Ba	>12.5%	147 (242)	**Y**	**Y**	**Y**
267	Ba	>12.5%	171	**Y**	**Y**	**Y**
268	Ba	>12.5%	175	**Y**	**Y**	**Y**
269	Ba	>12.5%	242	**Y**	**Y**	**Y**
270	Ba	>12.5%	242	**Y**	**Y**	**Y**
271	Ba	>12.5%	242	**Y**	**Y**	**Y**
272	Ba	>12.5%	146 (242)	**Y**	**Y**	**Y**
273	Ba	>12.5%	54 (172)	**Y**	**Y**	**Y**
274	Ba	>12.5%	77 (172)	**Y**	**Y**	**Y**
275	Ba	>12.5%	171	**Y**	**Y**	**Y**
276	Ra	>12.5%	40 (91)	**Y**	**Y**	**Y**
277	Ra	>12.5%	40	**Y**	**Y**	**Y**
278	CT	>12.5%	242	**Y**	**Y**	**Y**
279	CT	>12.5%	242	**Y**	**Y**	**Y**
280	Pa	>12.5%	166 (242)	**Y**	**Y**	**Y**
281	Ra	>12.5%	61 (95)	**Y**	**Y**	**Y**
282	Pa	>12.5%	56 (171)	**Y**	**Y**	**Y**
283	Pa	>12.5%	95 (171)	**Y**	**Y**	**Y**
284	CT	>12.5%	94 (170)	**Y**	**Y**	**Y**
285	CT	>12.5%	101 (177)	**Y**	**Y**	**Y**
286	Ra	5-12.5%	25	**N**	**N**	**N**
287	Ra	<5%	9	**N**	**N**	**N**
288	Ra	>12.5%	41 (91)	**Y**	**Y**	**Y**
289	Pa	>12.5%	40[c]	**Y**	**Y**	**Y**
290	Pa	>12.5%	74 (99)	**Y**	**Y**	**Y**
291	Pa	>12.5%	39[c]	**Y**	**Y**	**Y**
292	Pa	>12.5%	61 (99)	**Y**	**Y**	**Y**

Table A4 continues.

Table A4 continued.

Gauge	Soil Type[a]	Status	No. Days <12" March 18-November 14 [b]	Success Criteria 1 % Growing Season	Success Criteria 2 % of Reference	Hydrologic Success Met
293	CT	>12.5%	242	**Y**	**Y**	**Y**
294	CT	>12.5%	165 (242)	**Y**	**Y**	**Y**
295	Pa	>12.5%	165 (242)	**Y**	**Y**	**Y**
296	CT	>12.5%	74 (169)	**Y**	**Y**	**Y**
297	CT	>12.5%	177	**Y**	**Y**	**Y**
298	Ba	>12.5%	146 (242)	**Y**	**Y**	**Y**
299	Ba	>12.5%	147 (242)	**Y**	**Y**	**Y**
300	Ba	>12.5%	95 (242)	**Y**	**Y**	**Y**
301	Ba	>12.5%	59 (242)	**Y**	**Y**	**Y**
302	Ba	>12.5%	147 (242)	**Y**	**Y**	**Y**
303	Ba	>12.5%	76 (169)	**Y**	**Y**	**Y**
304	CT	>12.5%	170	**Y**	**Y**	**Y**
305	CT	>12.5%	167	**Y**	**Y**	**Y**
306	CT	>12.5%	176	**Y**	**Y**	**Y**
307	CT	>12.5%	114 (170)	**Y**	**Y**	**Y**
308	CT	>12.5%	235 (242)	**Y**	**Y**	**Y**
309	CT	>12.5%	176	**Y**	**Y**	**Y**
310	CT	>12.5%	81 (177)	**Y**	**Y**	**Y**
311	Ba	>12.5%	171	**Y**	**Y**	**Y**
312	CT	>12.5%	171	**Y**	**Y**	**Y**
313	Ba	>12.5%	146 (171)	**Y**	**Y**	**Y**
314	Ba	>12.5%	158	**Y**	**Y**	**Y**
315	Ba	>12.5%	167	**Y**	**Y**	**Y**
316*	Ra	>12.5%	63	**N/A**	**N/A**	**REF**
317	Ba	>12.5%	167	**Y**	**Y**	**Y**
318	Ba	>12.5%	158	**Y**	**Y**	**Y**
319*	Pa	>12.5%	82	**N/A**	**N/A**	**REF**
320*	Mu	>12.5%	178	**N/A**	**N/A**	**REF**
321	Pa	>12.5%	242	**Y**	**Y**	**Y**

* Reference Gauge

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; DA - Dare muck; DO - Dorovan muck; La - Leaf silt loam; Ln - Leon sand; MM - Masontown/Muckalee; Mu - Murville mucky loamy sand; Pa – Pantego fine sandy loam; Ra - Rains fine sandy loam; To-Torhunta fine sandy loam

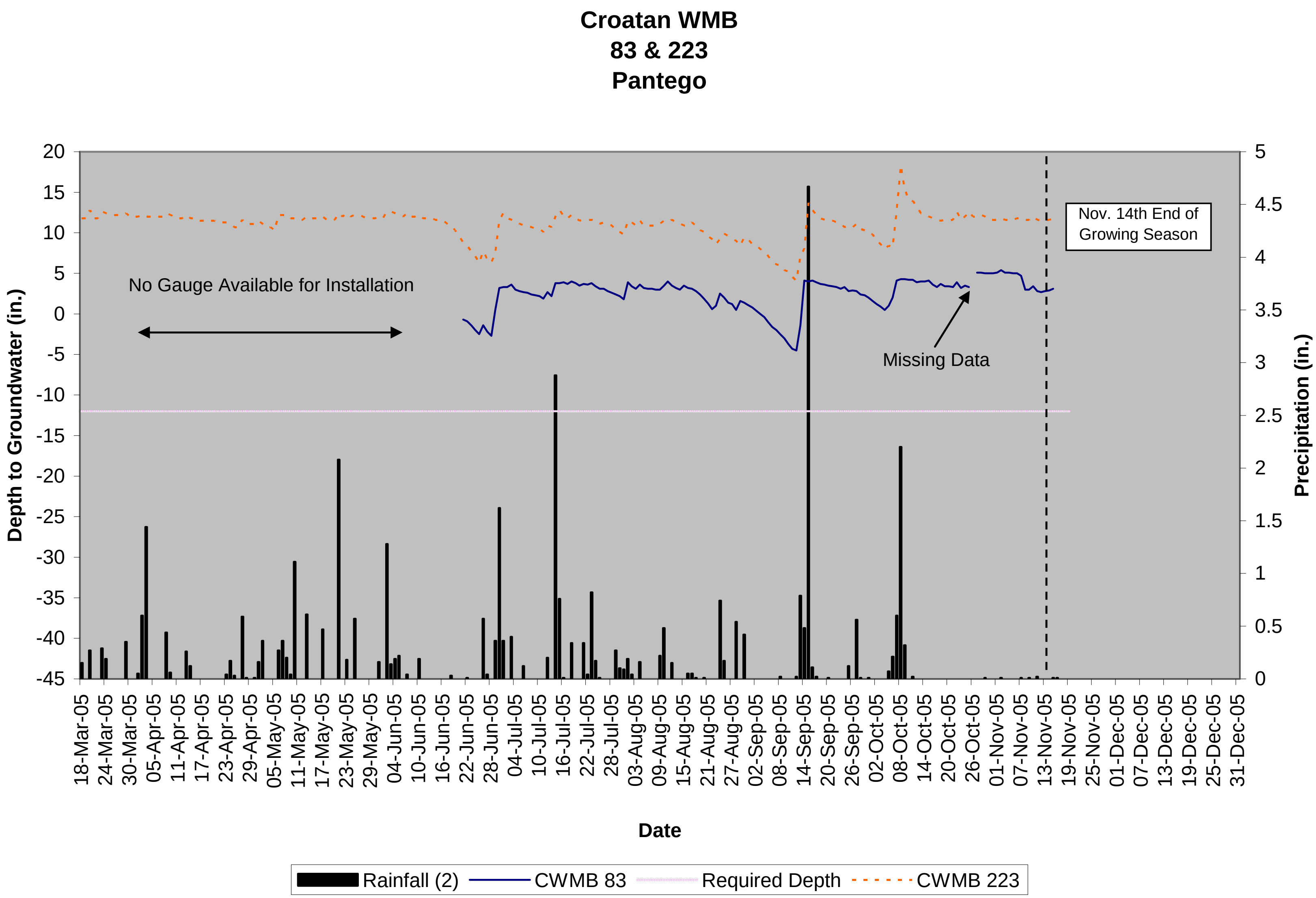
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Missing data could not be extrapolated with any certainty. The hydroperiod reported is the longest for which data are available

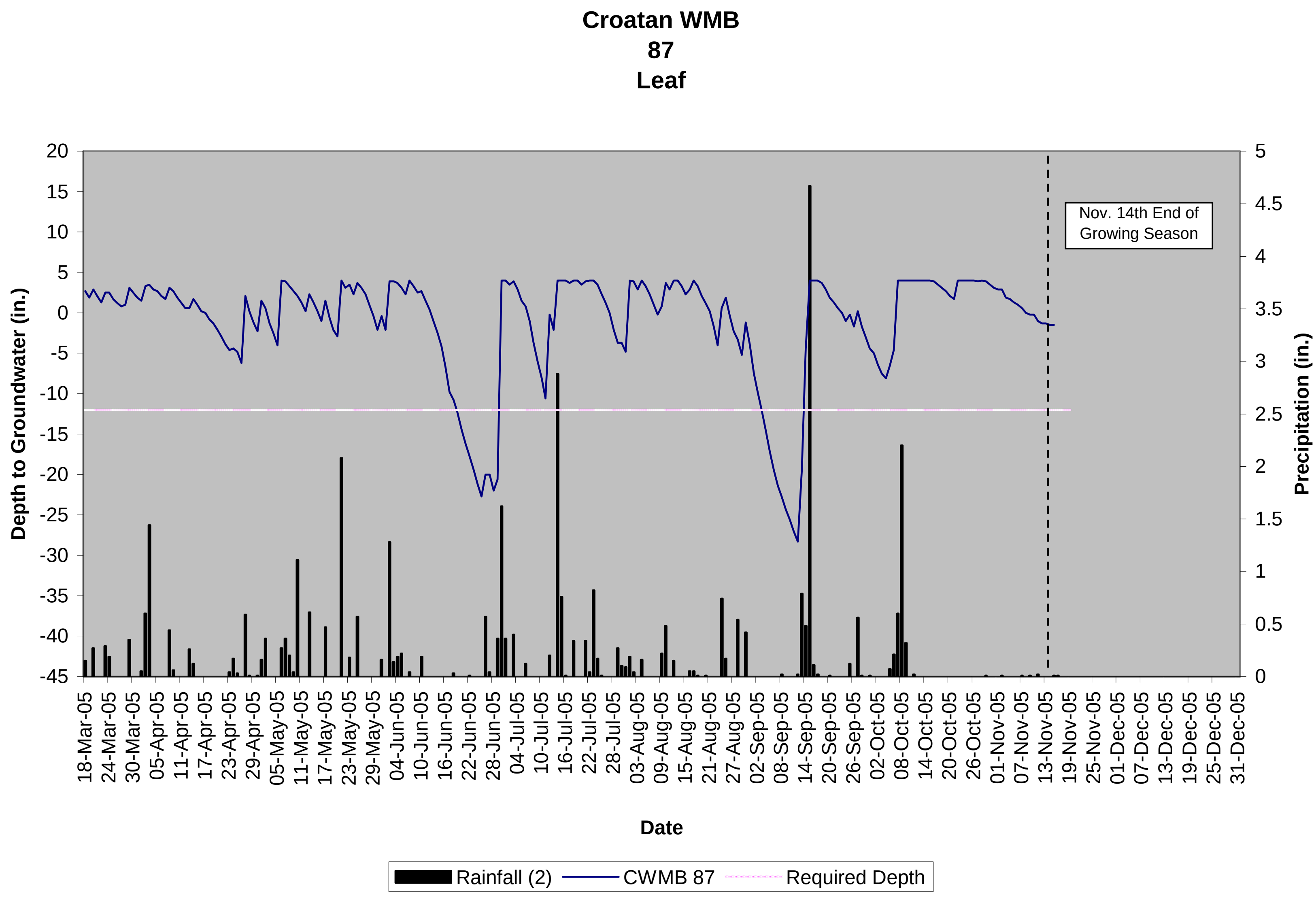
Table E1 Hydrographs

MONITORING GAUGE HYDROGRAPHS

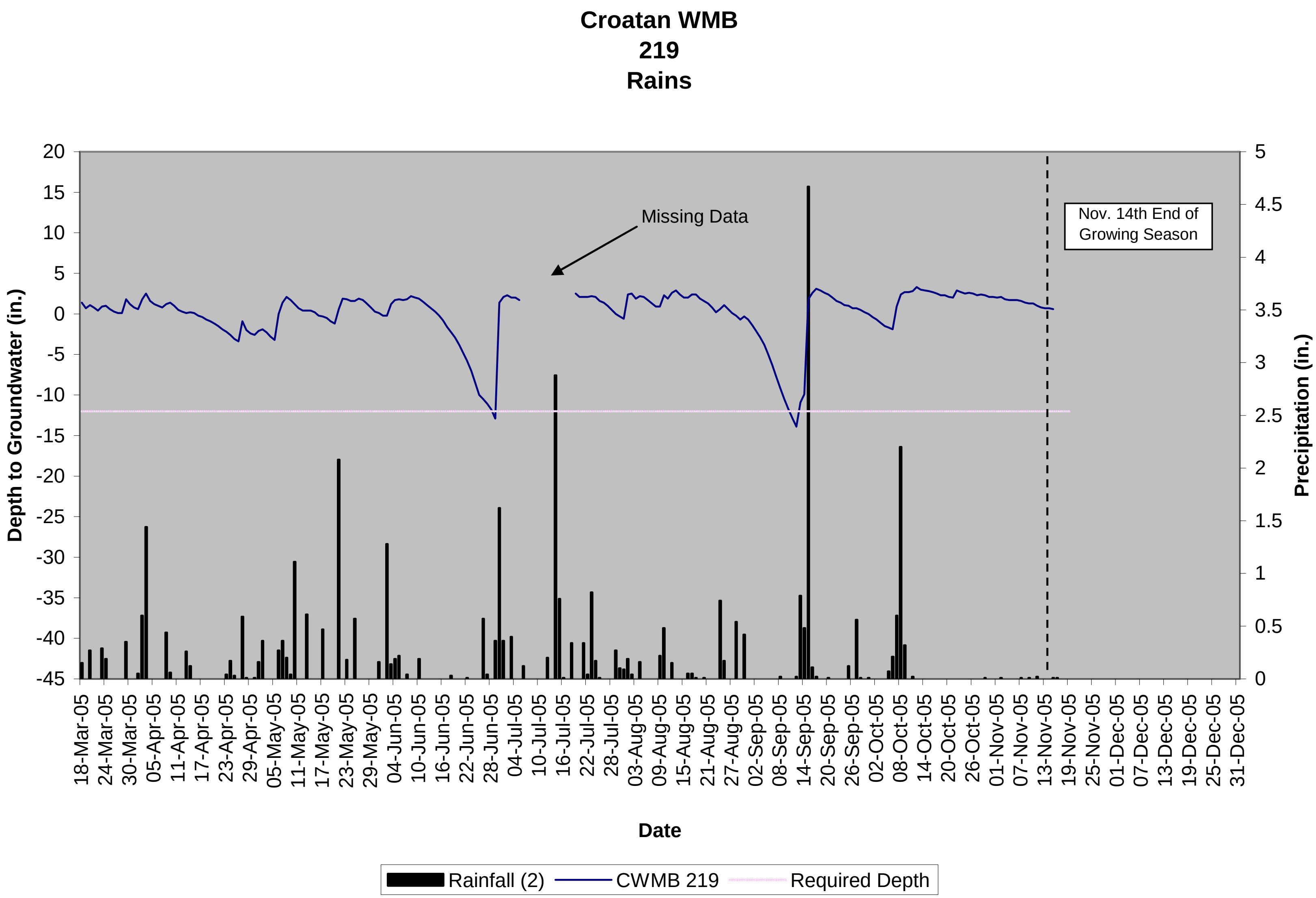
MU 1



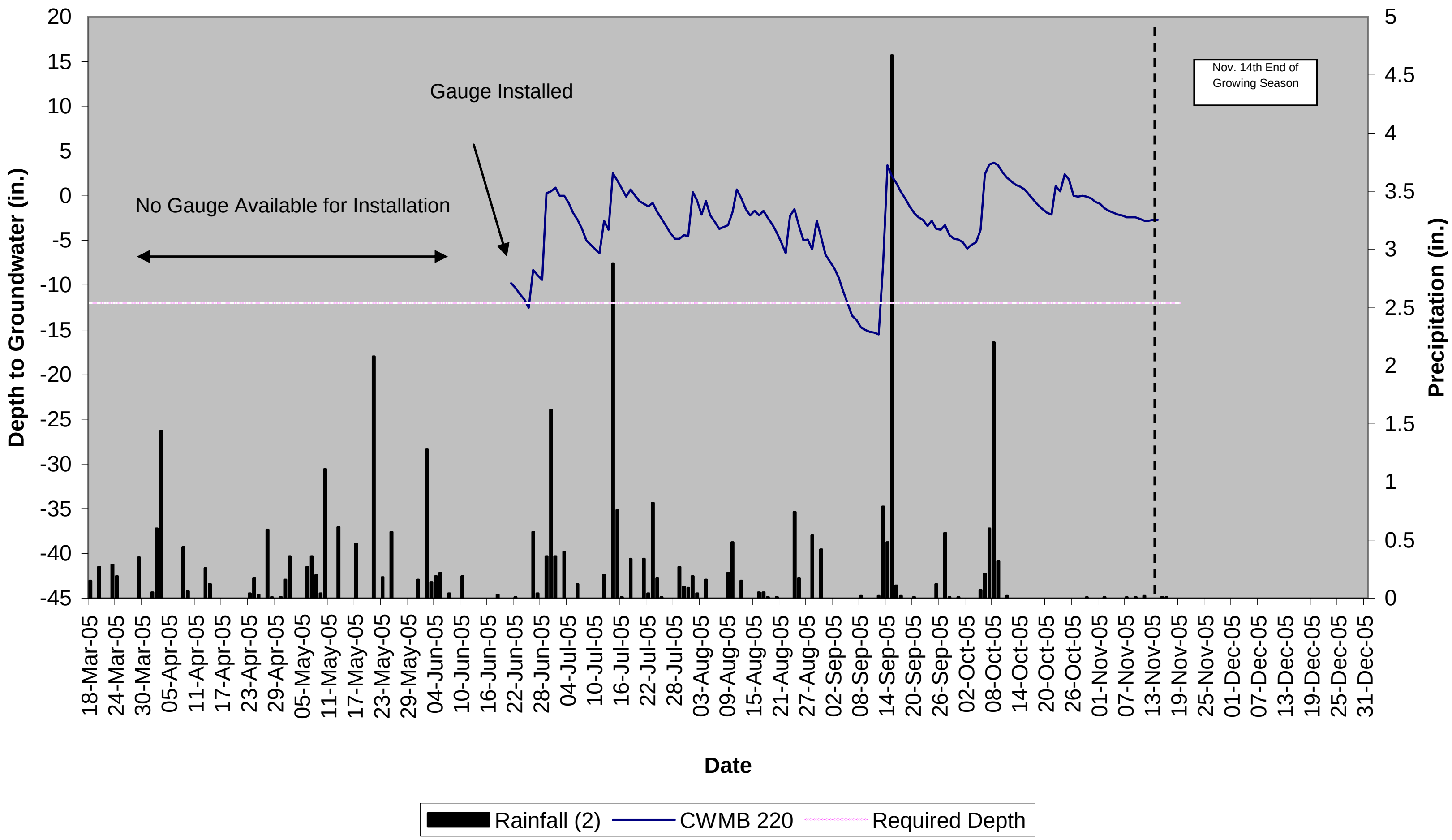
Croatan WMB
83 & 223
Pantego
No Gauge Available for Installation
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 83
Required Depth
CWMB 223



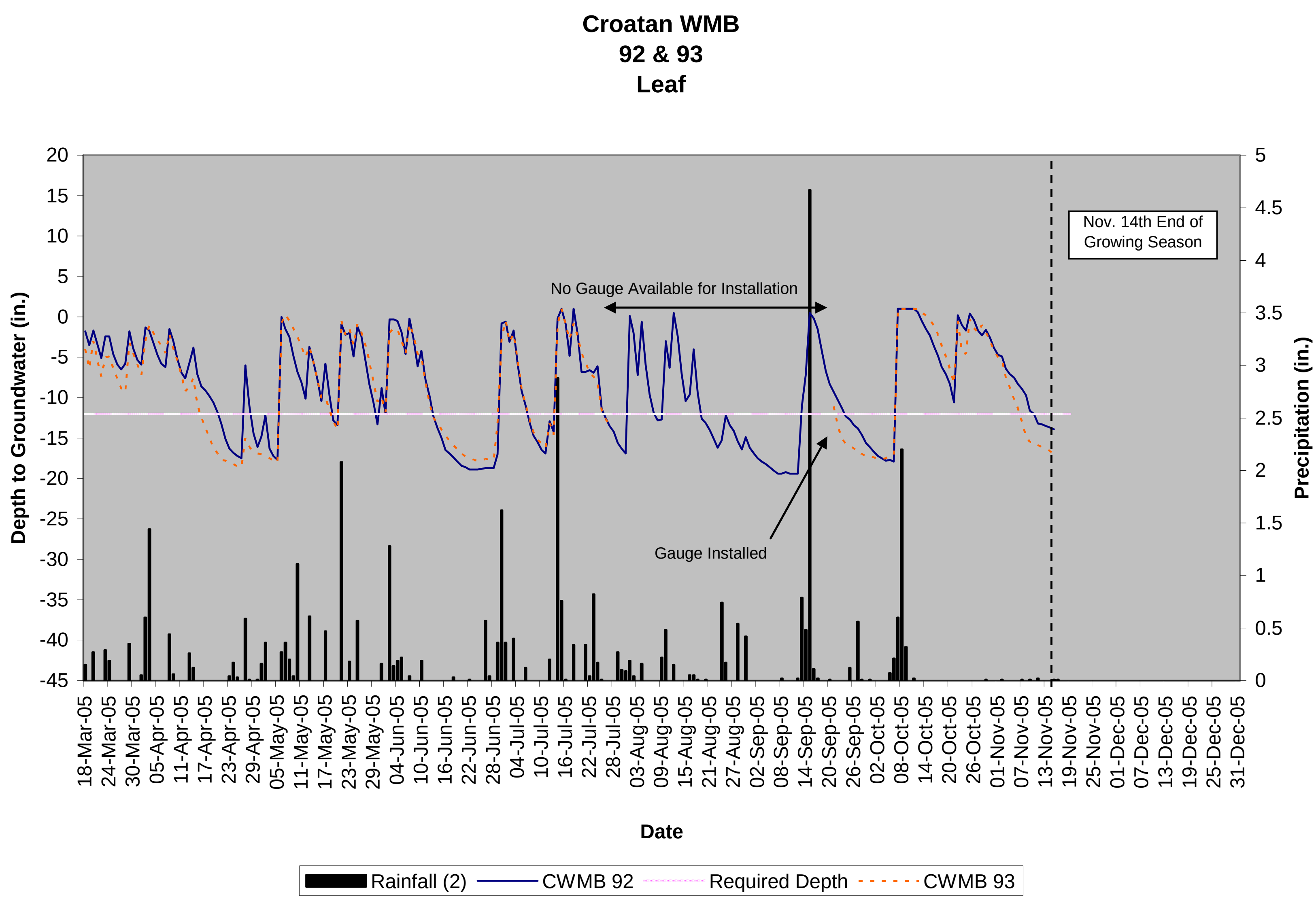
Croatan WMB
87
Leaf
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 87
Required Depth

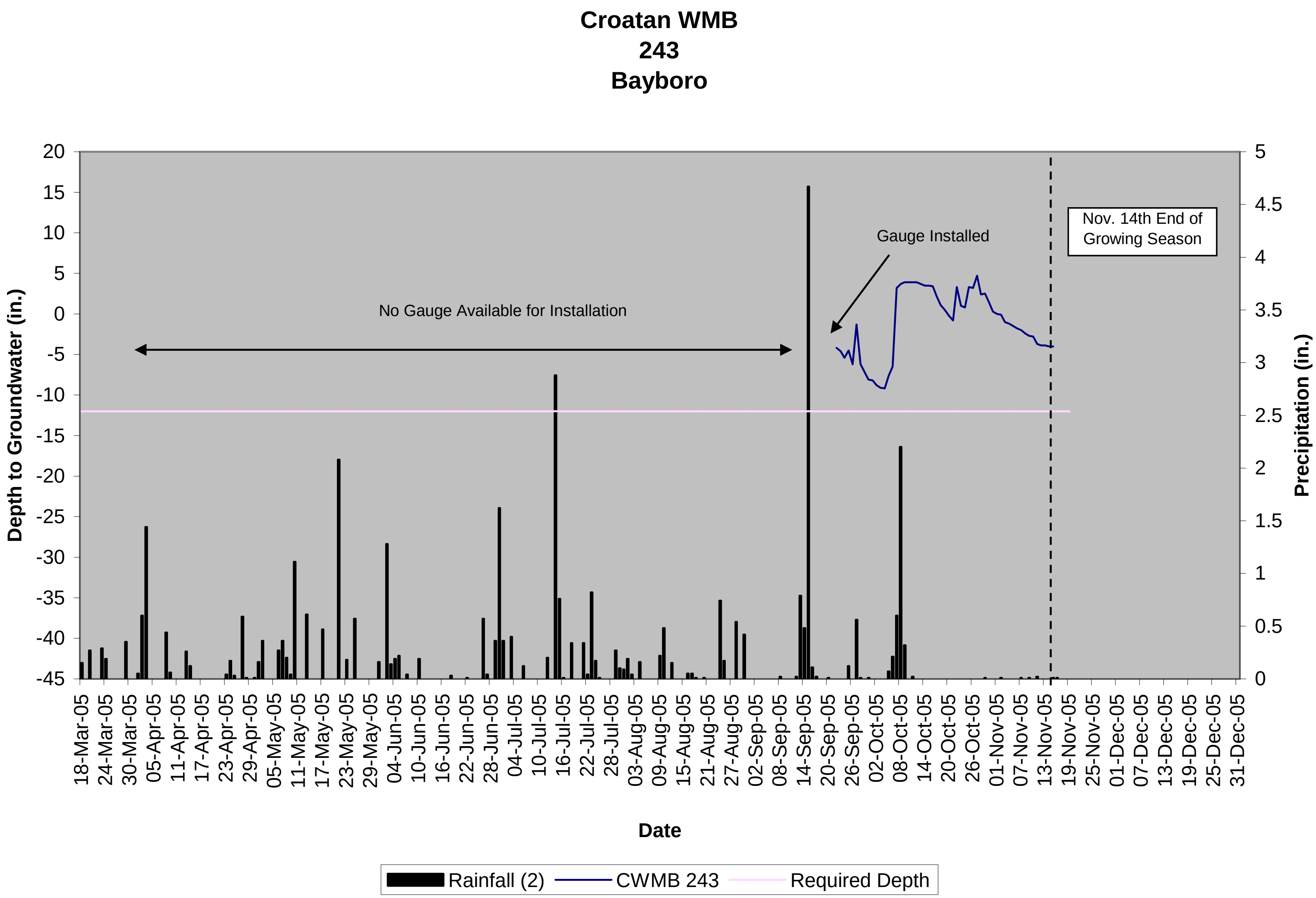

Croatan WMB
219
Rains
Depth to Groundwater (in.)
Precipitation (in.)
Date
Missing Data
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 219
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

Croatan WMB
220
Leaf

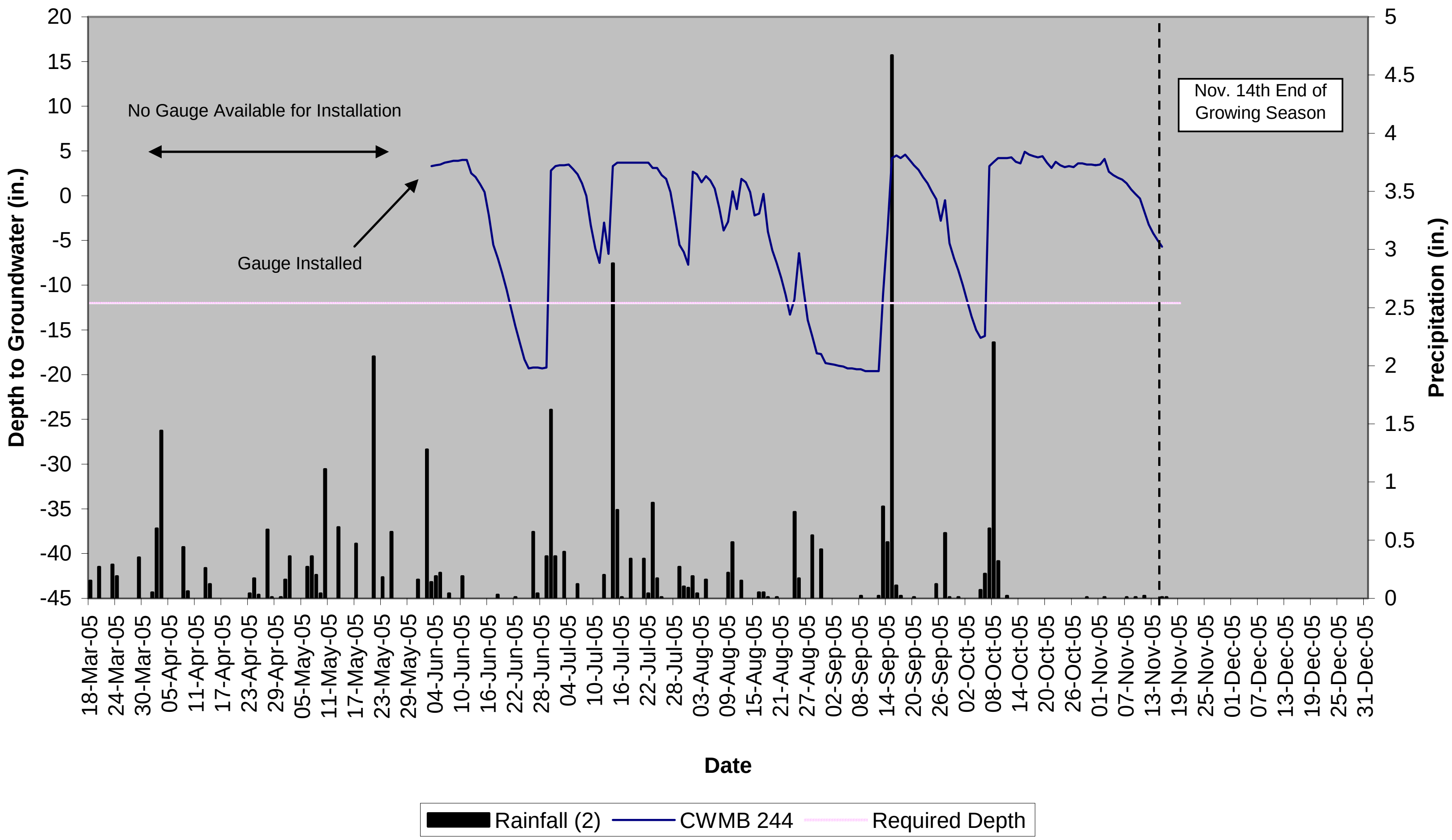


MU 2A

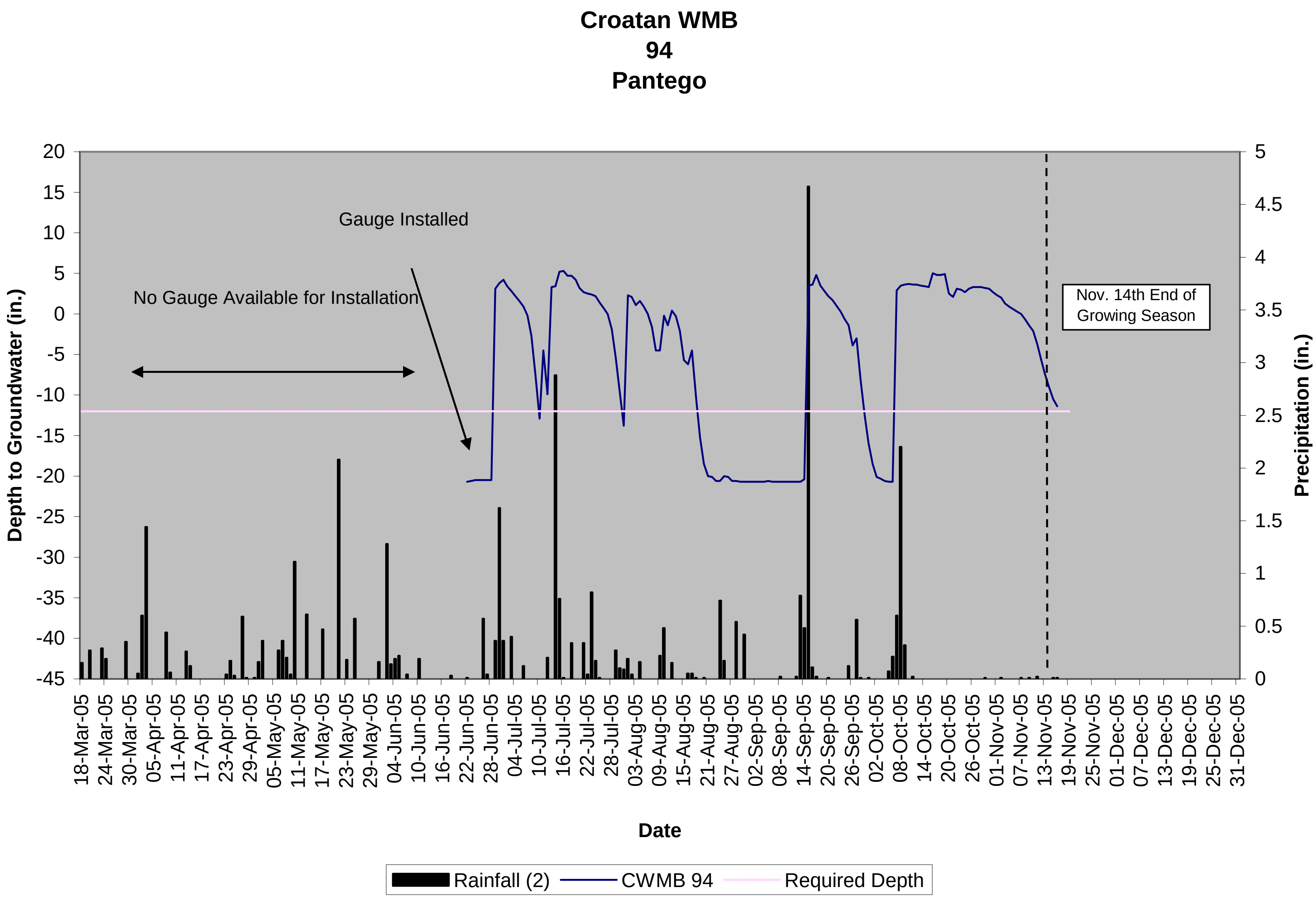

Croatan WMB
92 & 93
Leaf
Depth to Groundwater (in.)
Precipitation (in.)
No Gauge Available for Installation
Nov. 14th End of Growing Season
Gauge Installed
Date
Rainfall (2)
CWMB 92
Required Depth
CWMB 93


Croatan WMB
243
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
No Gauge Available for Installation
Gauge Installed
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 243
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

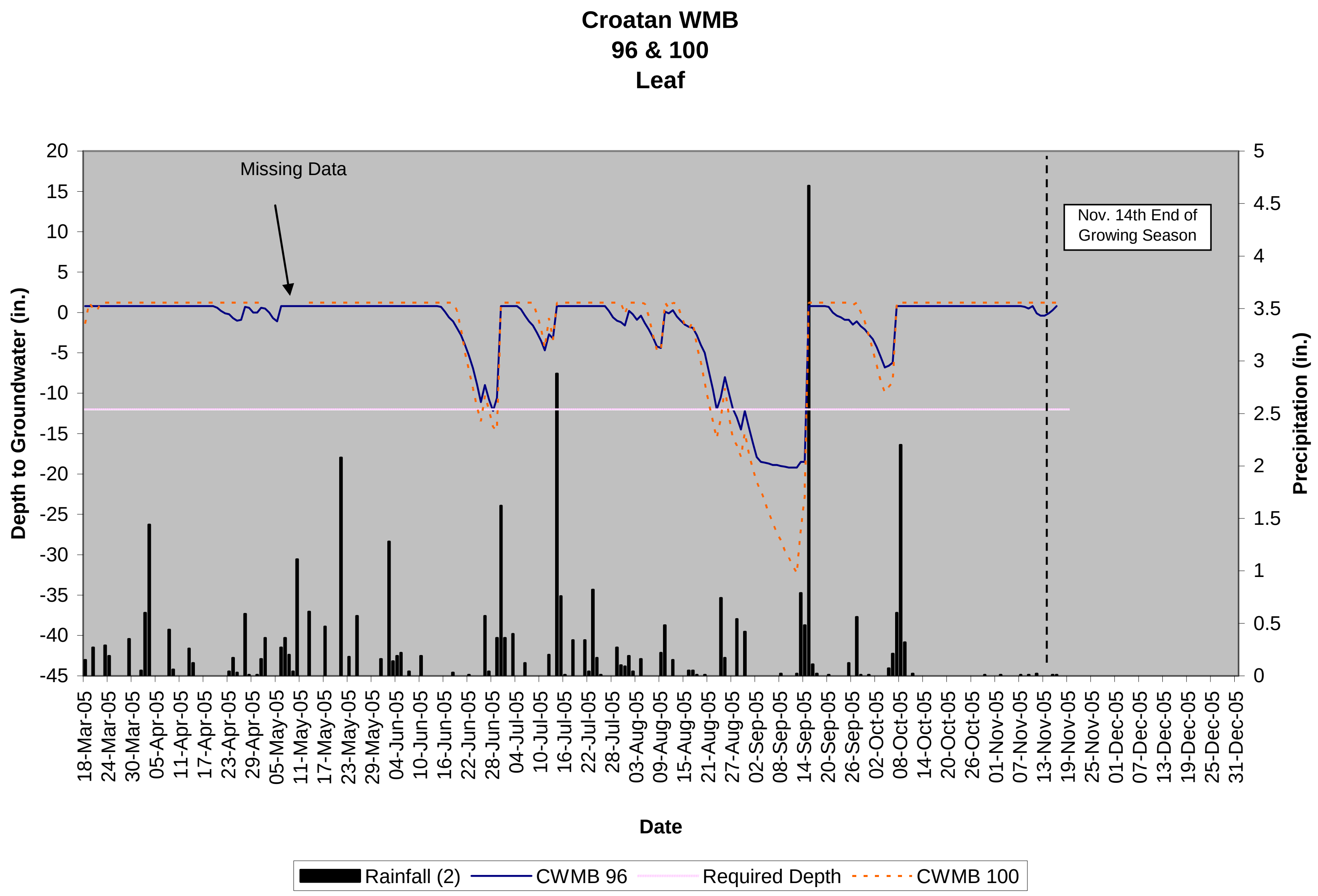
Croatan WMB
244
Leaf



MU 2B

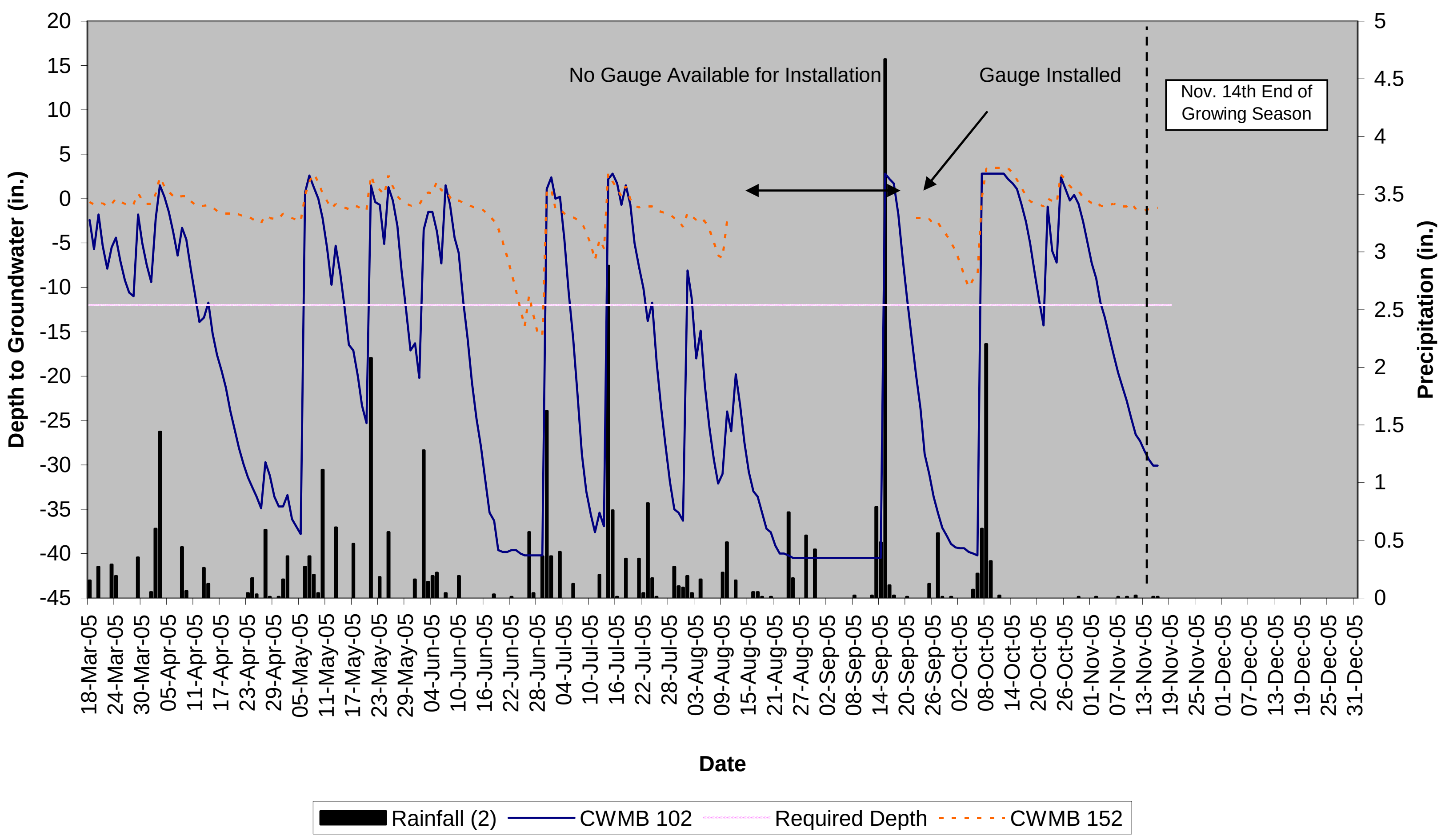


Croatan WMB
94
Pantego
Gauge Installed
No Gauge Available for Installation
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 94
Required Depth

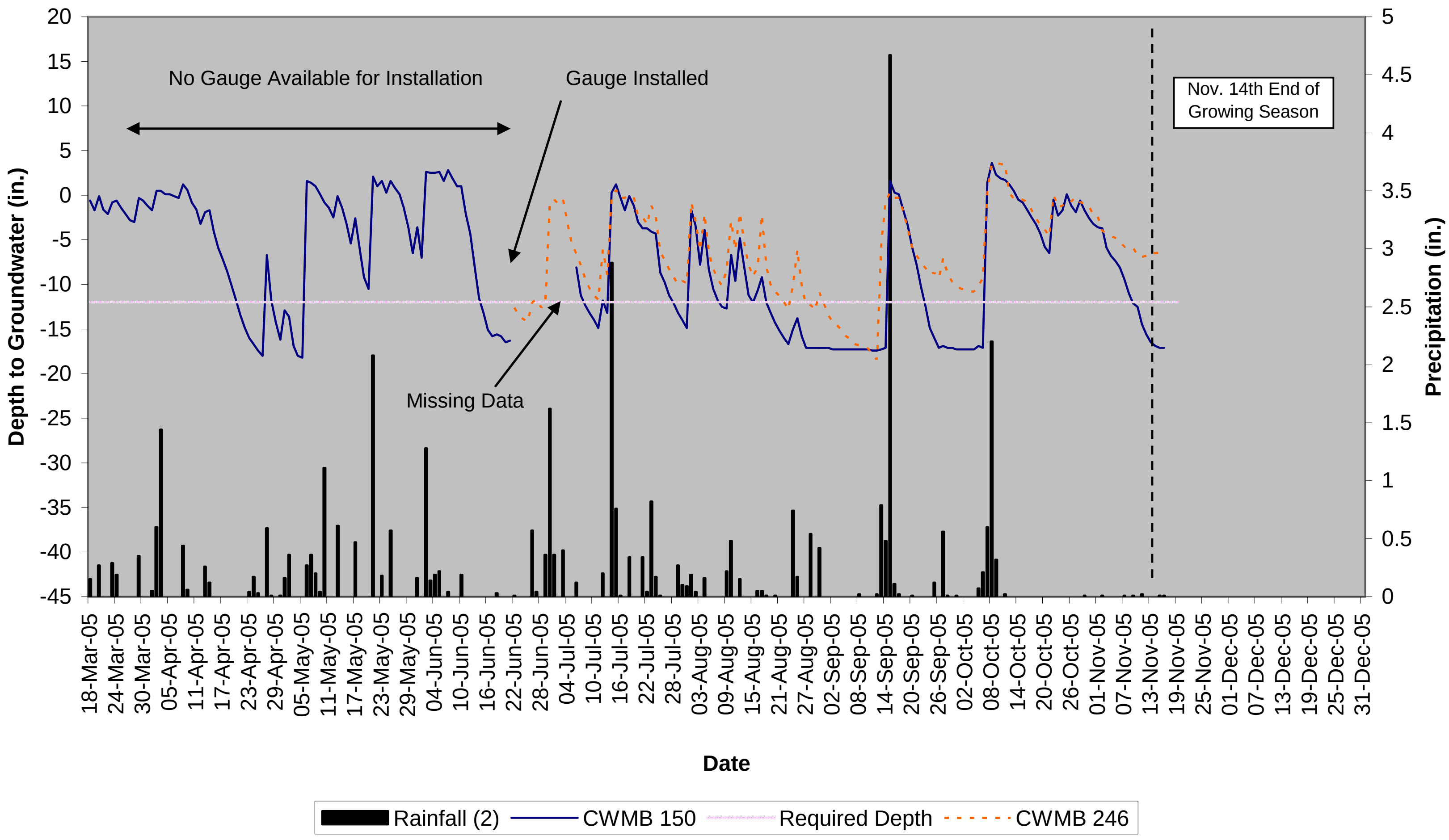


Croatan WMB
96 & 100
Leaf
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 96
Required Depth
CWMB 100

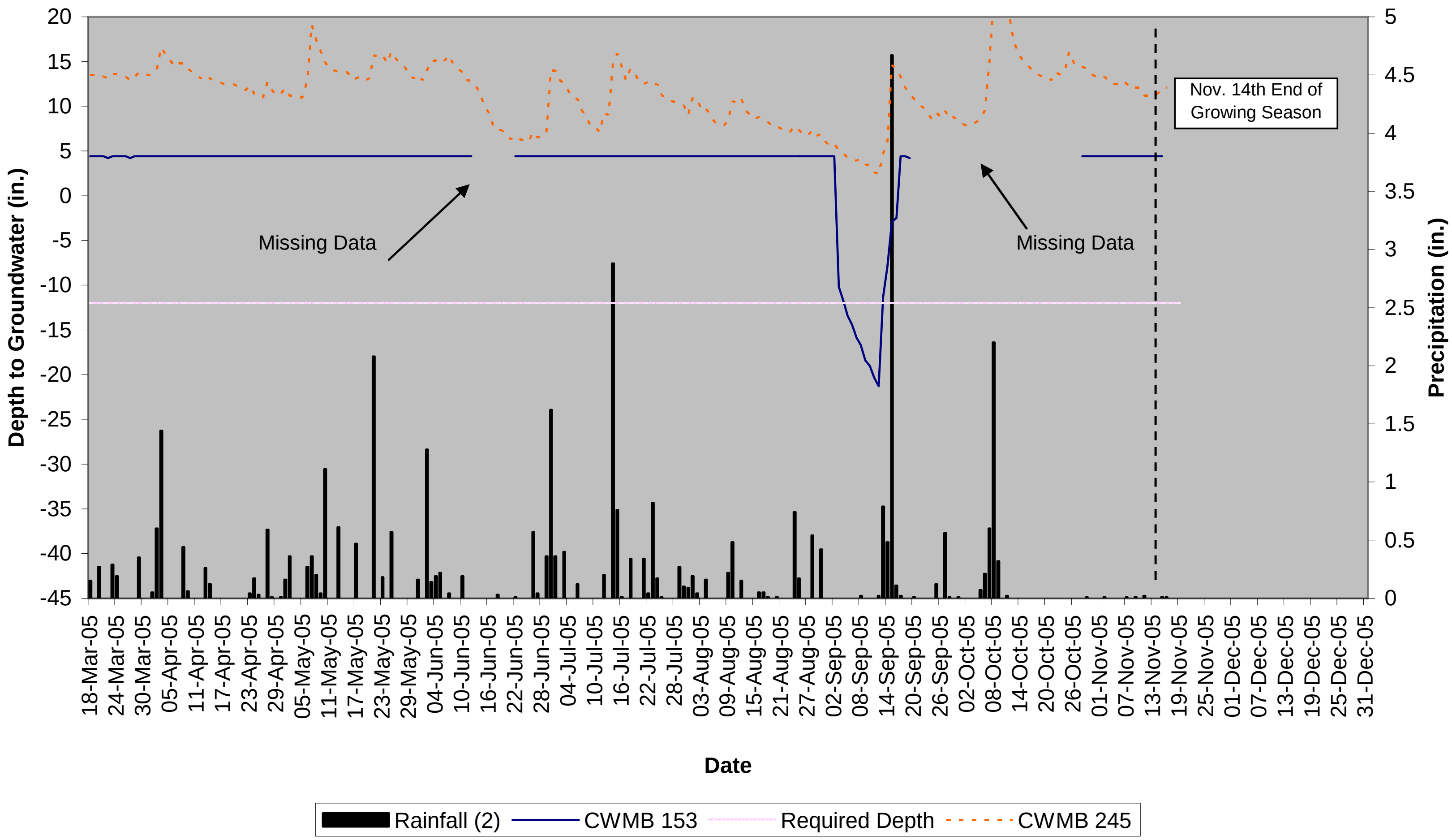
Croatan WMB
102 & 152
Bayboro

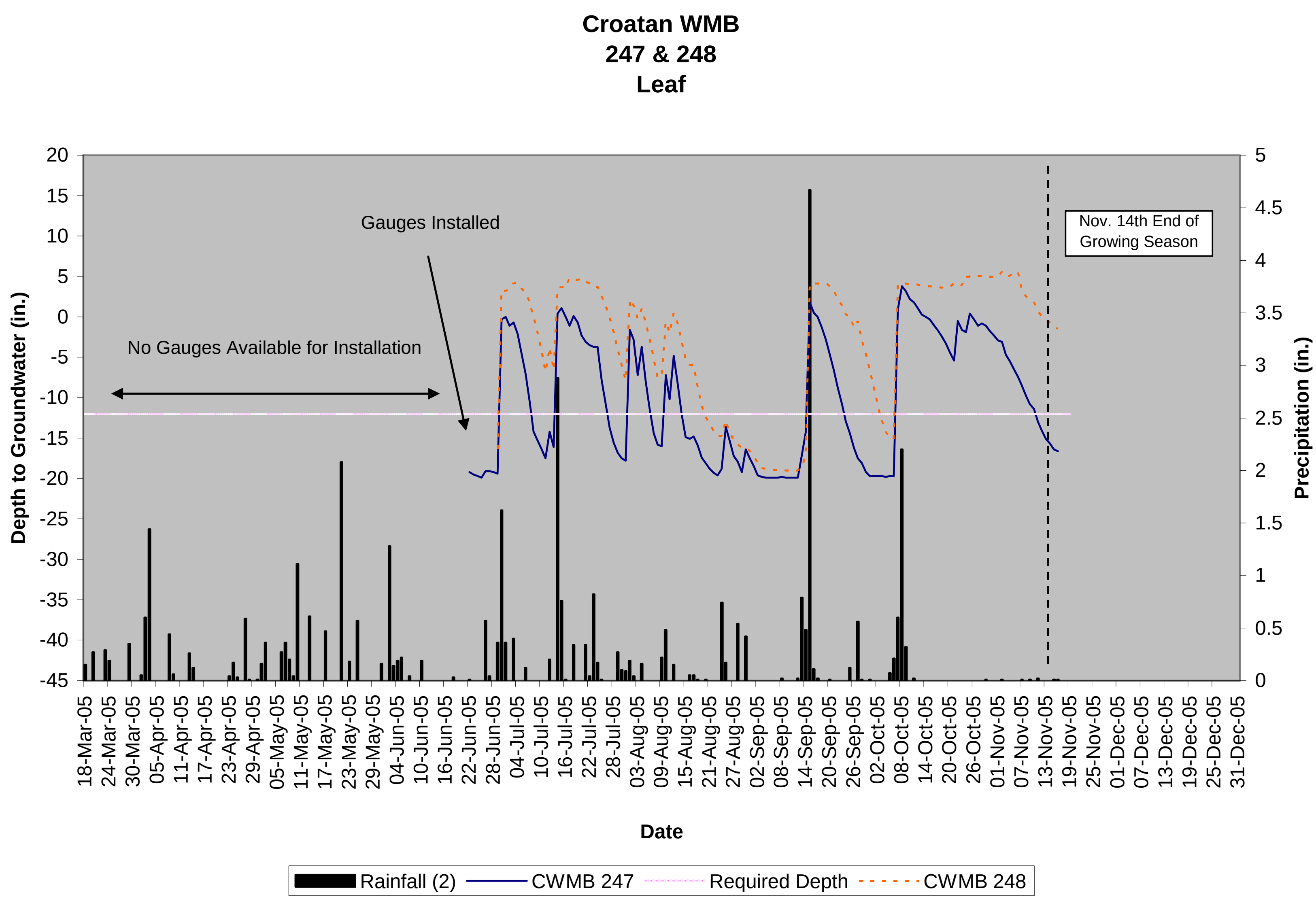


Croatan WMB
150 & 246
Leaf

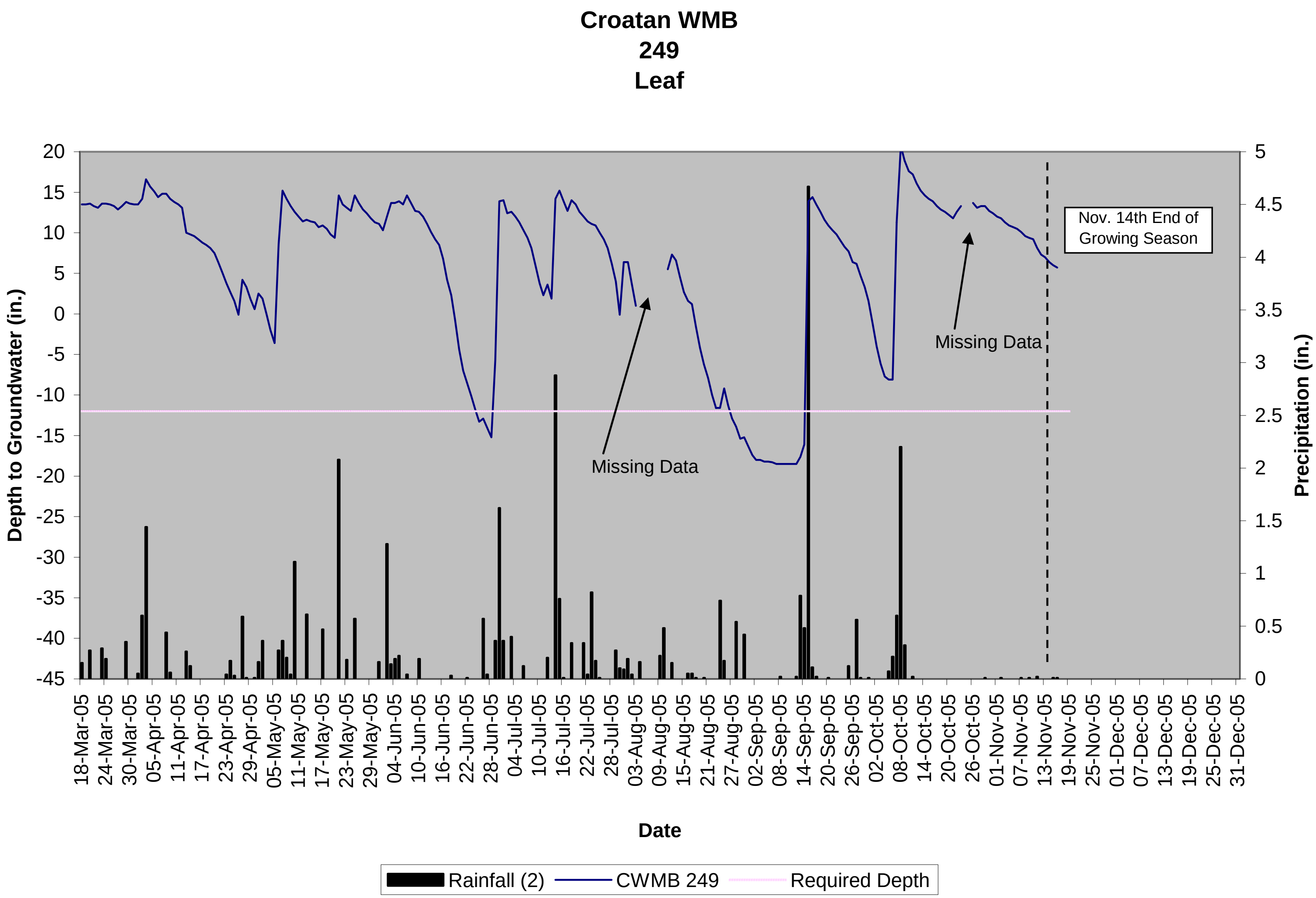


Croatan WMB
153 & 245
Bayboro

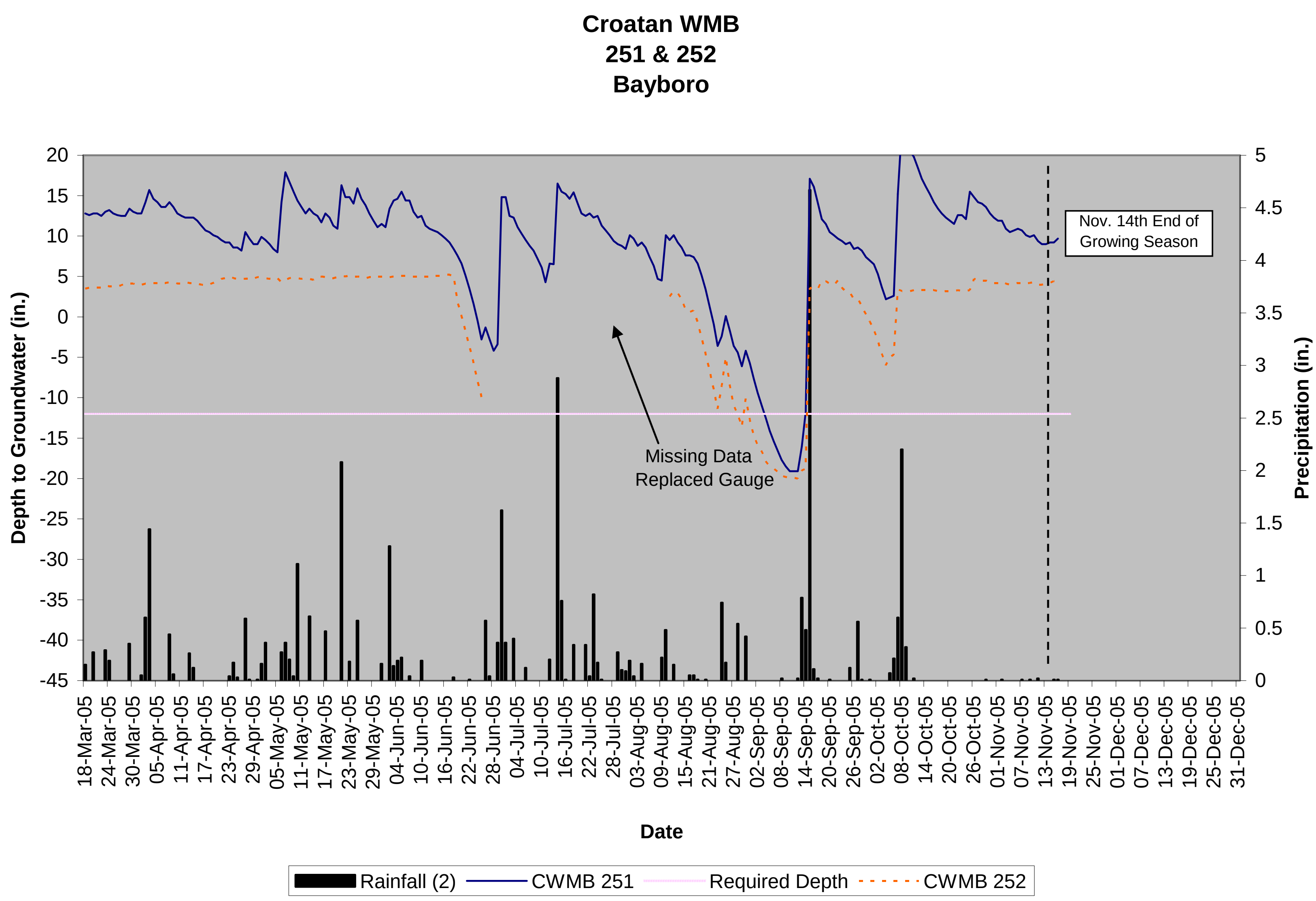




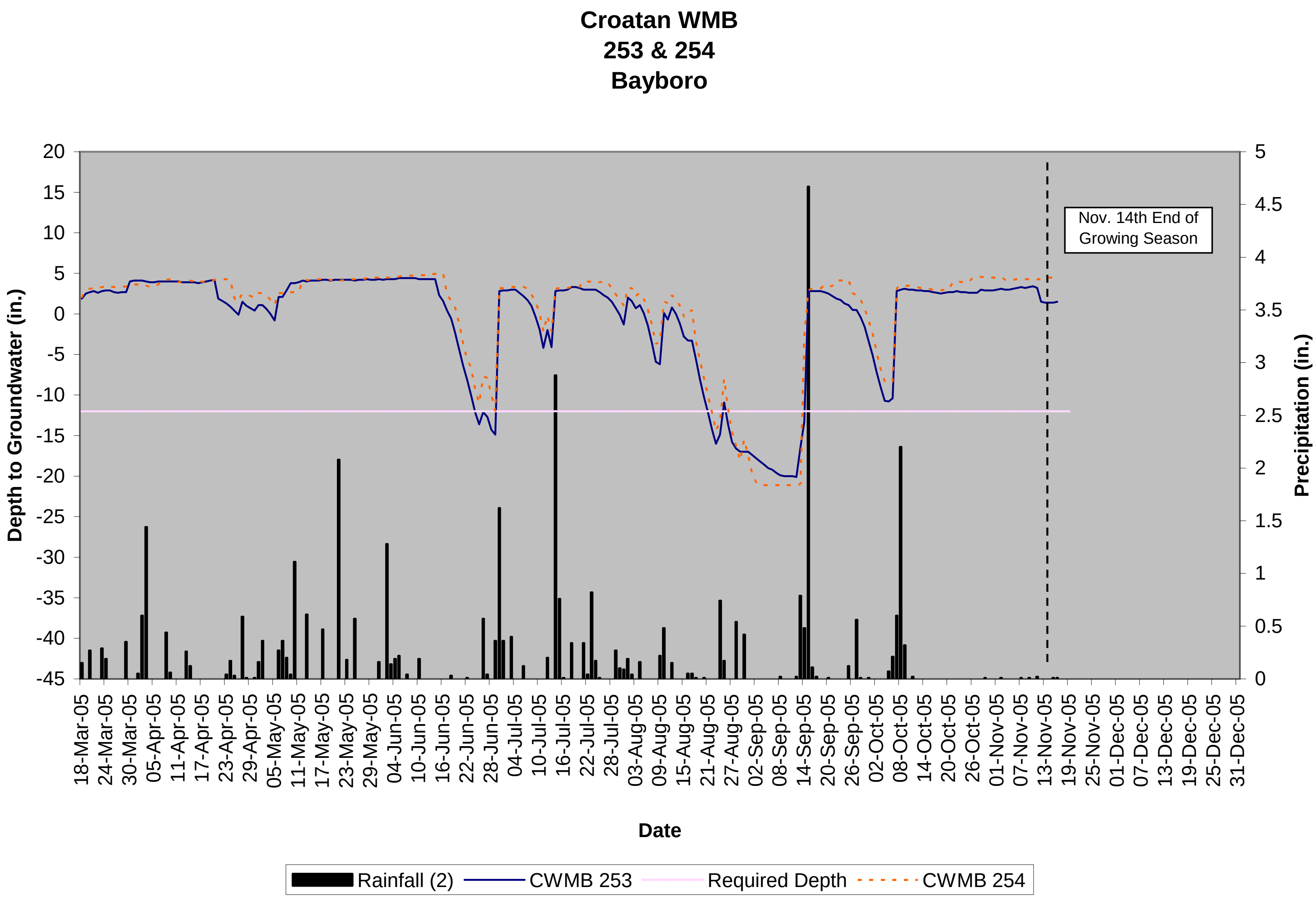
Croatan WMB
247 & 248
Leaf
Gauges Installed
No Gauges Available for Installation
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 247
Required Depth
CWMB 248



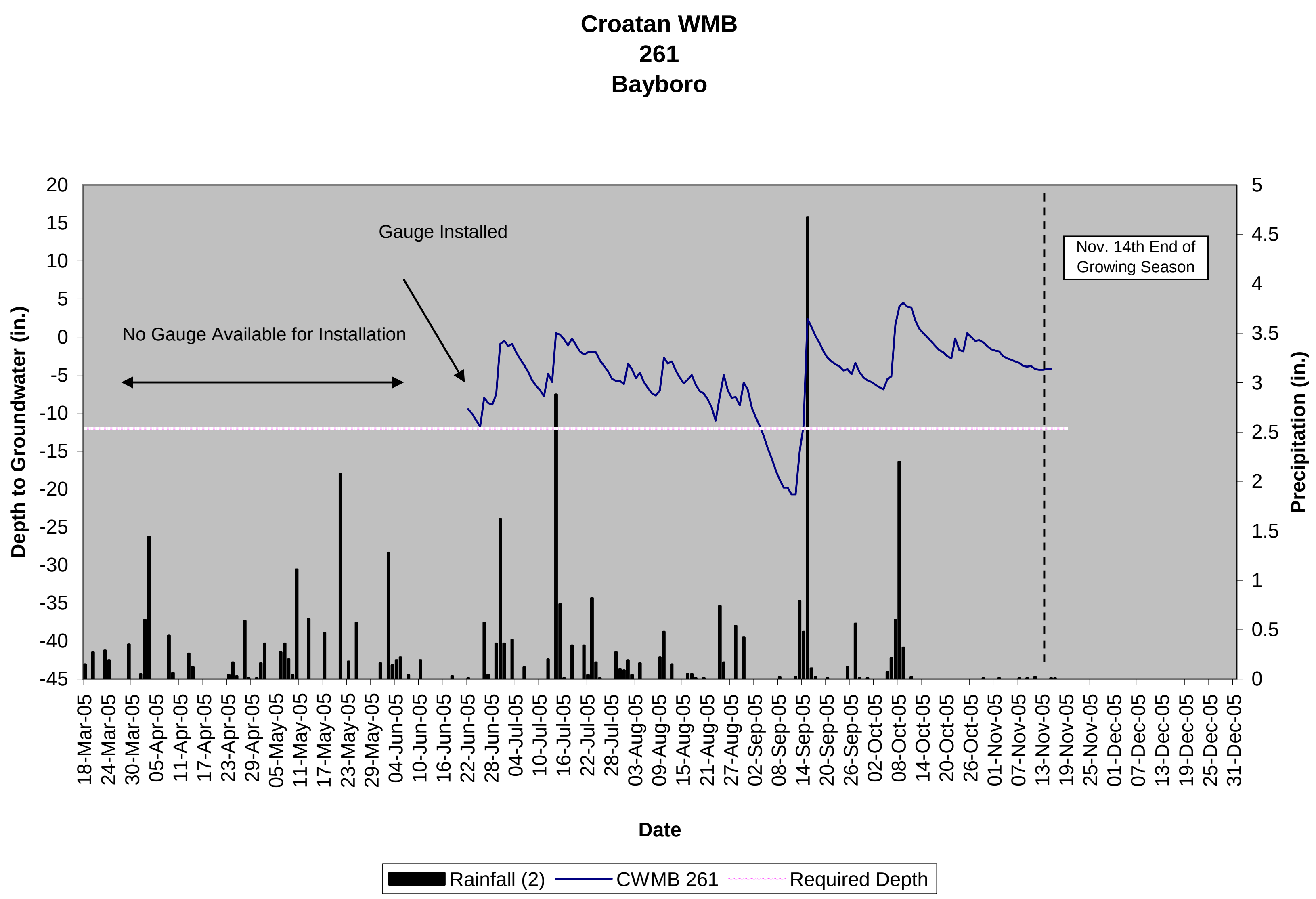
Croatan WMB
249
Leaf
Depth to Groundwater (in.)
Precipitation (in.)
Date
Missing Data
Missing Data
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 249
Required Depth



Croatan WMB
251 & 252
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Missing Data
Replaced Gauge
Rainfall (2)
CWMB 251
Required Depth
CWMB 252

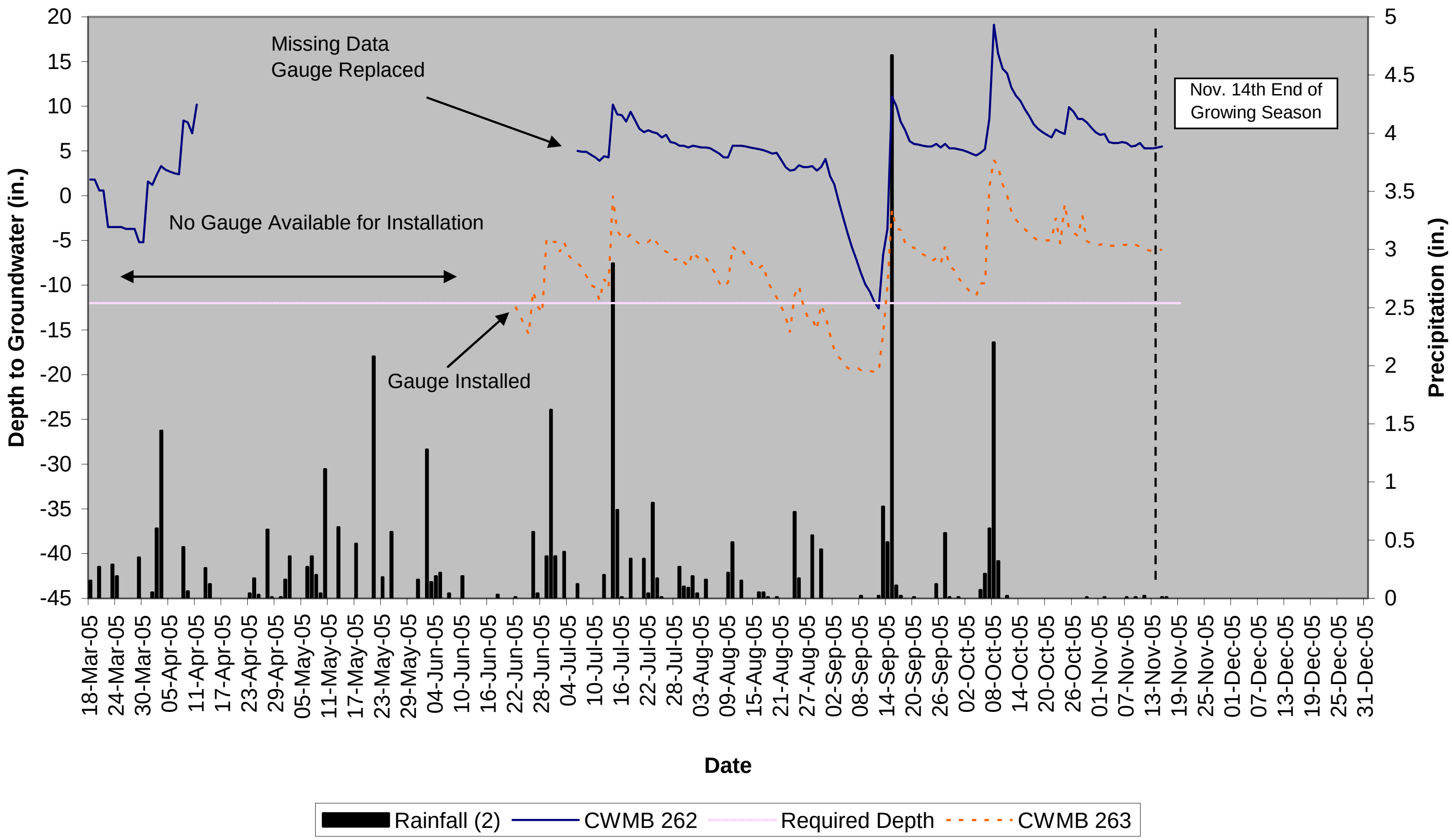


Croatan WMB
253 & 254
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 253
Required Depth
CWMB 254

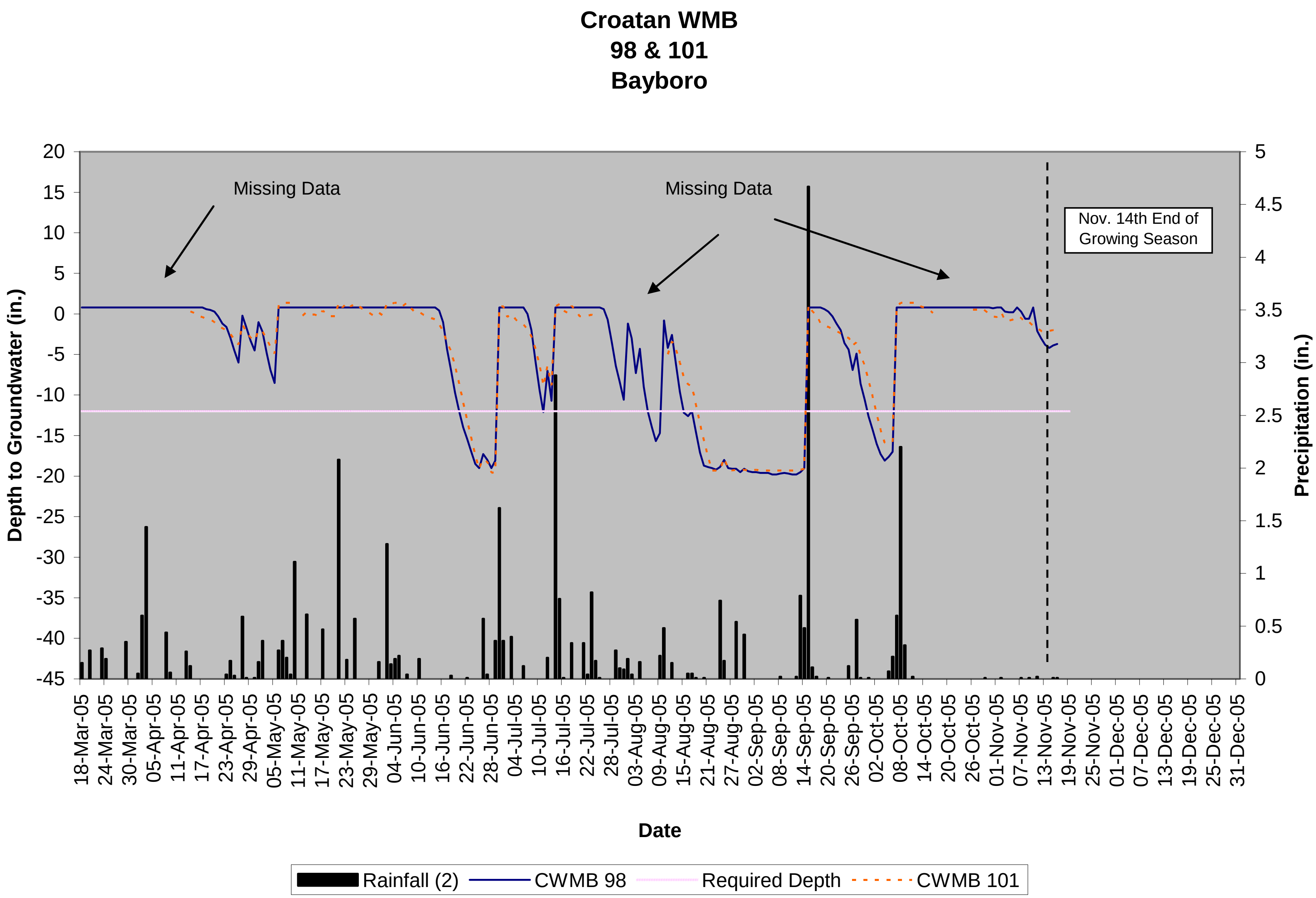


Croatan WMB
261
Bayboro
Gauge Installed
No Gauge Available for Installation
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 261
Required Depth

Croatan WMB
262 & 263
Bayboro

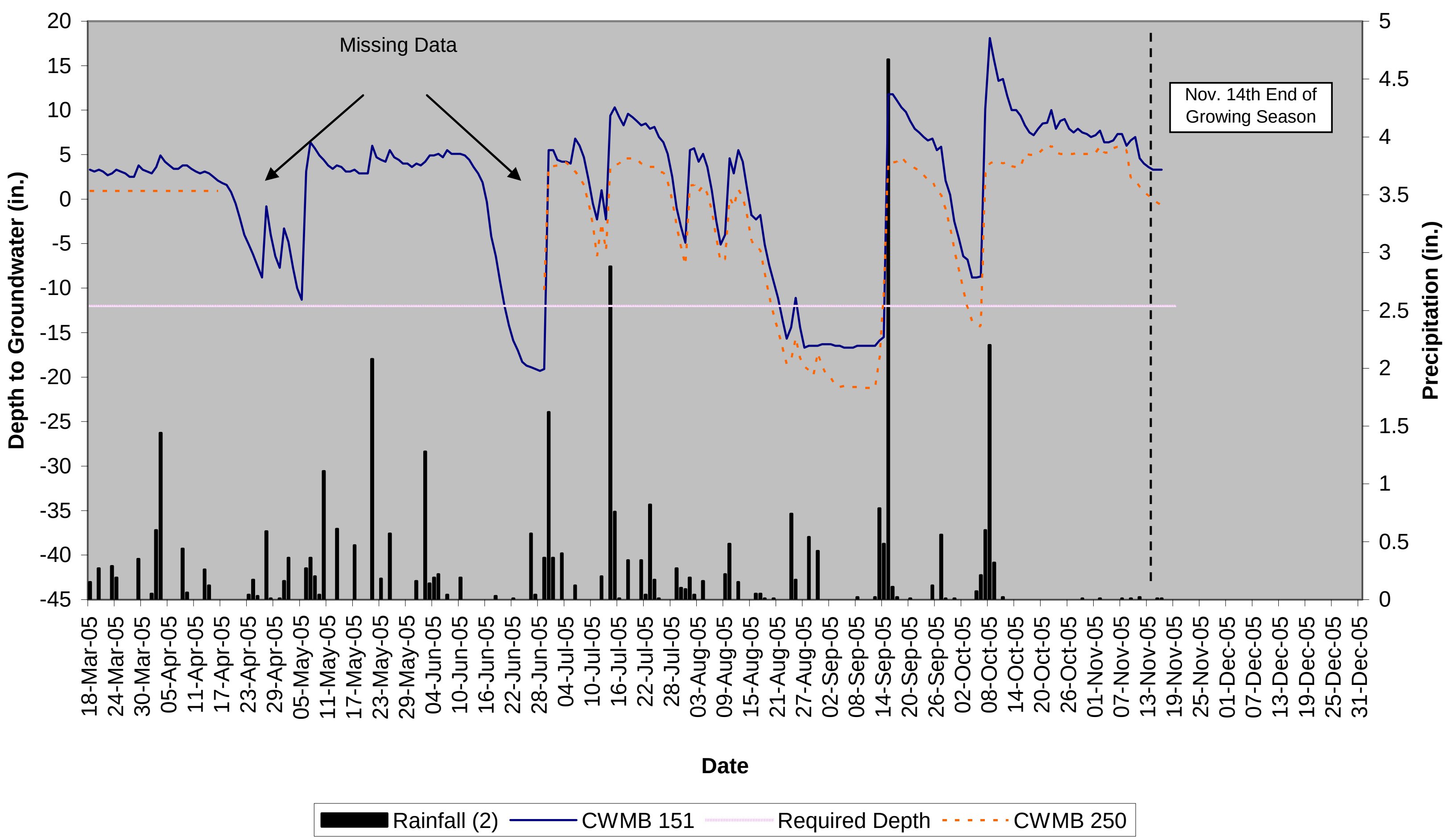


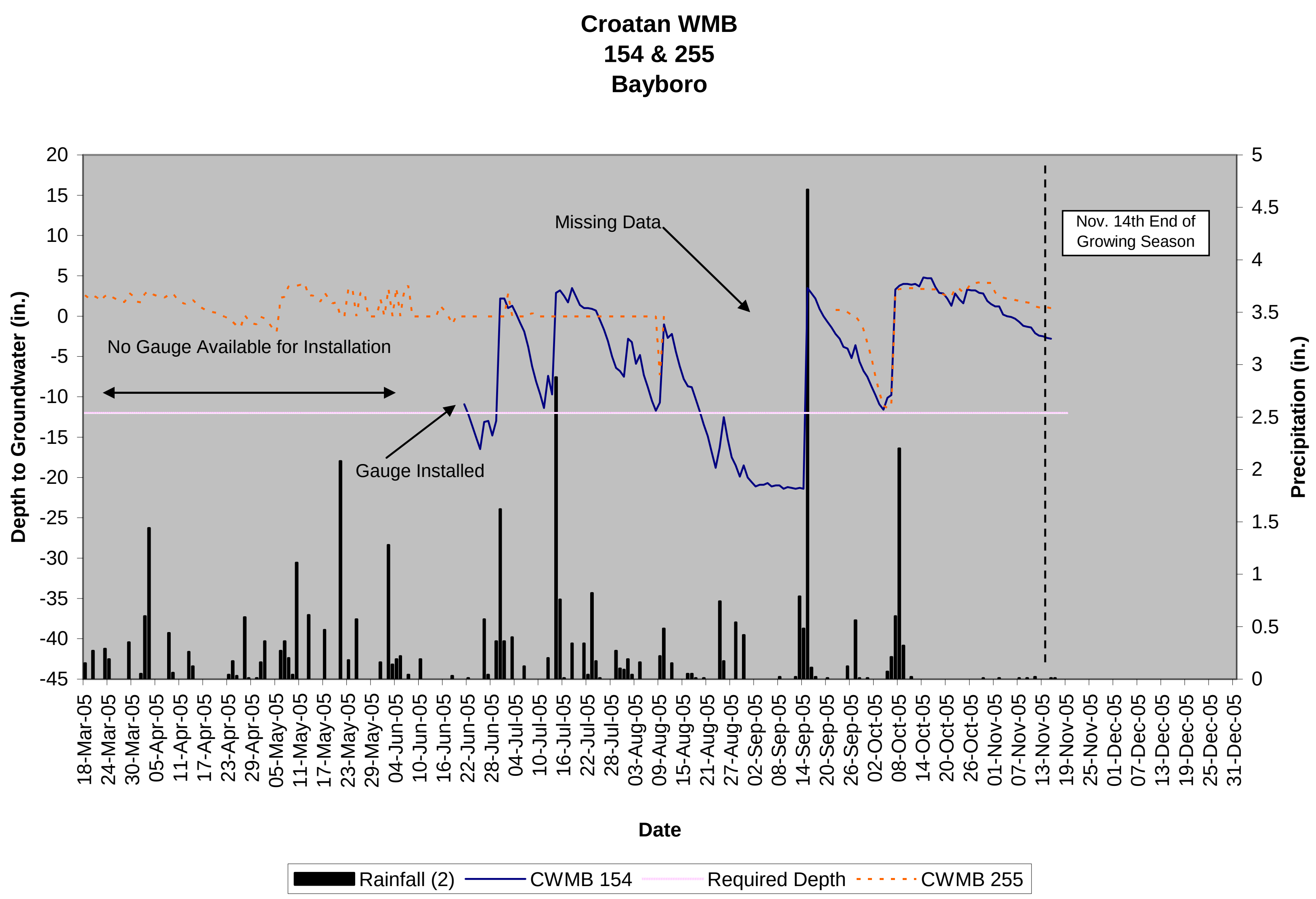
MU 3



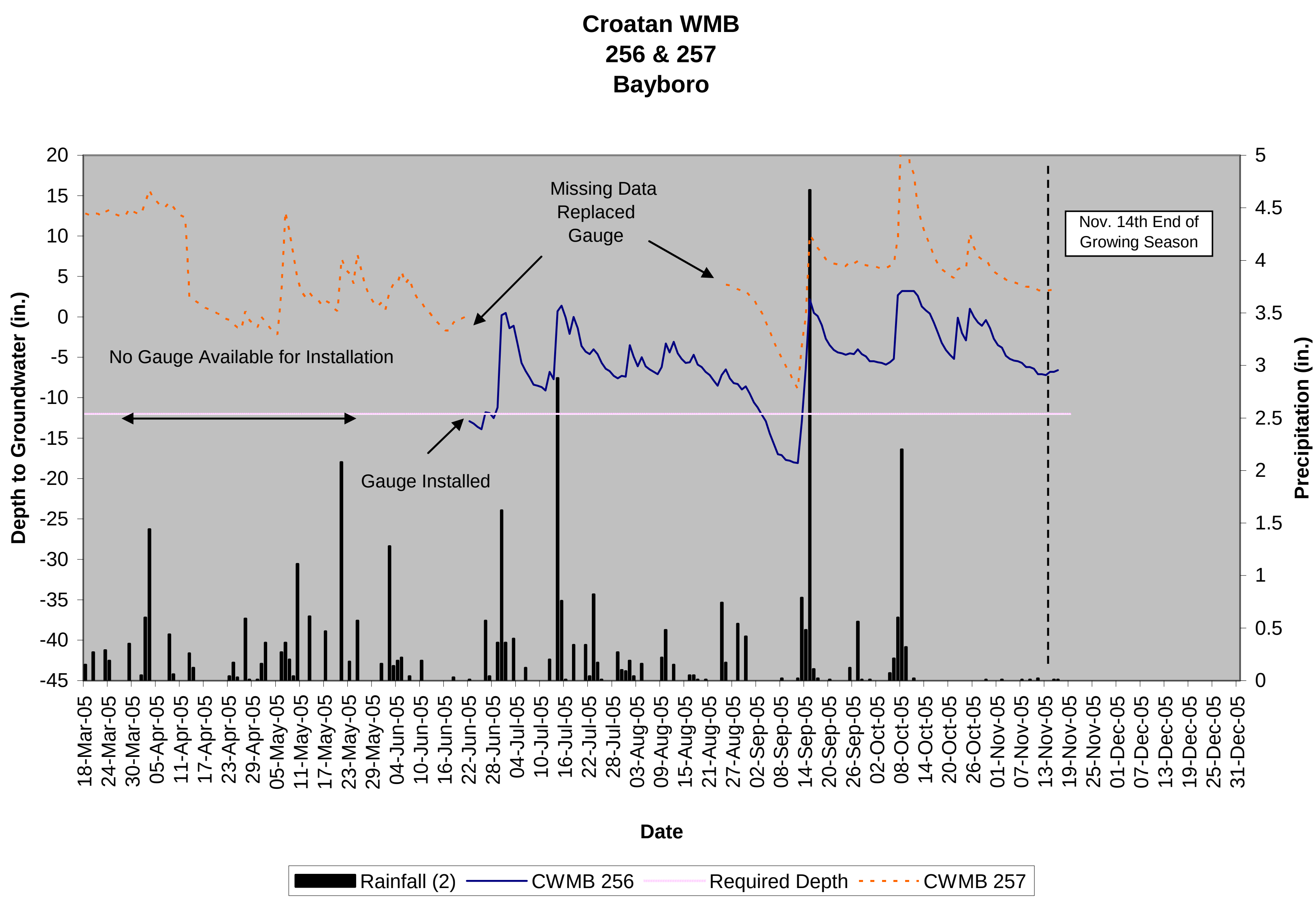
Croatan WMB
98 & 101
Bayboro
Missing Data
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 98
Required Depth
CWMB 101

Croatan WMB
151 & 250
Leaf



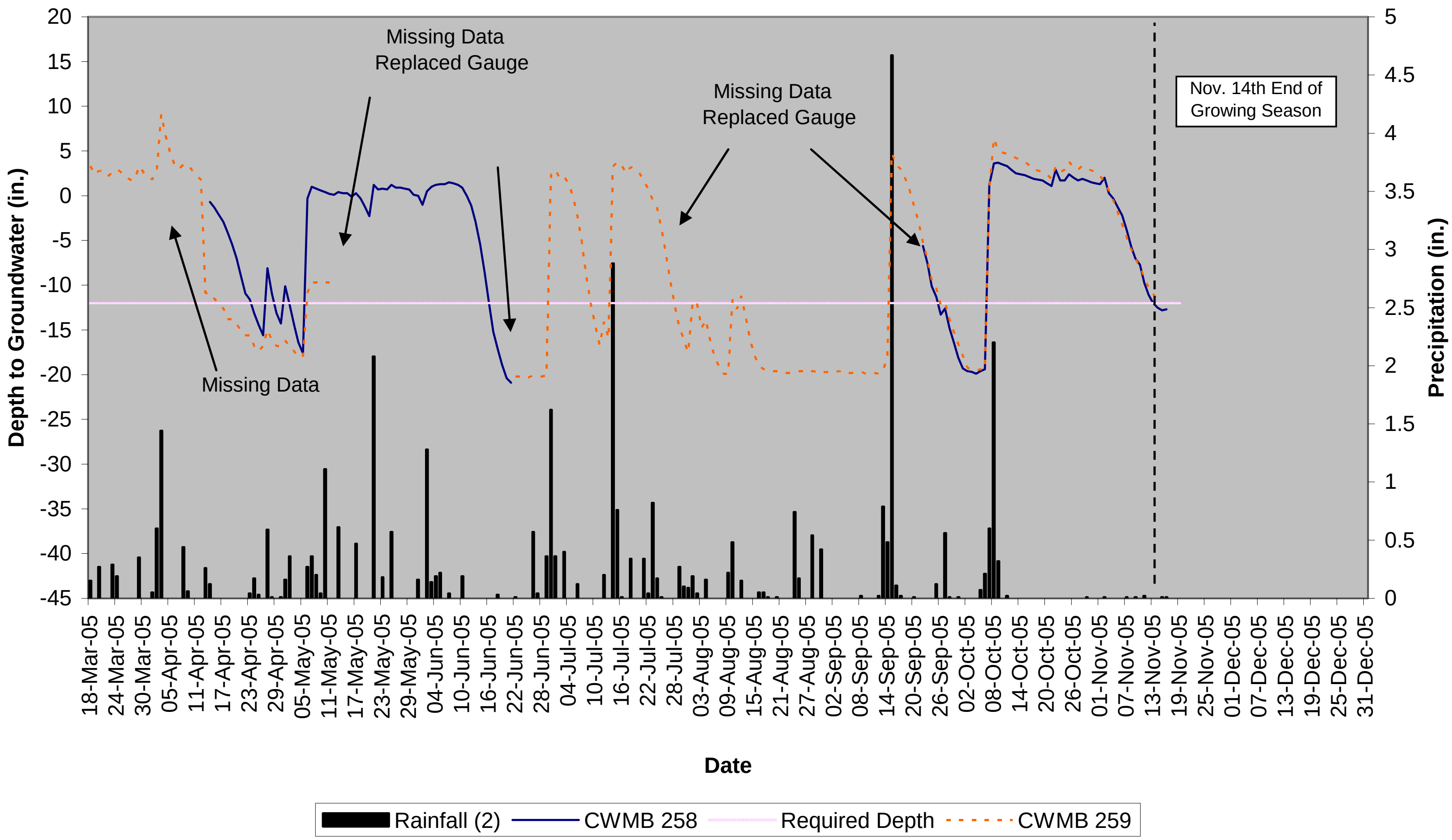


Croatan WMB
154 & 255
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
No Gauge Available for Installation
Gauge Installed
Missing Data
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 154
Required Depth
CWMB 255



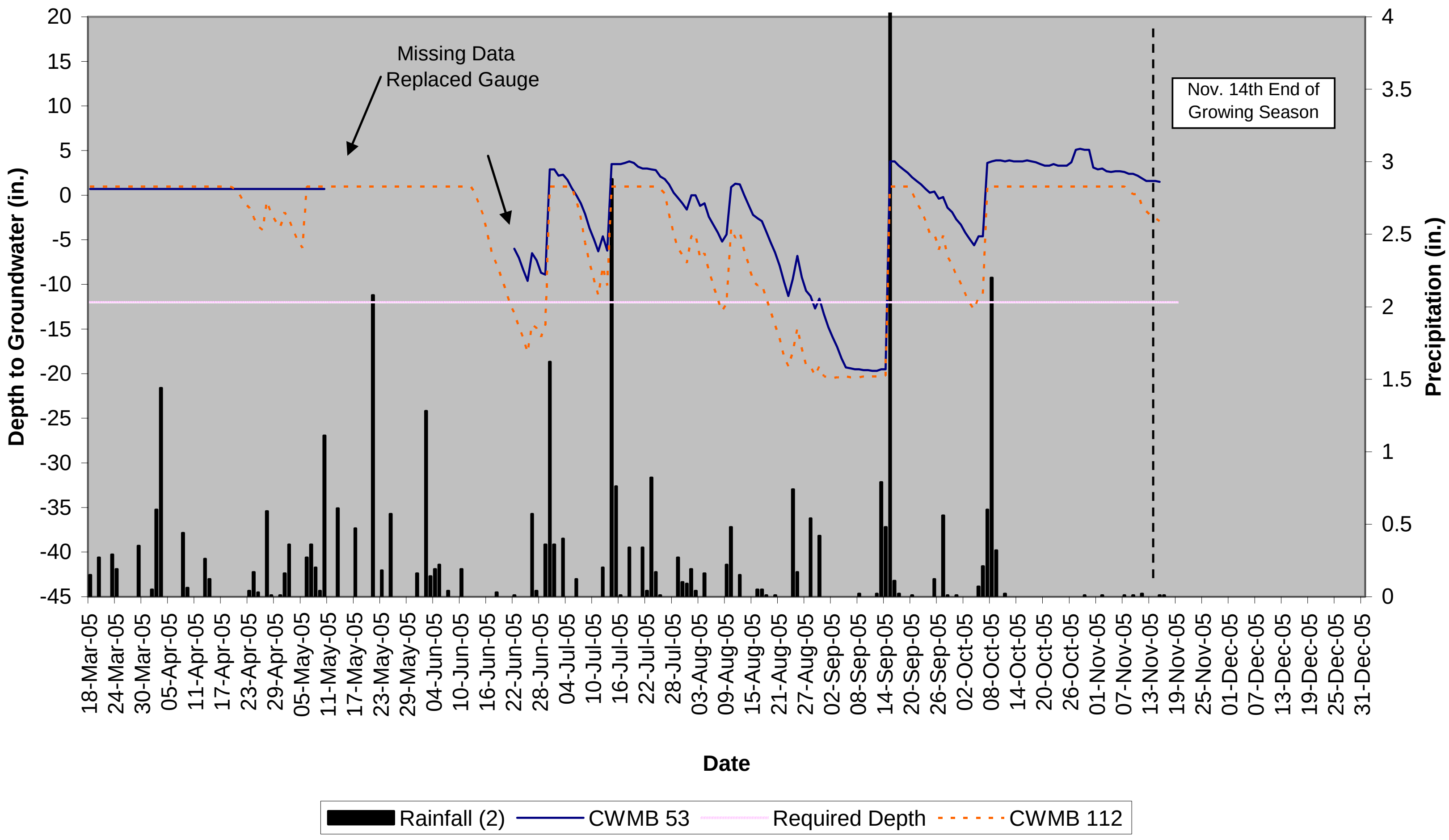
Croatan WMB
256 & 257
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Missing Data
Replaced
Gauge
No Gauge Available for Installation
Gauge Installed
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 256
Required Depth
CWMB 257

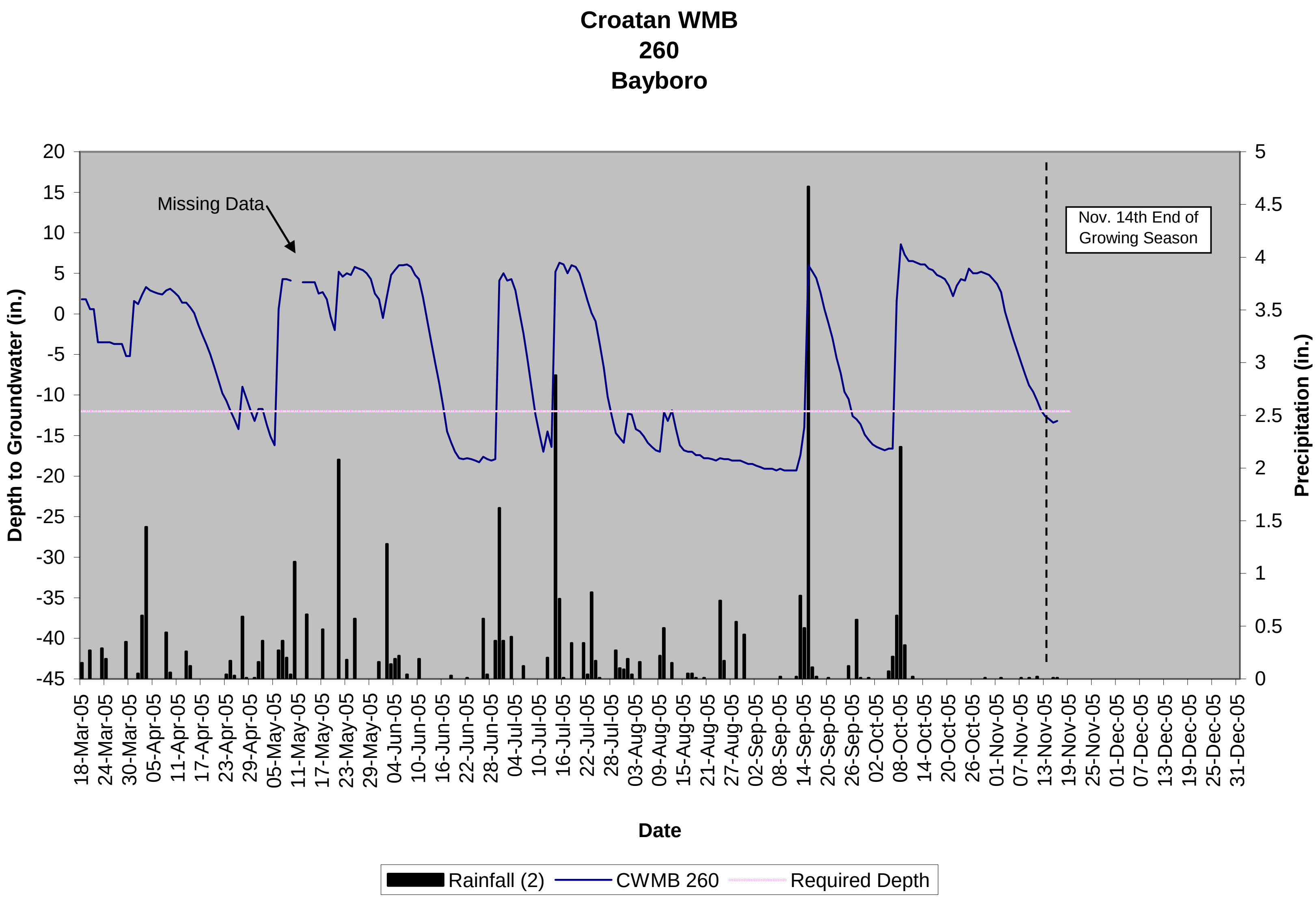
Croatan WMB
258 & 259
Bayboro



MU 4A

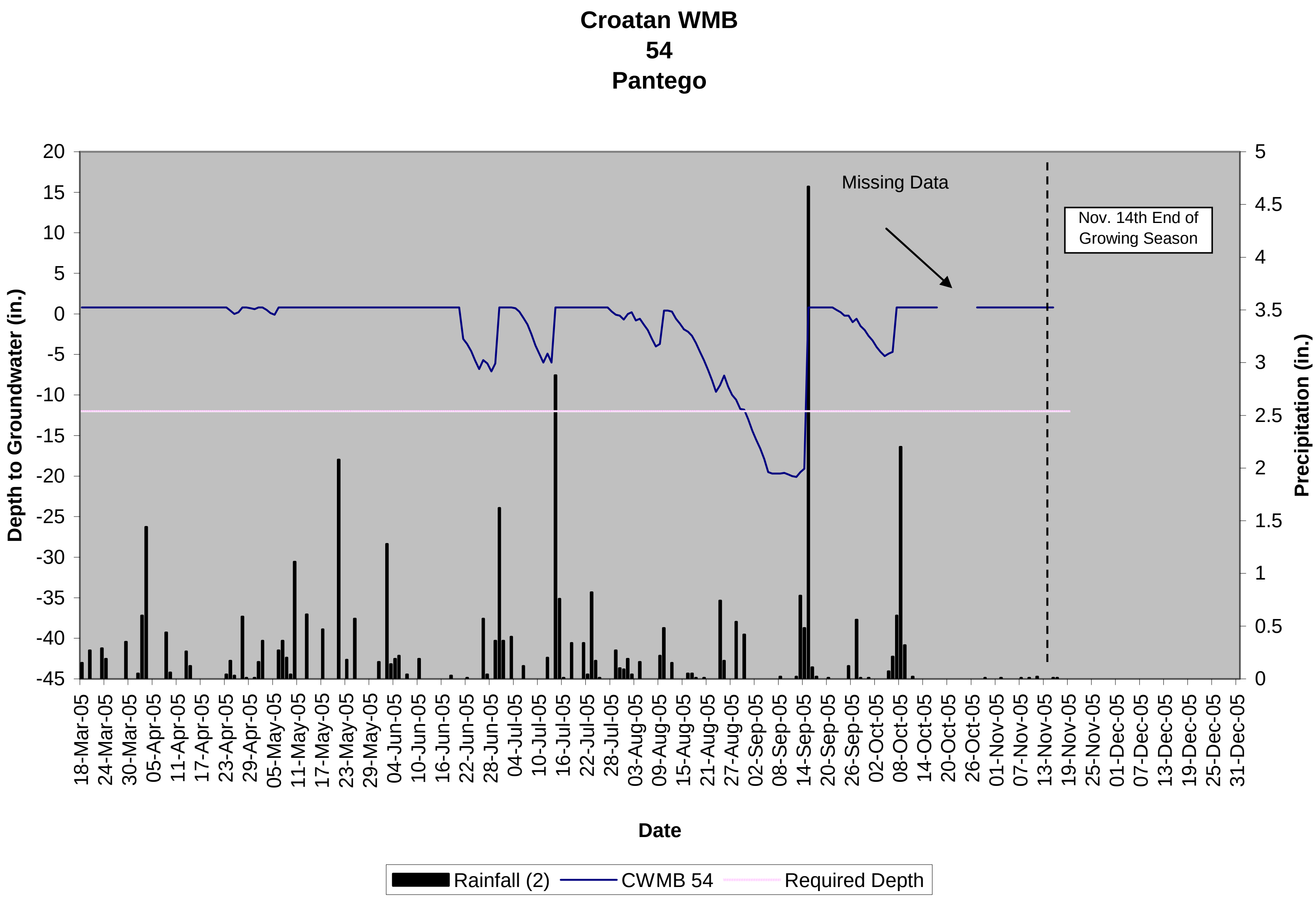
Croatan WMB
53 &112
Bayboro



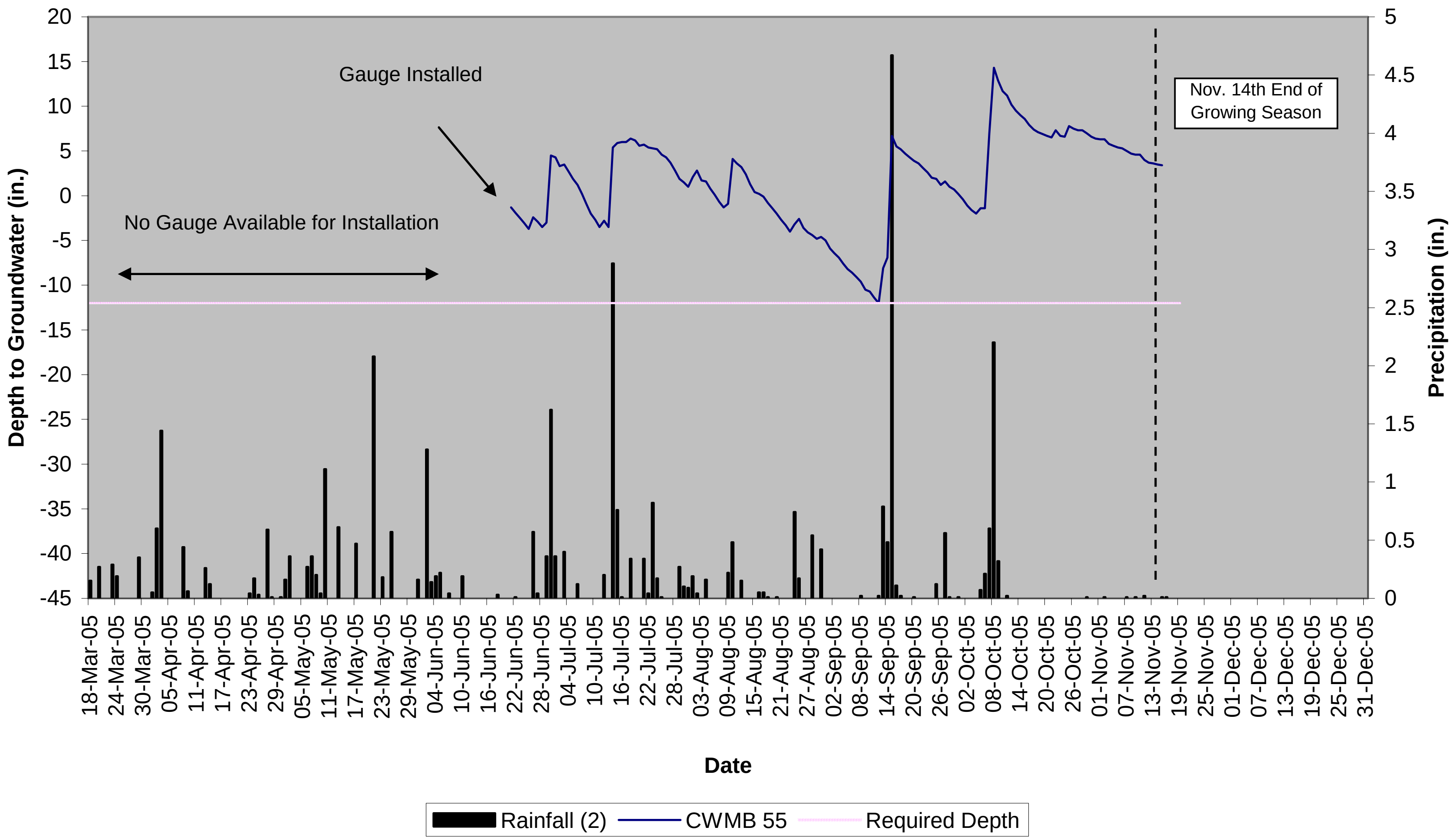


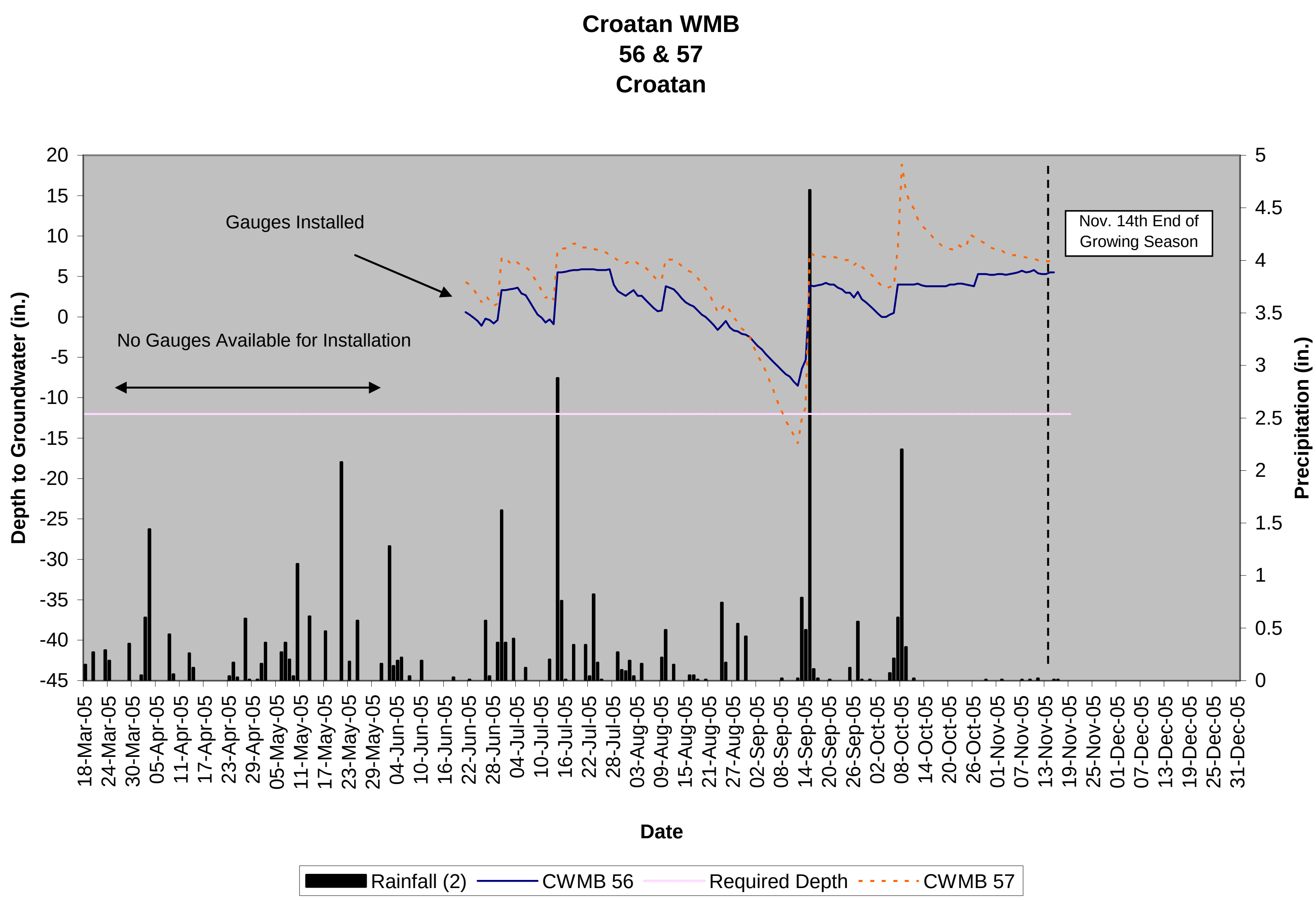
Croatan WMB
260
Bayboro
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 260
Required Depth

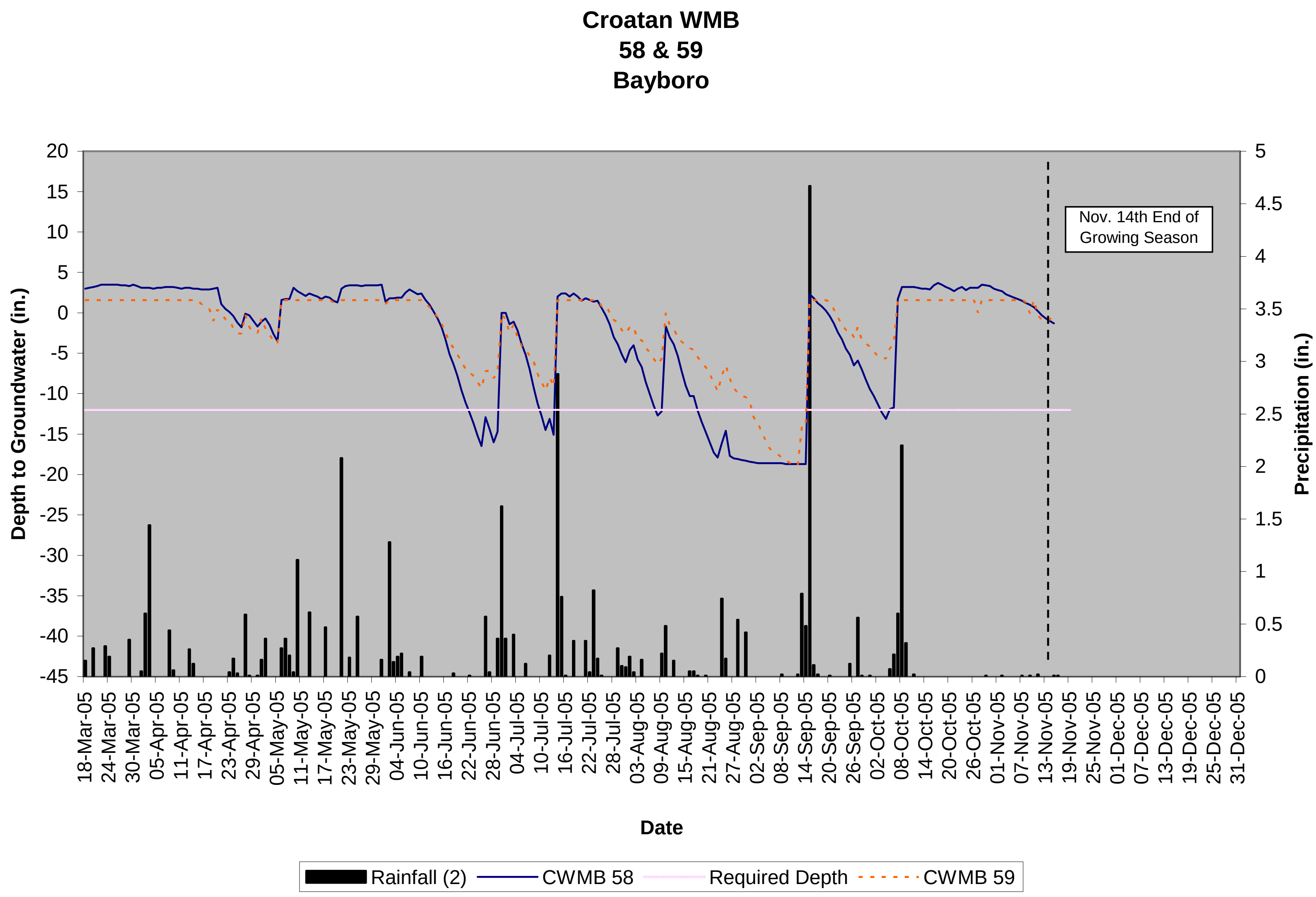
MU 4B


Croatan WMB
54
Pantego
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 54
Required Depth

Croatan WMB
55
Bayboro

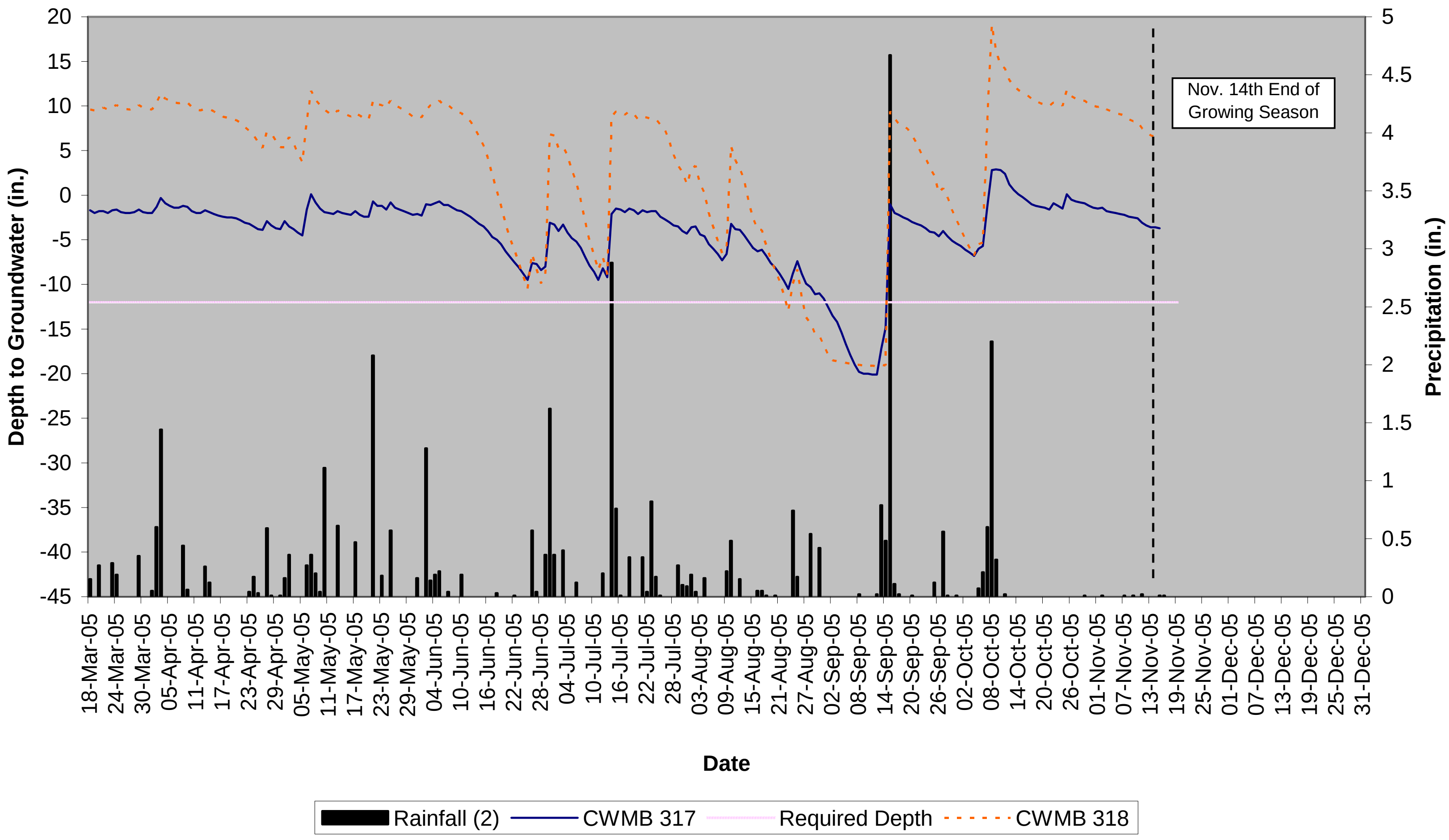



Croatan WMB
56 & 57
Croatan
Gauges Installed
No Gauges Available for Installation
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 56
Required Depth
CWMB 57



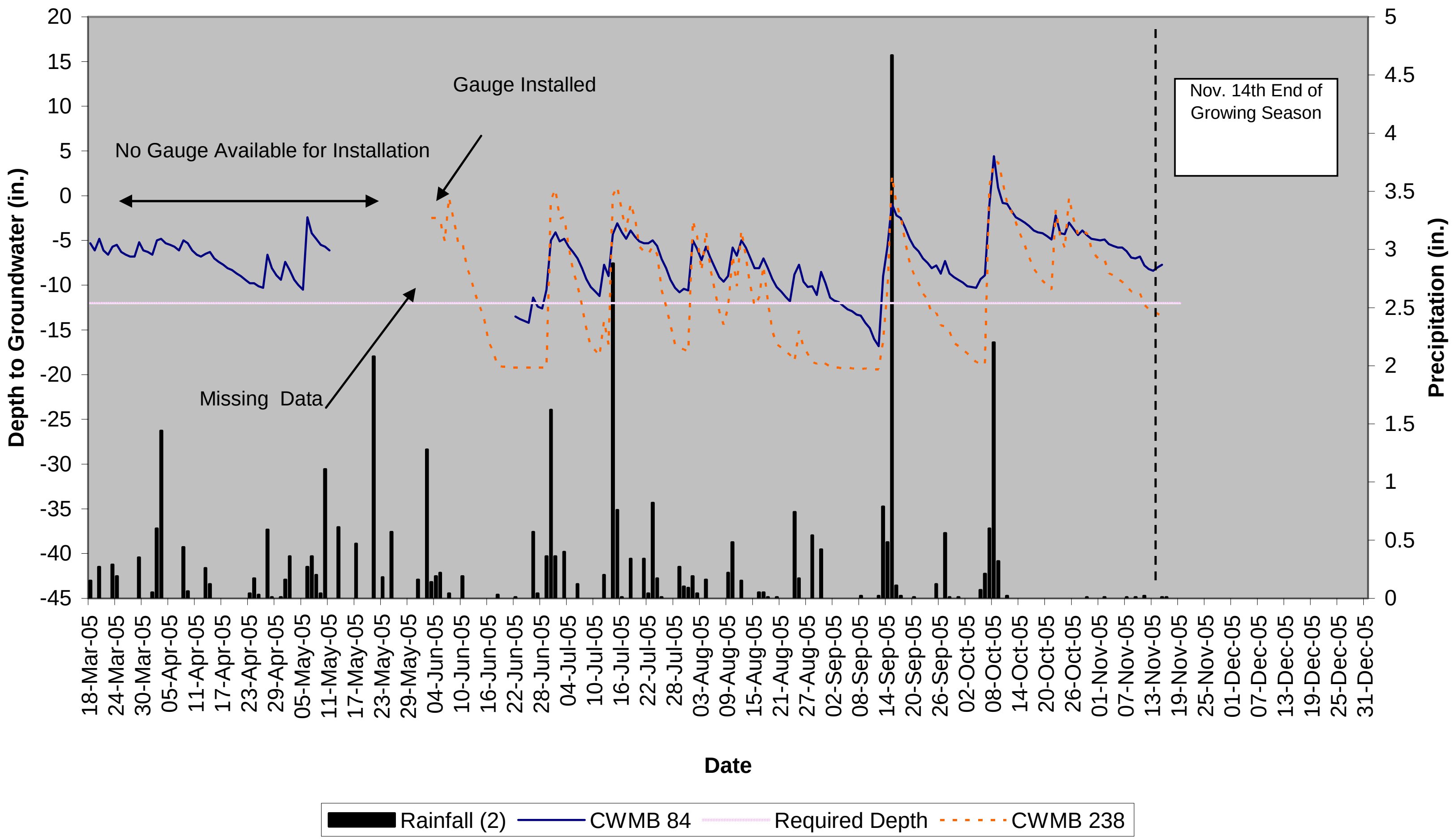
Croatan WMB
58 & 59
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Date
Rainfall (2)
CWMB 58
Required Depth
CWMB 59

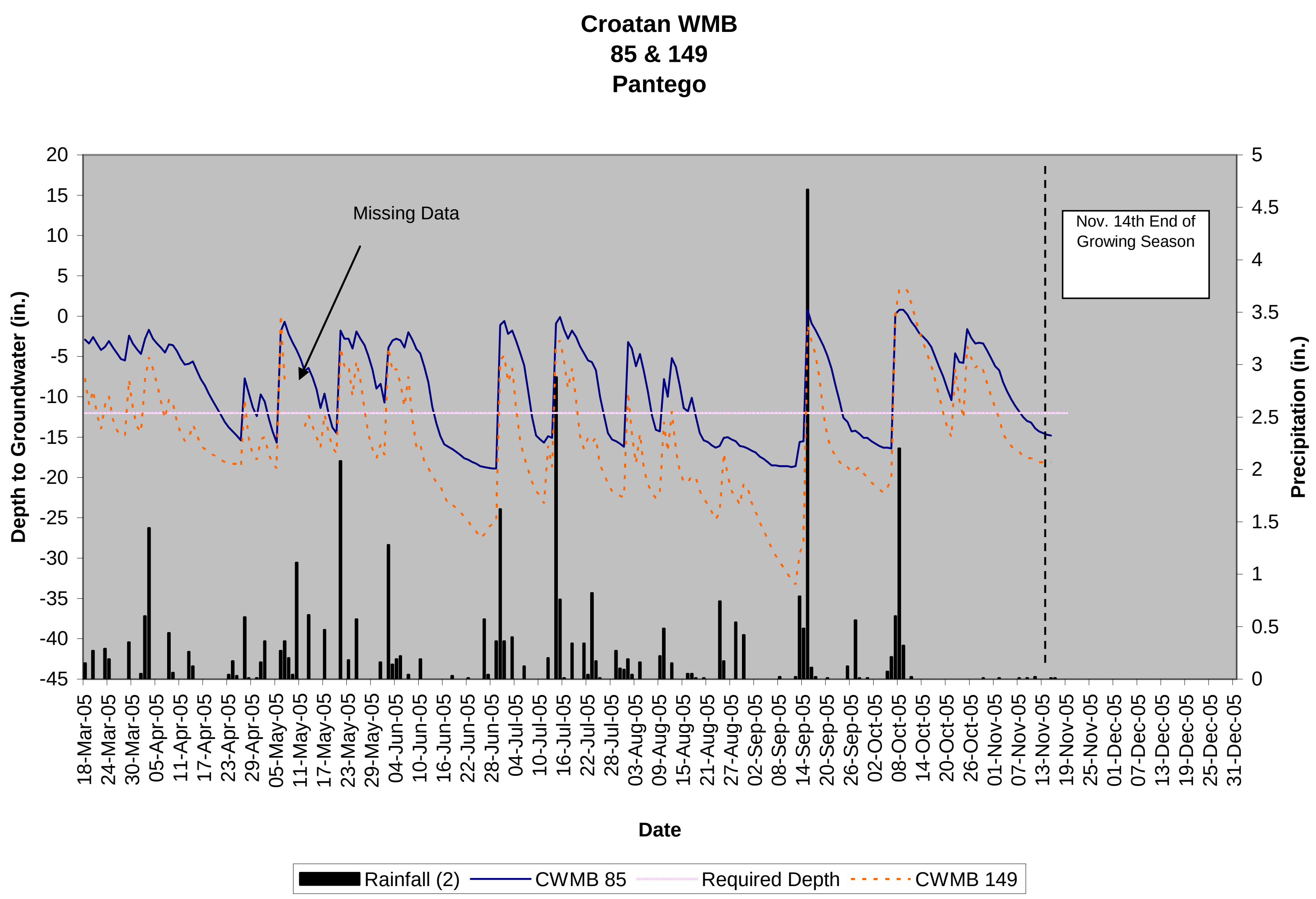
Croatan WMB
317 & 318
Bayboro

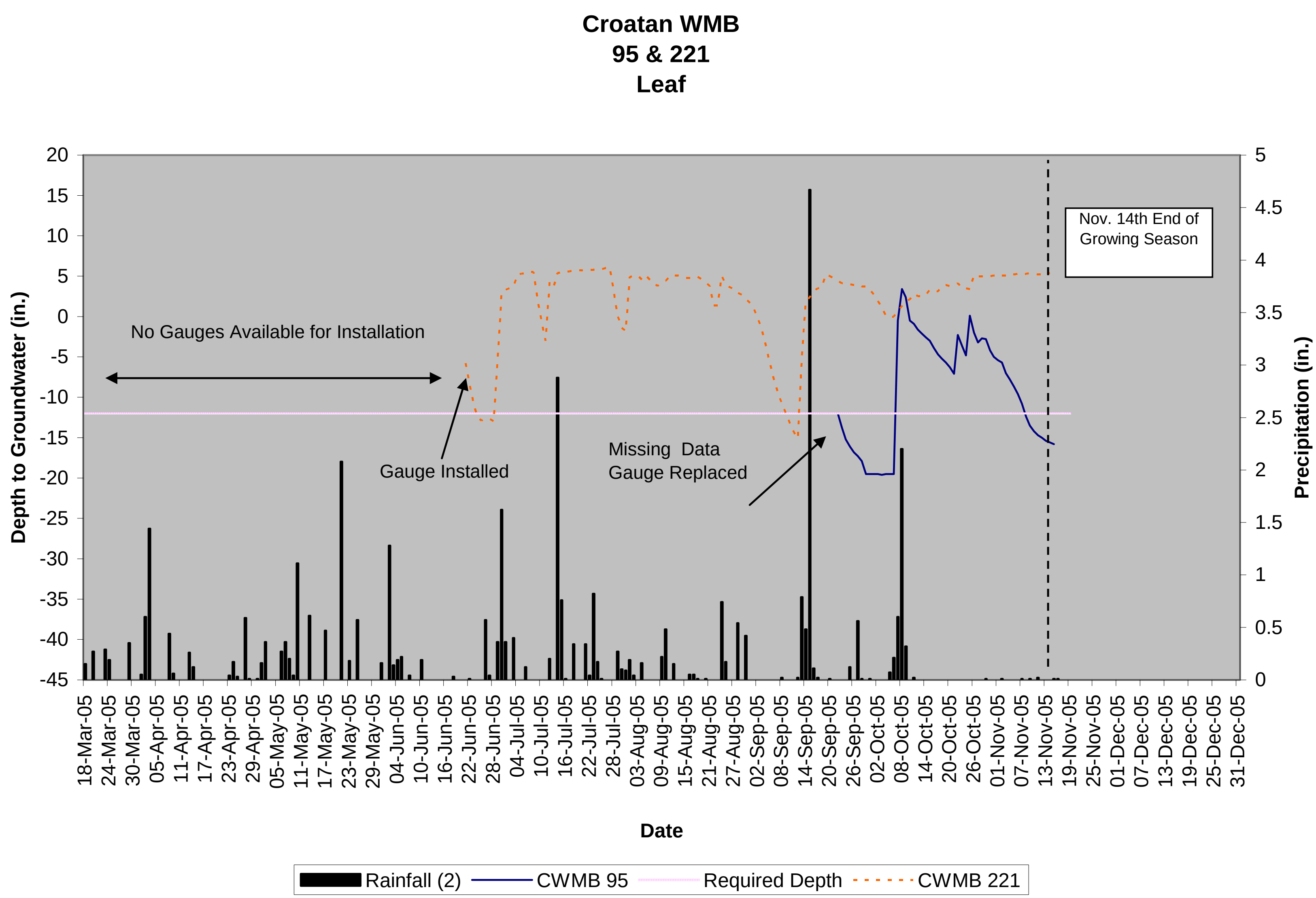


MU 5

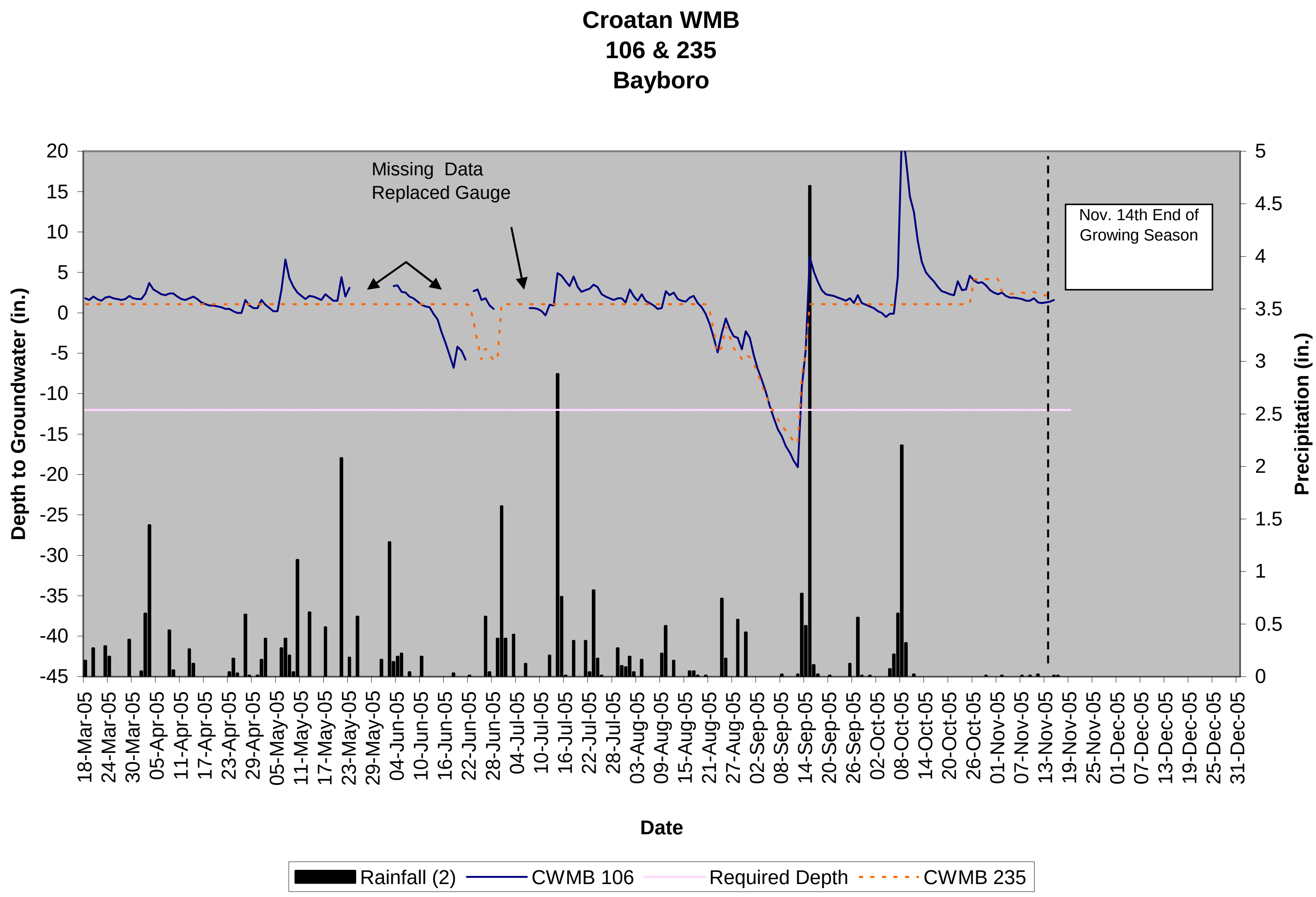
Croatan WMB
84 & 238
Rains




Croatan WMB
85 & 149
Pantego
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 85
Required Depth
CWMB 149



Croatan WMB
95 & 221
Leaf
Depth to Groundwater (in.)
Precipitation (in.)
No Gauges Available for Installation
Gauge Installed
Missing Data
Gauge Replaced
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 95
Required Depth
CWMB 221


Croatan WMB
106 & 235
Bayboro
Missing Data
Replaced Gauge
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
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28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
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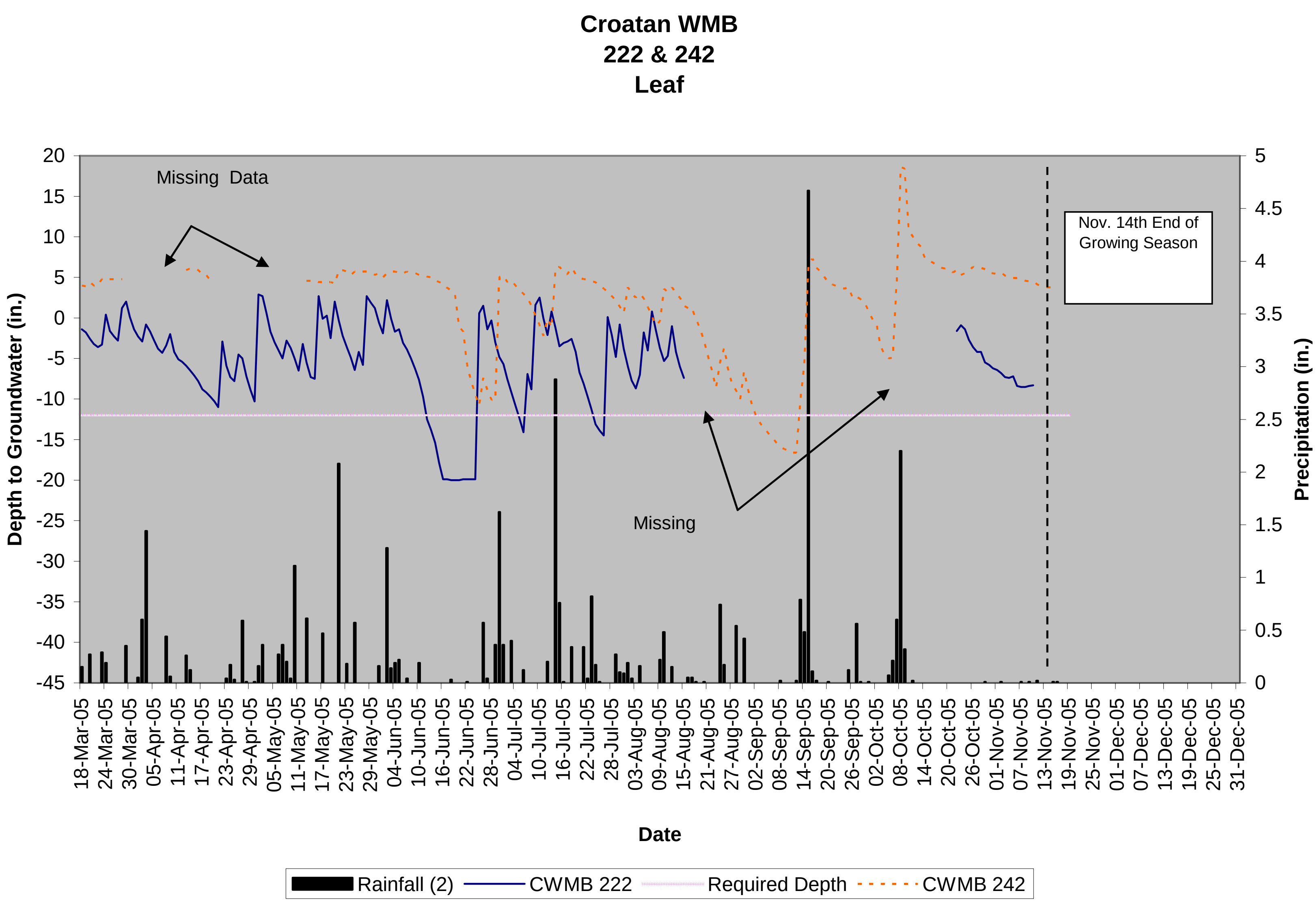
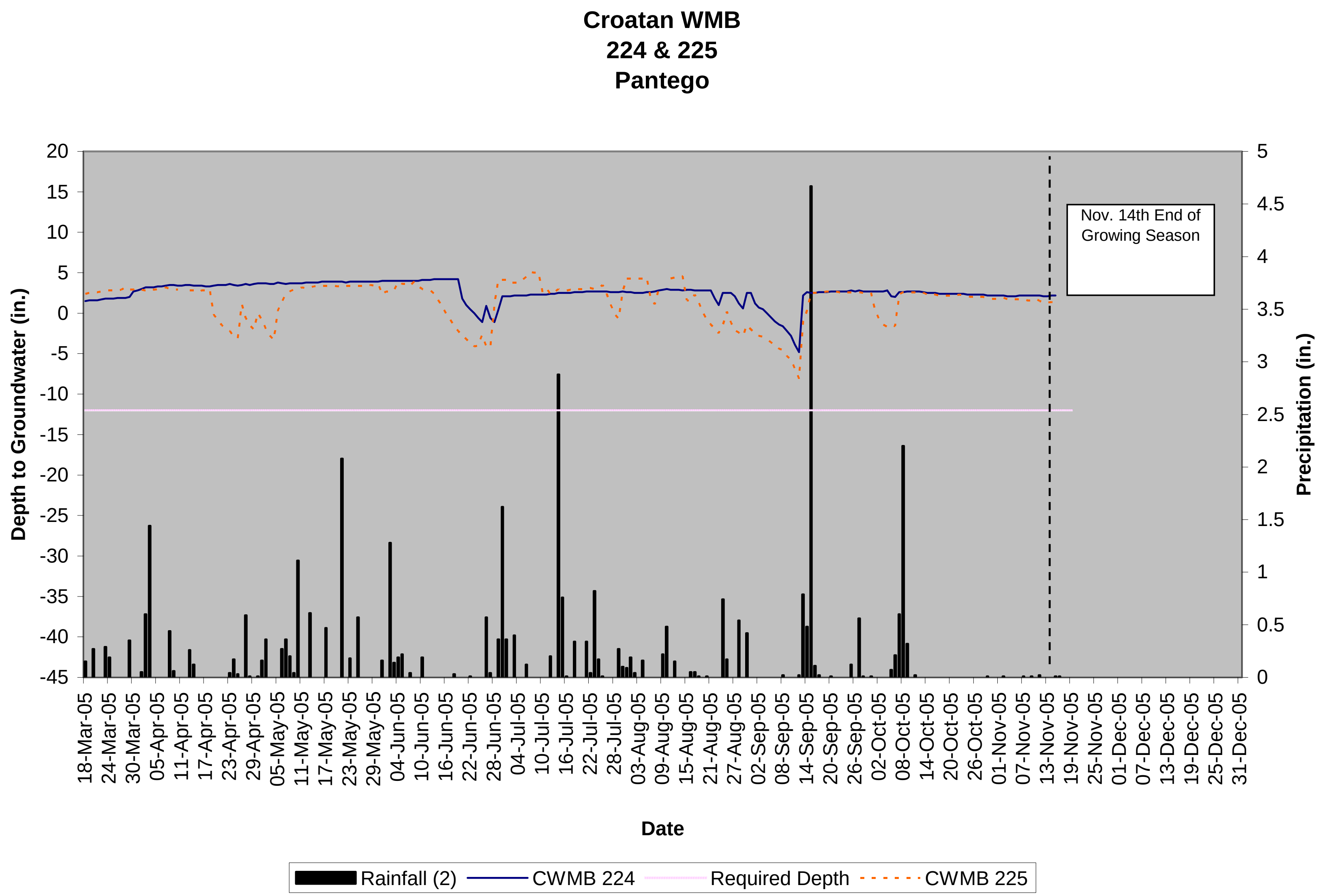
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 106
Required Depth
CWMB 235

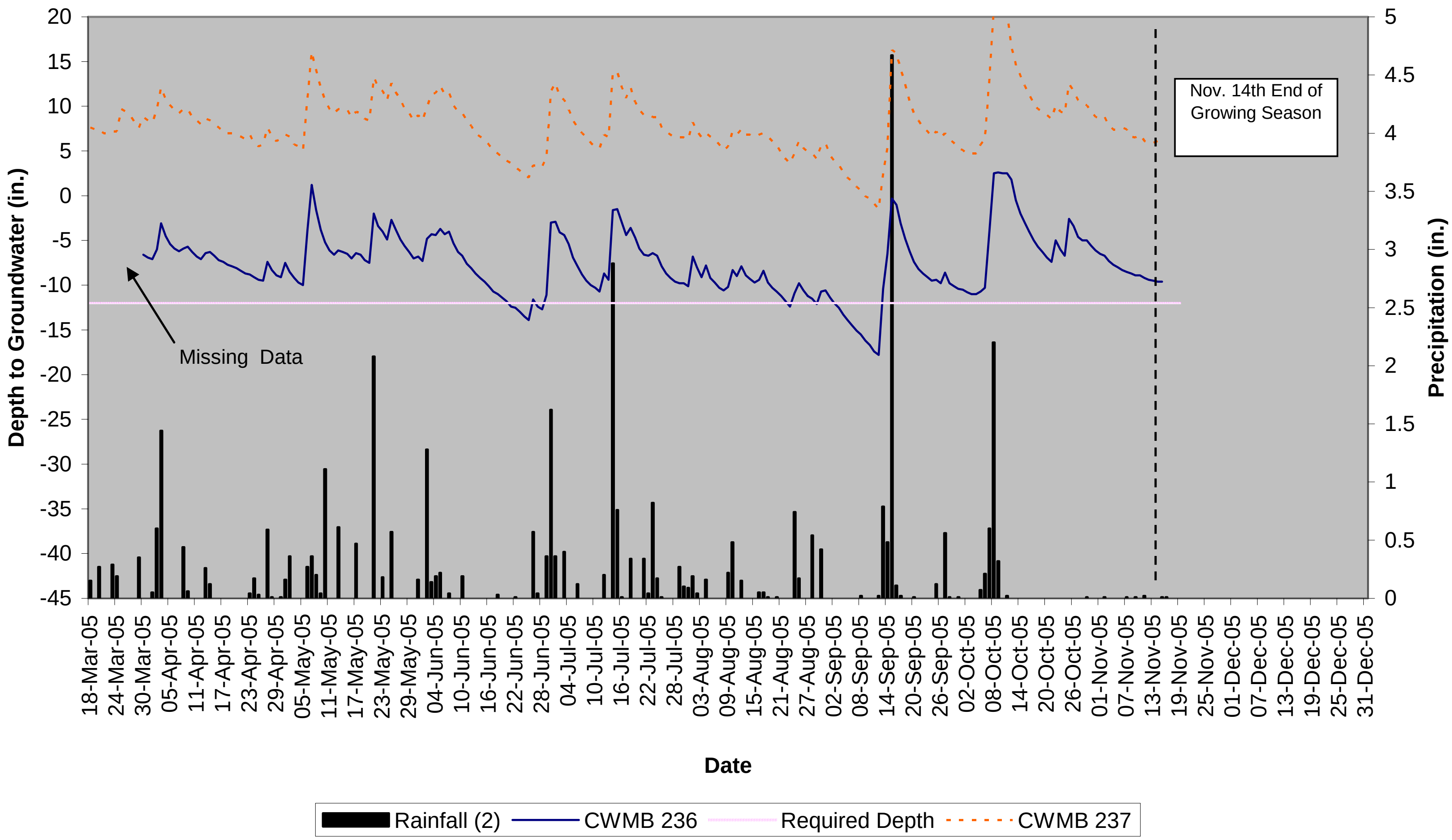


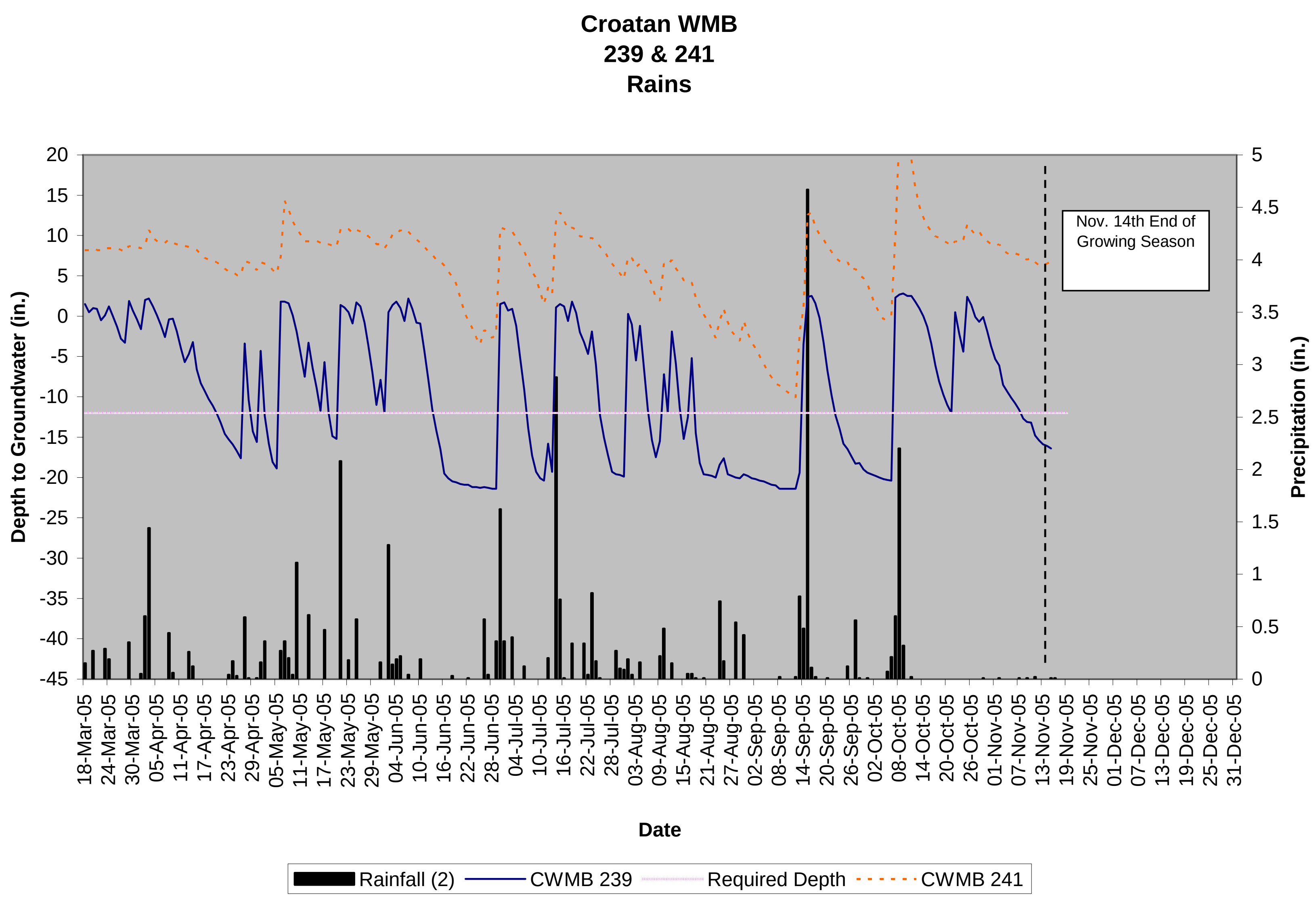
Croatan WMB
222 & 242
Leaf
Missing Data
Missing
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 222
Required Depth
CWMB 242



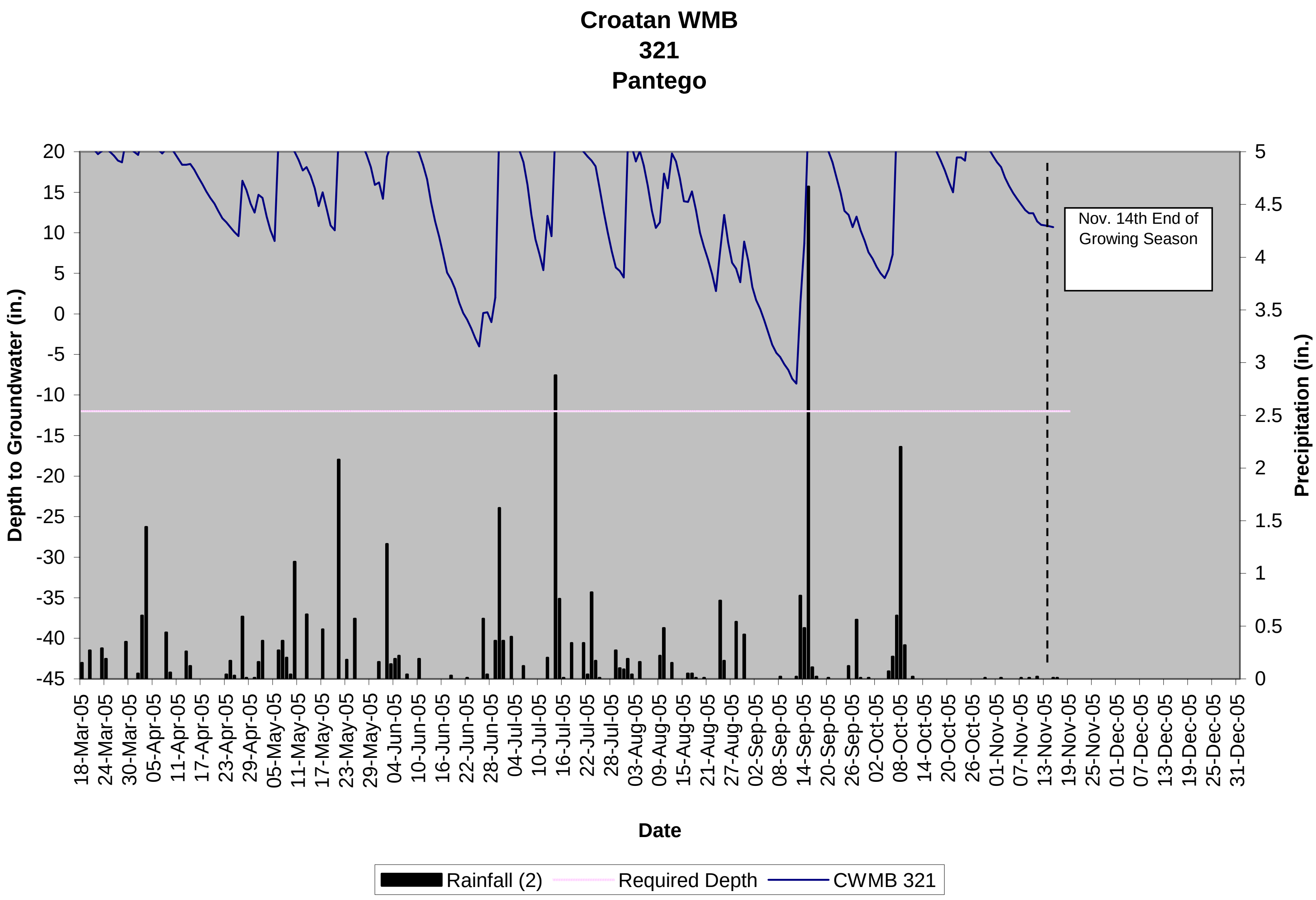
Croatan WMB
224 & 225
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 224
Required Depth
CWMB 225

Croatan WMB
236 & 237
Masontown/Muckalee





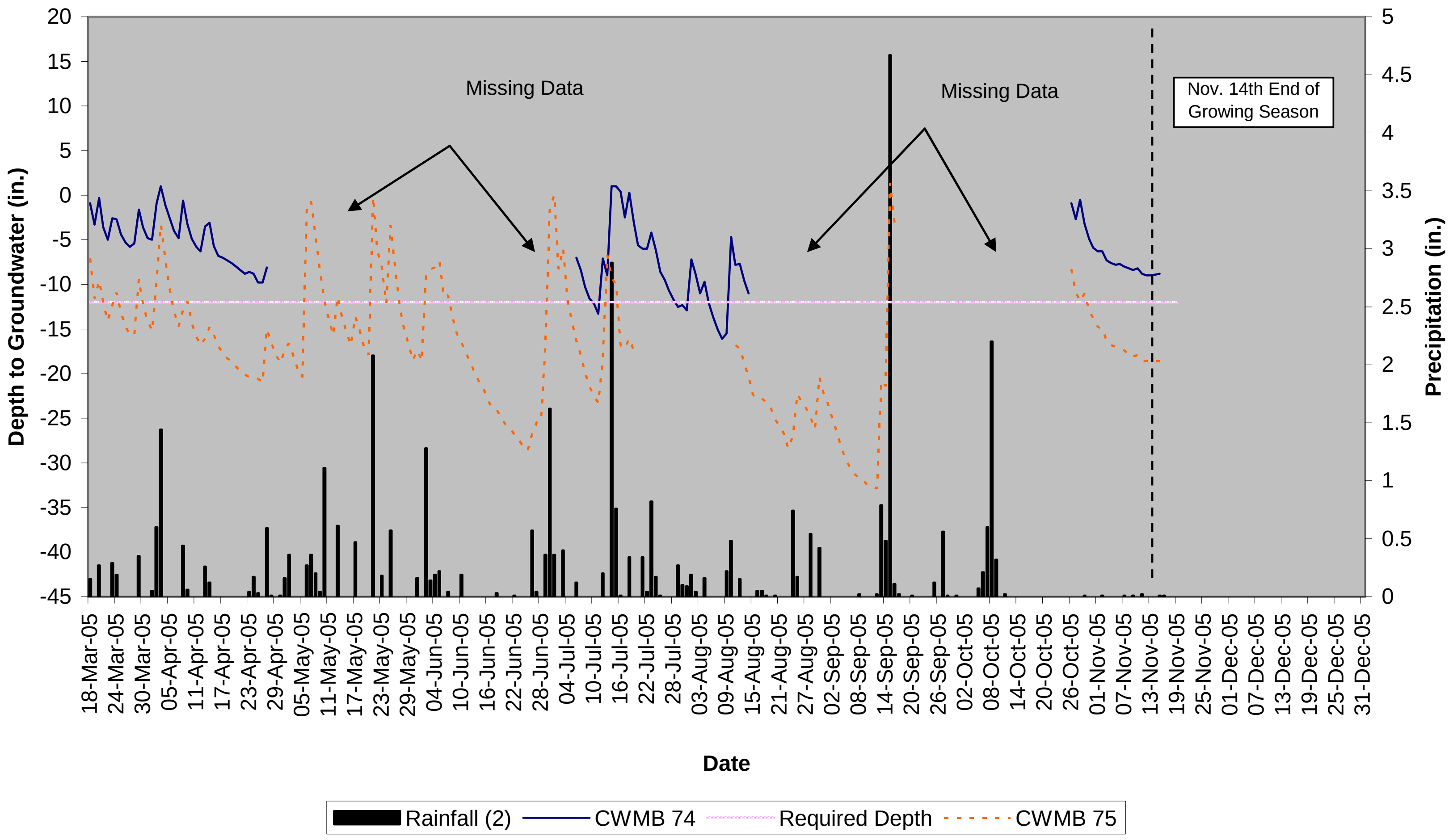
Croatan WMB
239 & 241
Rains
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 239
Required Depth
CWMB 241

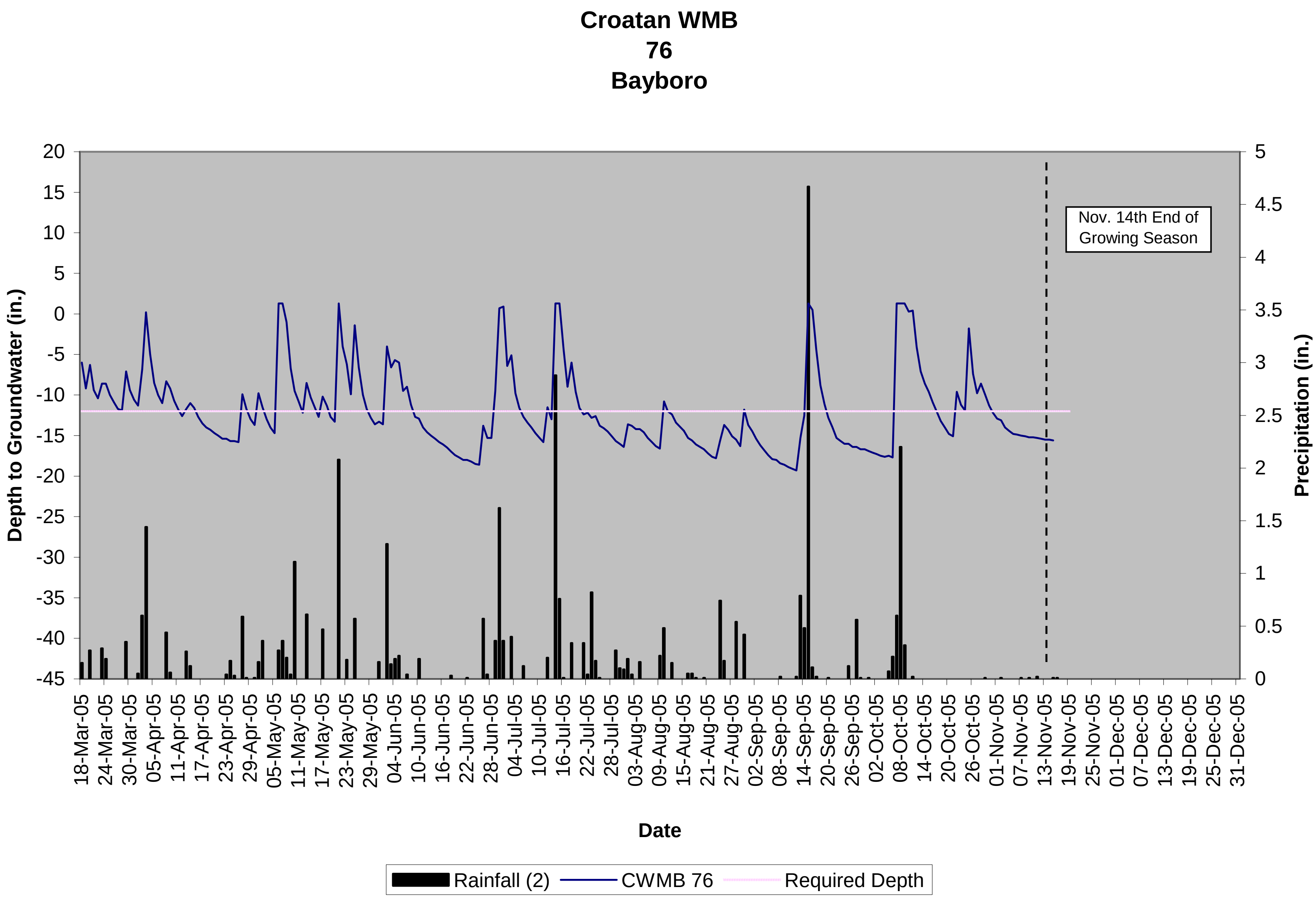


Croatan WMB
321
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
Required Depth
CWMB 321

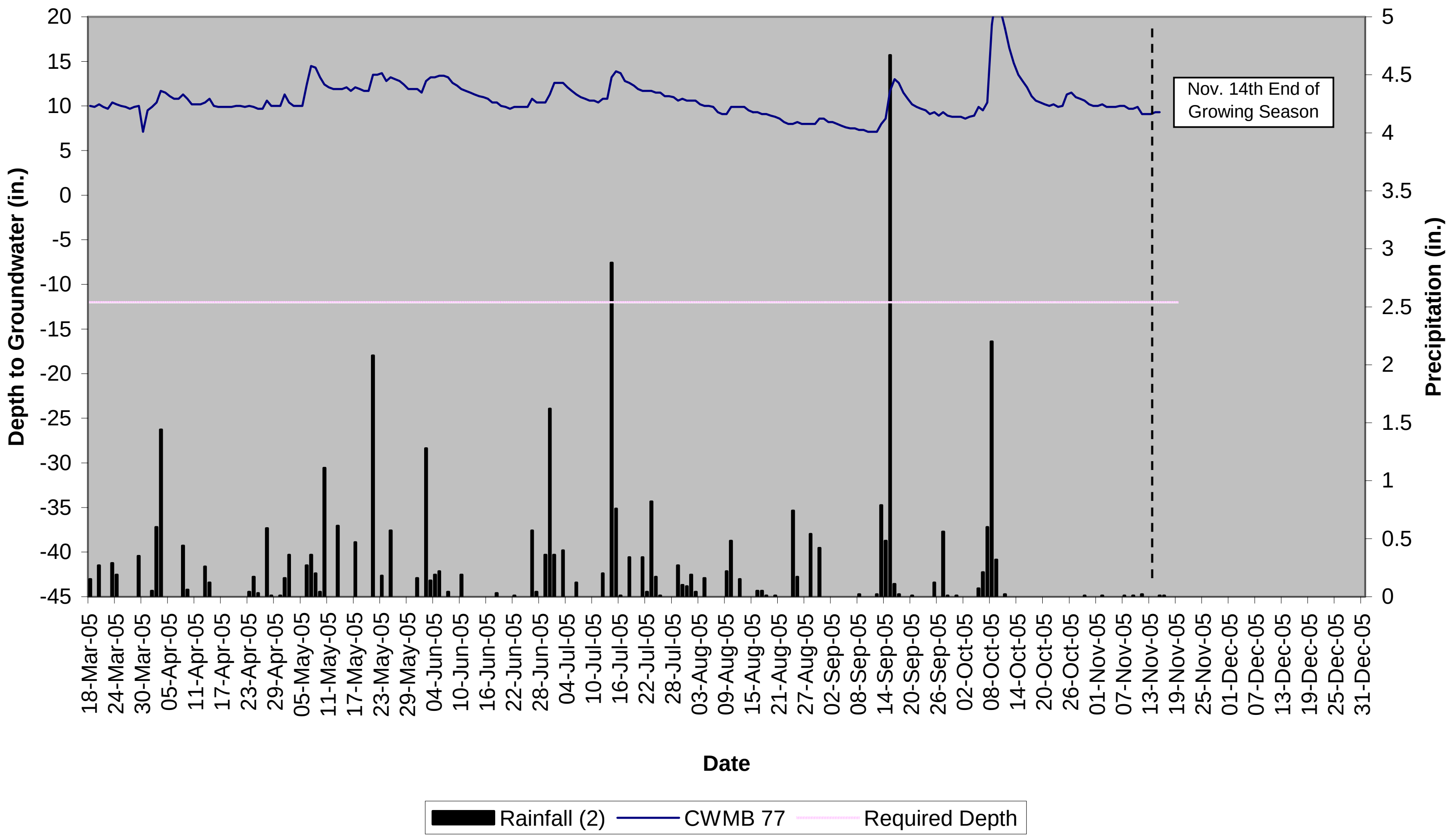
MU 6

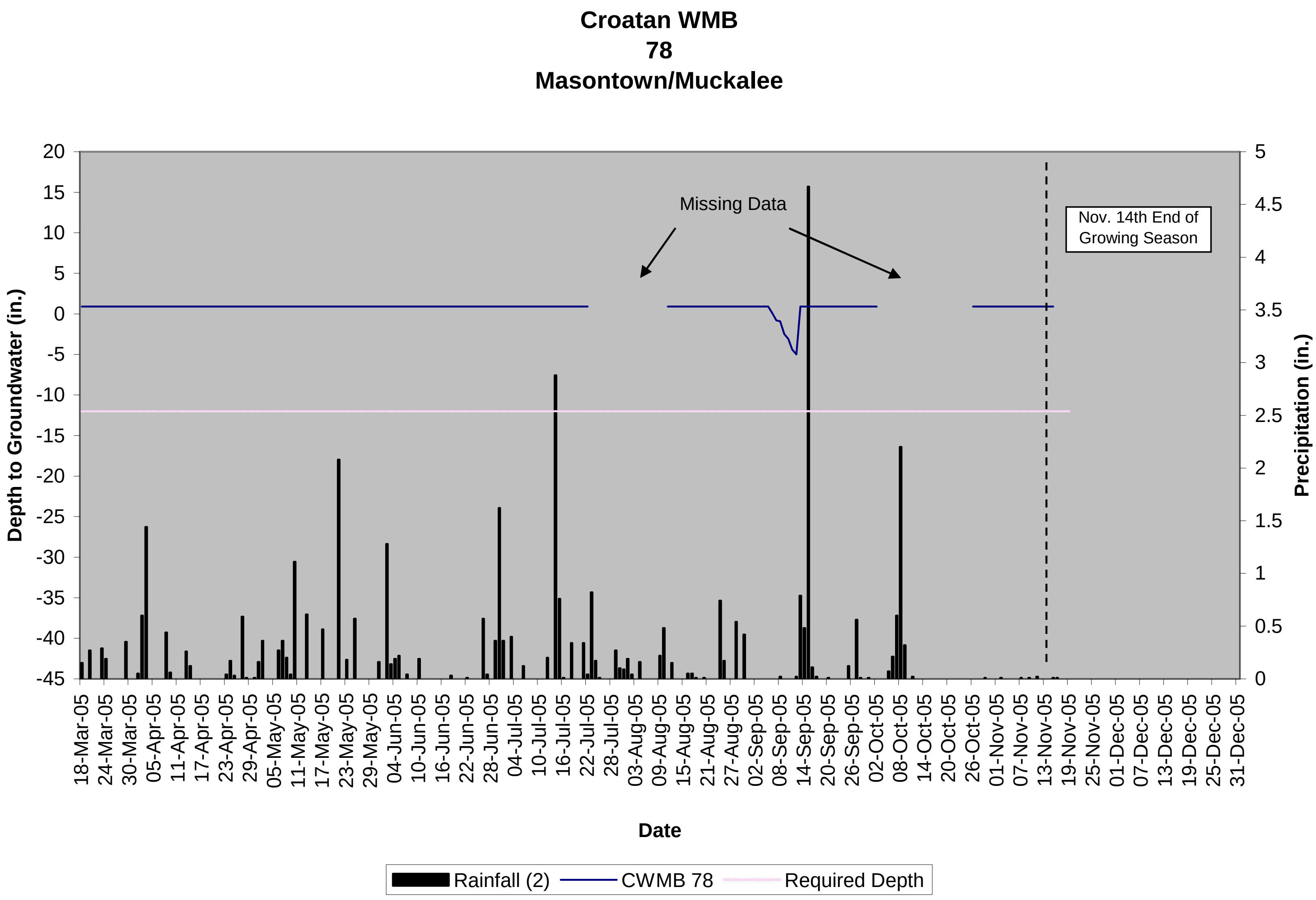
Croatan WMB
74 & 75
Bayboro




Croatan WMB
76
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 76
Required Depth

Croatan WMB
77
Croatan





Croatan WMB
78
Masontown/Muckalee
Depth to Groundwater (in.)
Precipitation (in.)
Missing Data
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
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26-Sep-05
02-Oct-05
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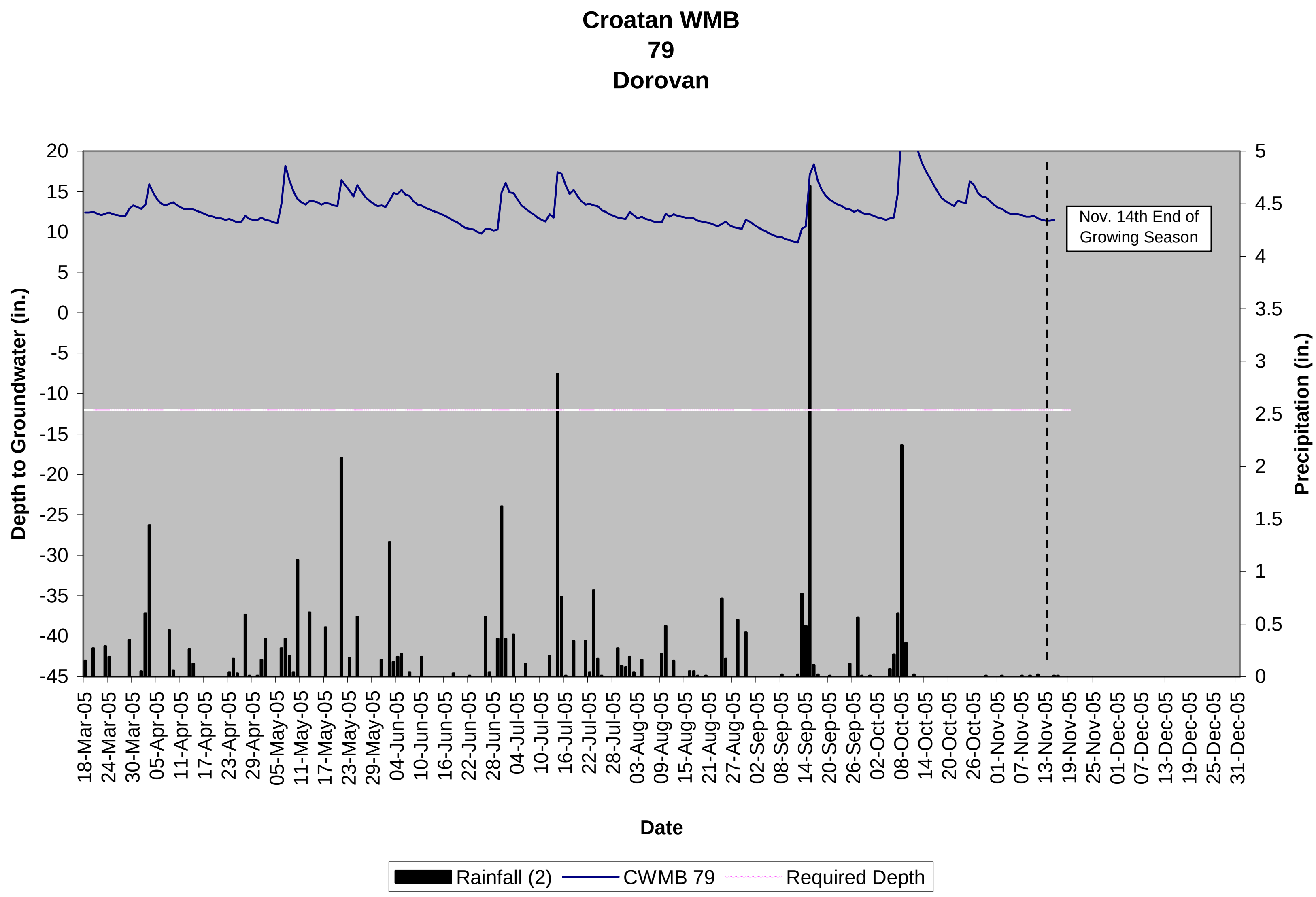
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Date
Rainfall (2)
CWMB 78
Required Depth


Croatan WMB
79
Dorovan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 79
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
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0.5
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18-Mar-05
24-Mar-05
30-Mar-05
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22-Jul-05
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20-Sep-05
26-Sep-05
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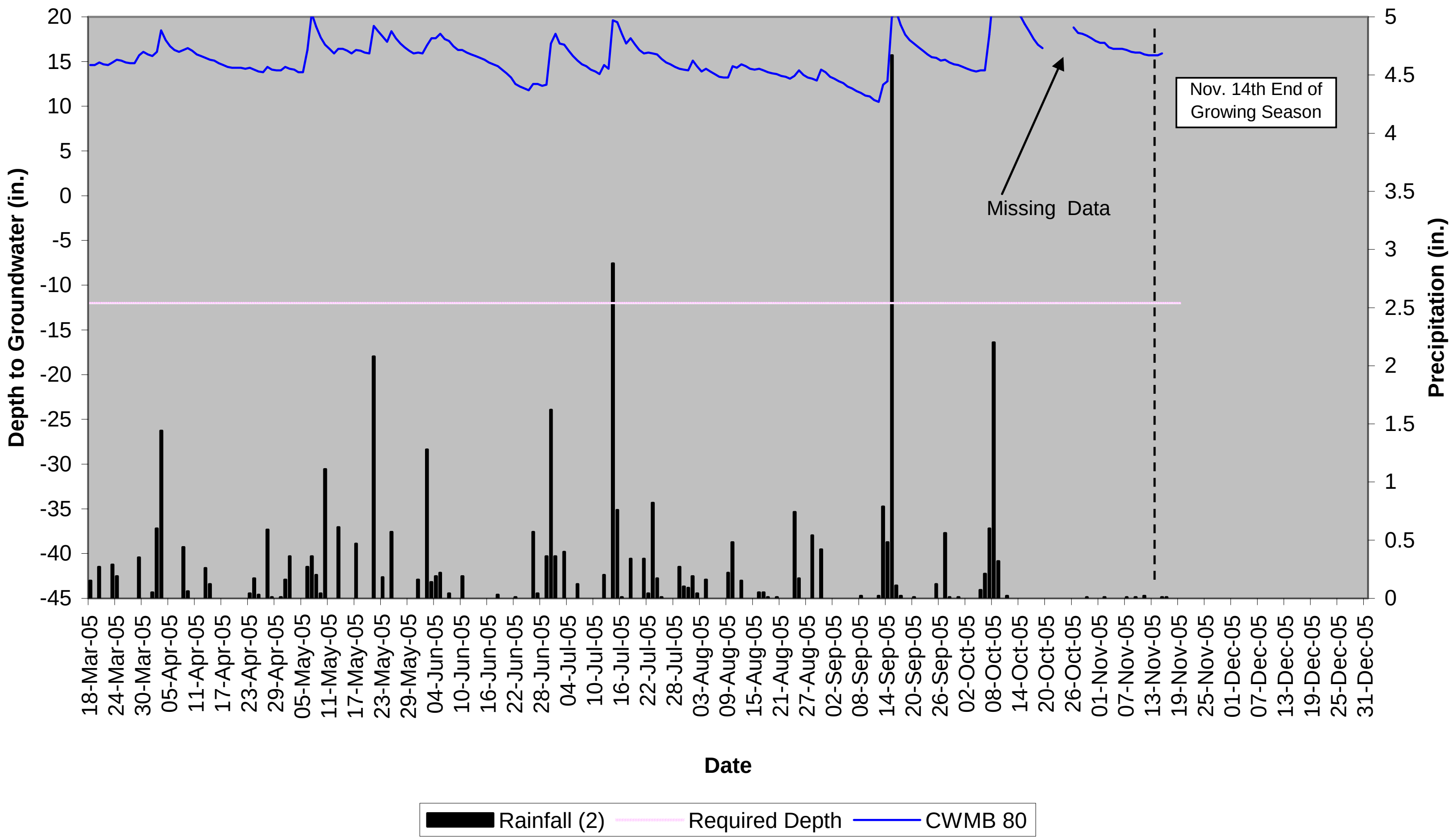
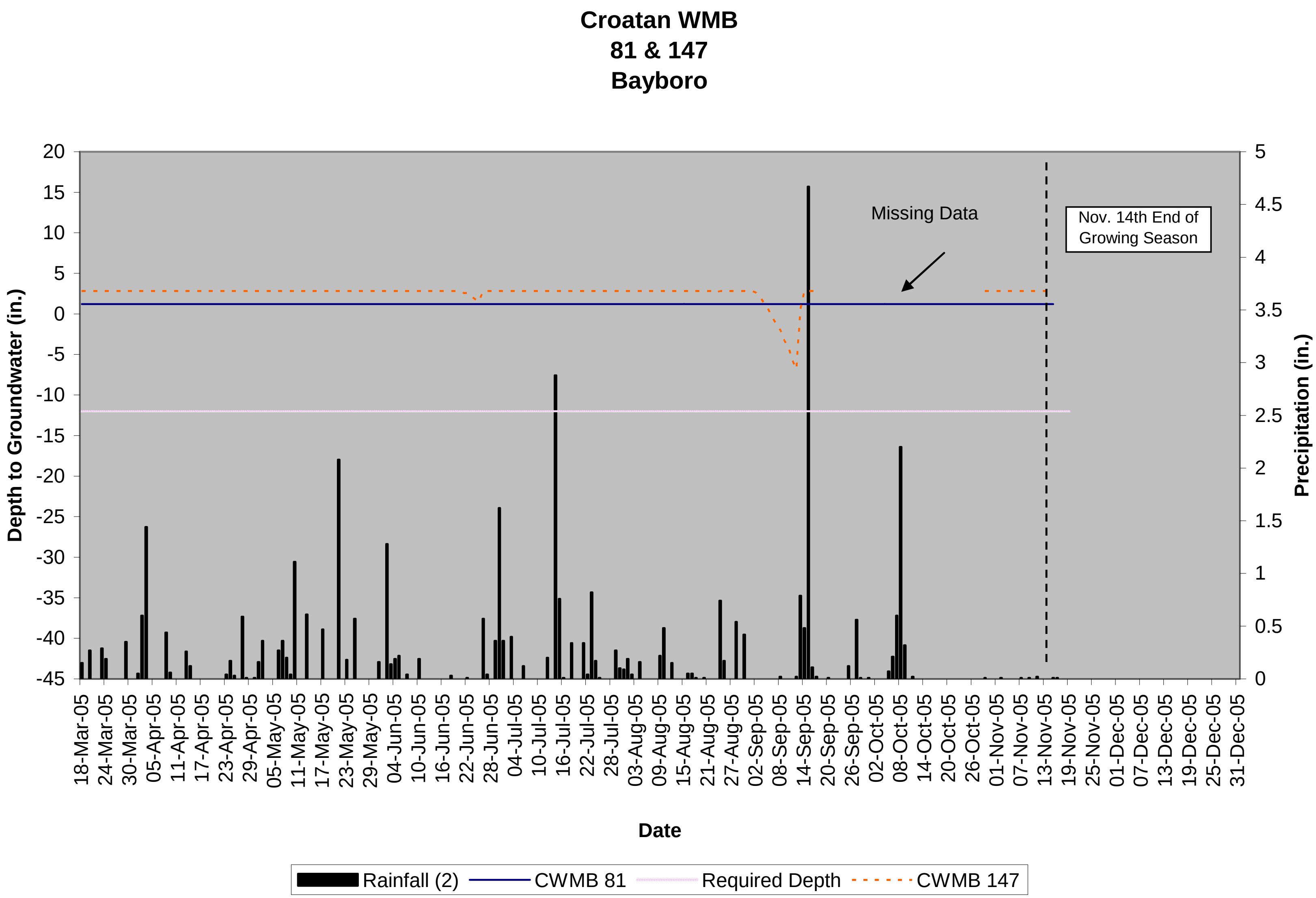
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

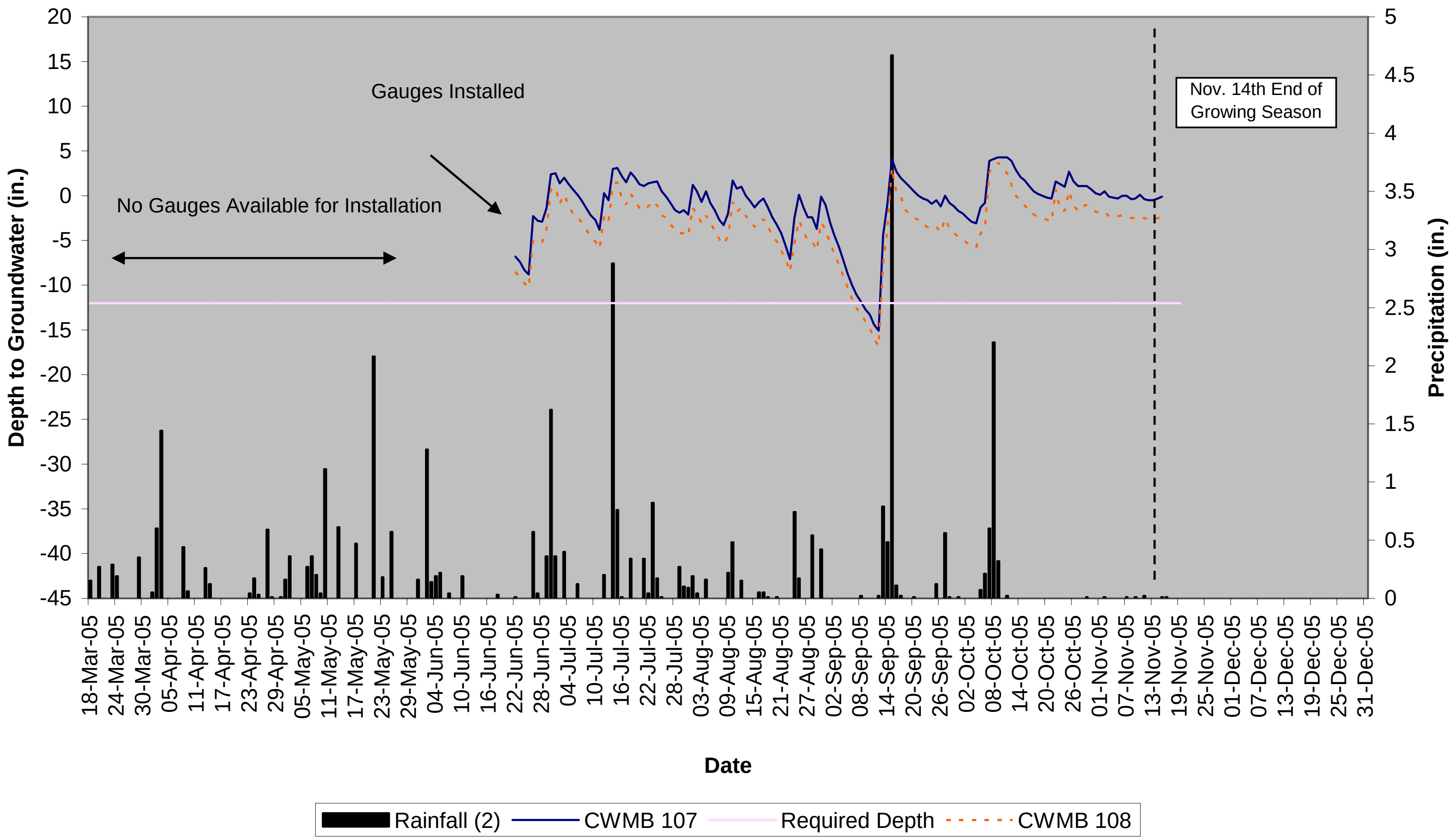
Croatan WMB
80
Dorovan

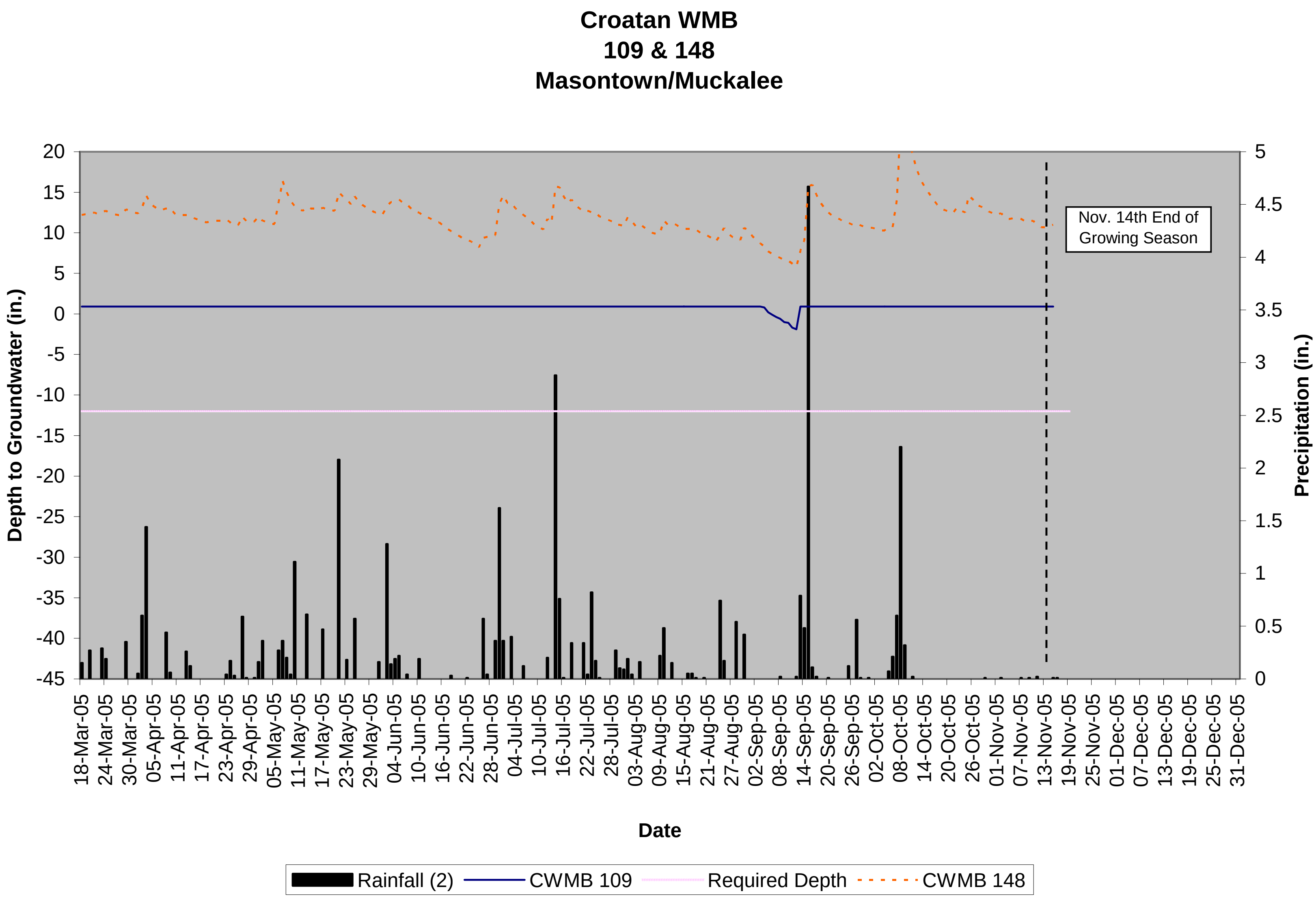




Croatan WMB
81 & 147
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Missing Data
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 81
Required Depth
CWMB 147

Croatan WMB
107 & 108
Bayboro





Croatan WMB
109 & 148
Masontown/Muckalee
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
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1.5
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0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
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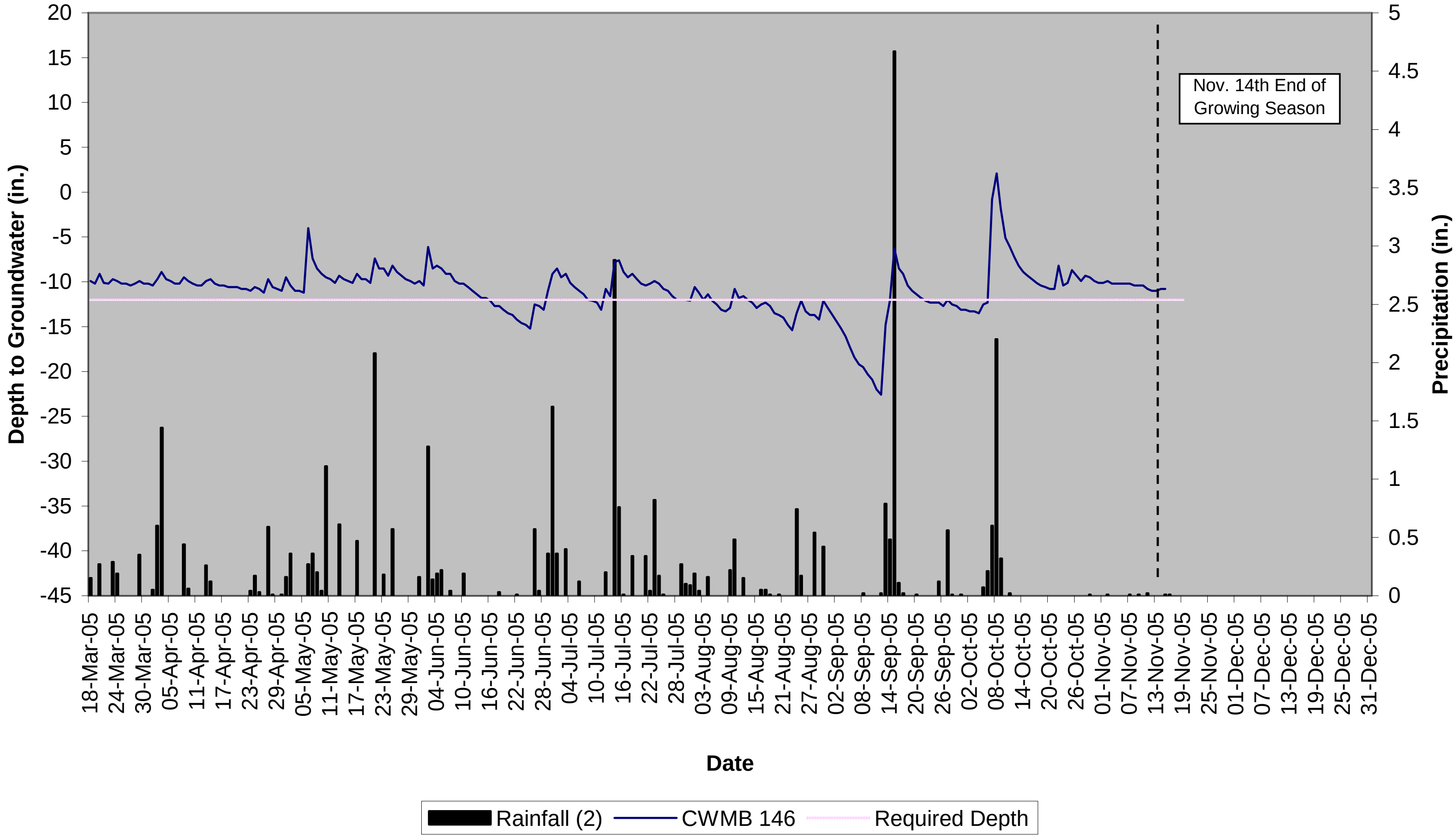
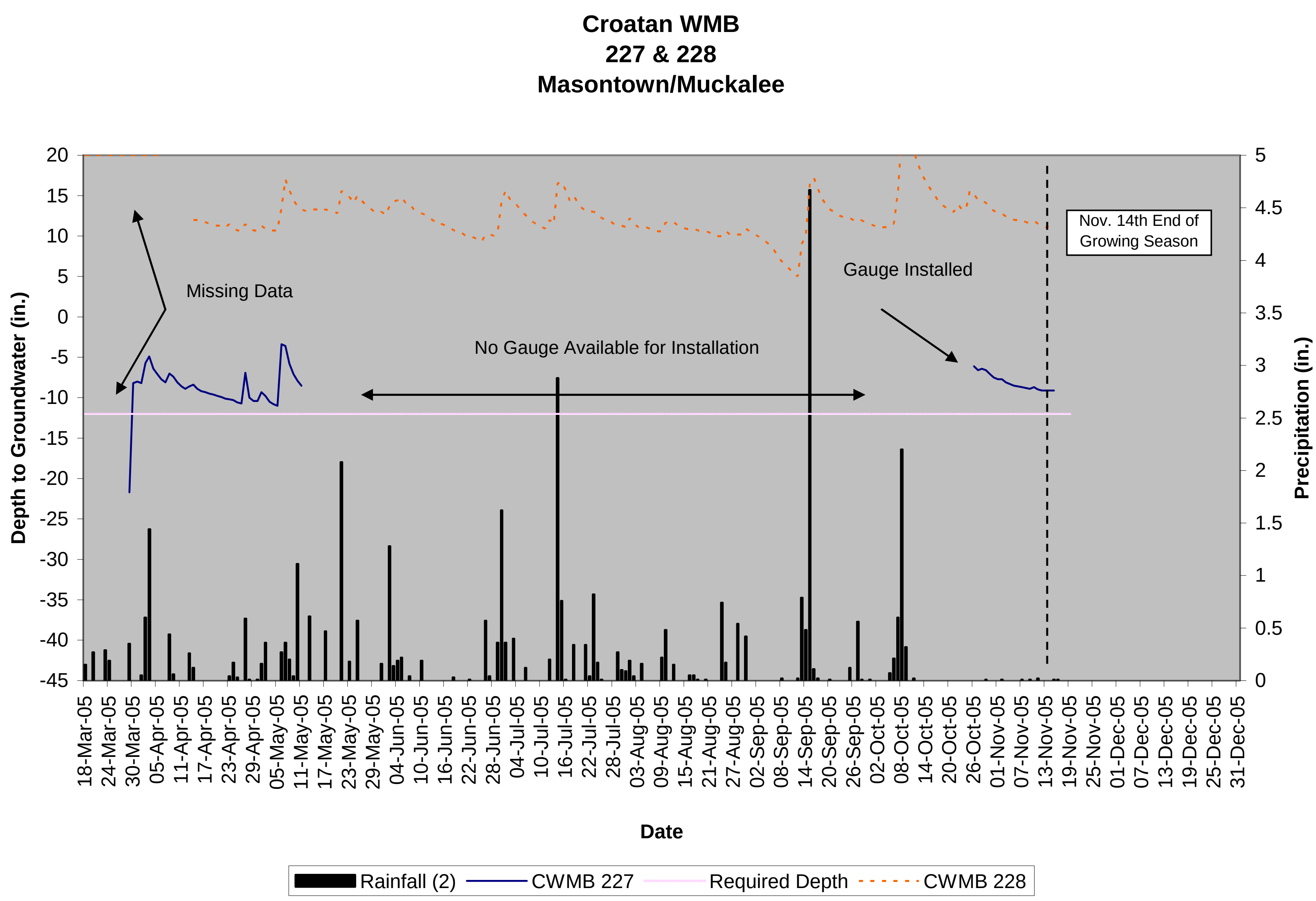
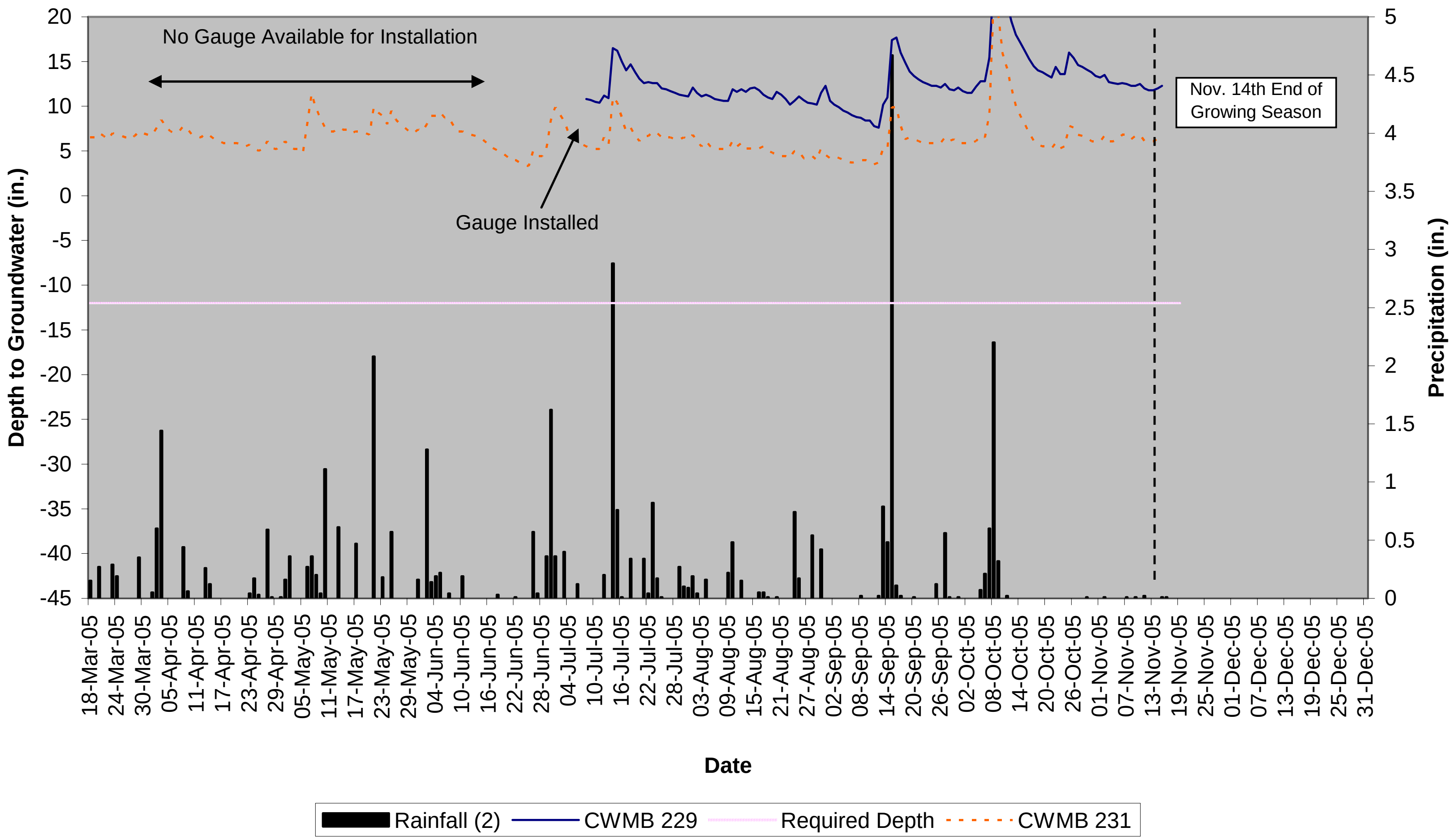
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 109
Required Depth
CWMB 148

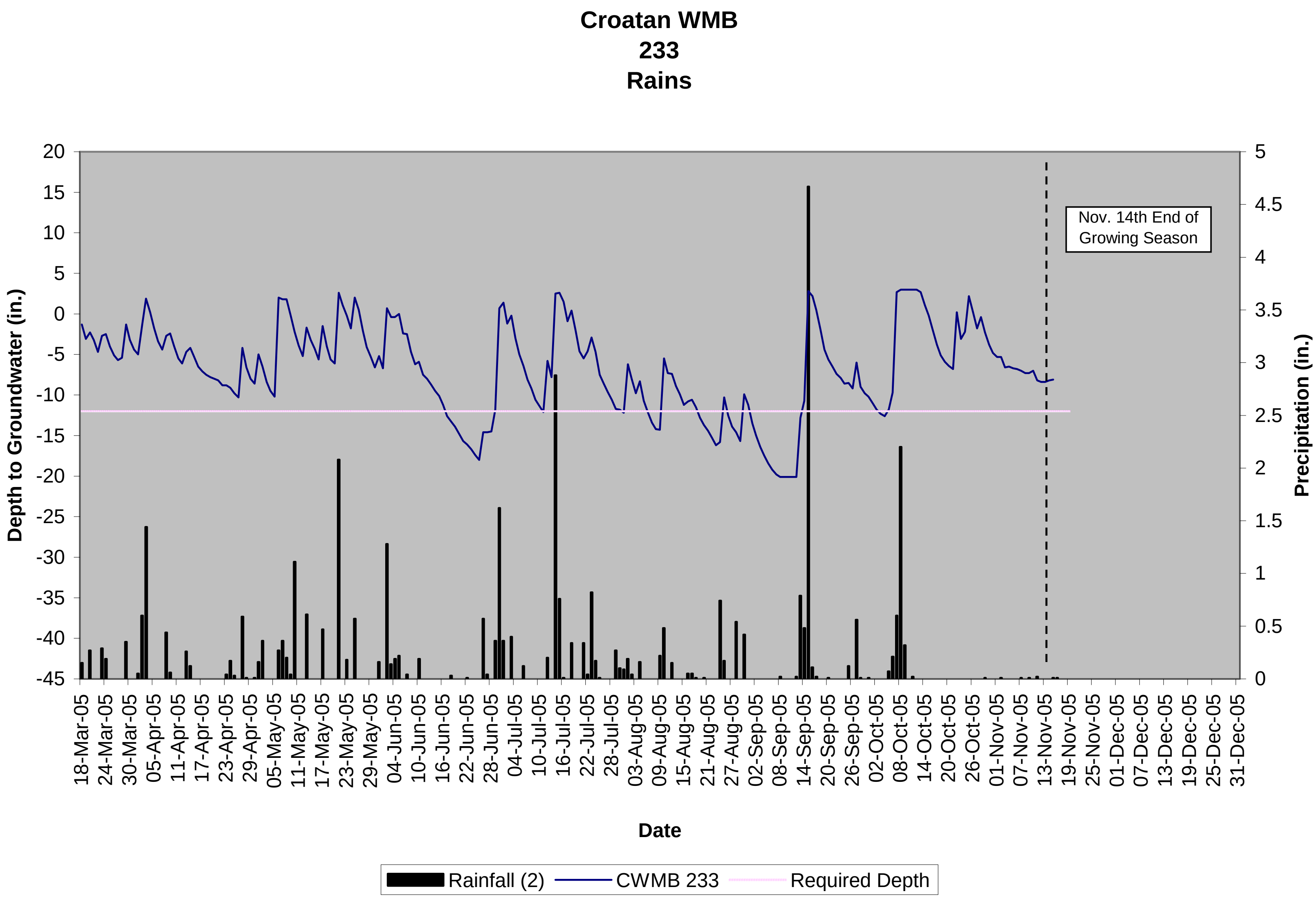
Croatan WMB
146
Leaf



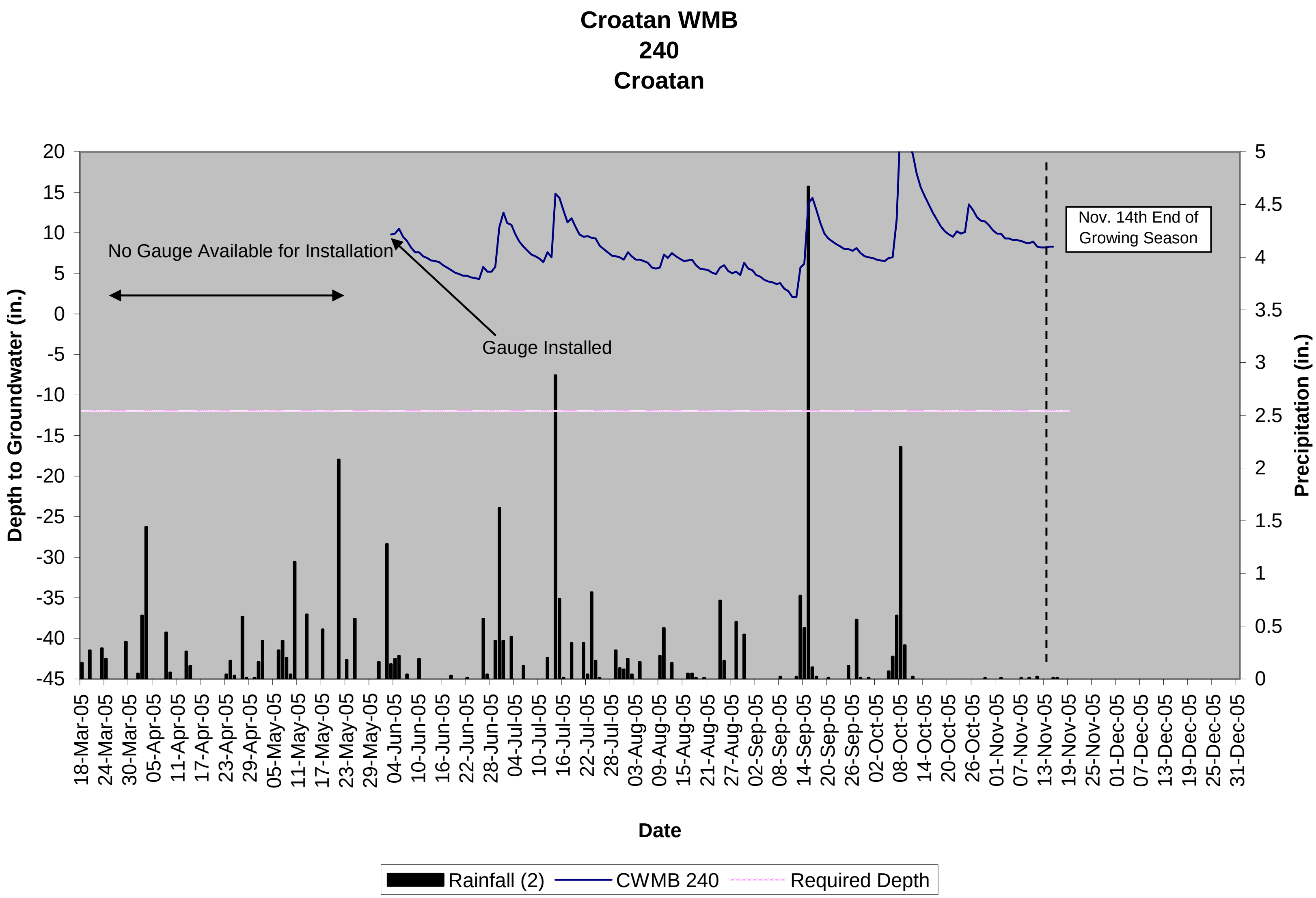

Croatan WMB
227 & 228
Masontown/Muckalee
Missing Data
No Gauge Available for Installation
Gauge Installed
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 227
Required Depth
CWMB 228

Croatan WMB
229 & 231
Croatan





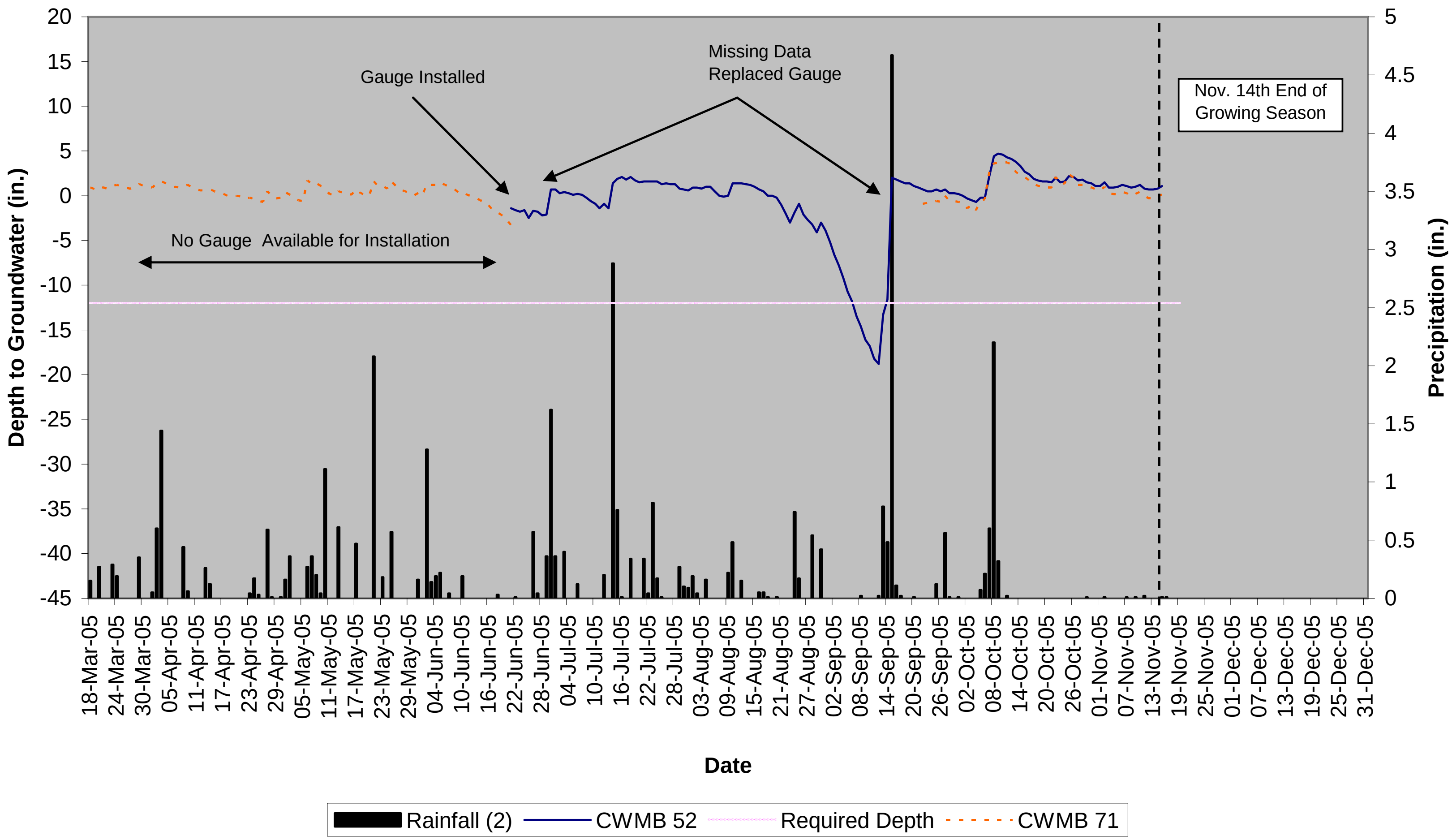
Croatan WMB
233
Rains
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 233
Required Depth



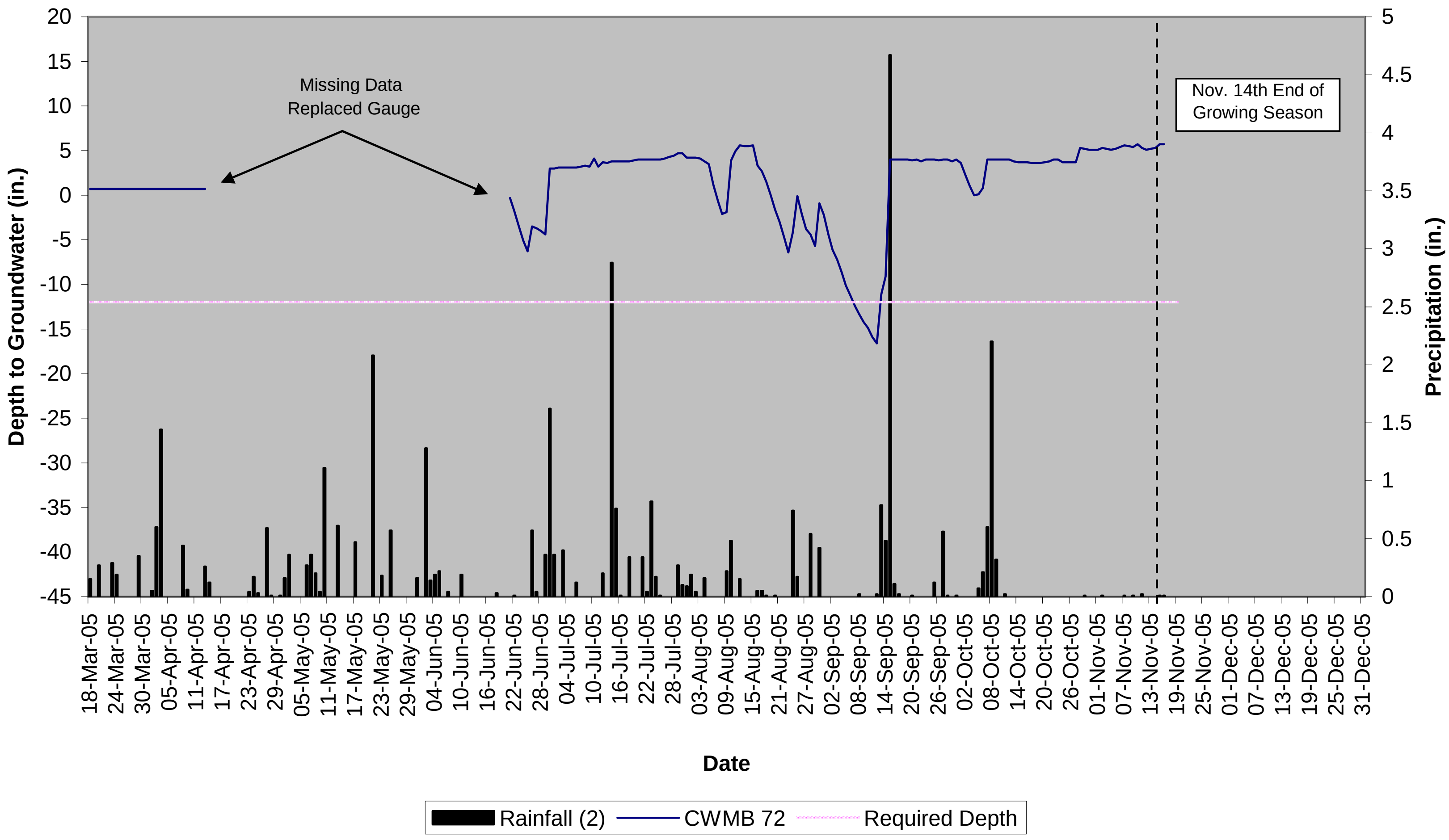
Croatan WMB
240
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
No Gauge Available for Installation
Gauge Installed
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 240
Required Depth

MU 7

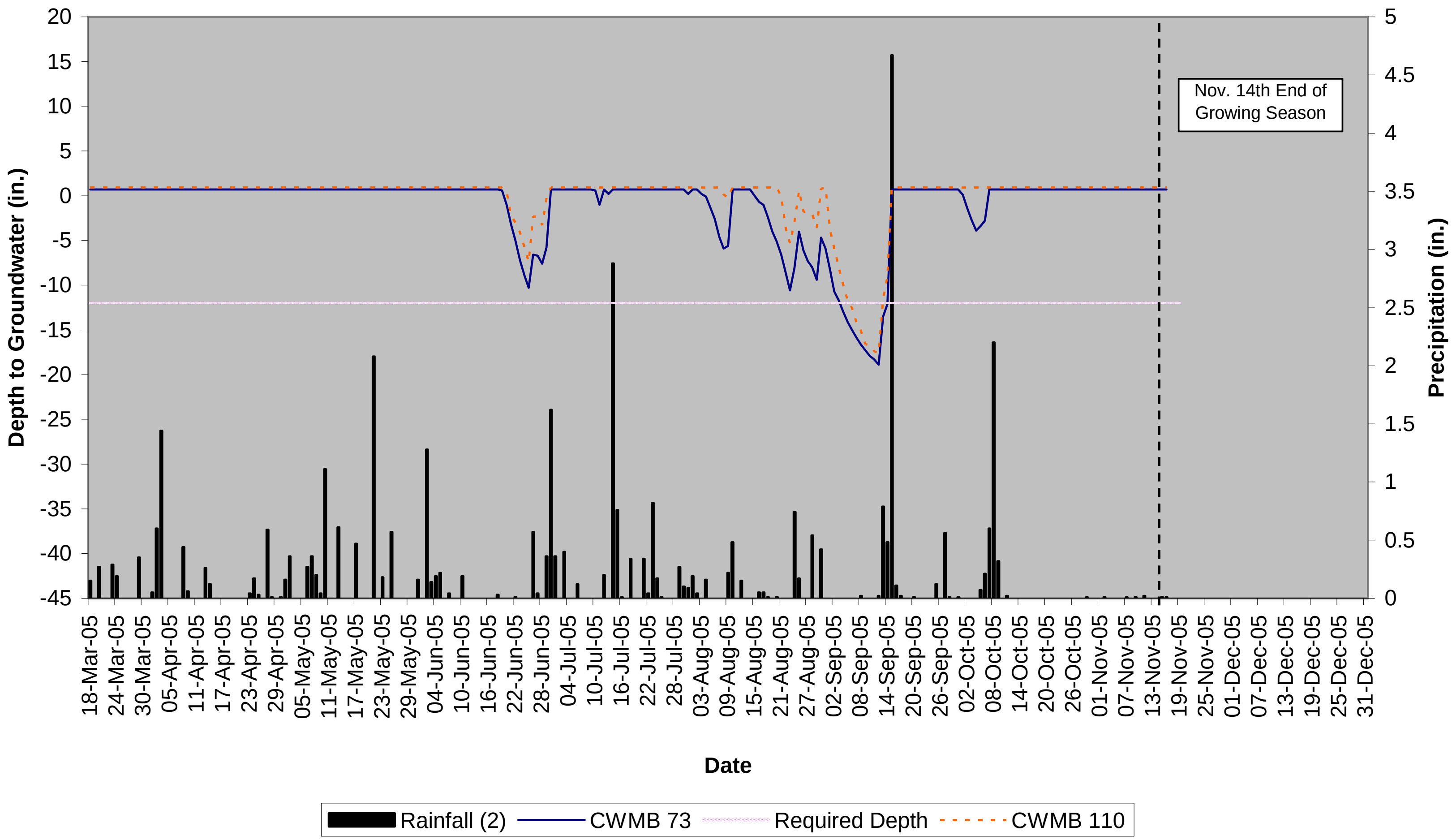
Croatan WMB
52 & 71
Bayboro



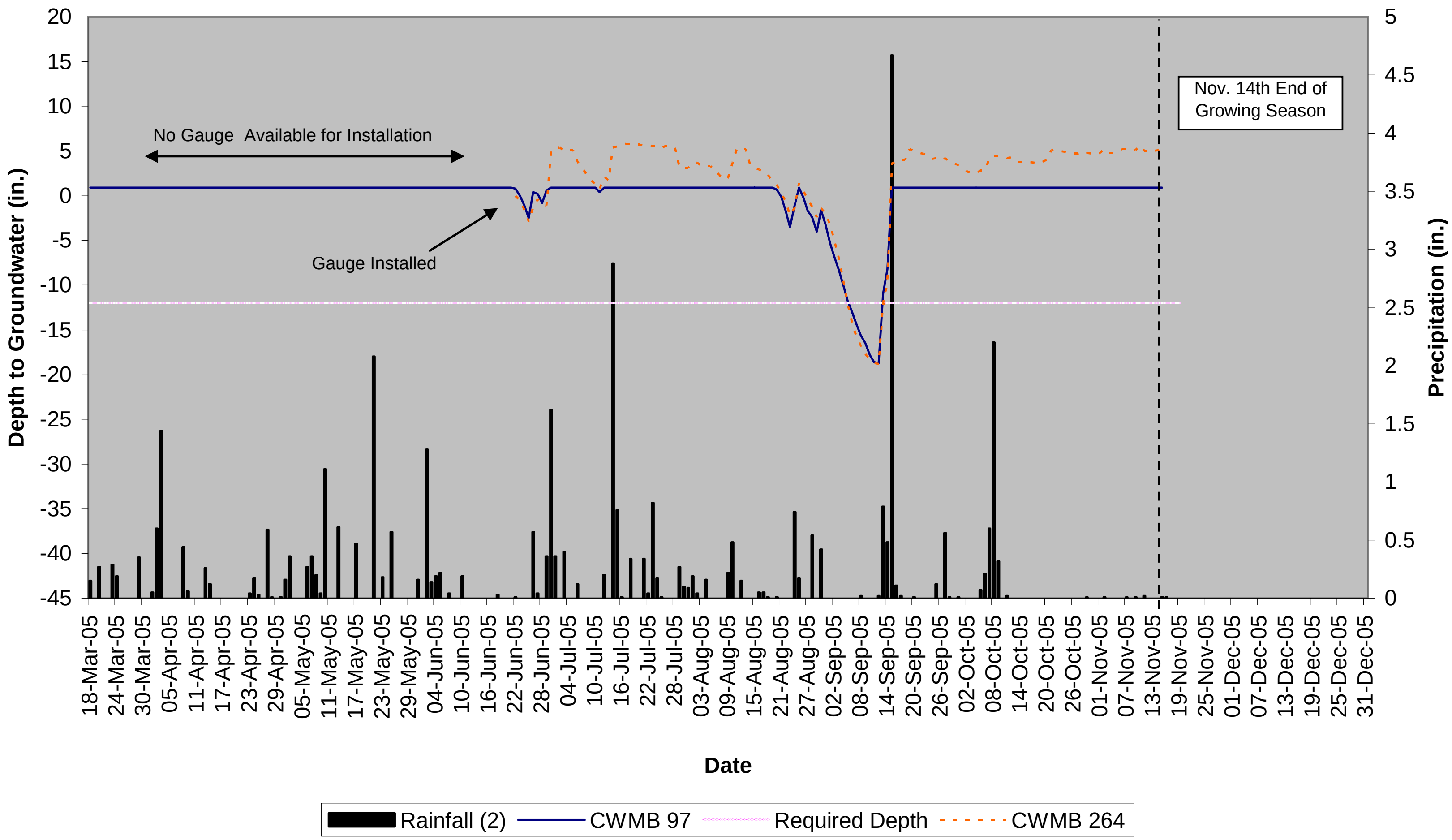
Croatan WMB
72
Bayboro

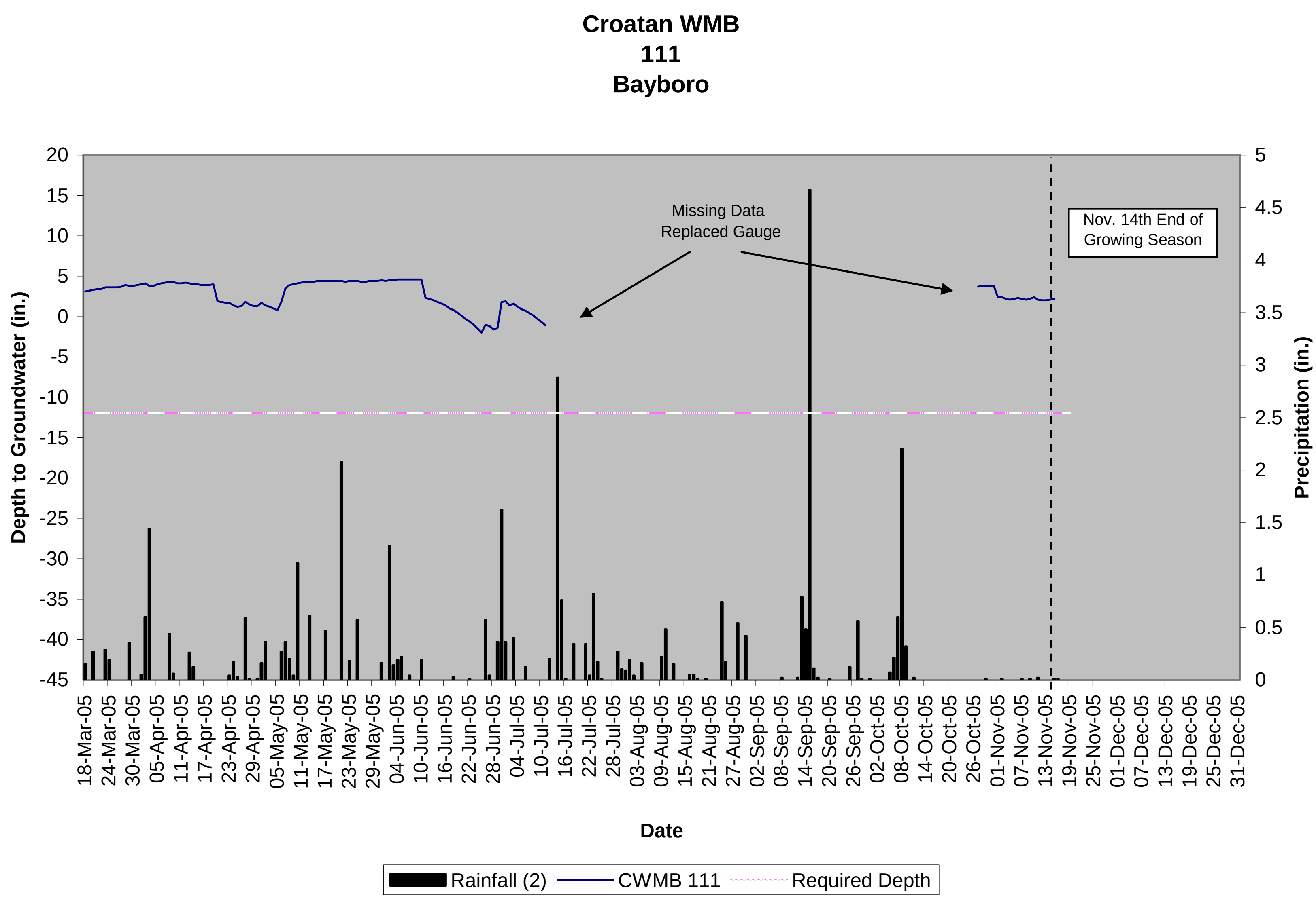


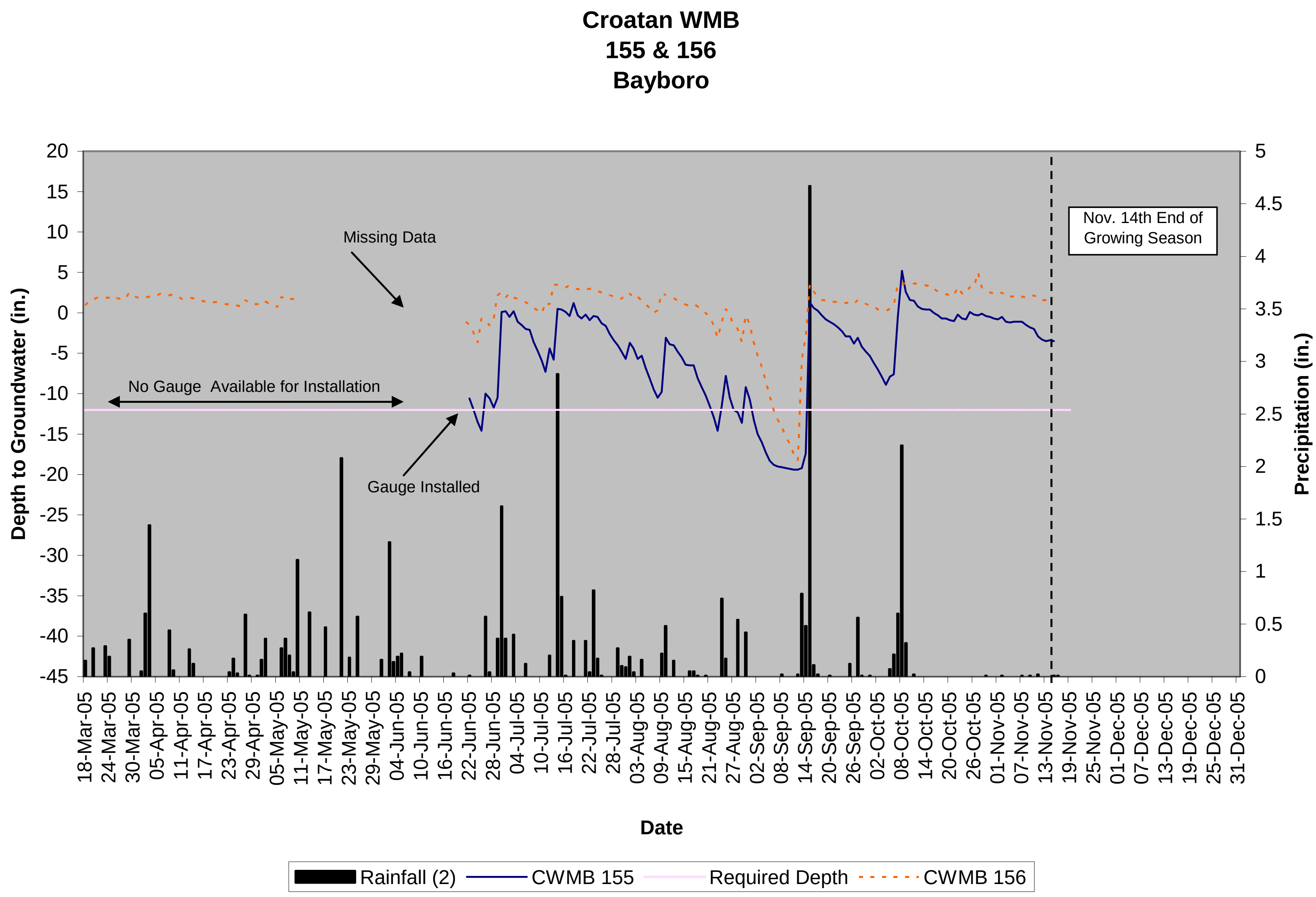
Croatan WMB
73 & 110
Pantego

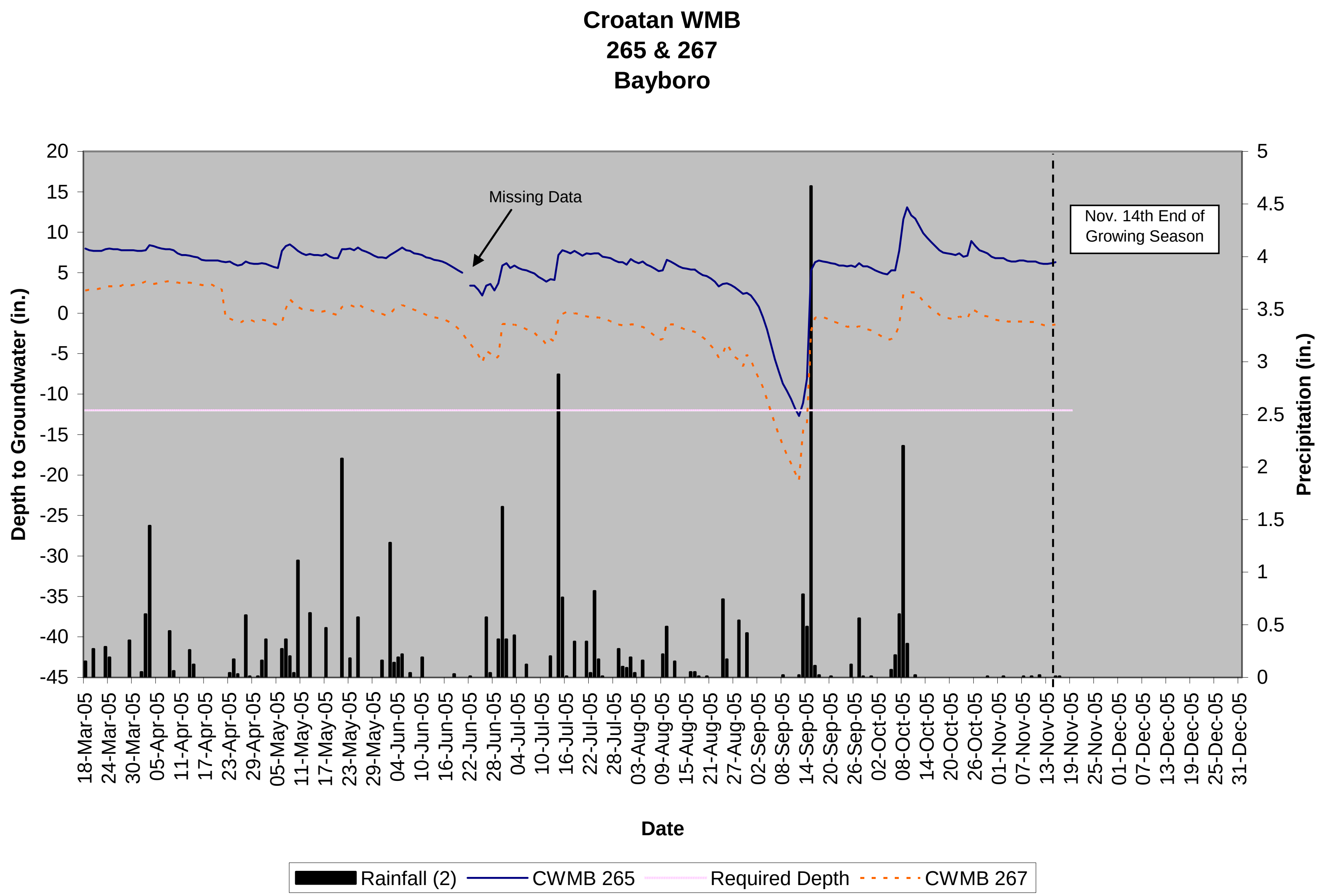


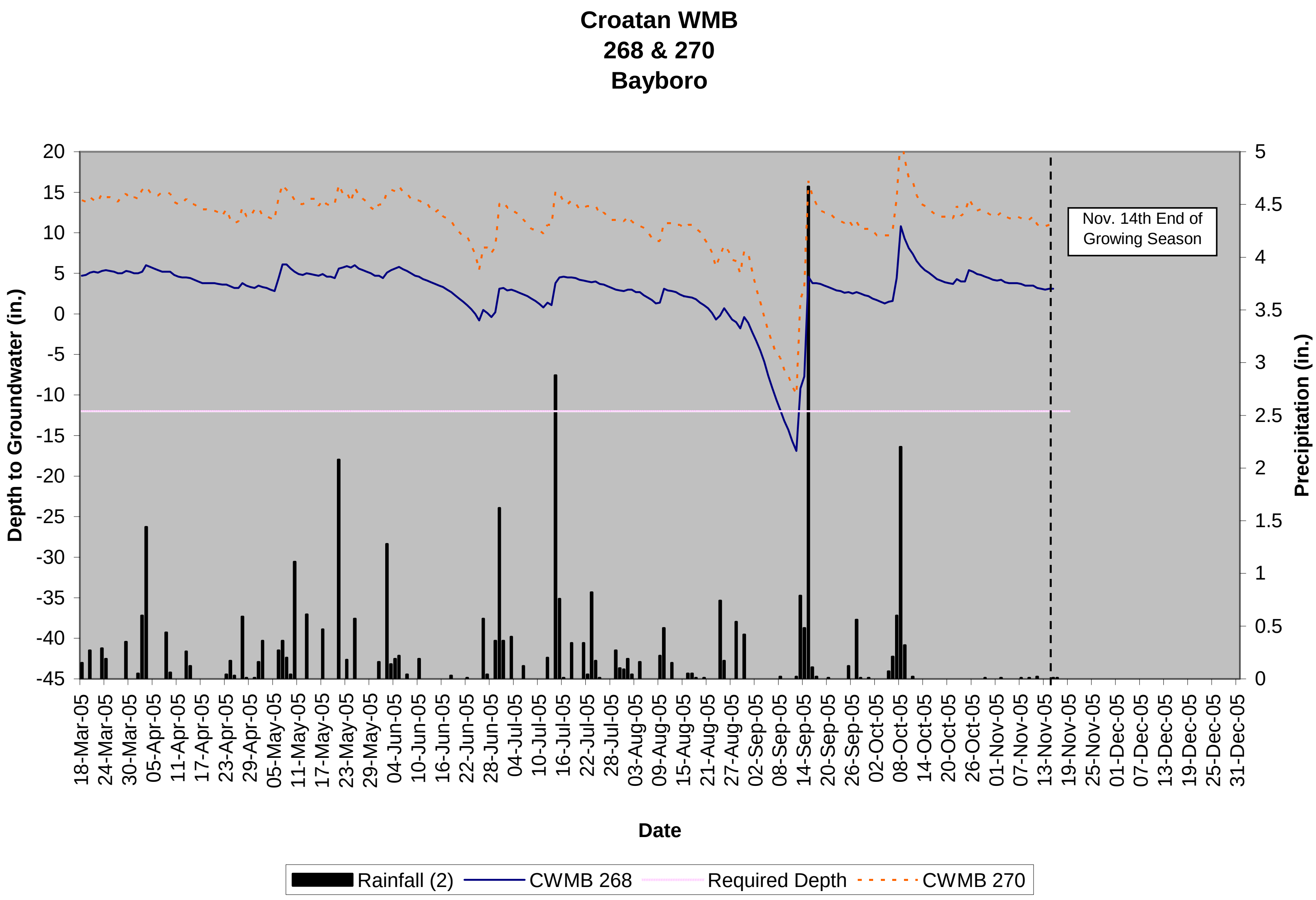
Croatan WMB
97 & 264
Bayboro




Croatan WMB
111
Bayboro
Missing Data
Replaced Gauge
Nov. 14th End of
Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 111
Required Depth


Croatan WMB
155 & 156
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Missing Data
No Gauge Available for Installation
Gauge Installed
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 155
Required Depth
CWMB 156


Croatan WMB
265 & 267
Bayboro
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 265
Required Depth
CWMB 267


Croatan WMB
268 & 270
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
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-30
-35
-40
-45
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4.5
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3
2.5
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1.5
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0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
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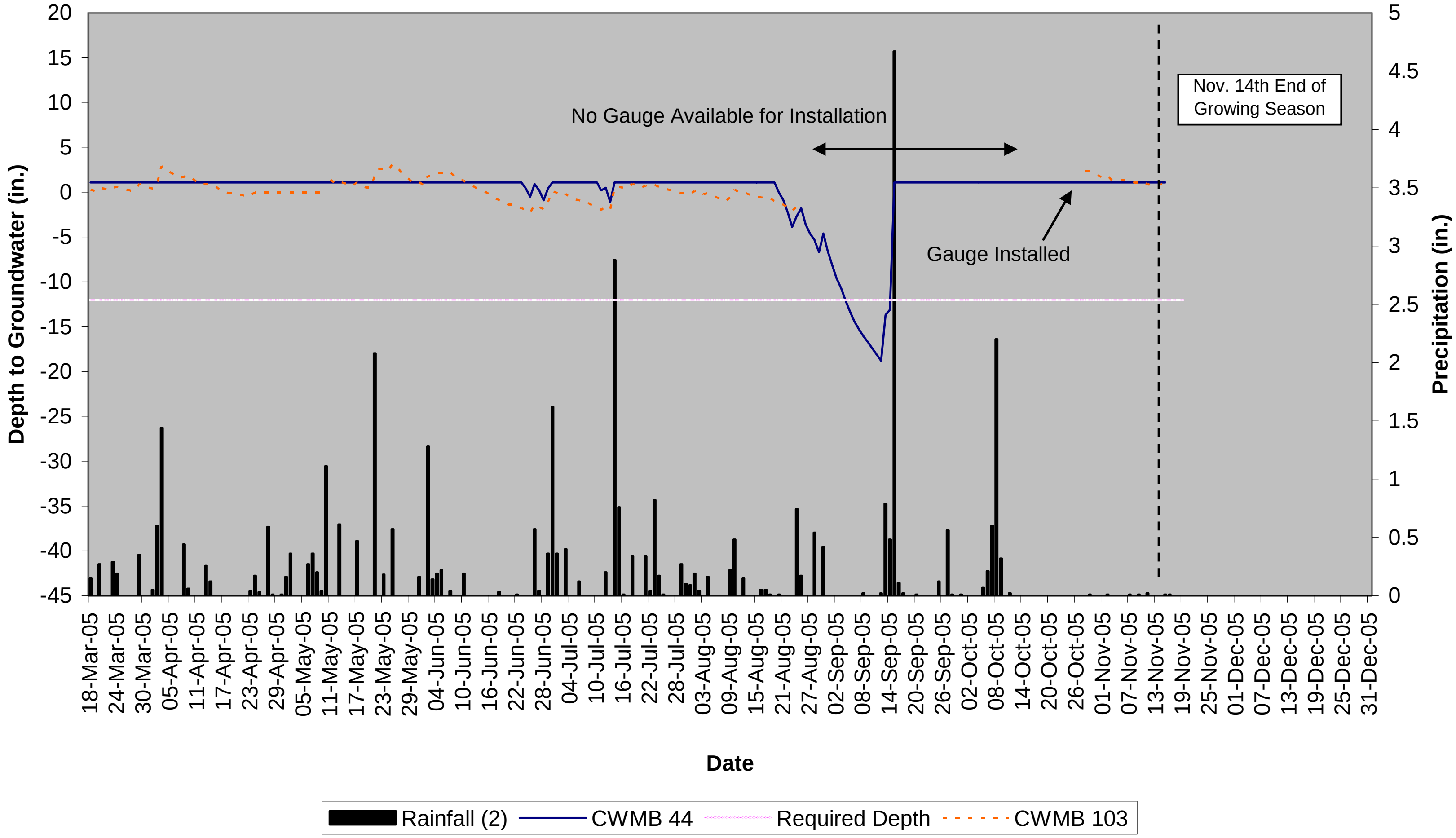
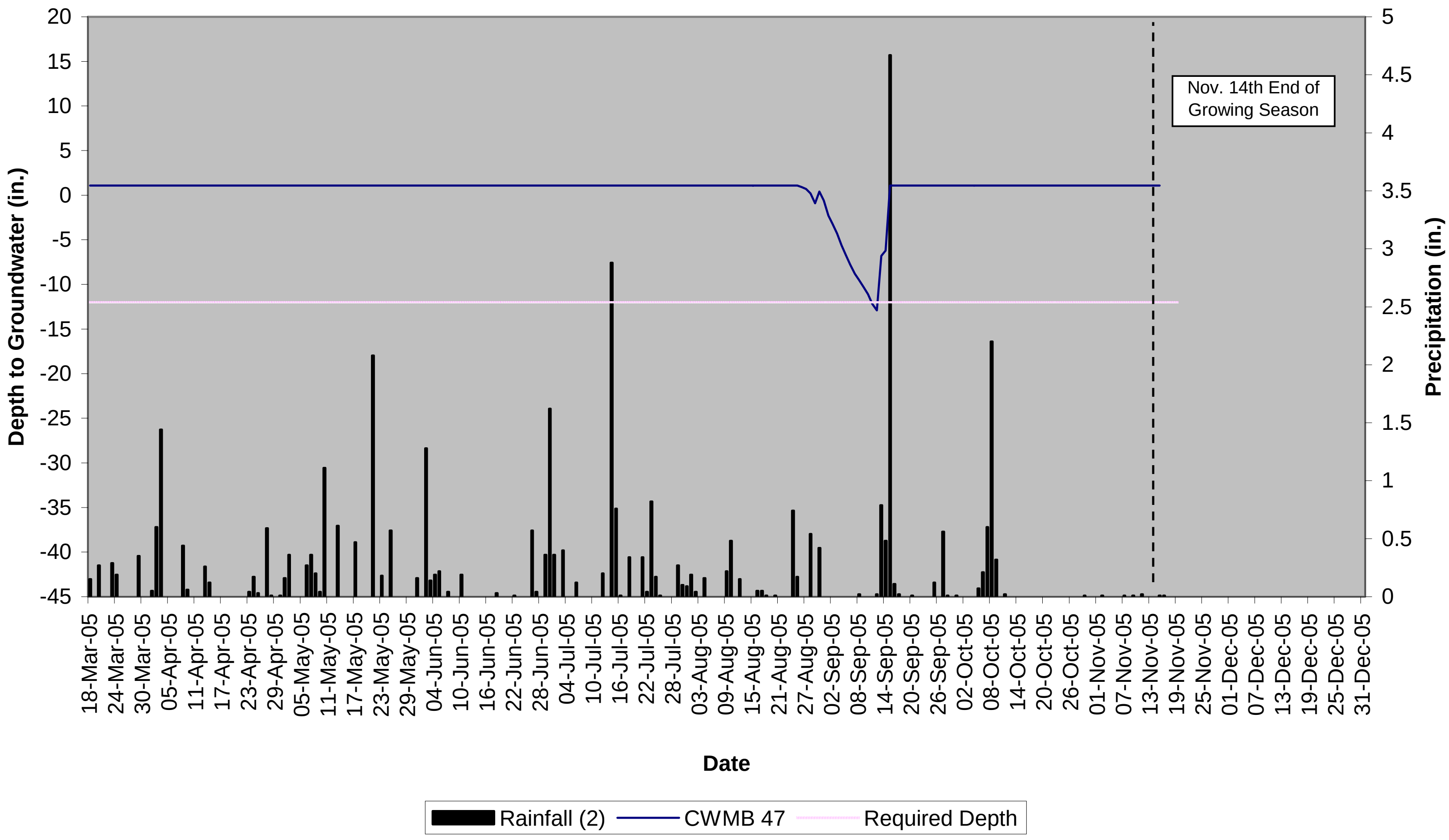
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 268
Required Depth
CWMB 270

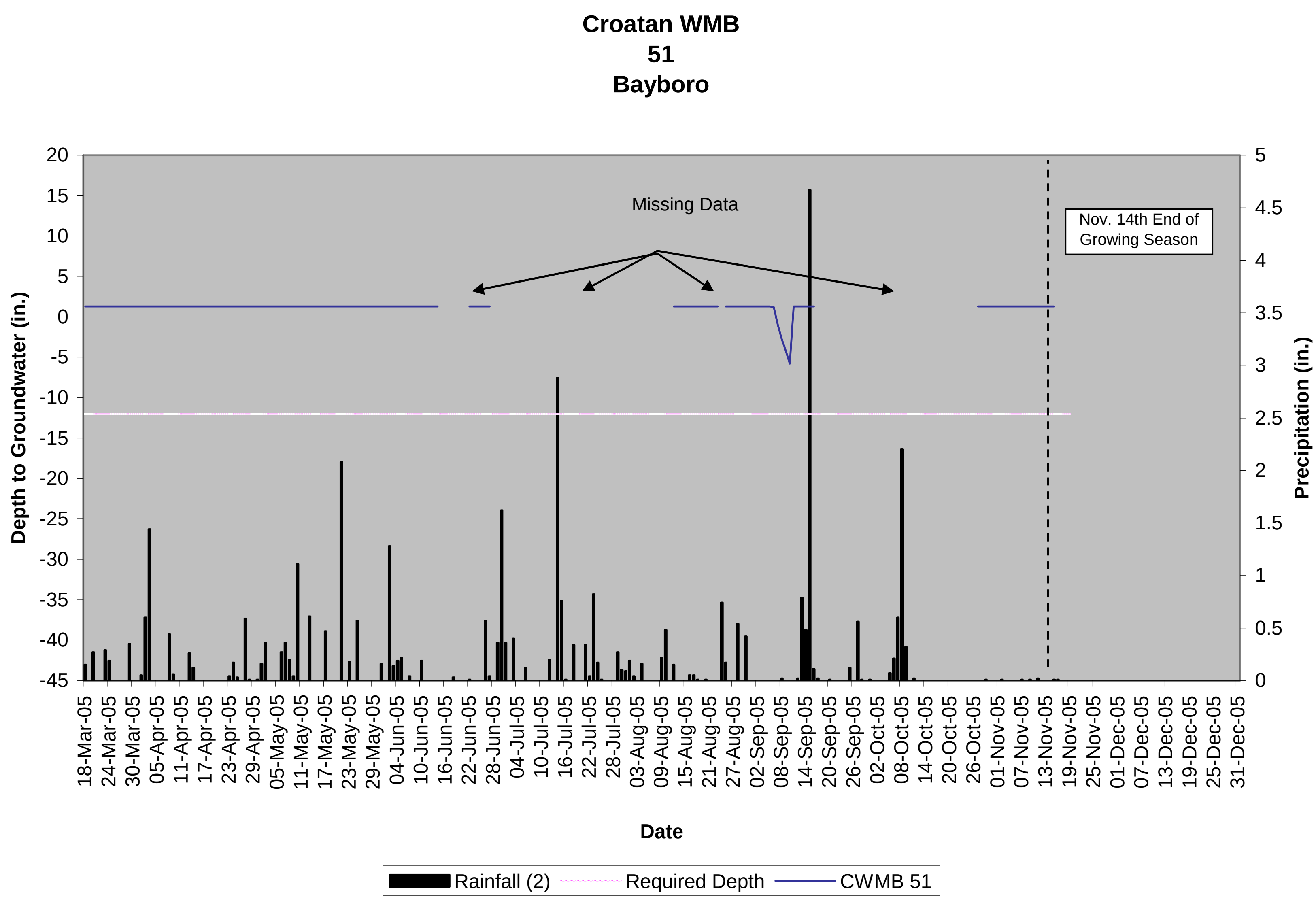
MU 8

Croatan WMB
44 & 103
Croatan



Croatan WMB
47
Bayboro




Croatan WMB
51
Bayboro
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
Required Depth
CWMB 51
20
15
10
5
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-5
-10
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-35
-40
-45
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4.5
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18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
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19-Nov-05
25-Nov-05
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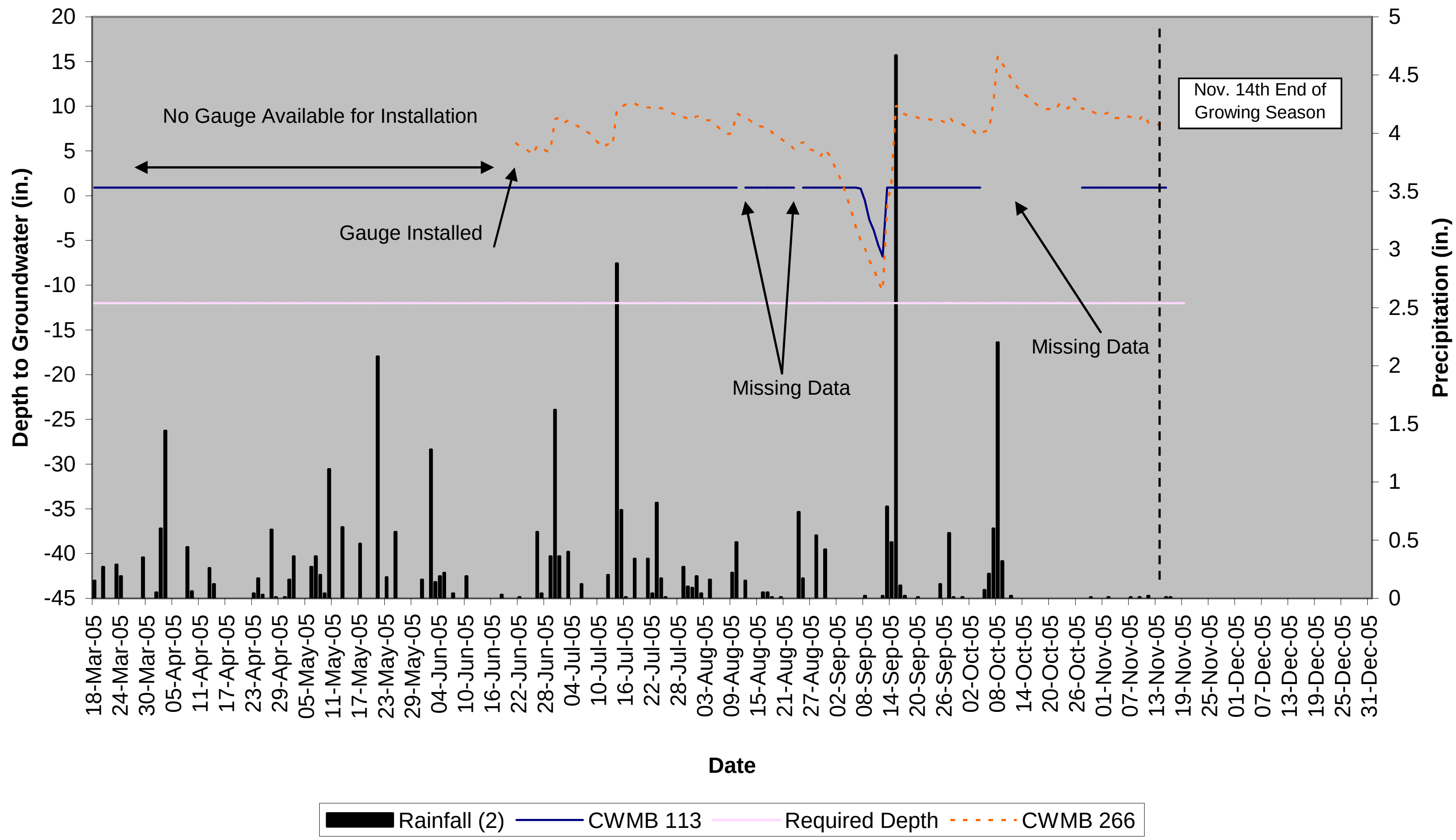
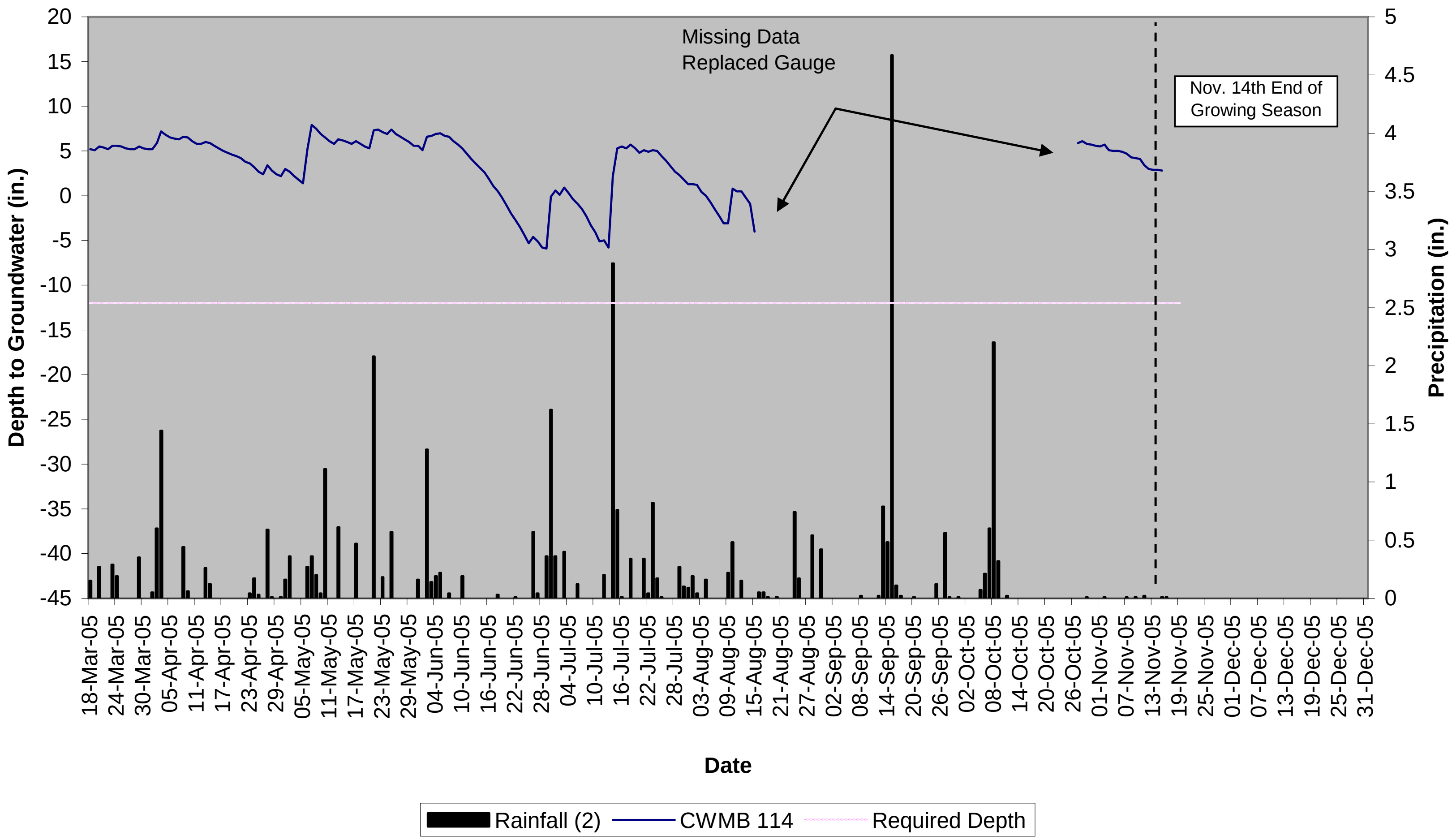
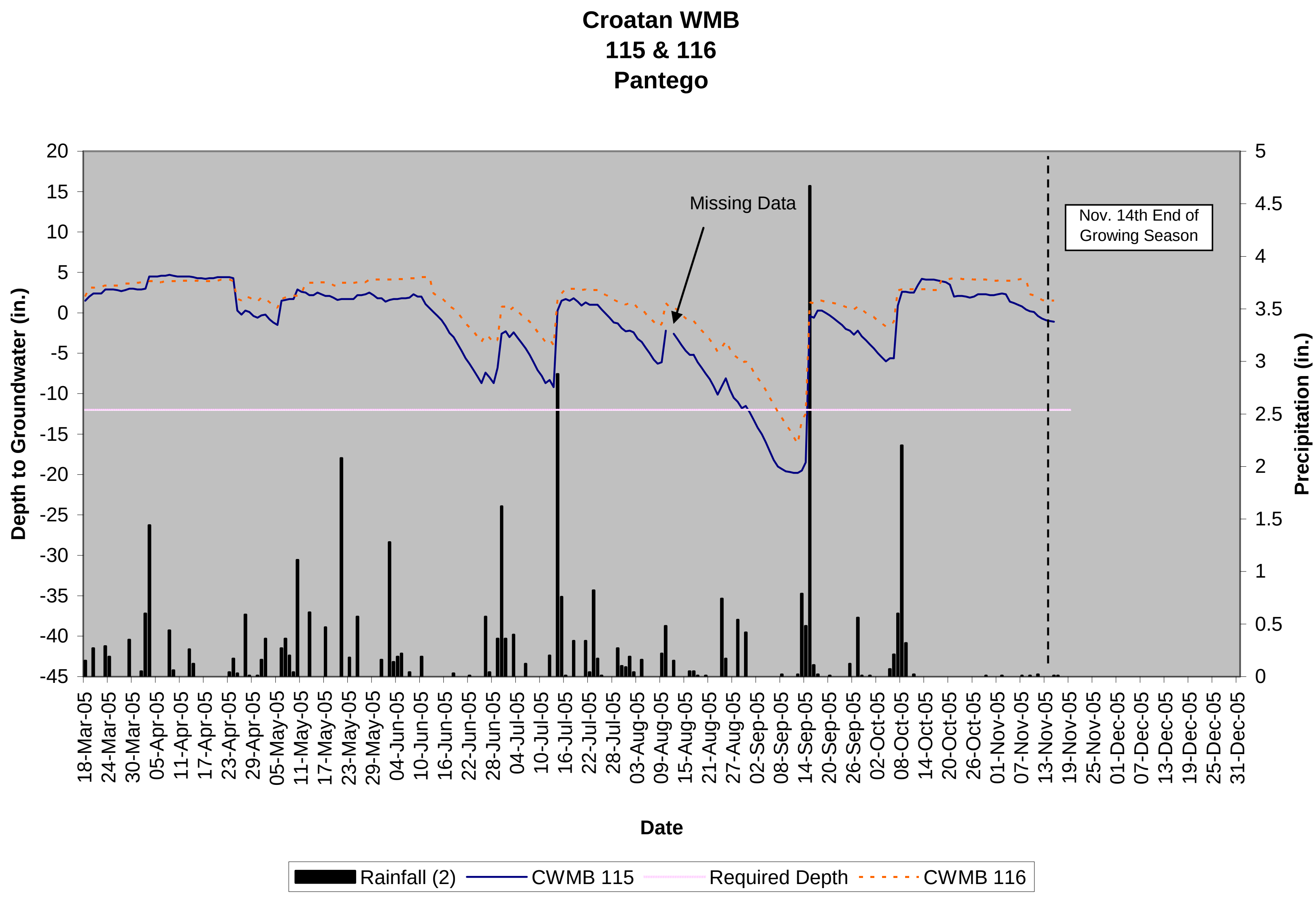
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

Croatan WMB
113 & 266
Bayboro

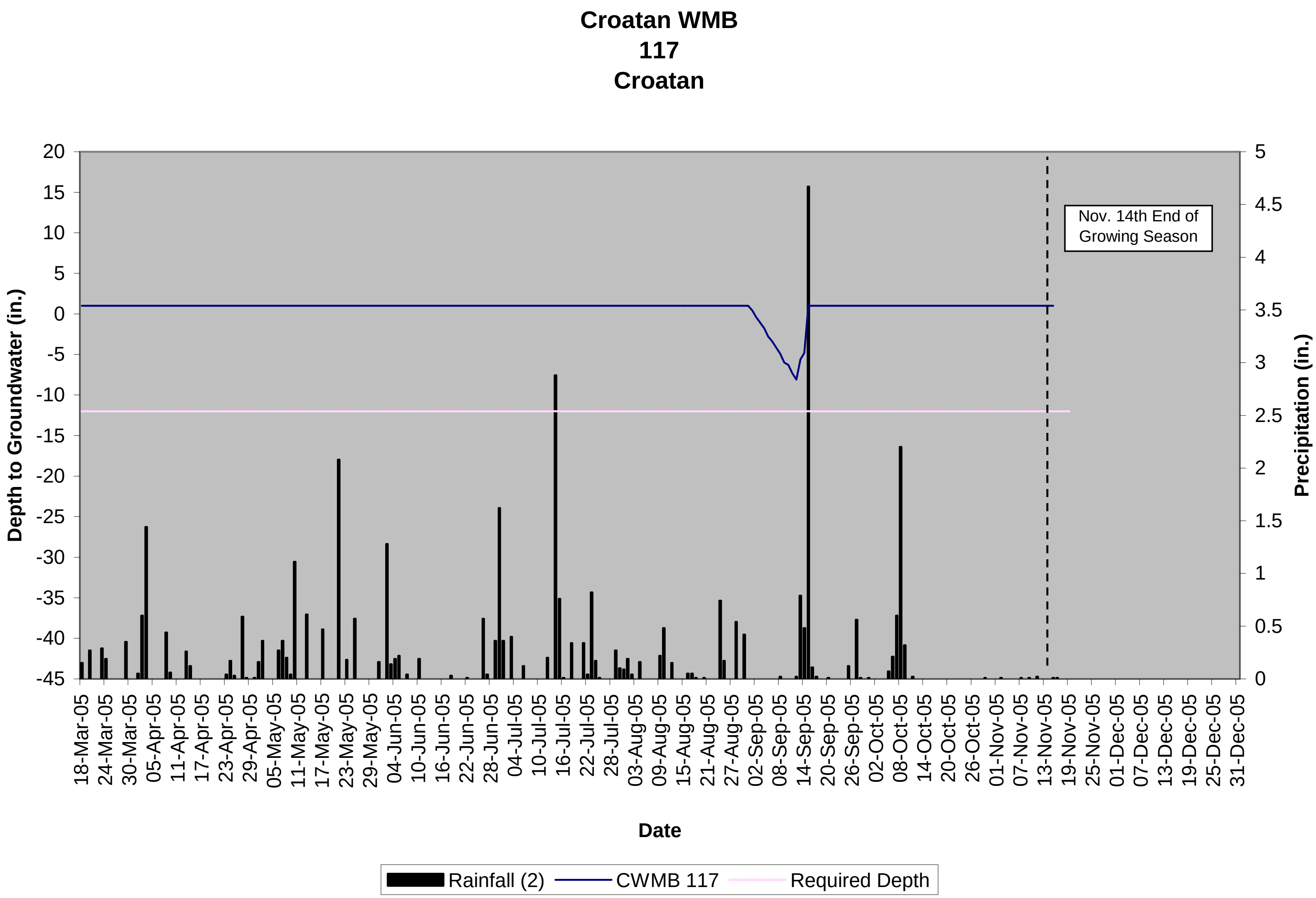


Croatan WMB
114
Croatan





Croatan WMB
115 & 116
Pantego
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 115
Required Depth
CWMB 116


Croatan WMB
117
Croatan
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
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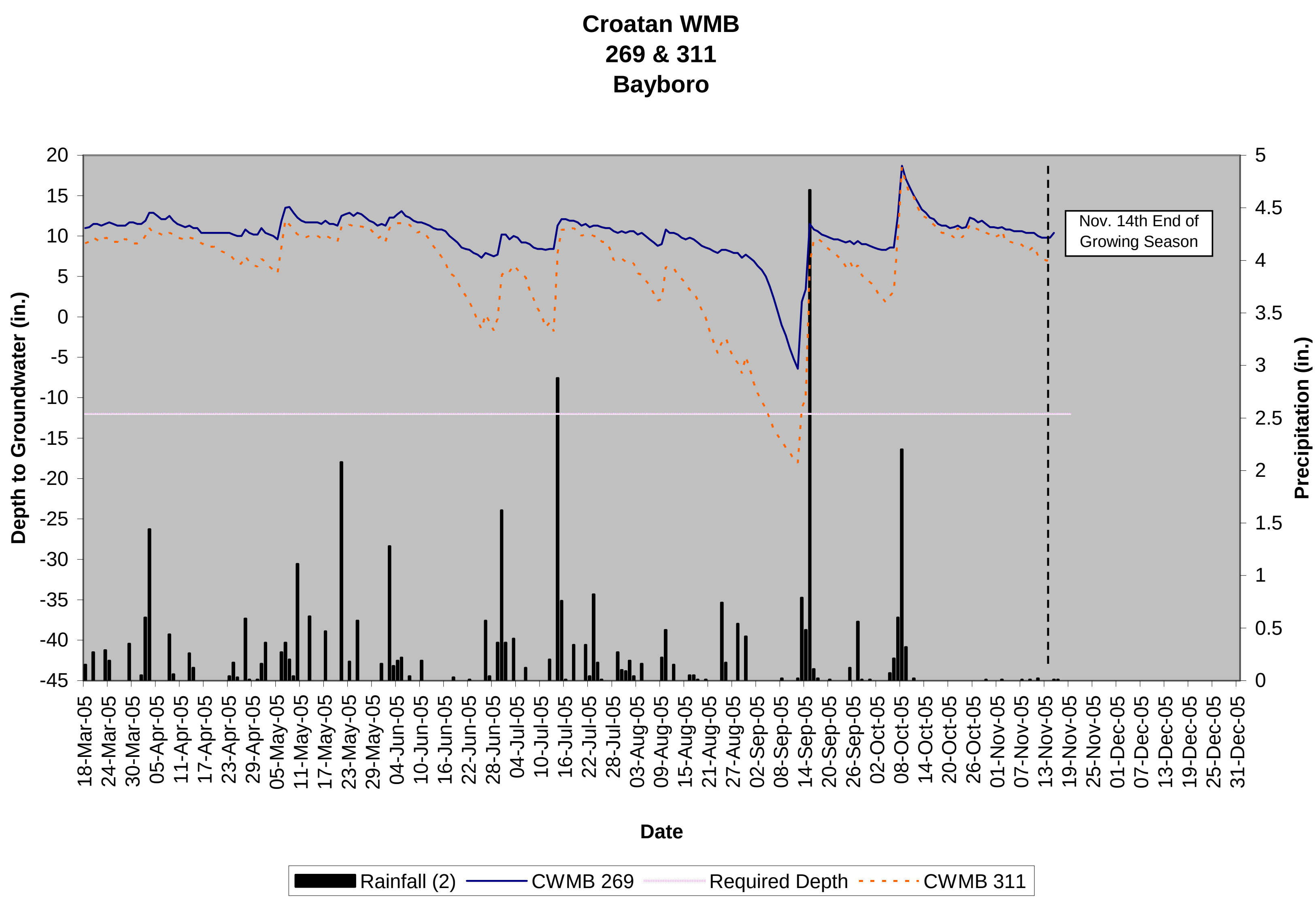
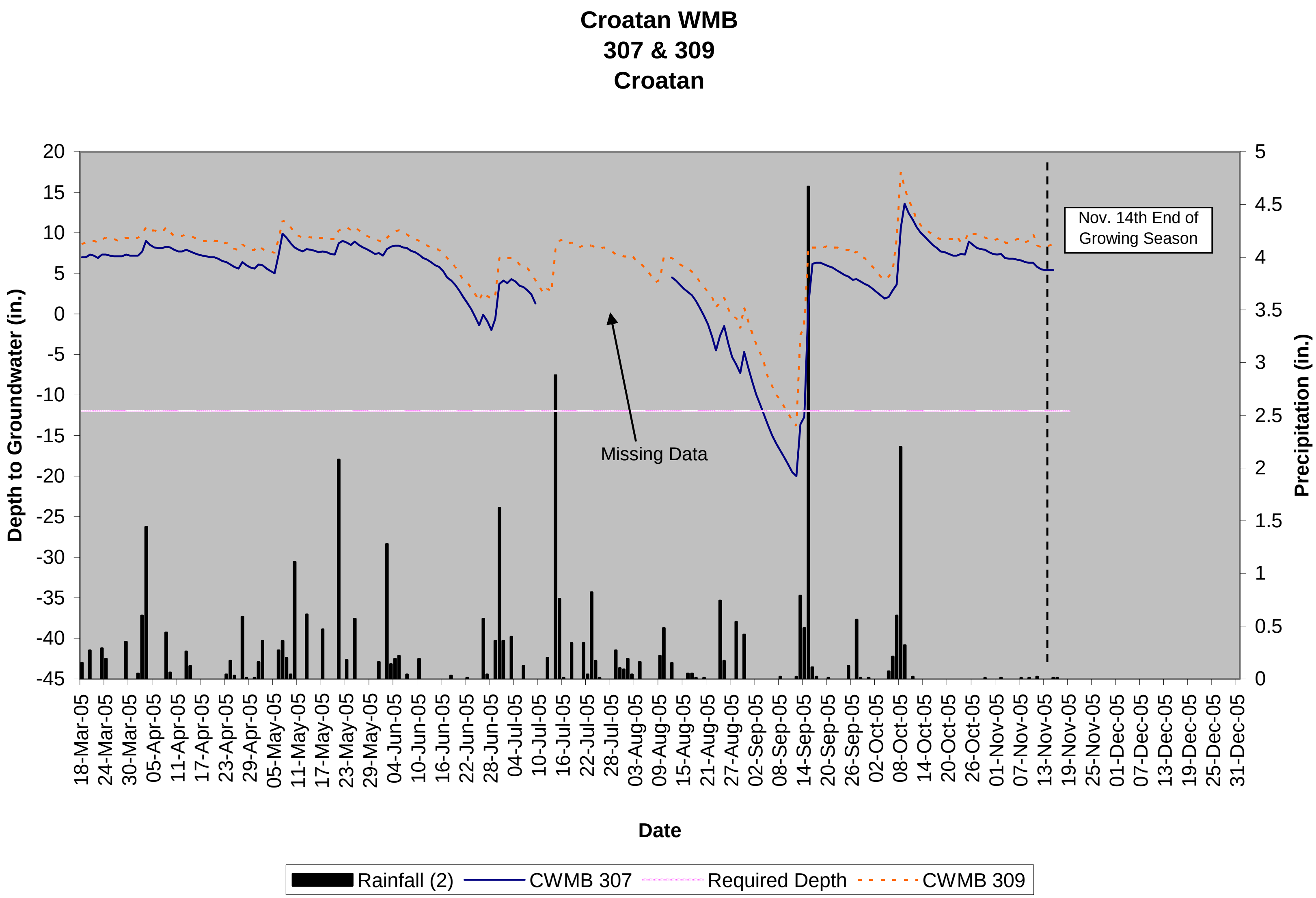
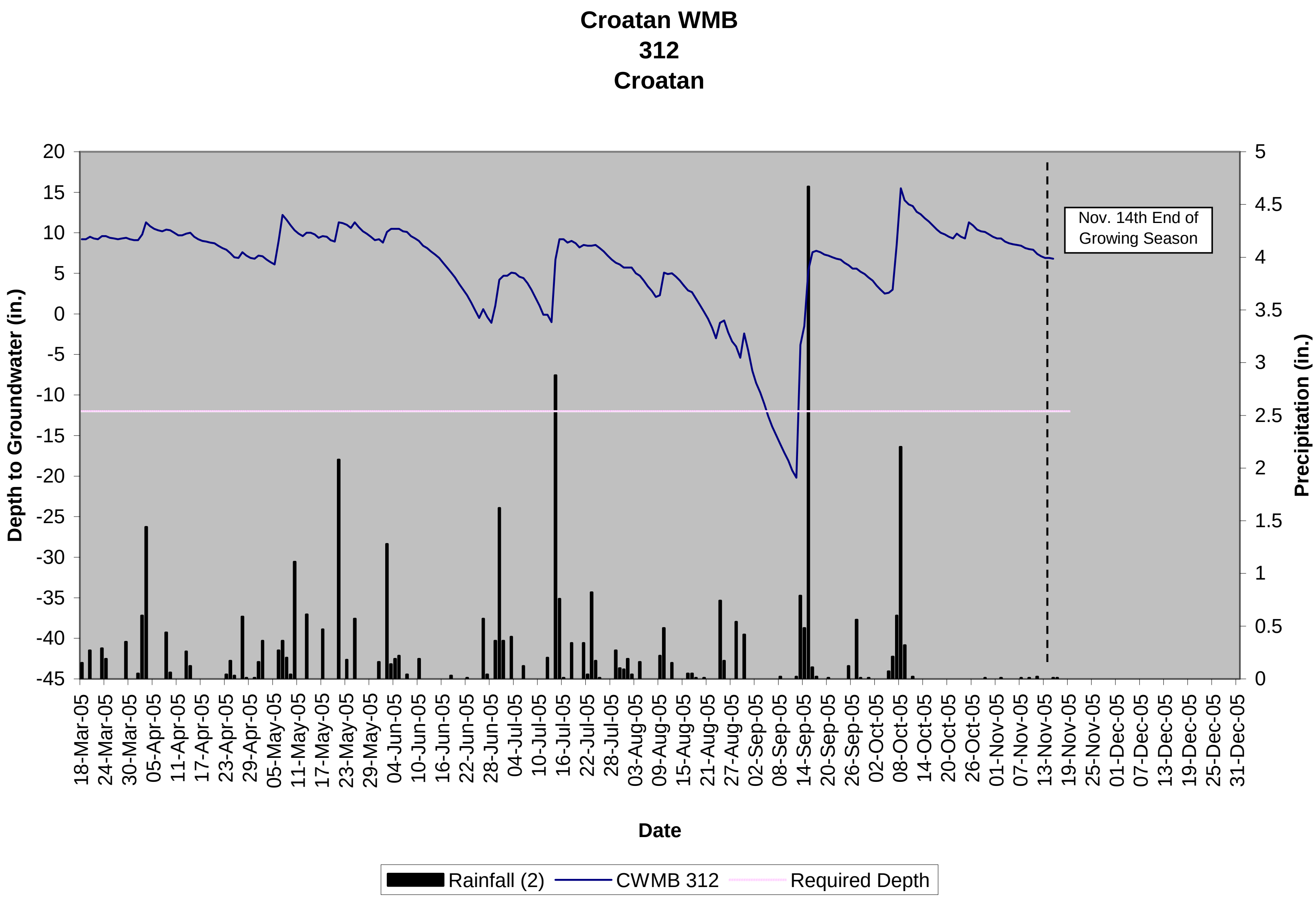
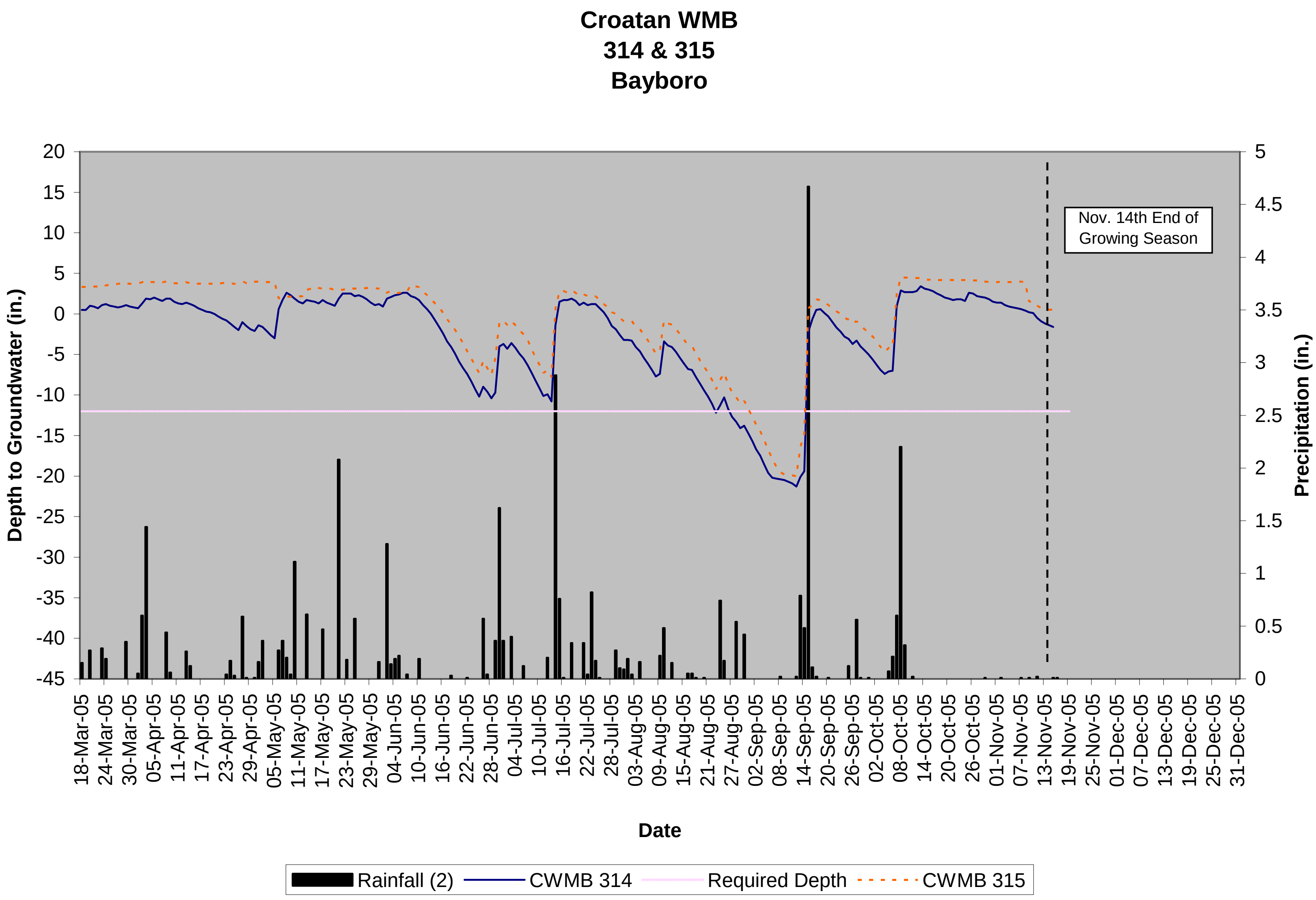
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 117
Required Depth



Croatan WMB
269 & 311
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 269
Required Depth
CWMB 311

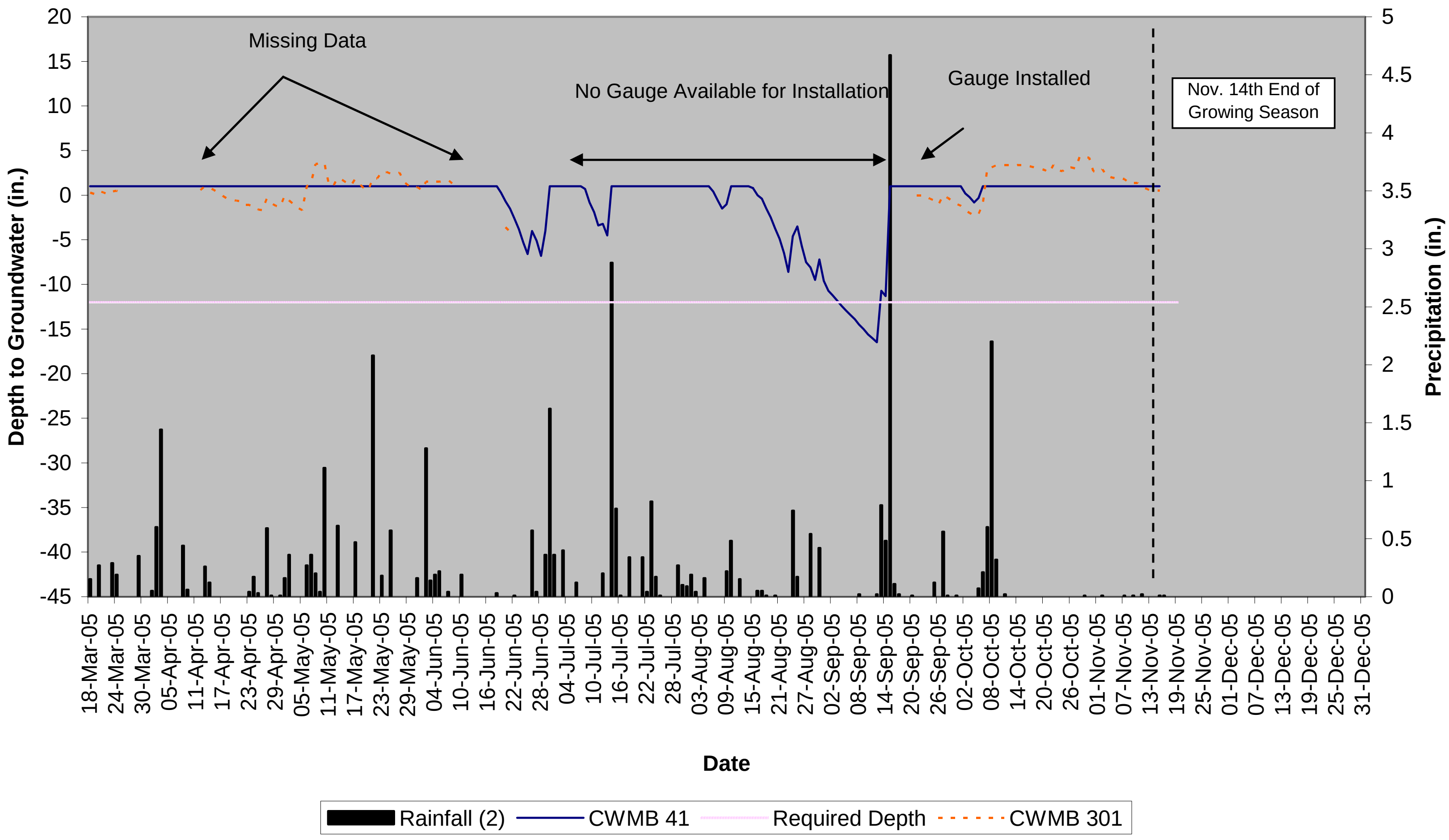

Croatan WMB
307 & 309
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Missing Data
Rainfall (2)
CWMB 307
Required Depth
CWMB 309


Croatan WMB
312
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 312
Required Depth

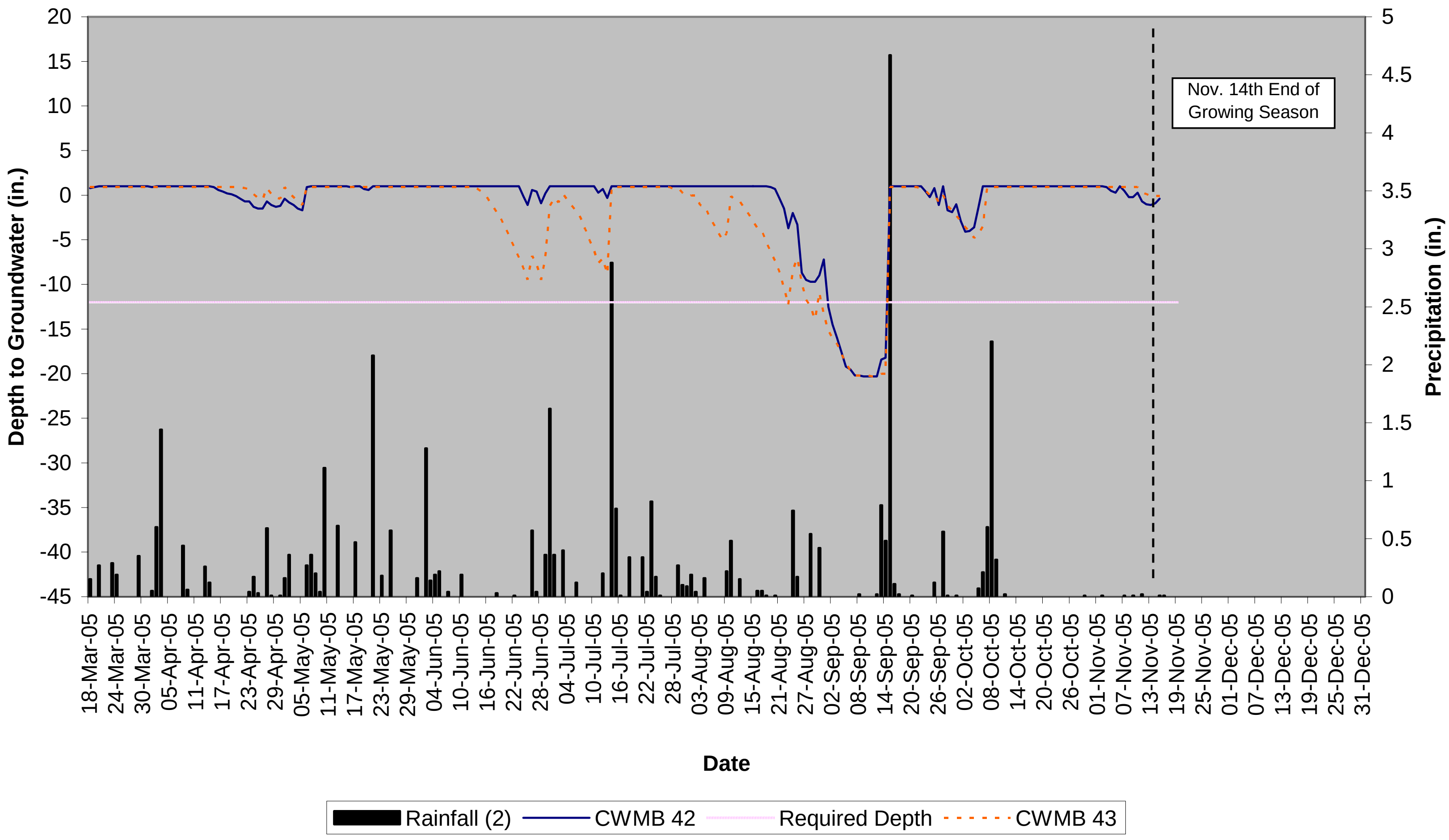

Croatan WMB
314 & 315
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 314
Required Depth
CWMB 315

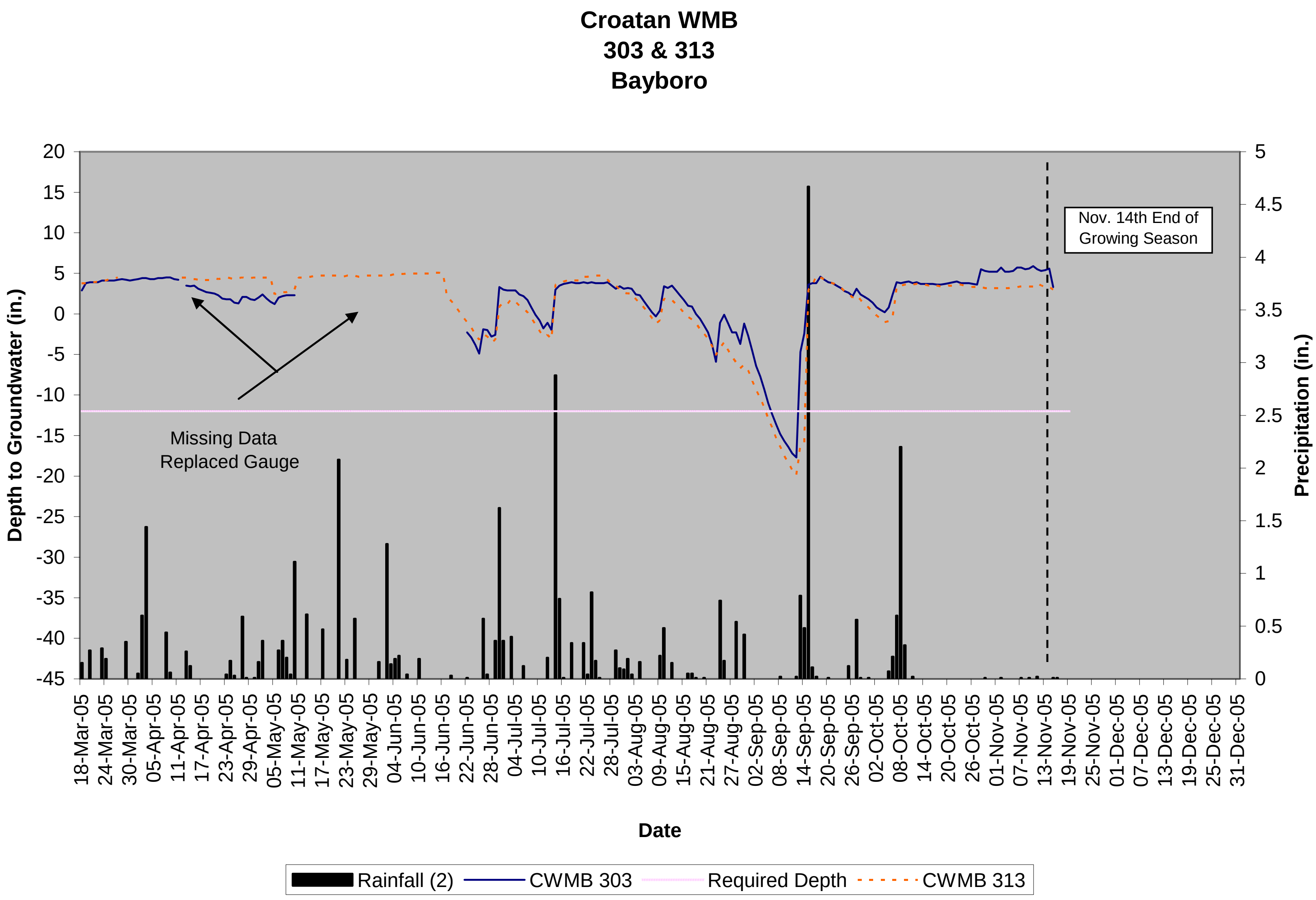
MU 9

Croatan WMB
41 & 301
Bayboro

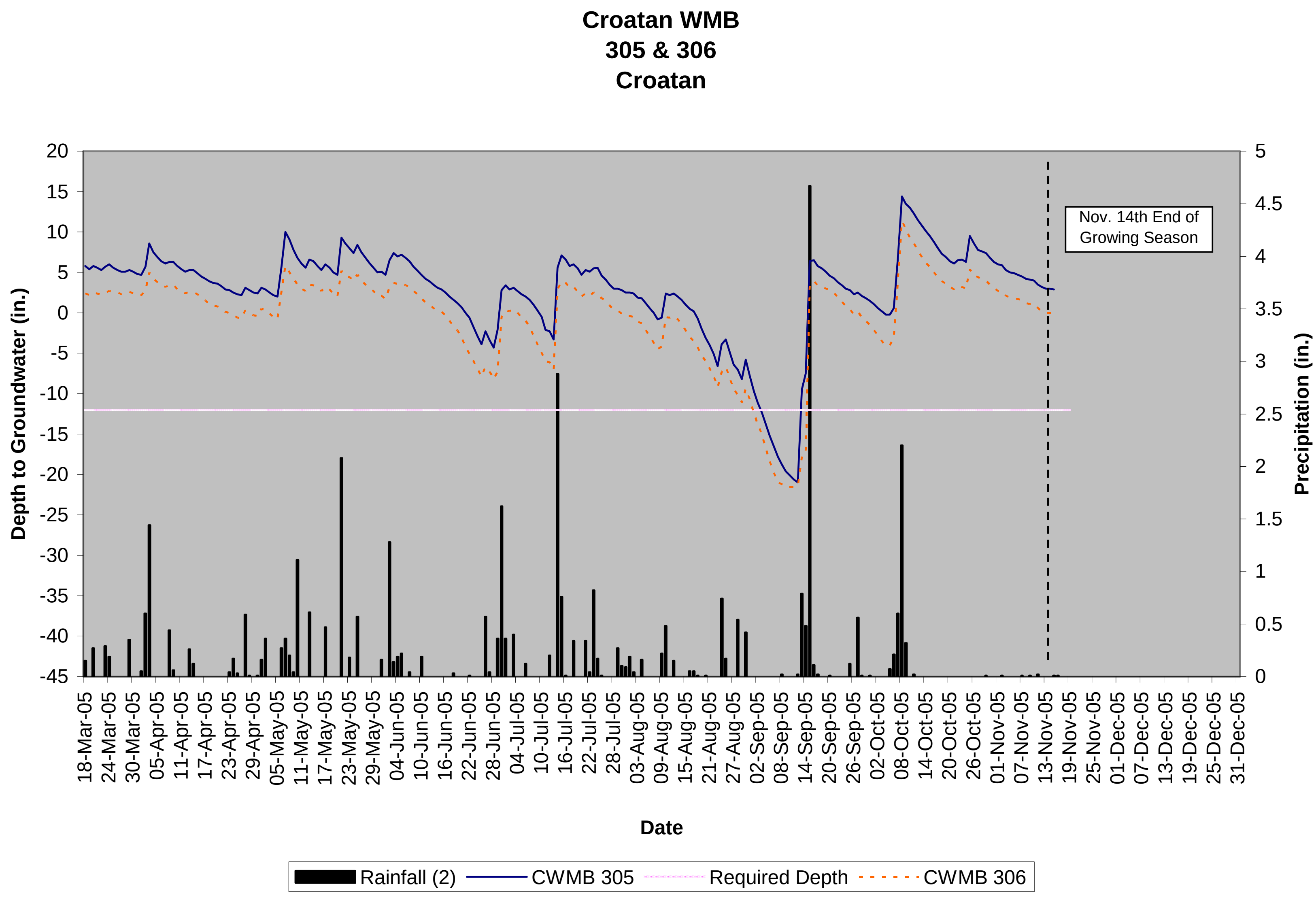


Croatan WMB
42 & 43
Croatan





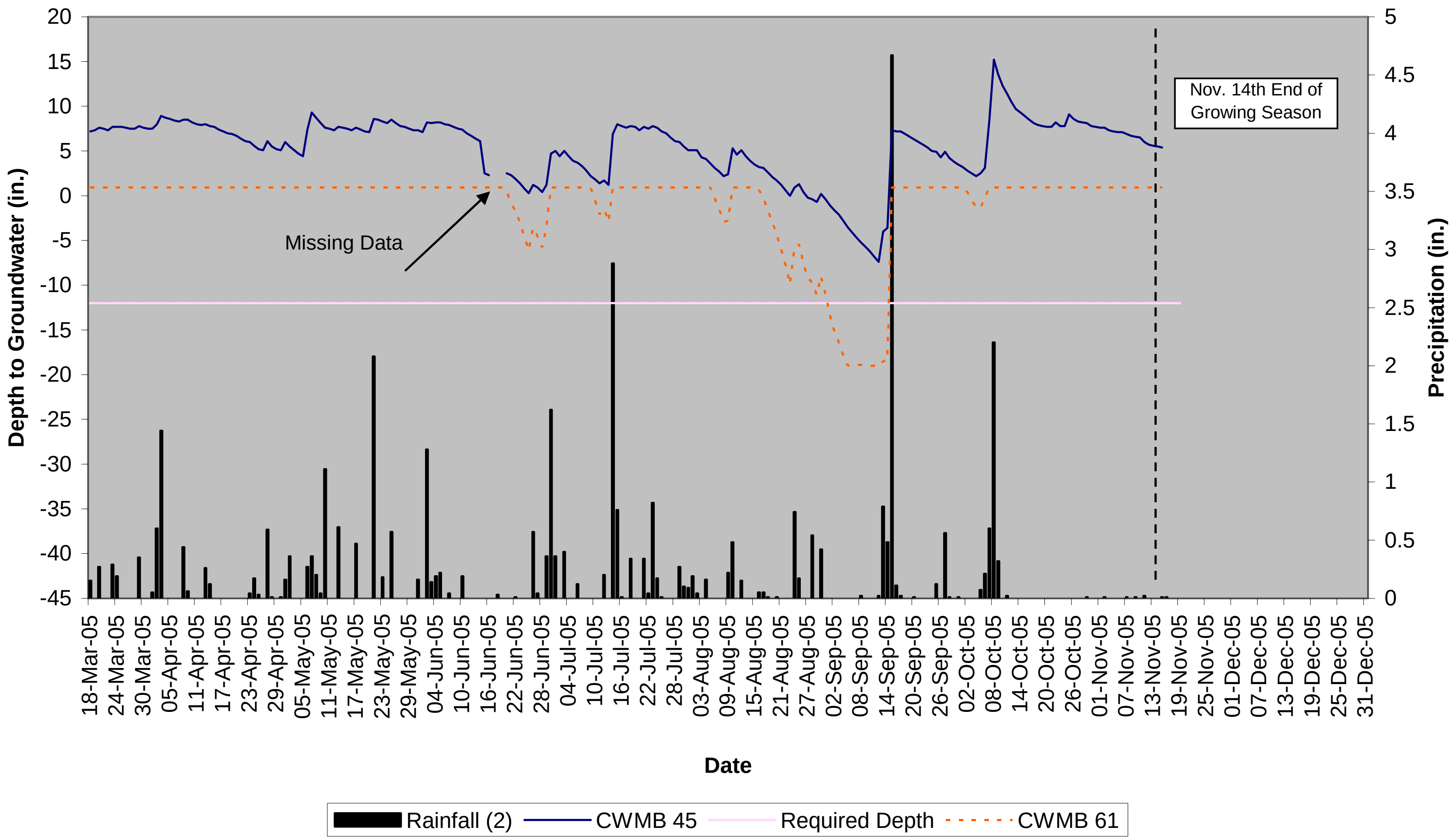
Croatan WMB
303 & 313
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Missing Data
Replaced Gauge
Rainfall (2)
CWMB 303
Required Depth
CWMB 313

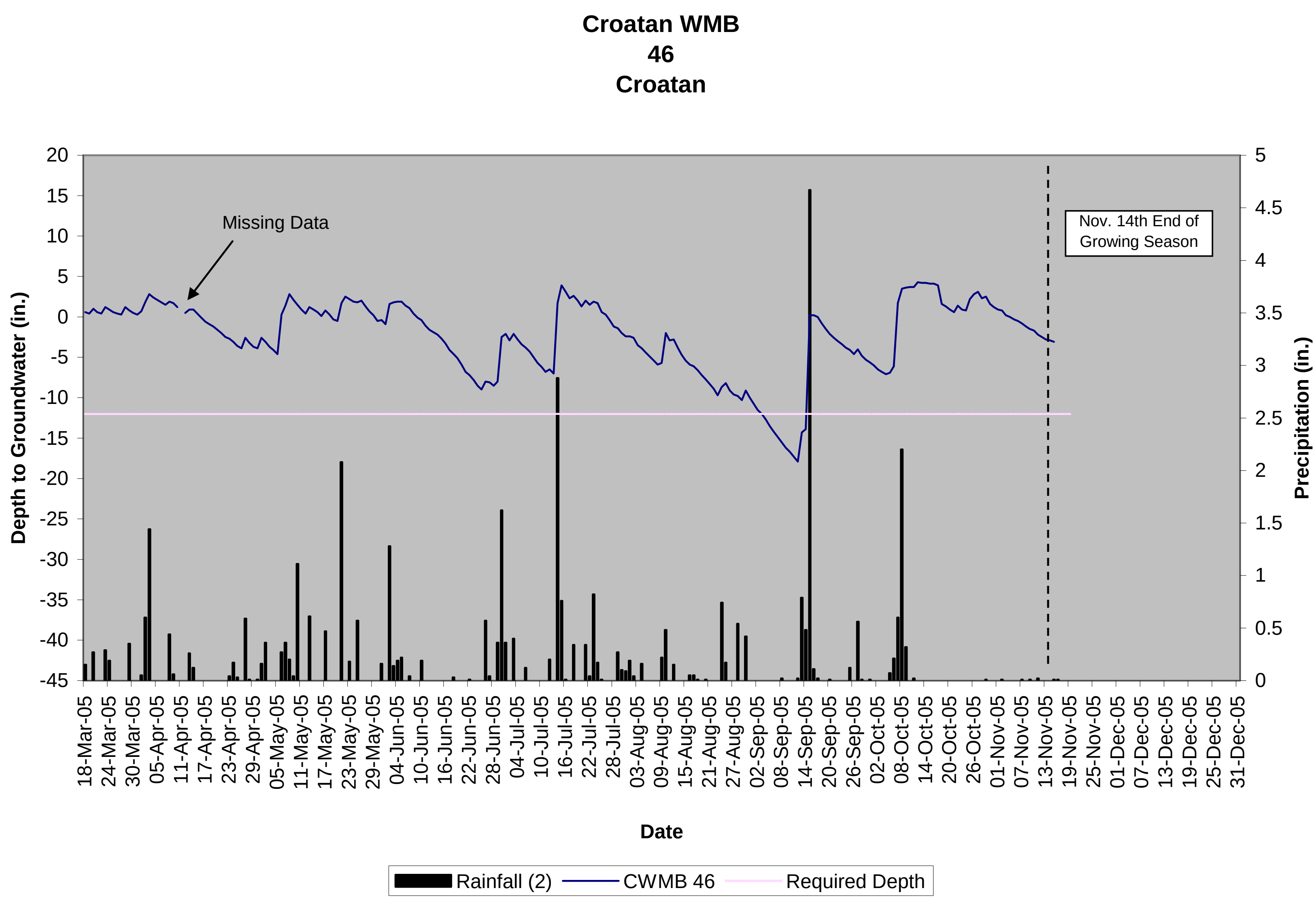


Croatan WMB
305 & 306
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 305
Required Depth
CWMB 306

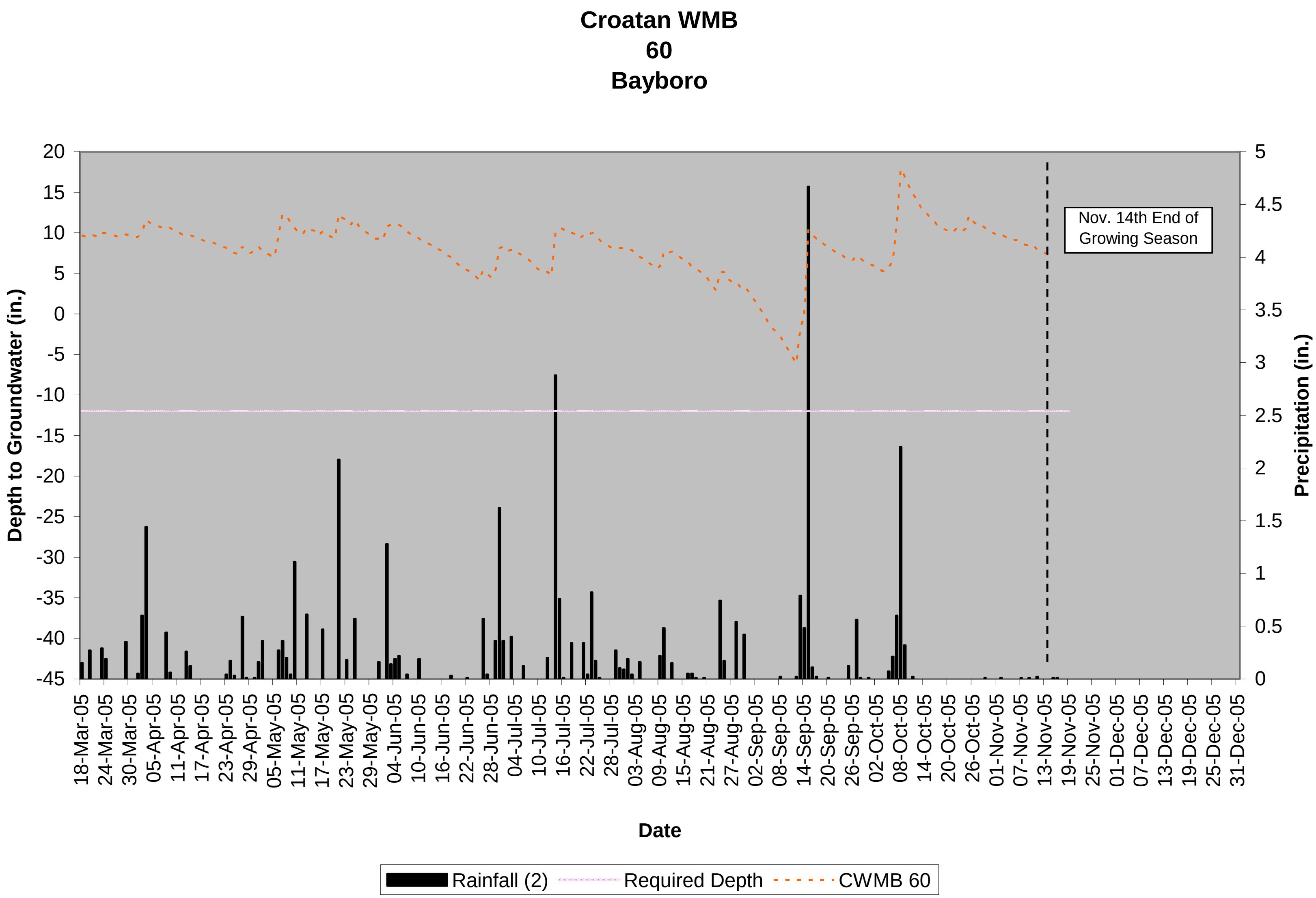
MU 10A

Croatan WMB
45 & 61
Croatan



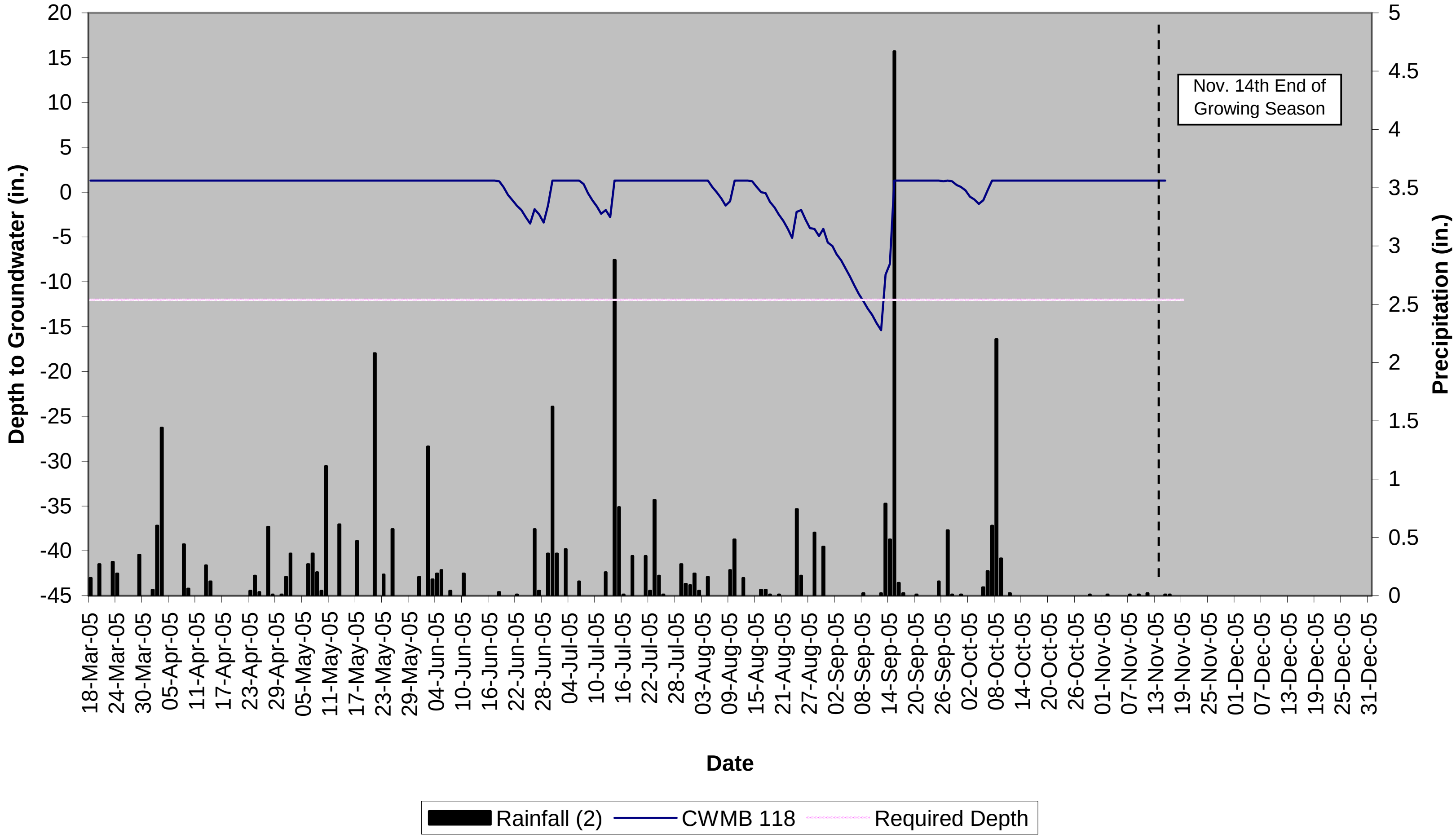


Croatan WMB
46
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Missing Data
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 46
Required Depth

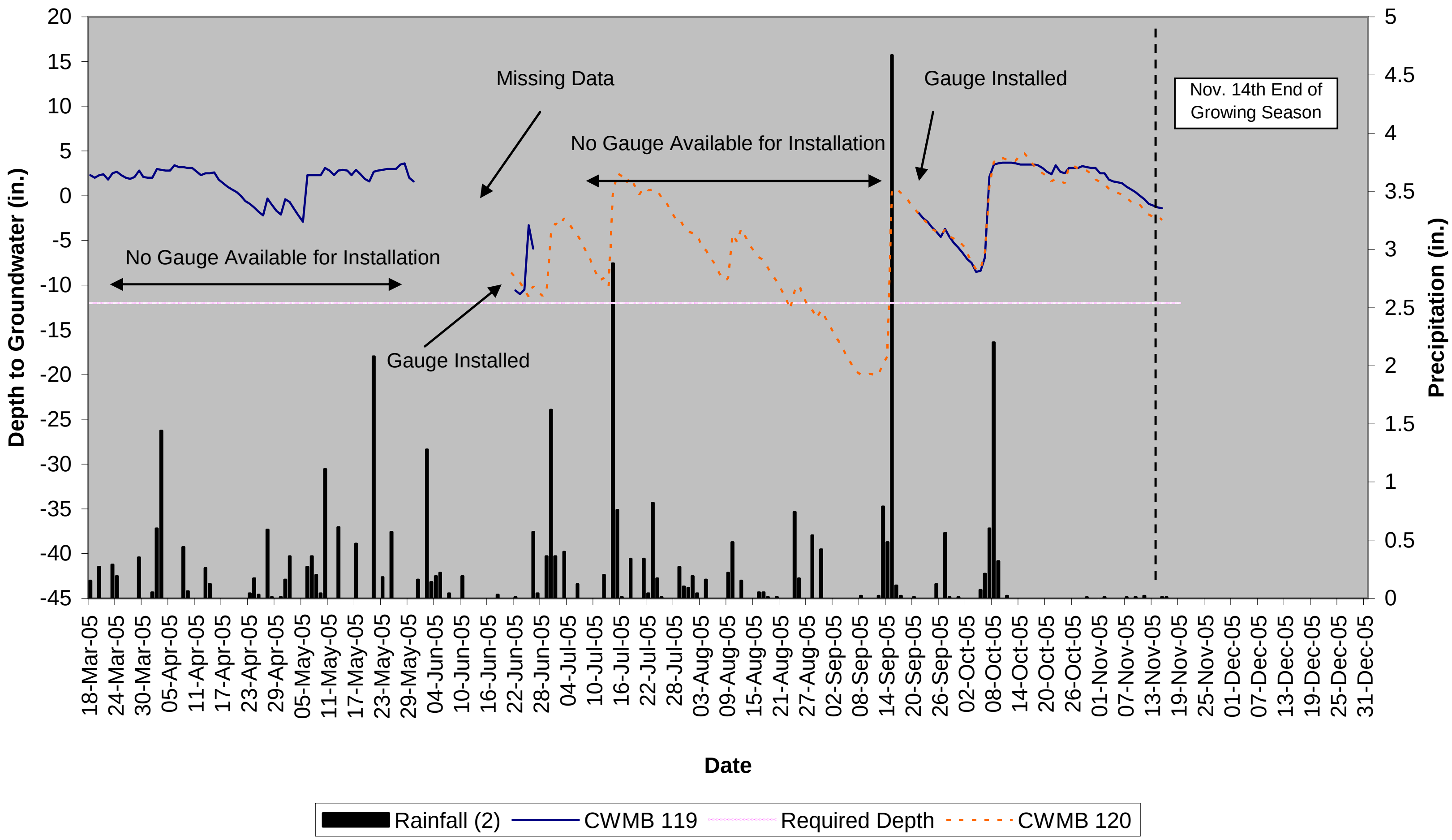


Croatan WMB
60
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Nov. 14th End of Growing Season
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Date
Rainfall (2)
Required Depth
CWMB 60

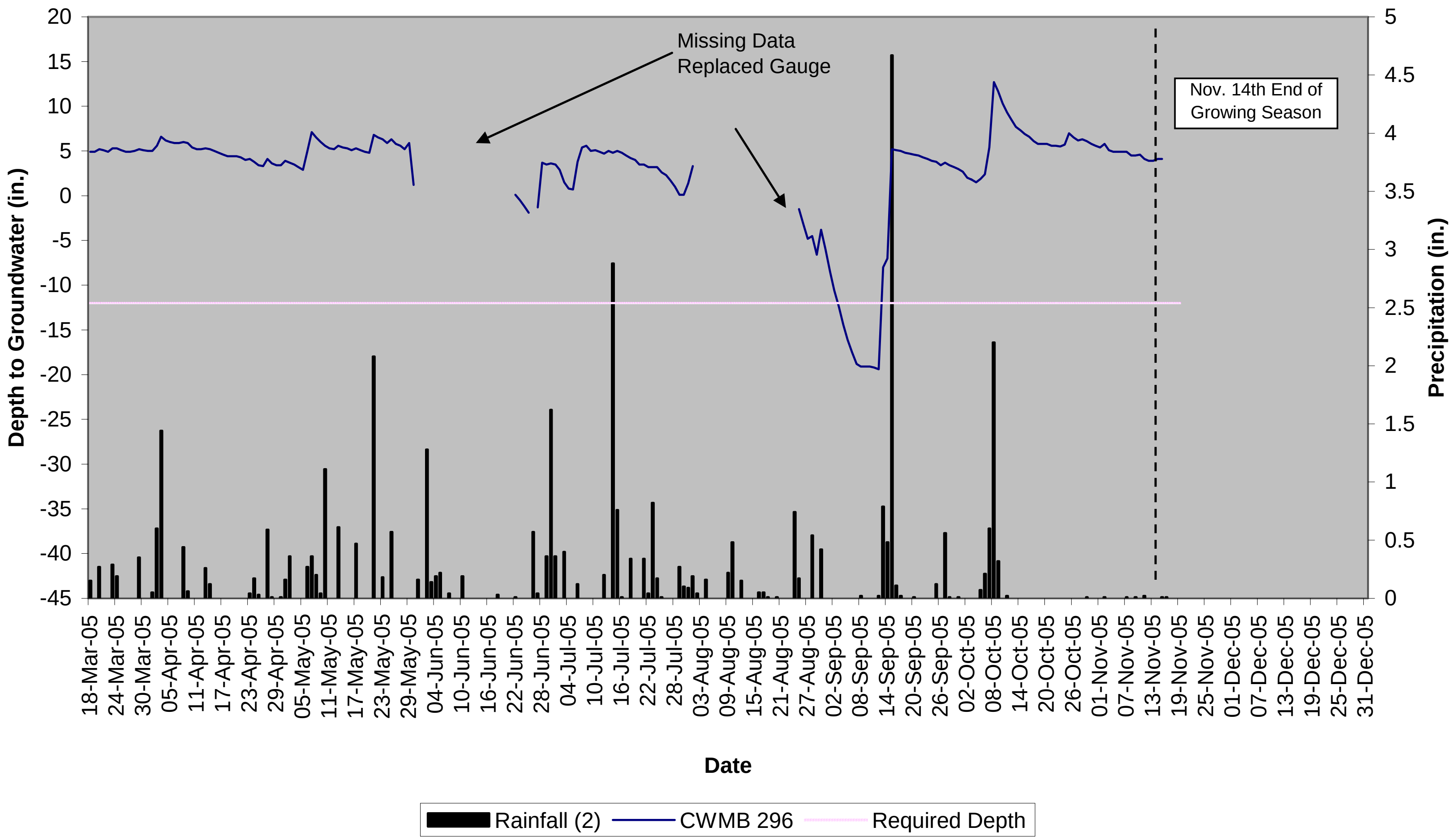
Croatan WMB
118
Bayboro



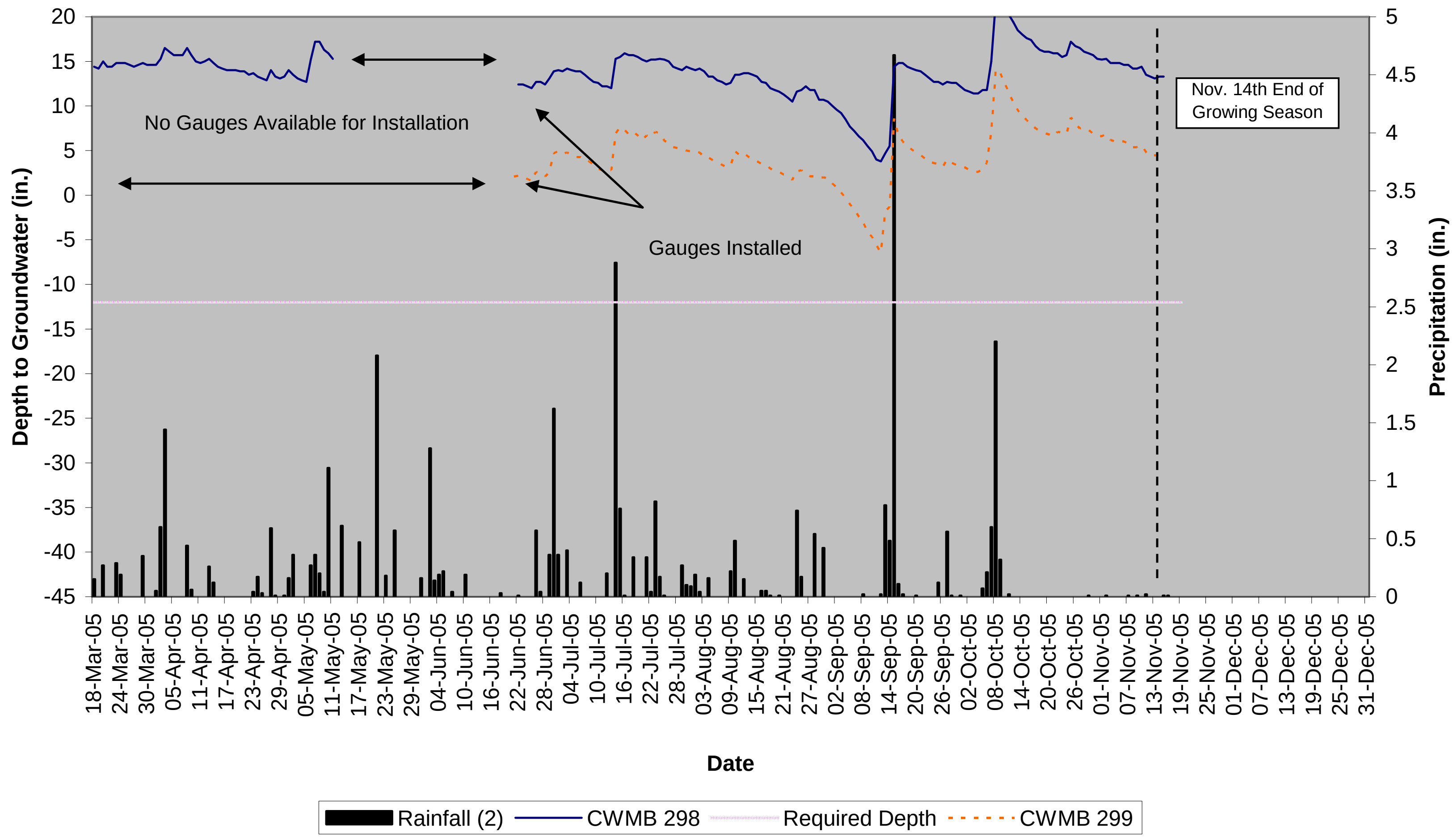
Croatan WMB
119 & 120
Croatan

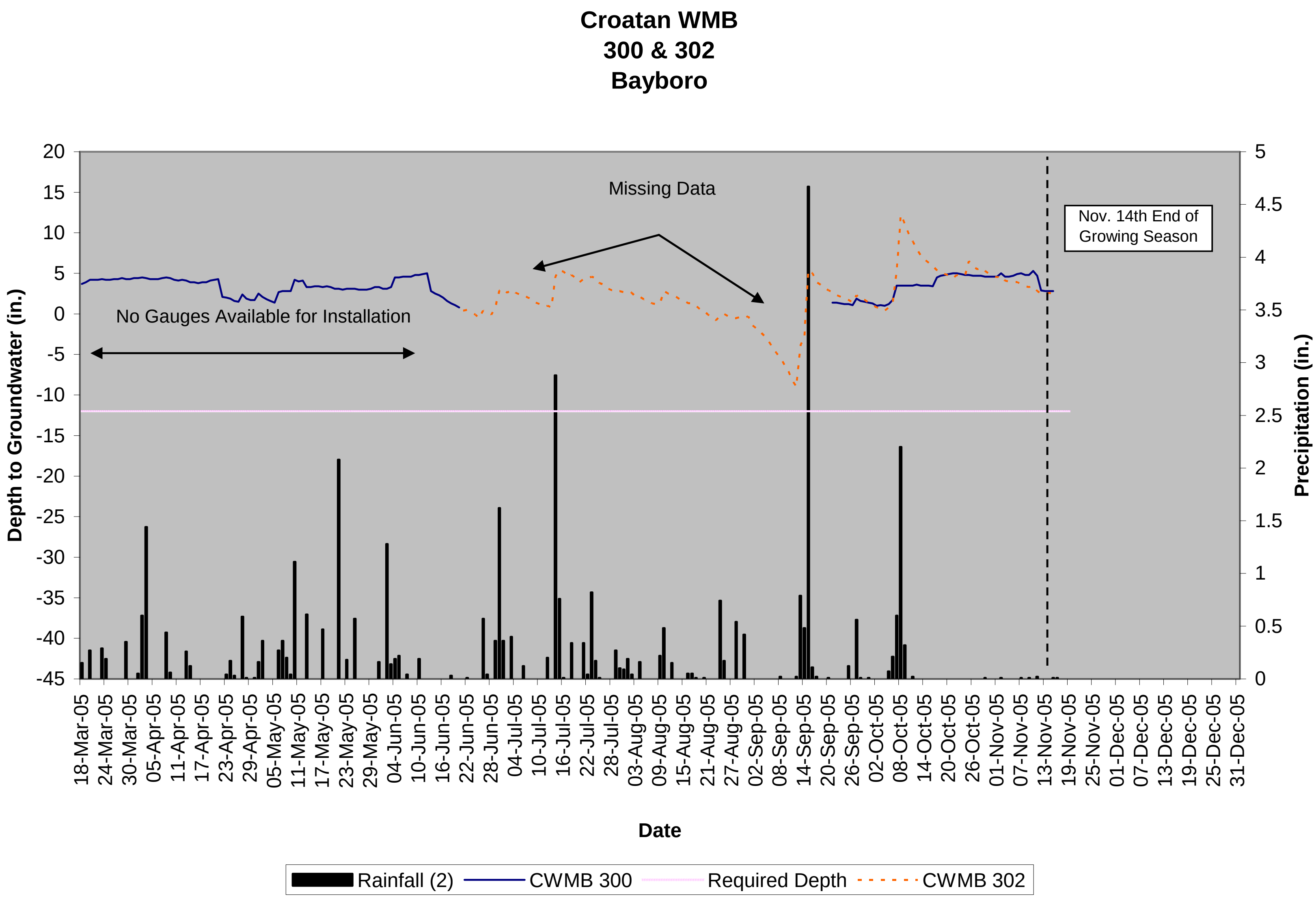


Croatan WMB
296
Croatan

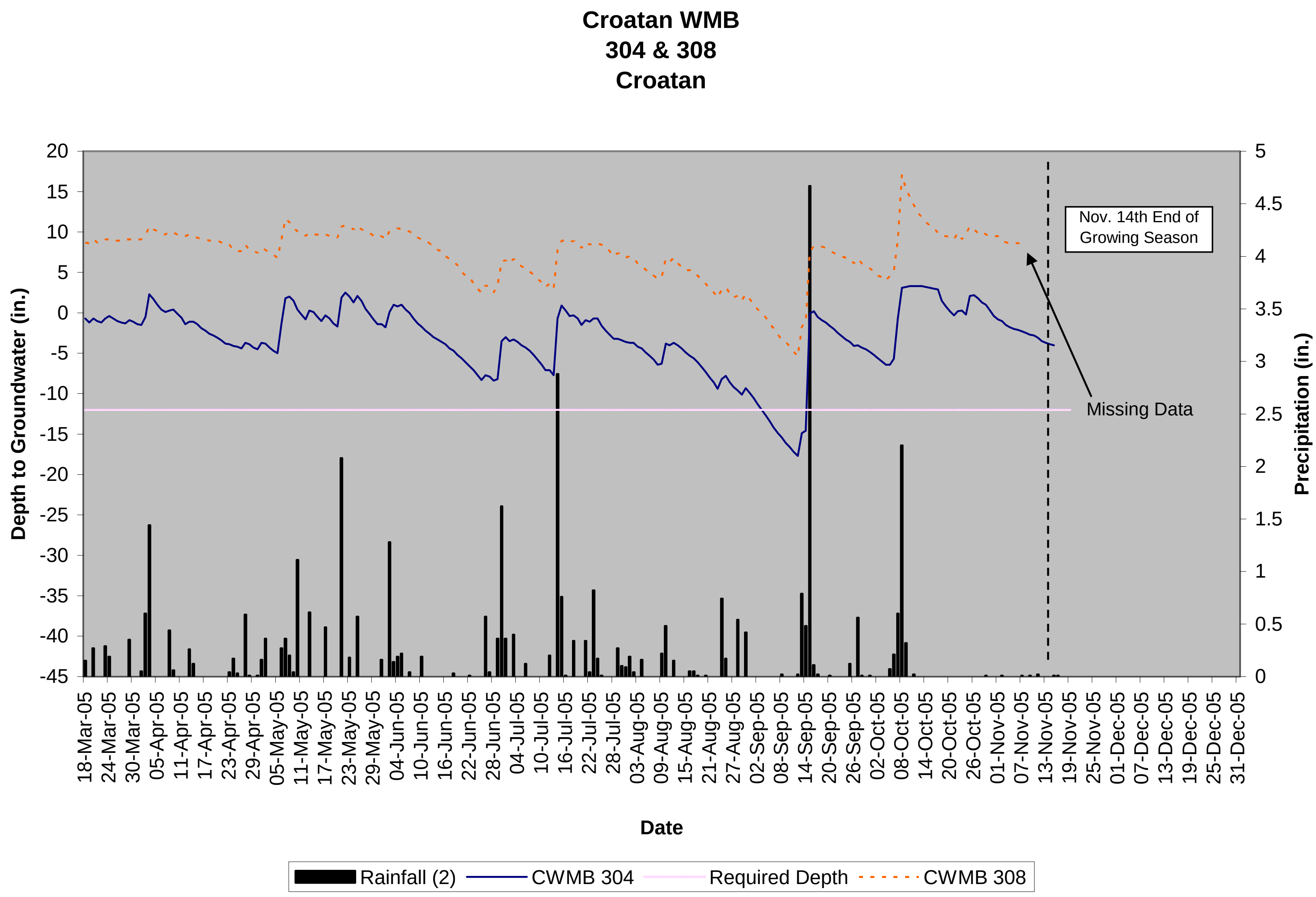


Croatan WMB
298 & 299
Bayboro

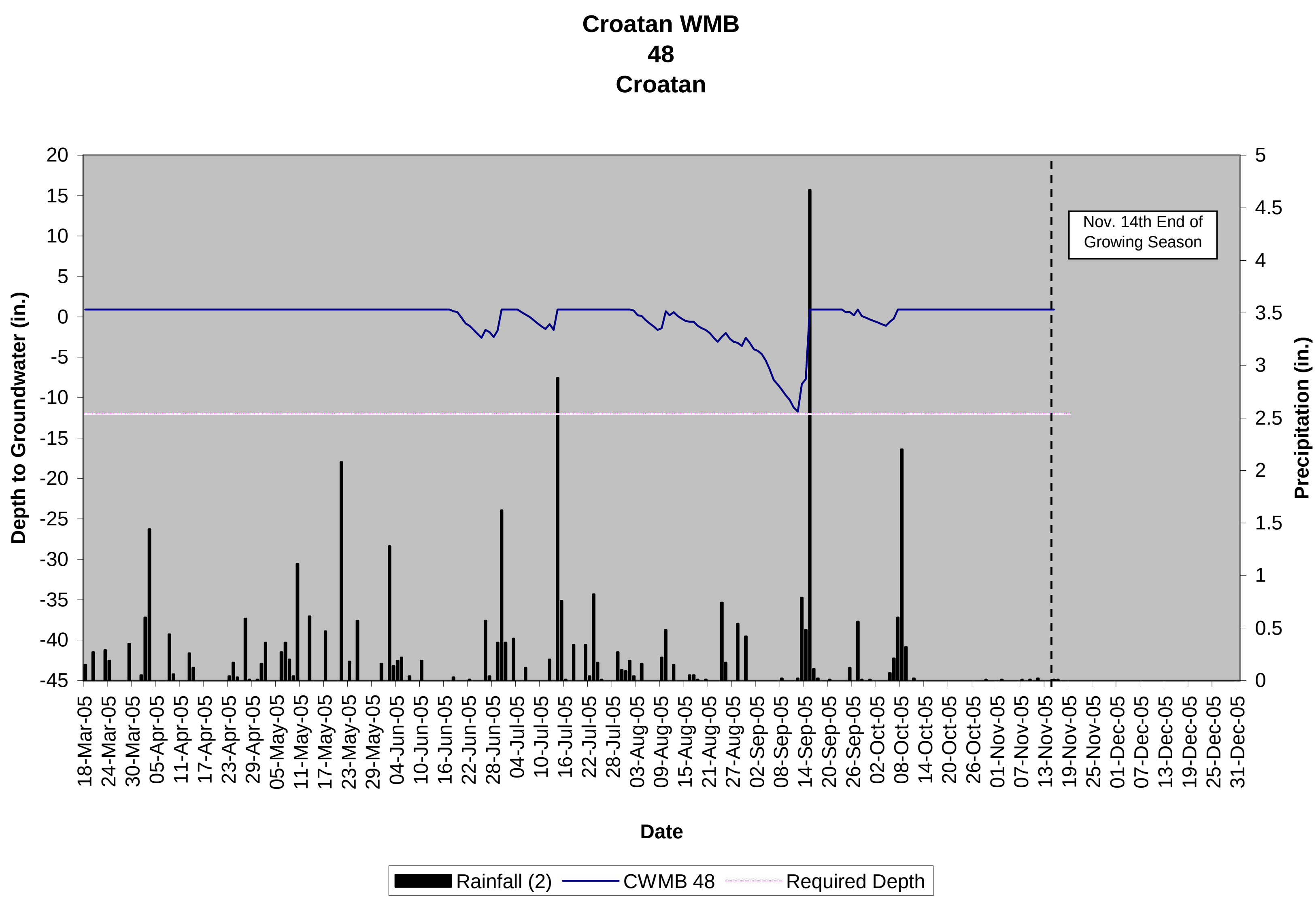


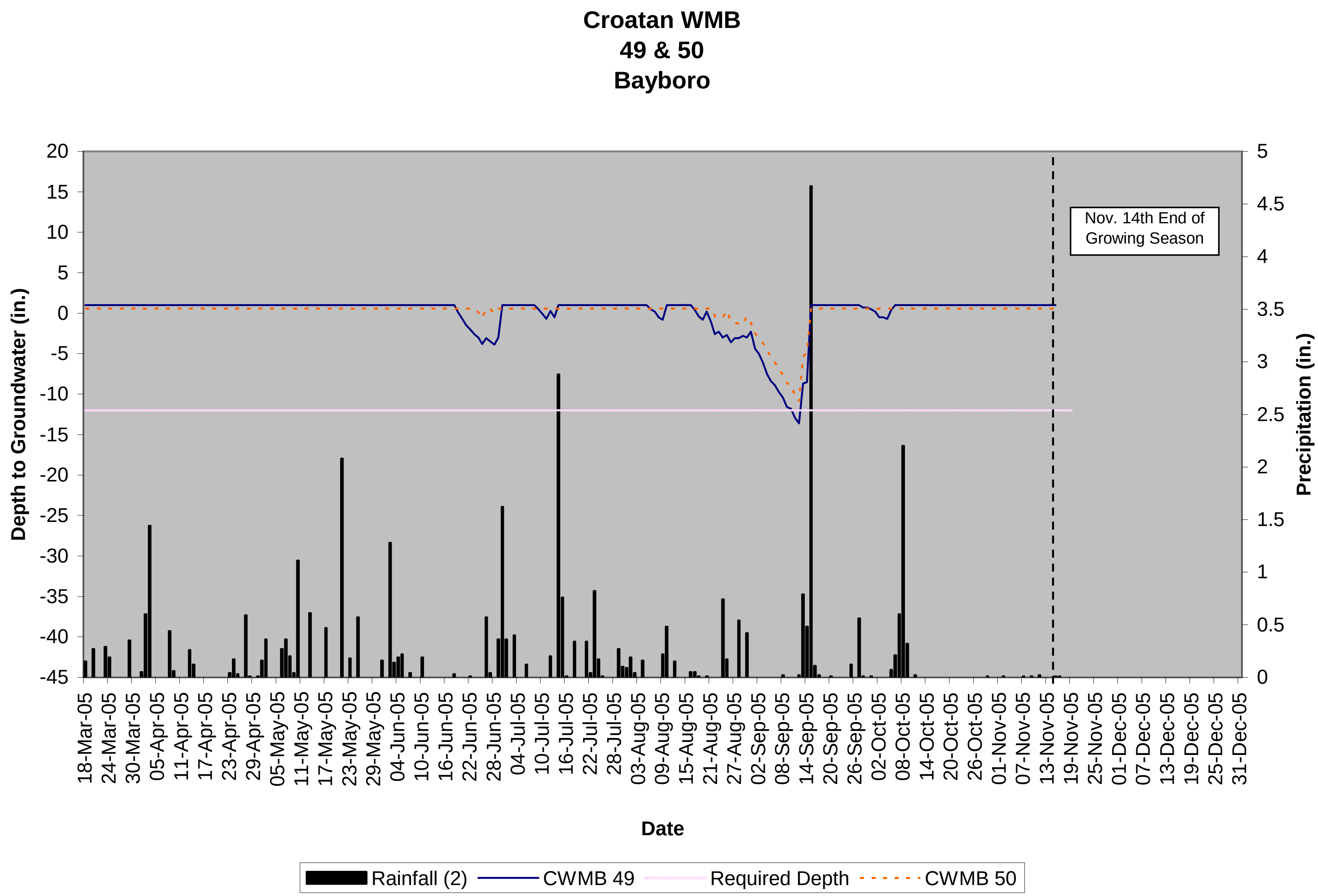


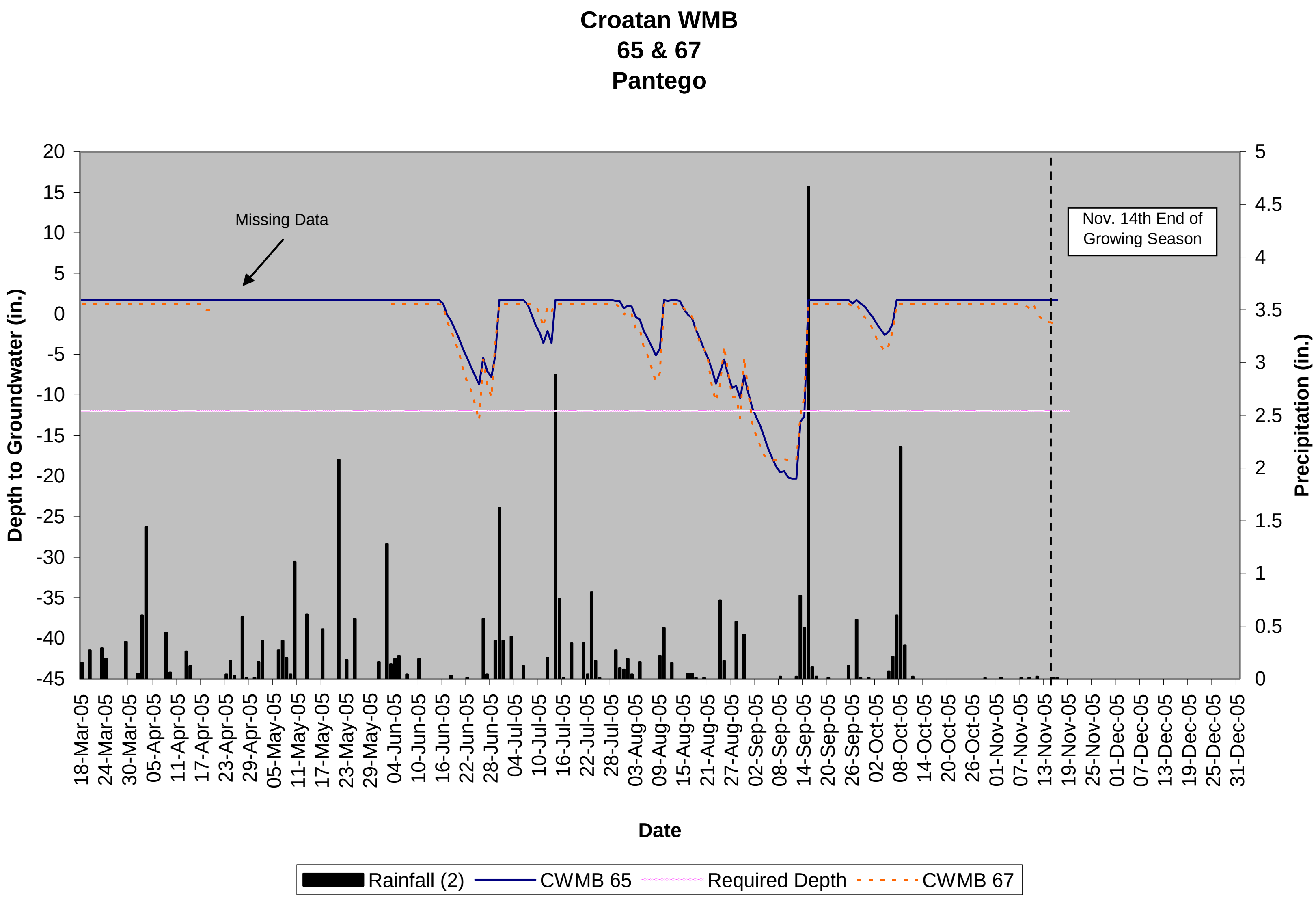
Croatan WMB
300 & 302
Bayboro
Missing Data
Nov. 14th End of Growing Season
No Gauges Available for Installation
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 300
Required Depth
CWMB 302


Croatan WMB
304 & 308
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Missing Data
Rainfall (2)
CWMB 304
Required Depth
CWMB 308
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

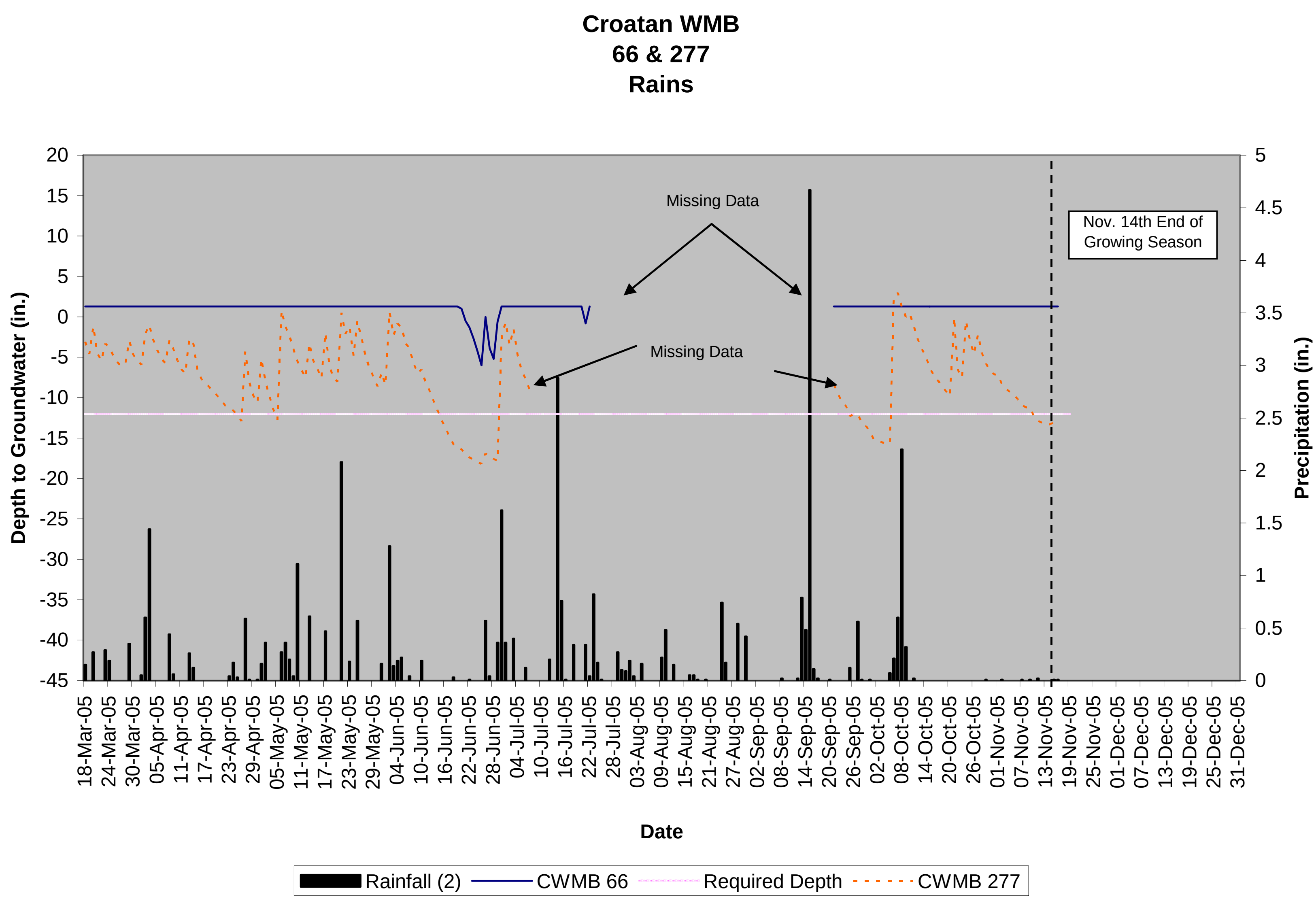
MU 10B

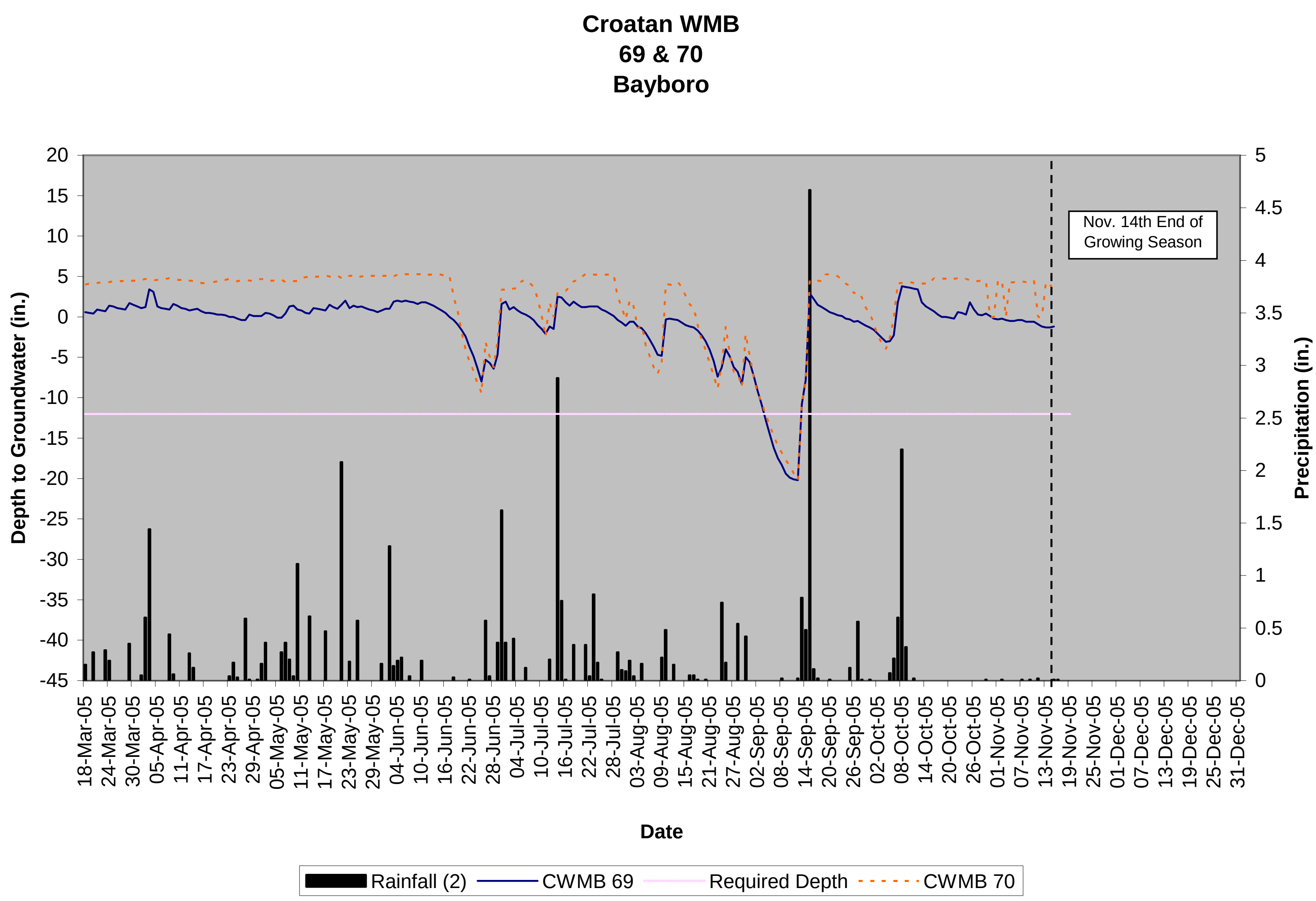

Croatan WMB
48
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 48
Required Depth


Croatan WMB
49 & 50
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 49
Required Depth
CWMB 50



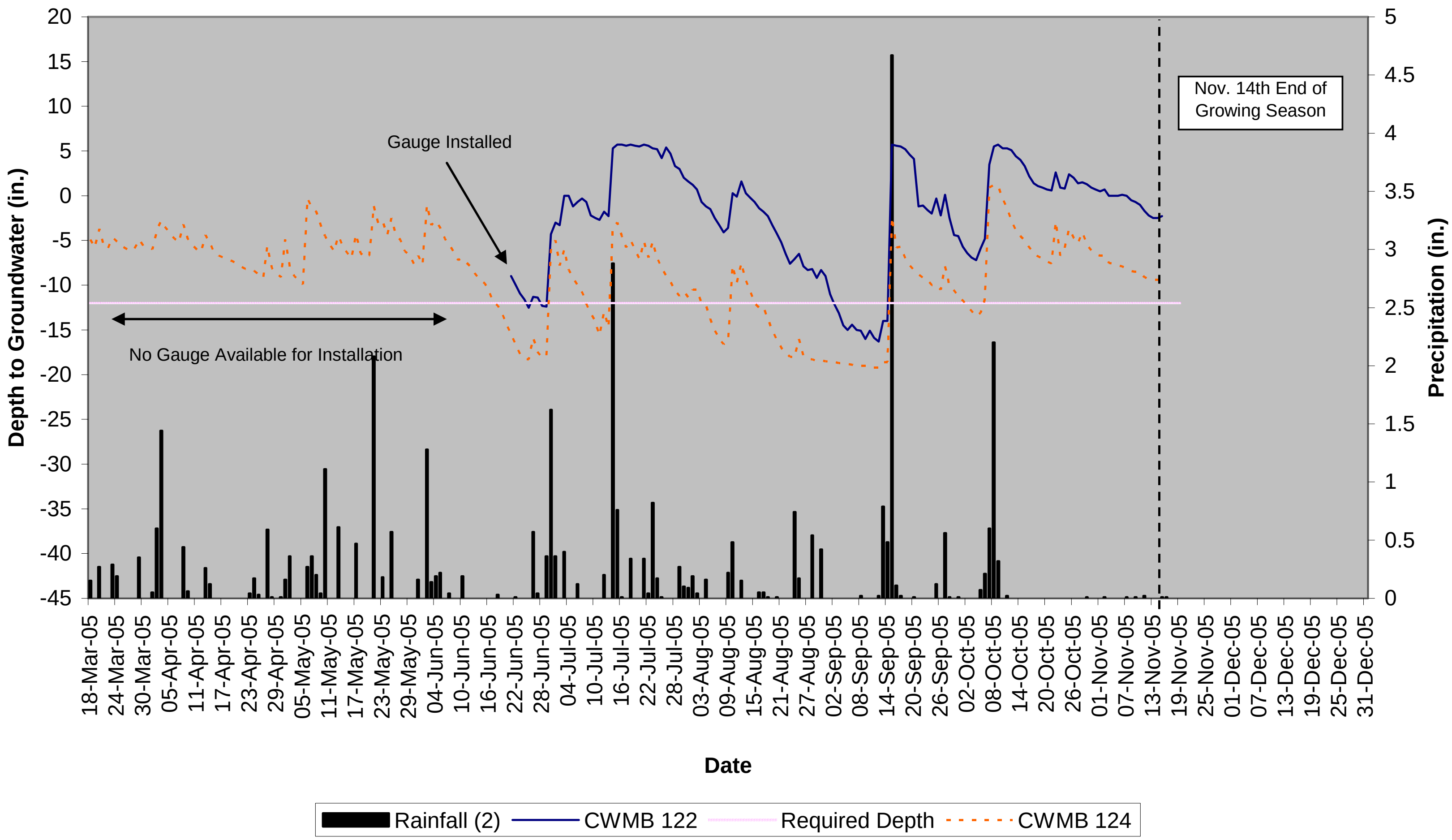
Croatan WMB
65 & 67
Pantego
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 65
Required Depth
CWMB 67

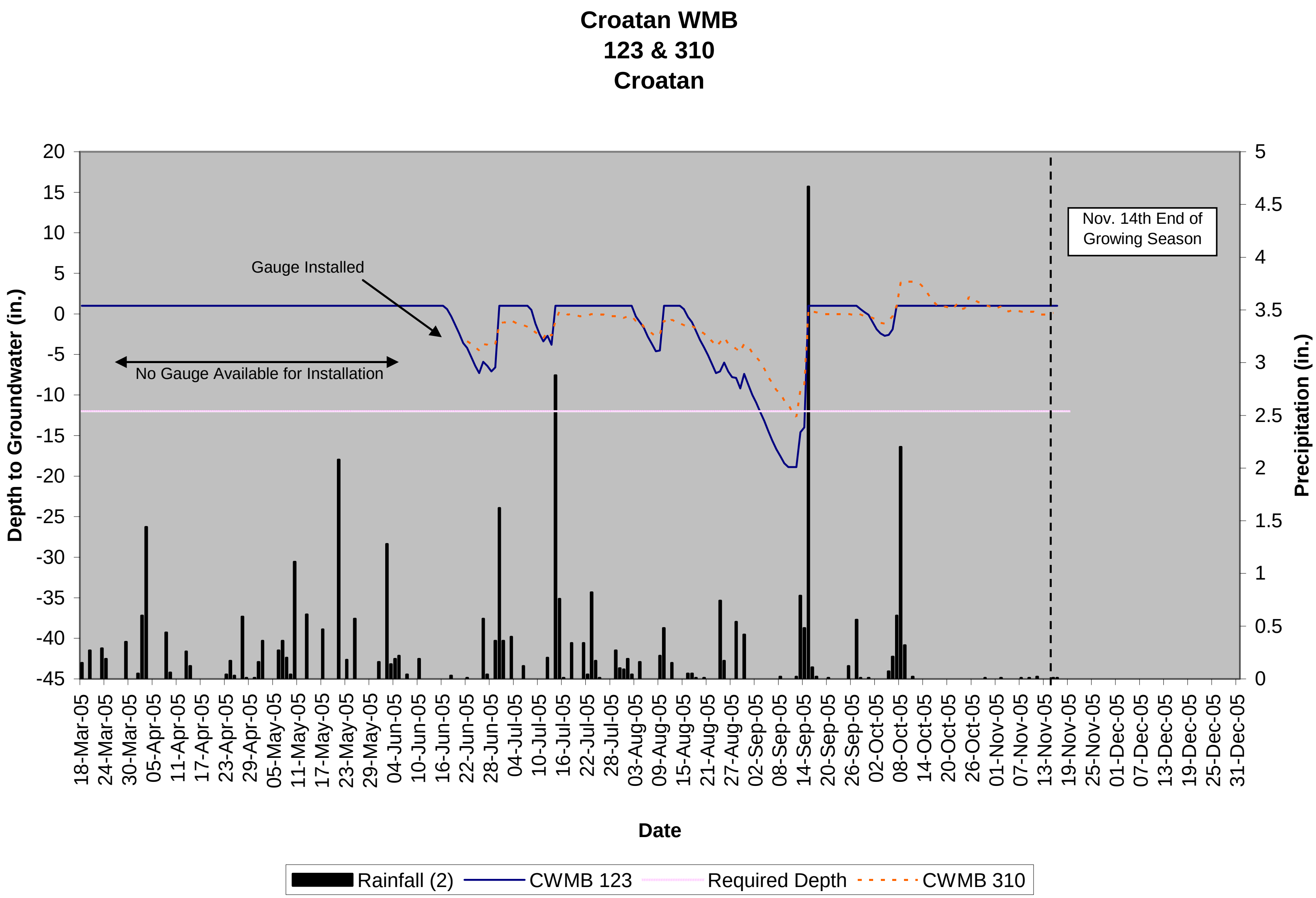

Croatan WMB
66 & 277
Rains
Missing Data
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 66
Required Depth
CWMB 277



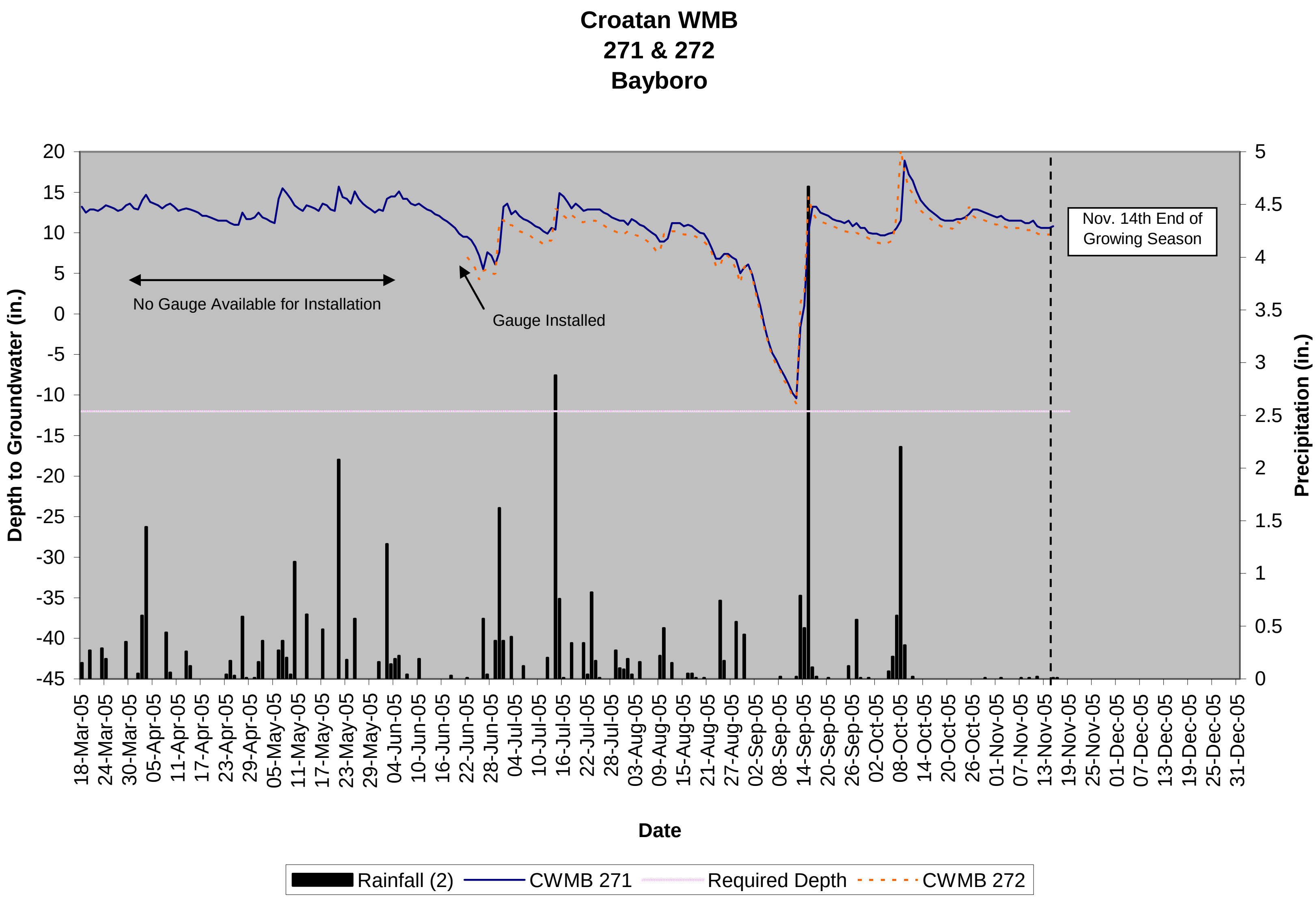
Croatan WMB
69 & 70
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 69
Required Depth
CWMB 70

Croatan WMB
122 & 124
Pantego

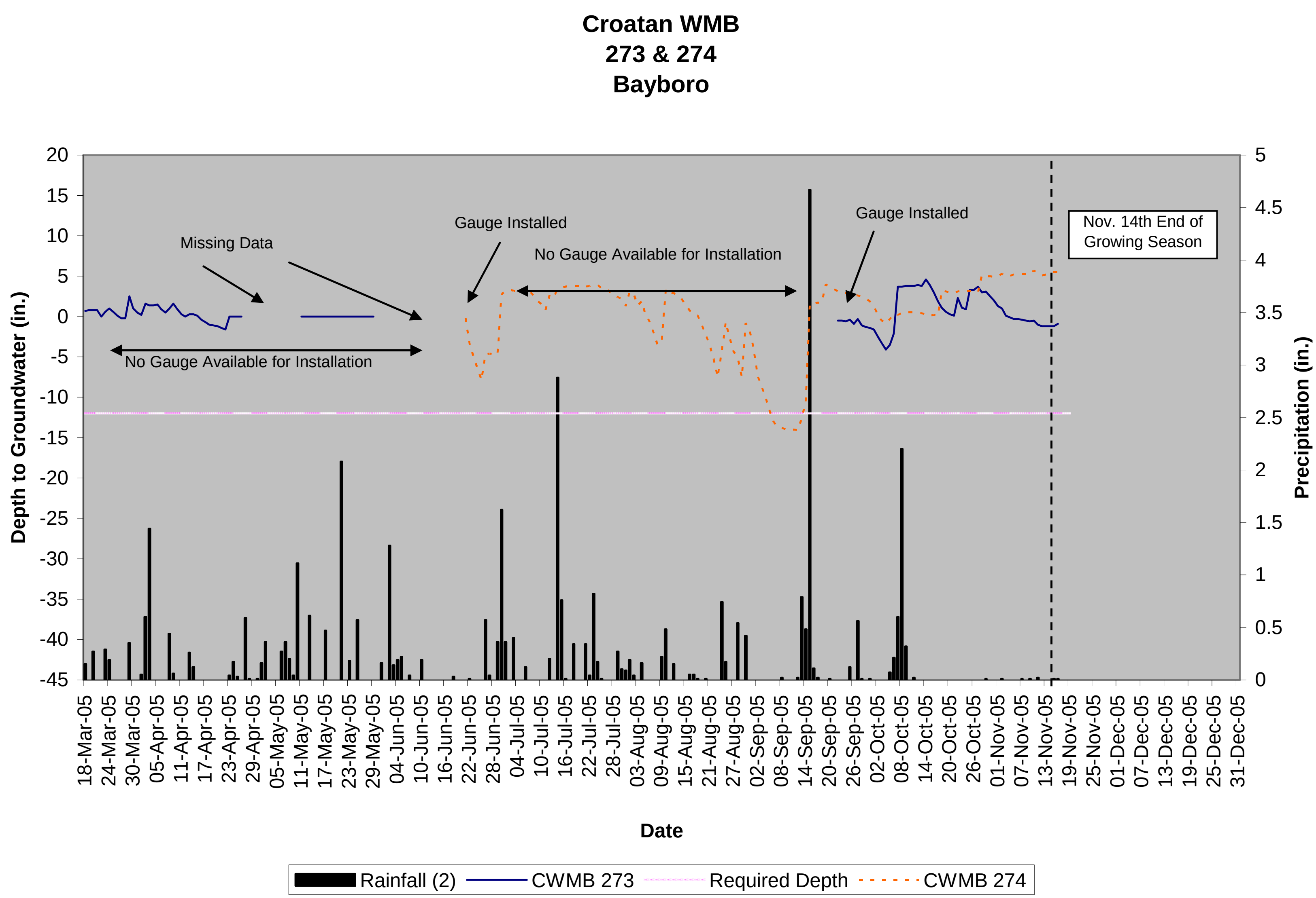




Croatan WMB
123 & 310
Croatan
Gauge Installed
No Gauge Available for Installation
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
4.5
4
3.5
3
2.5
2
1.5
1
0.5
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 123
Required Depth
CWMB 310

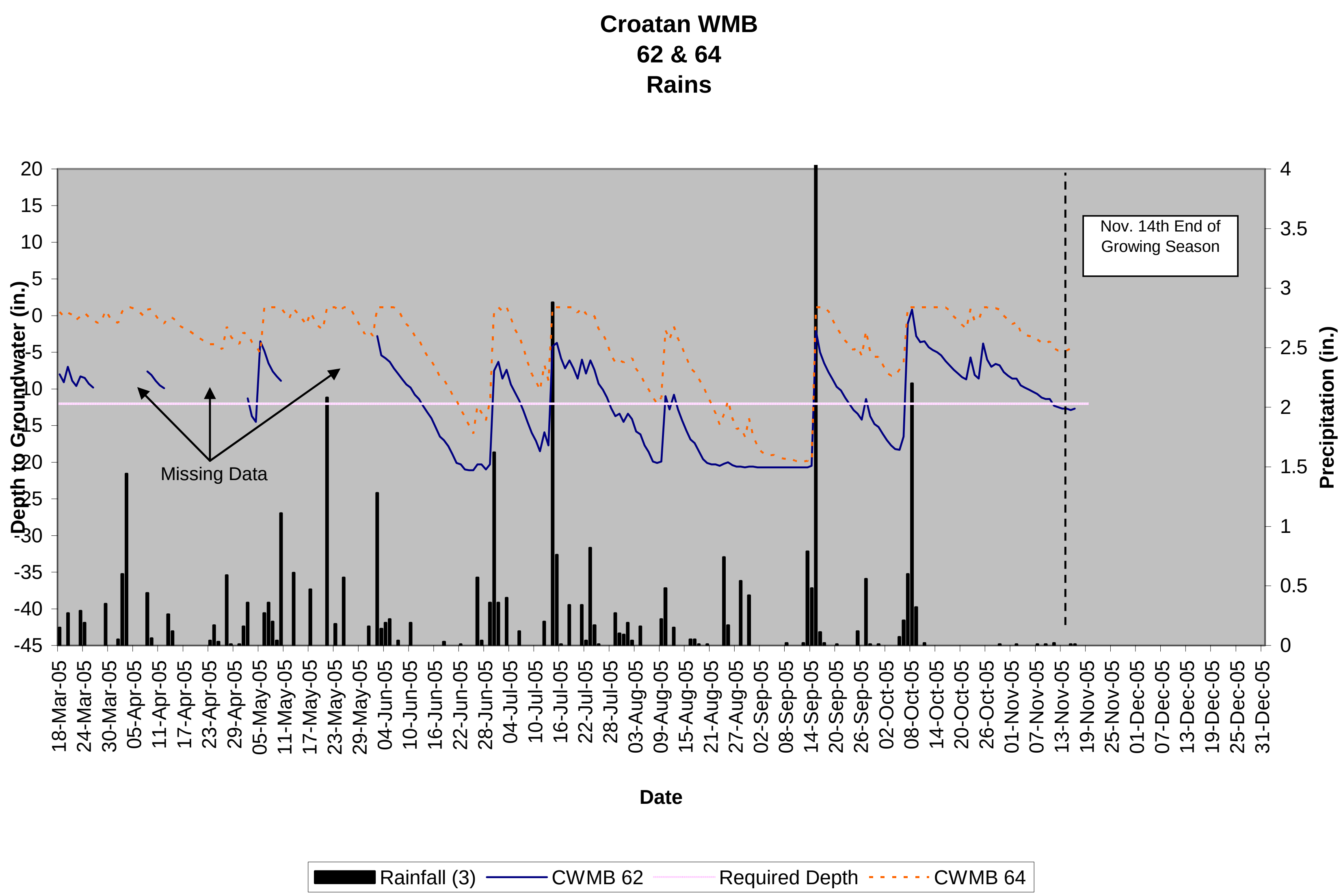


Croatan WMB
271 & 272
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
No Gauge Available for Installation
Gauge Installed
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 271
Required Depth
CWMB 272



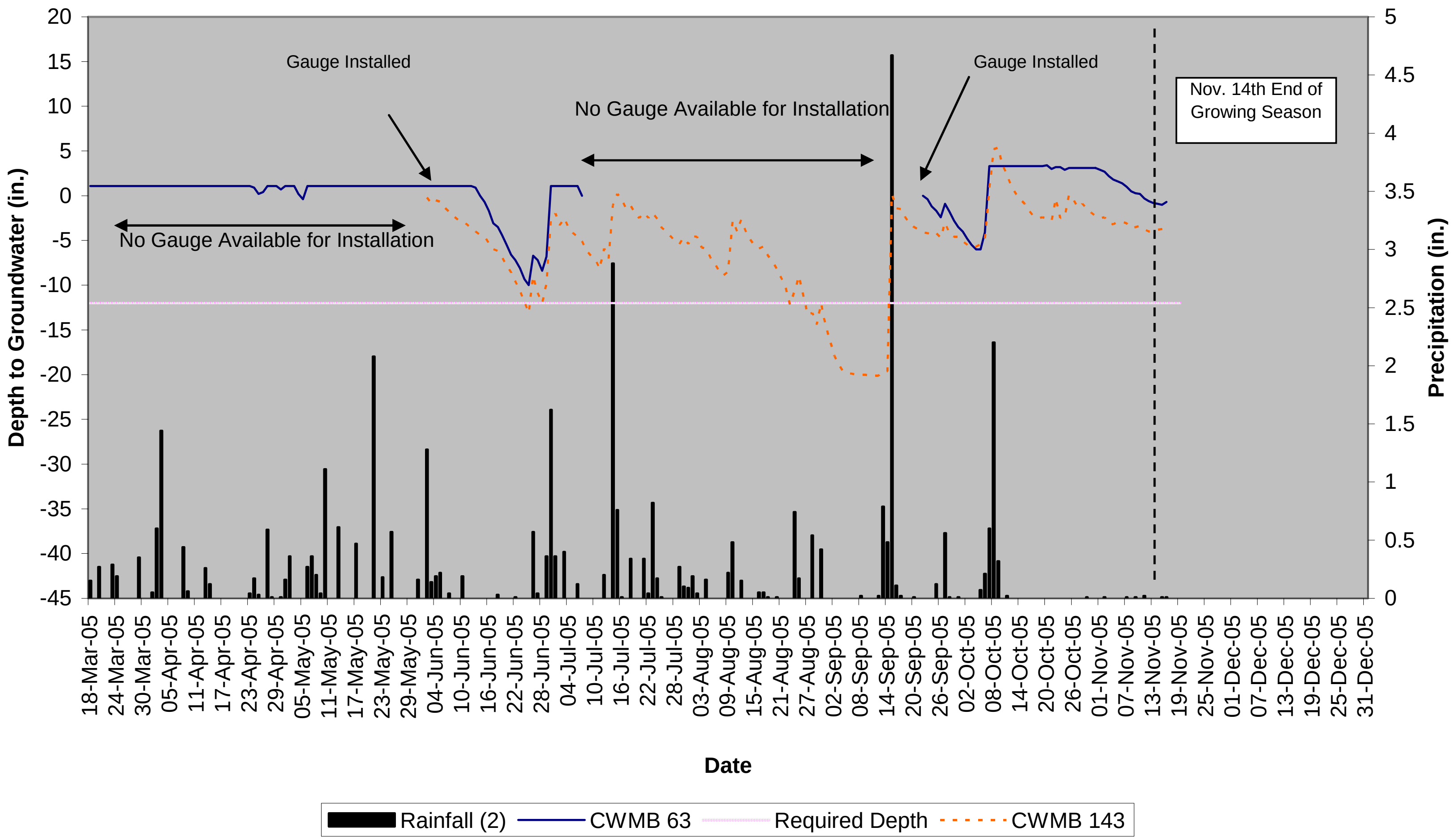
Croatan WMB
273 & 274
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Missing Data
Gauge Installed
No Gauge Available for Installation
No Gauge Available for Installation
Gauge Installed
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 273
Required Depth
CWMB 274

MU 10C

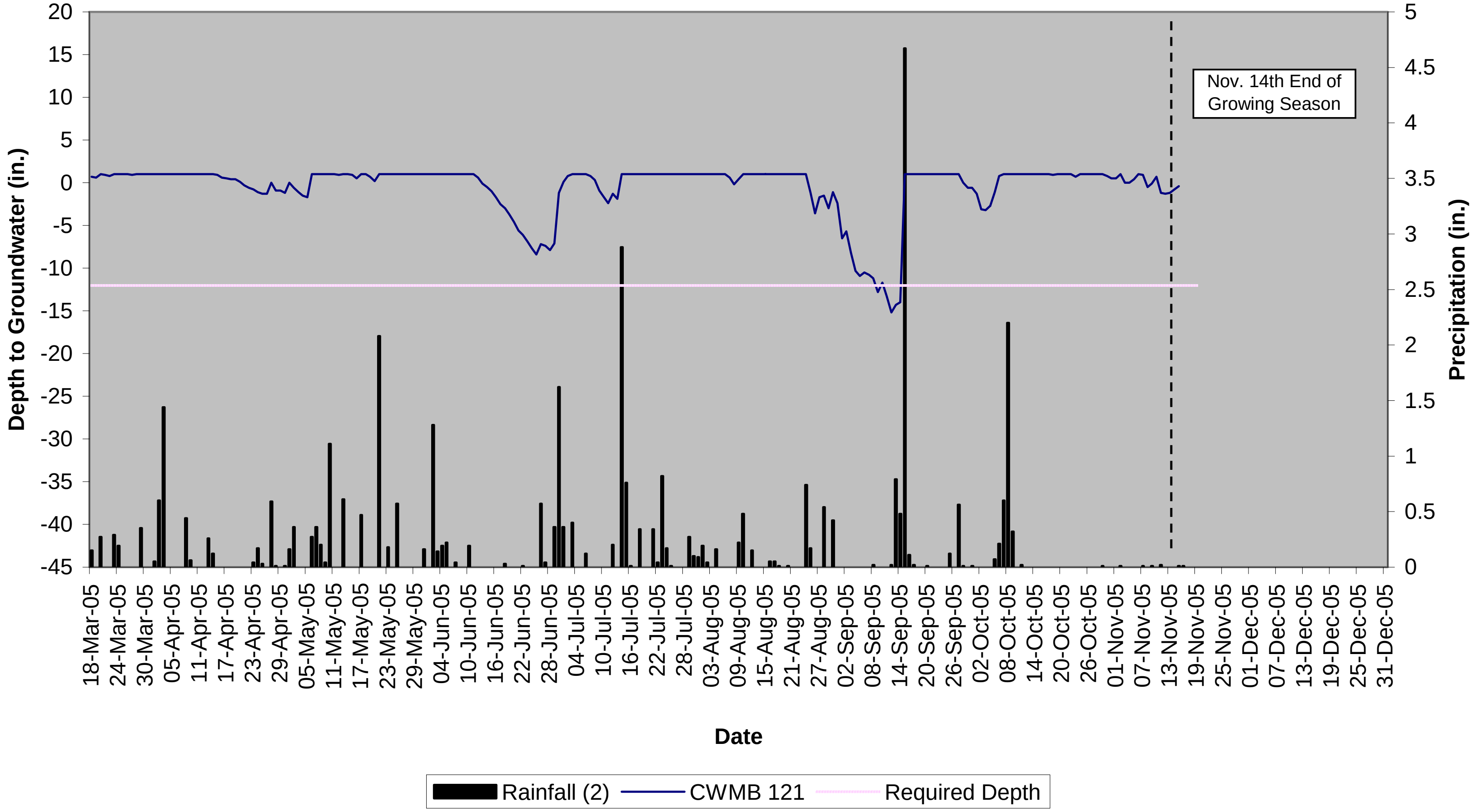


Croatan WMB
62 & 64
Rains
Depth to Groundwater (in.)
Precipitation (in.)
Date
Missing Data
Nov. 14th End of Growing Season
Rainfall (3)
CWMB 62
Required Depth
CWMB 64

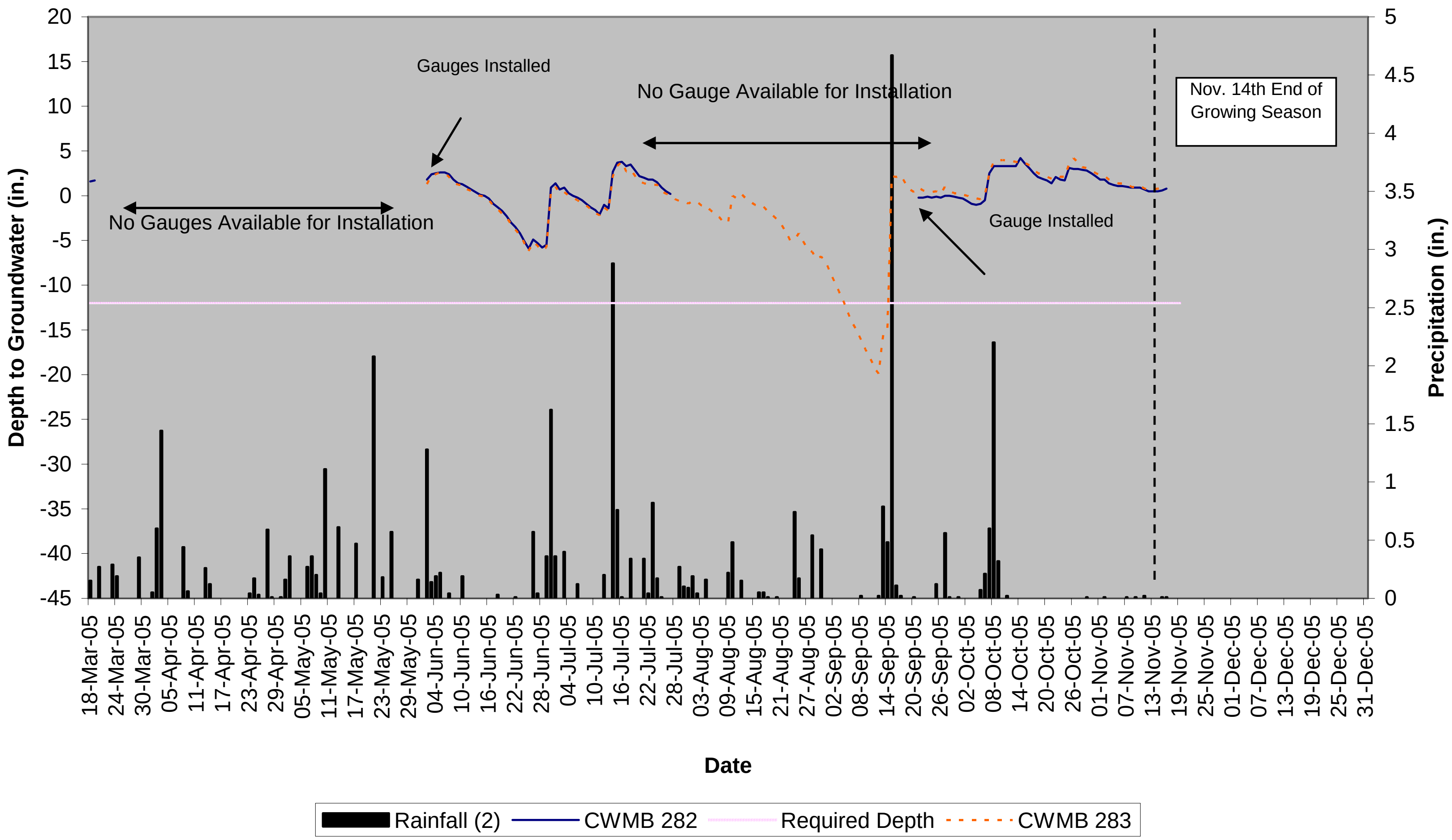
Croatan WMB
63 & 143
Pantego

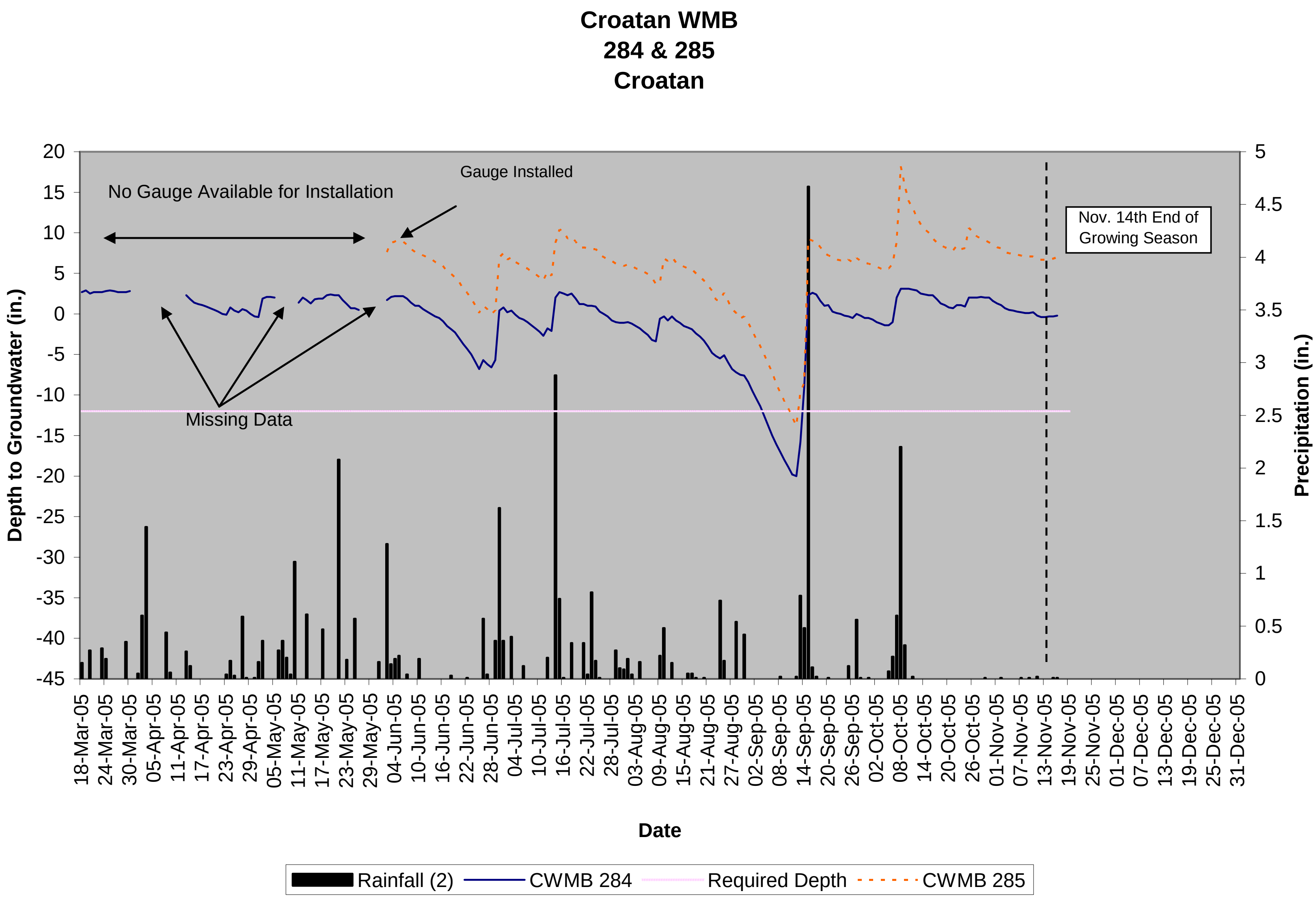


Croatan WMB
121
Pantego

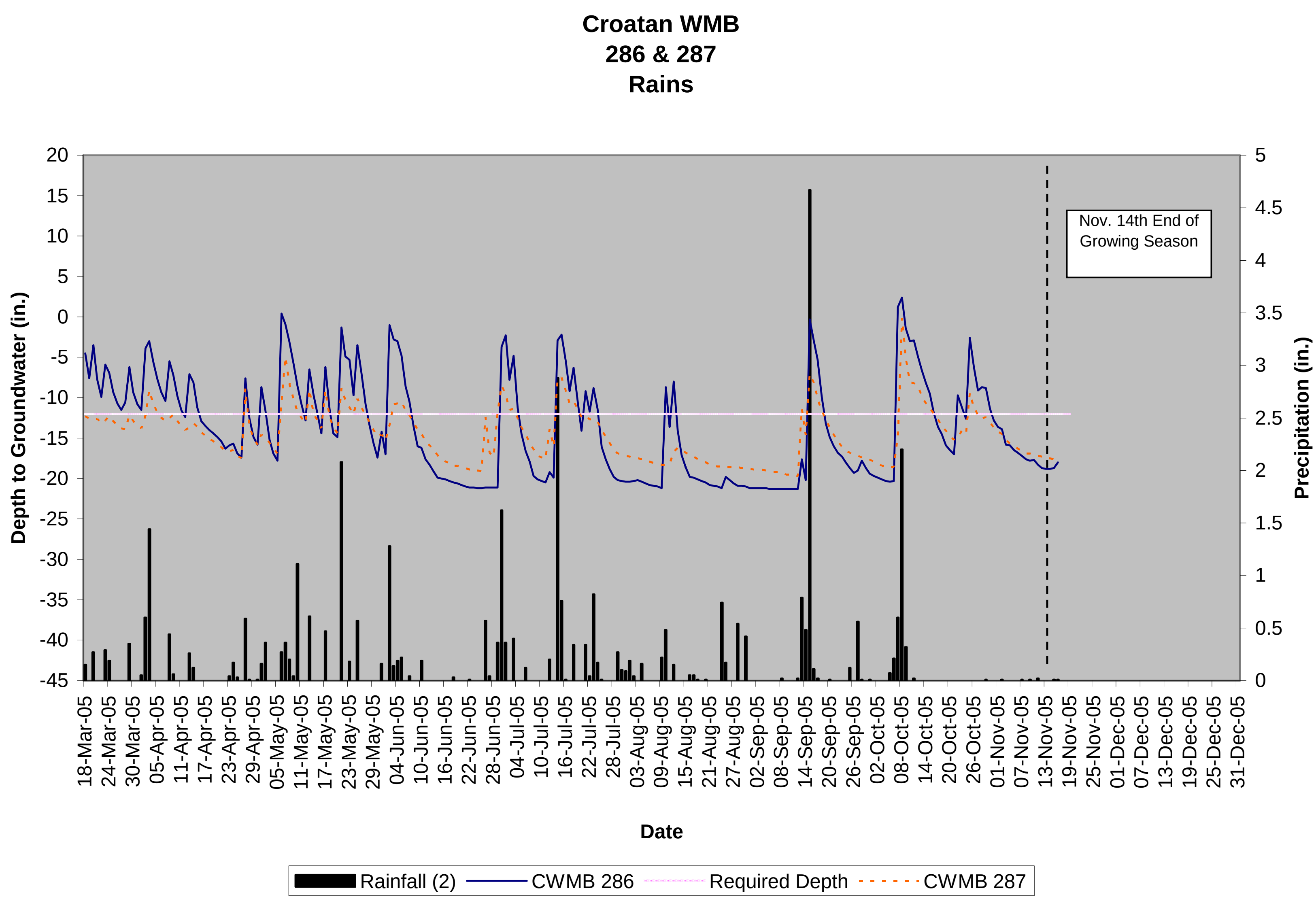


Croatan WMB
282 & 283
Pantego



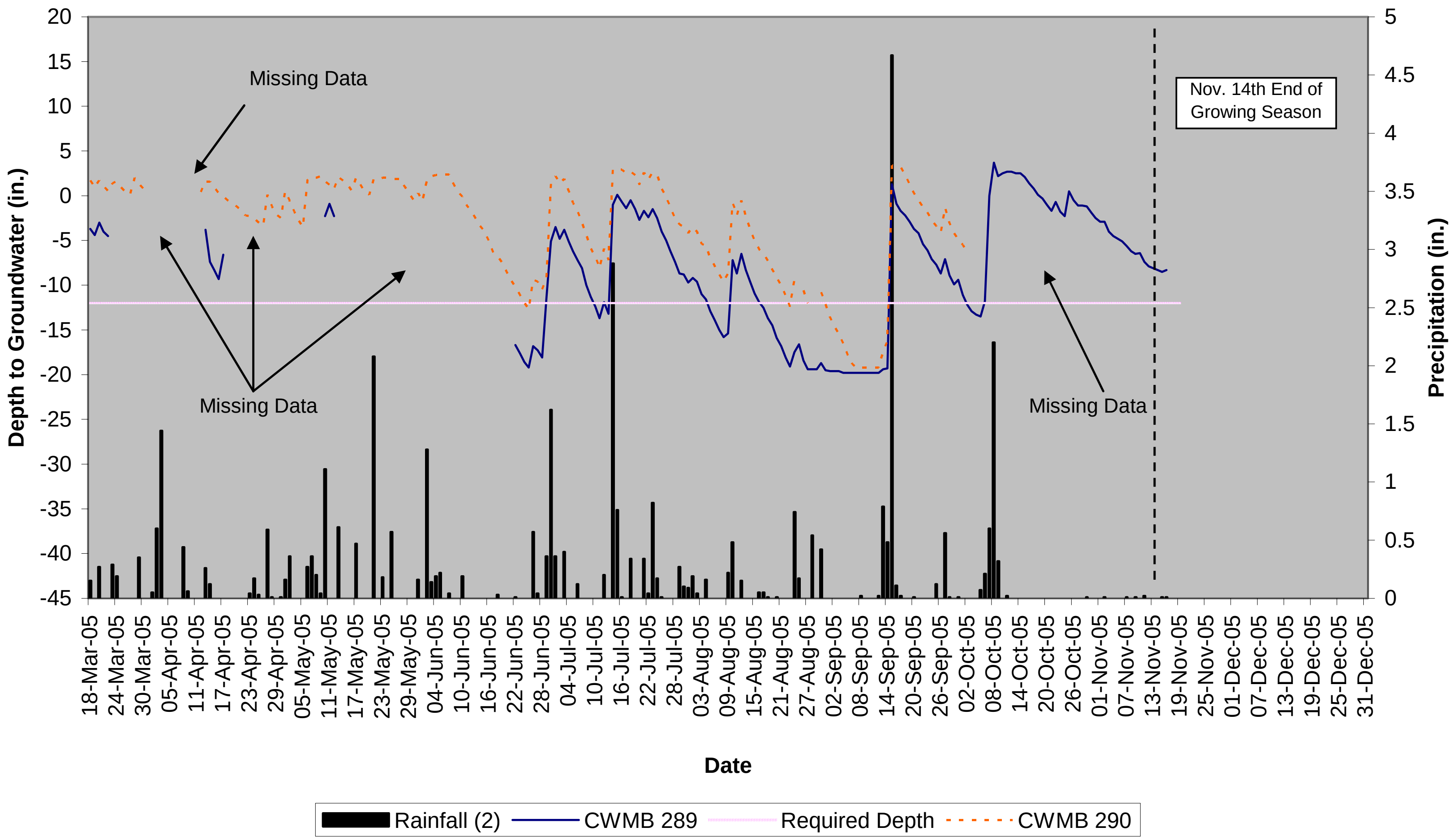


Croatan WMB
284 & 285
Croatan
No Gauge Available for Installation
Gauge Installed
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 284
Required Depth
CWMB 285

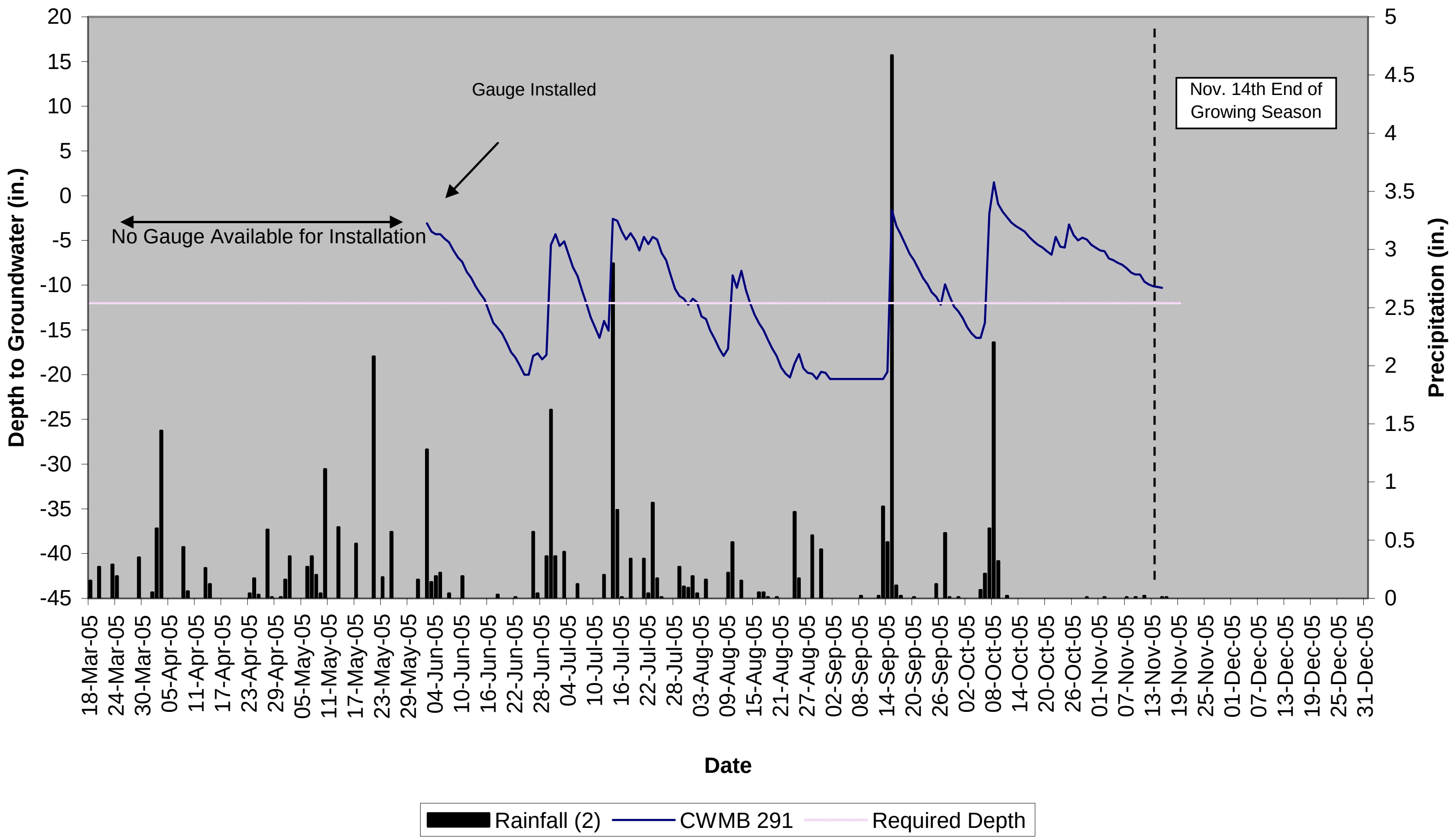


Croatan WMB
286 & 287
Rains
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 286
Required Depth
CWMB 287

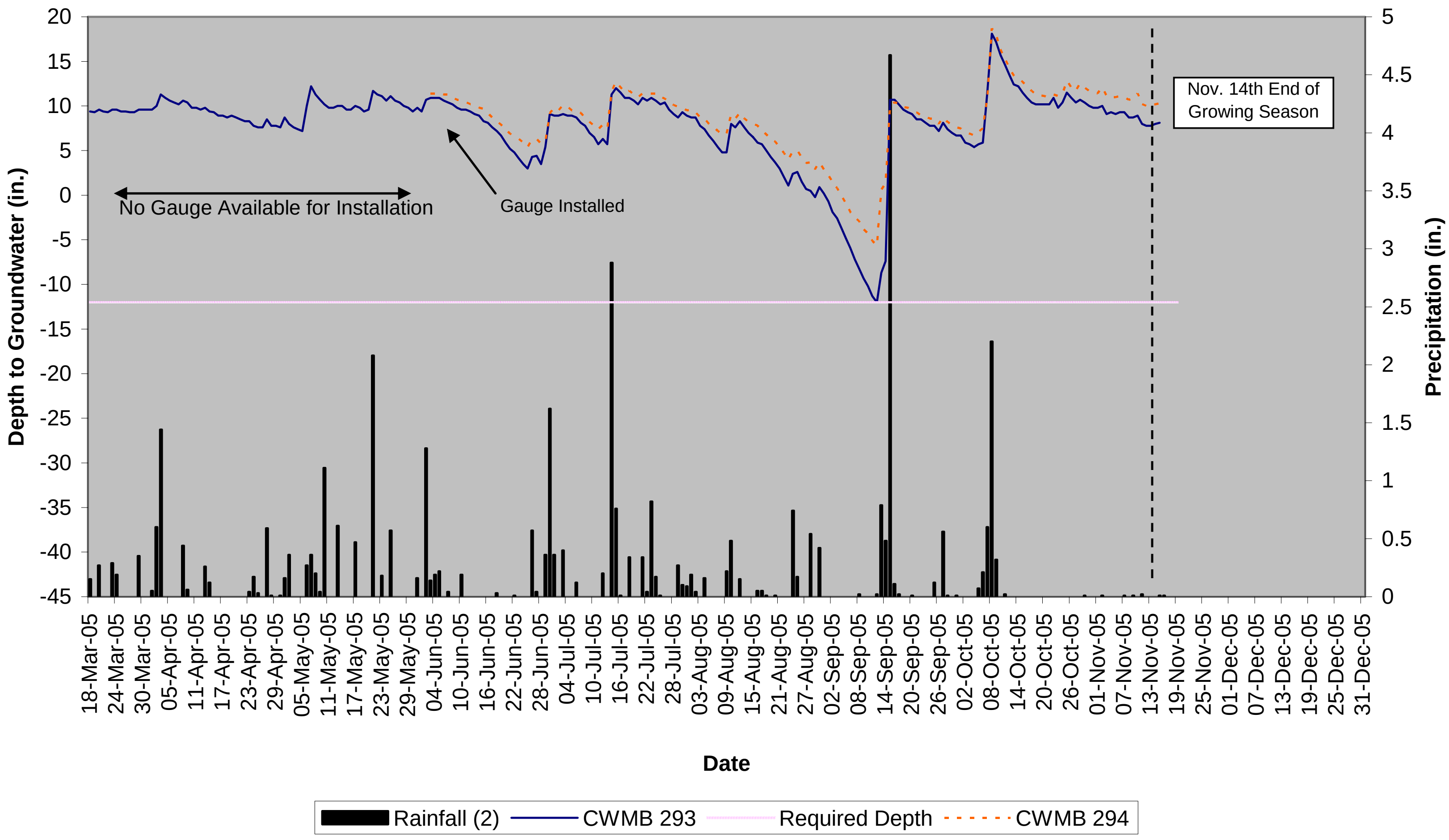
Croatan WMB
289 & 290
Pantego



Croatan WMB
291
Pantego

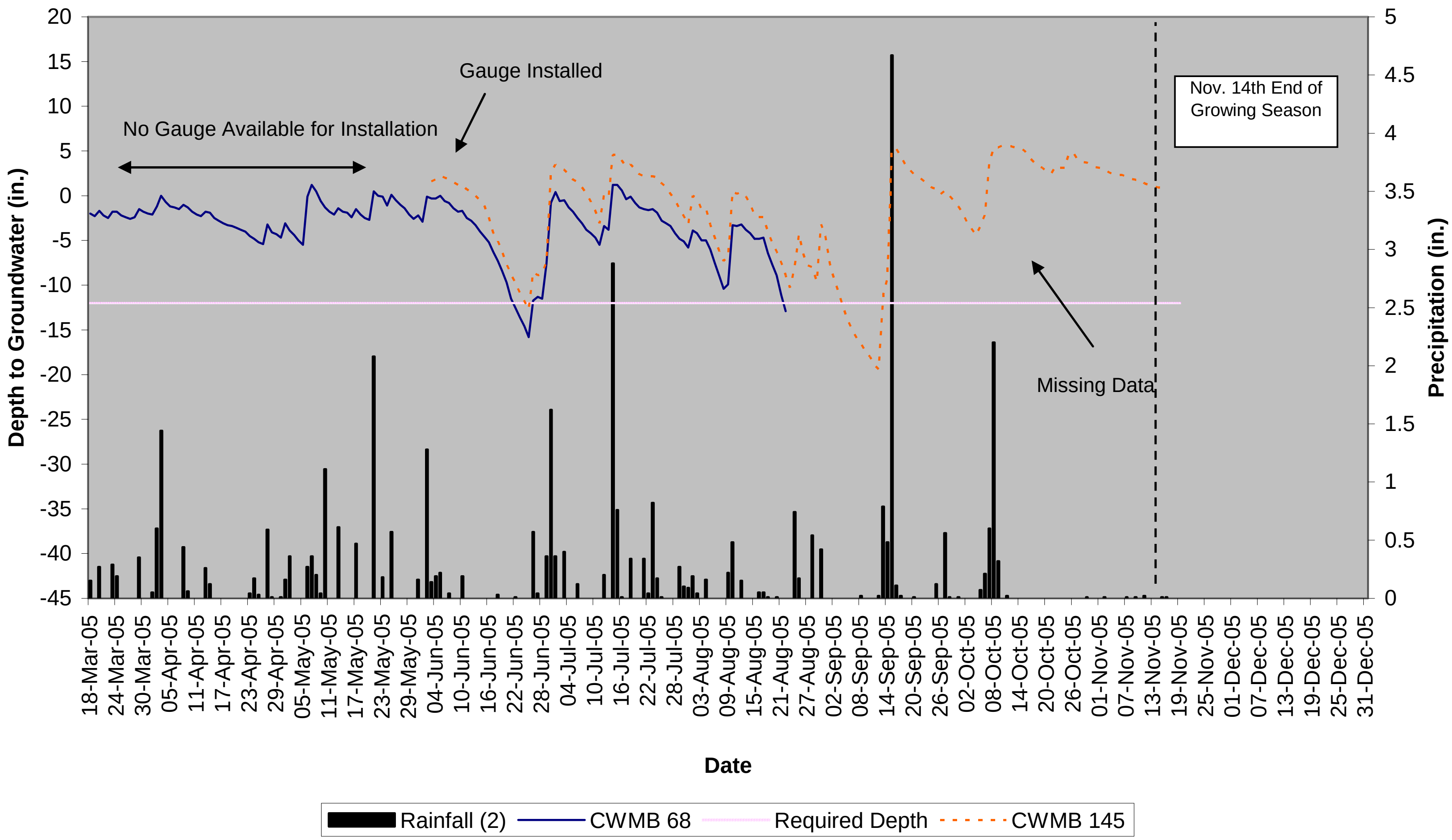


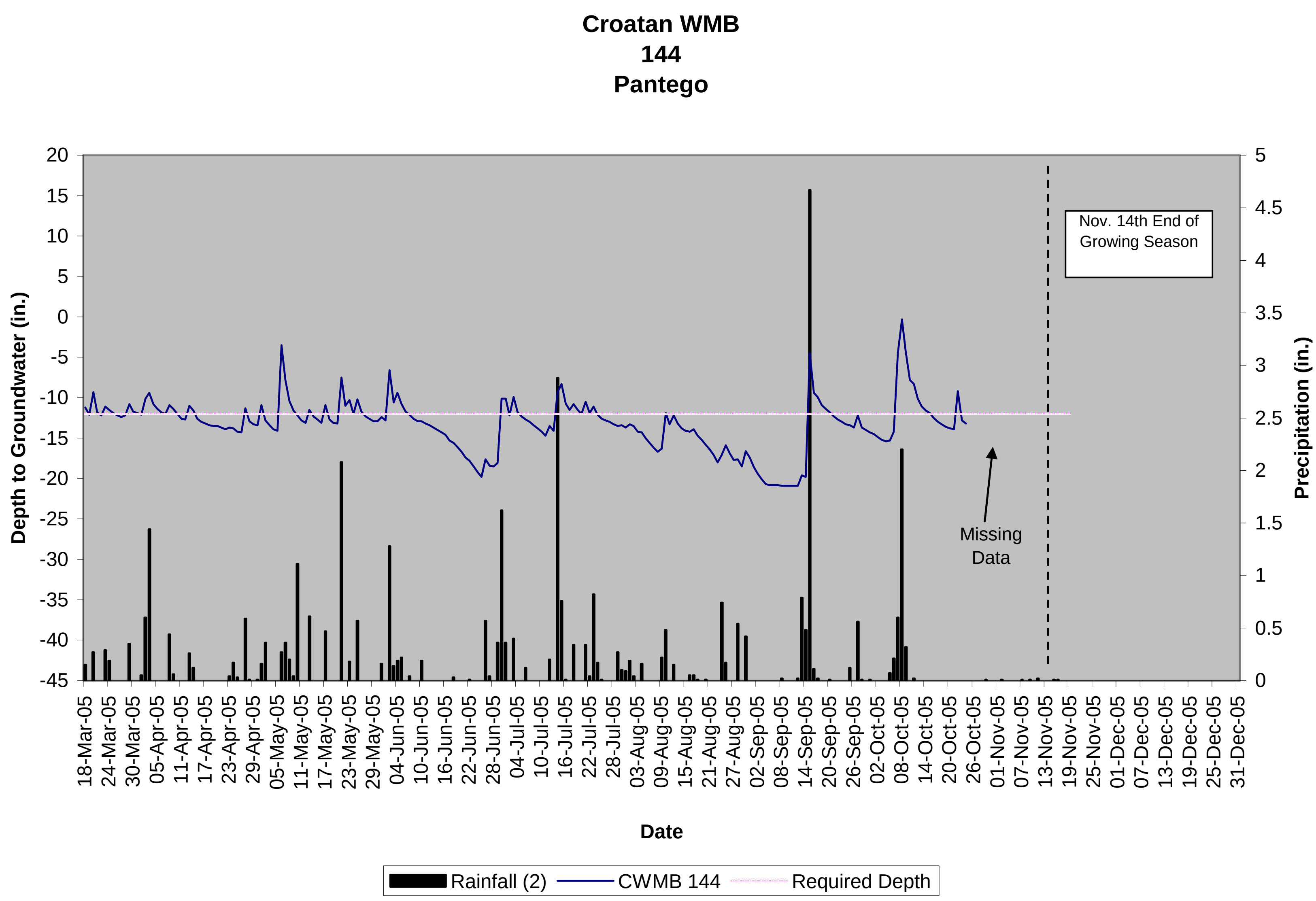
Croatan WMB
293 & 294
Croatan

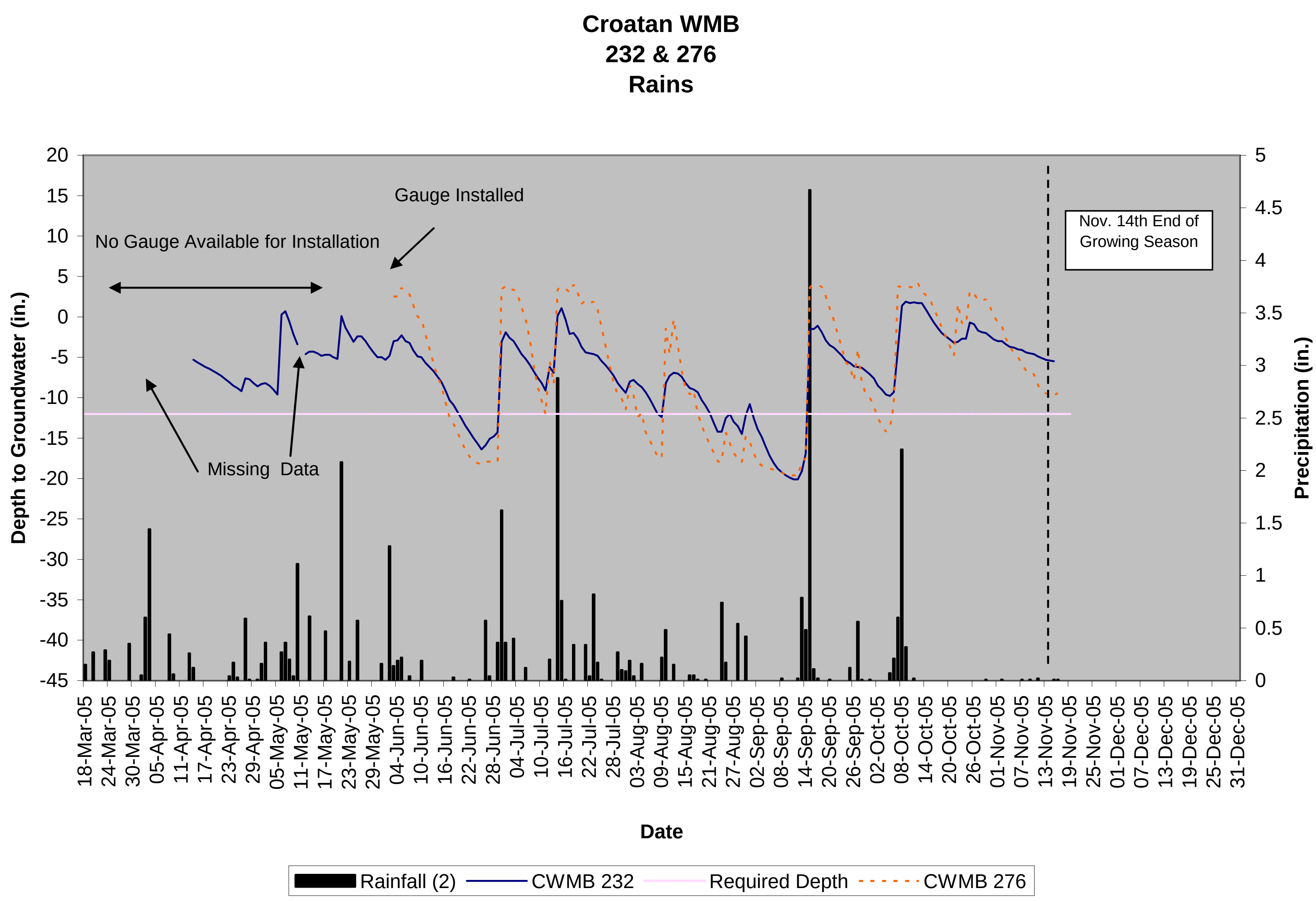


MU 11

Croatan WMB
68 & 145
Bayboro

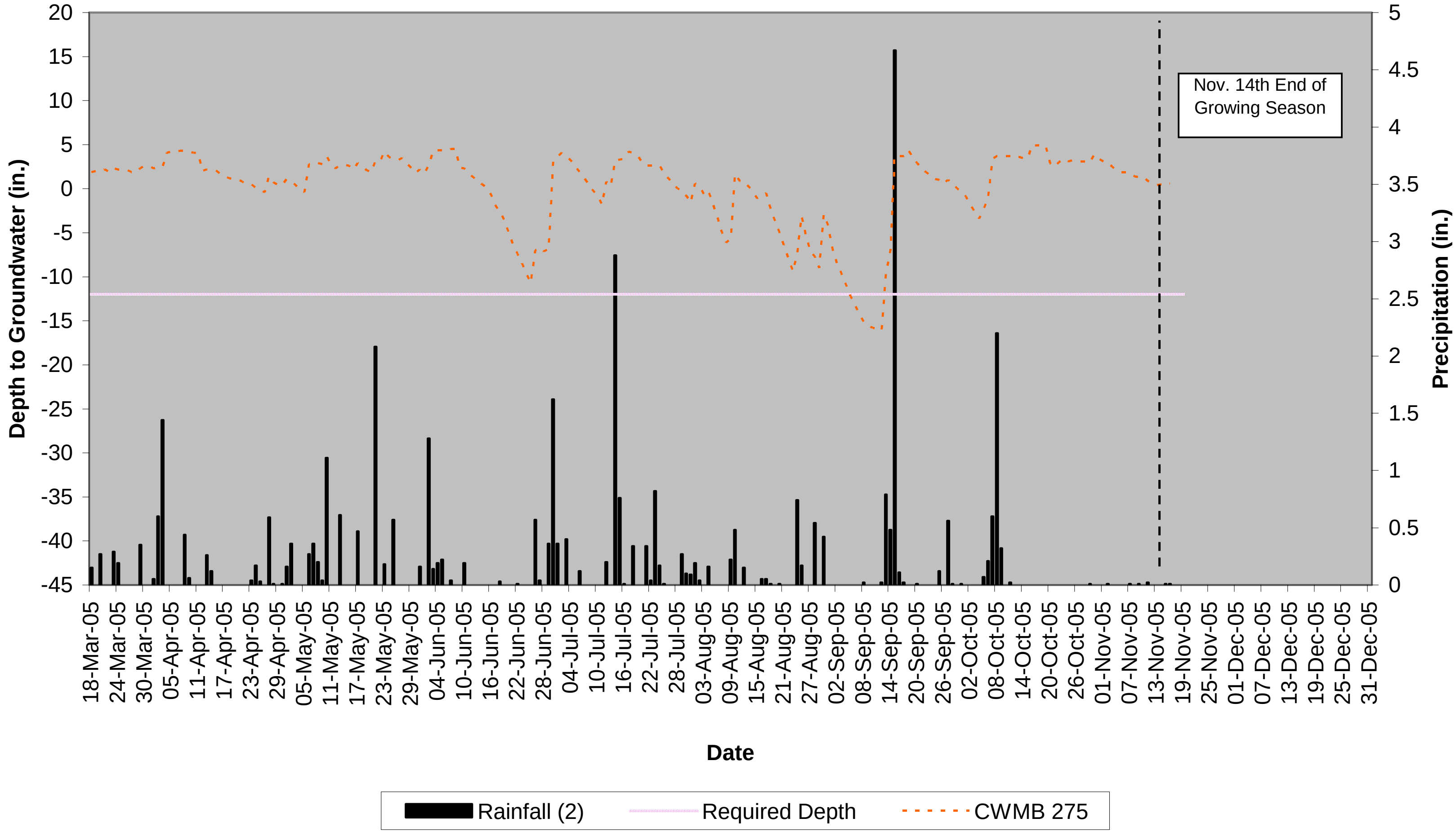


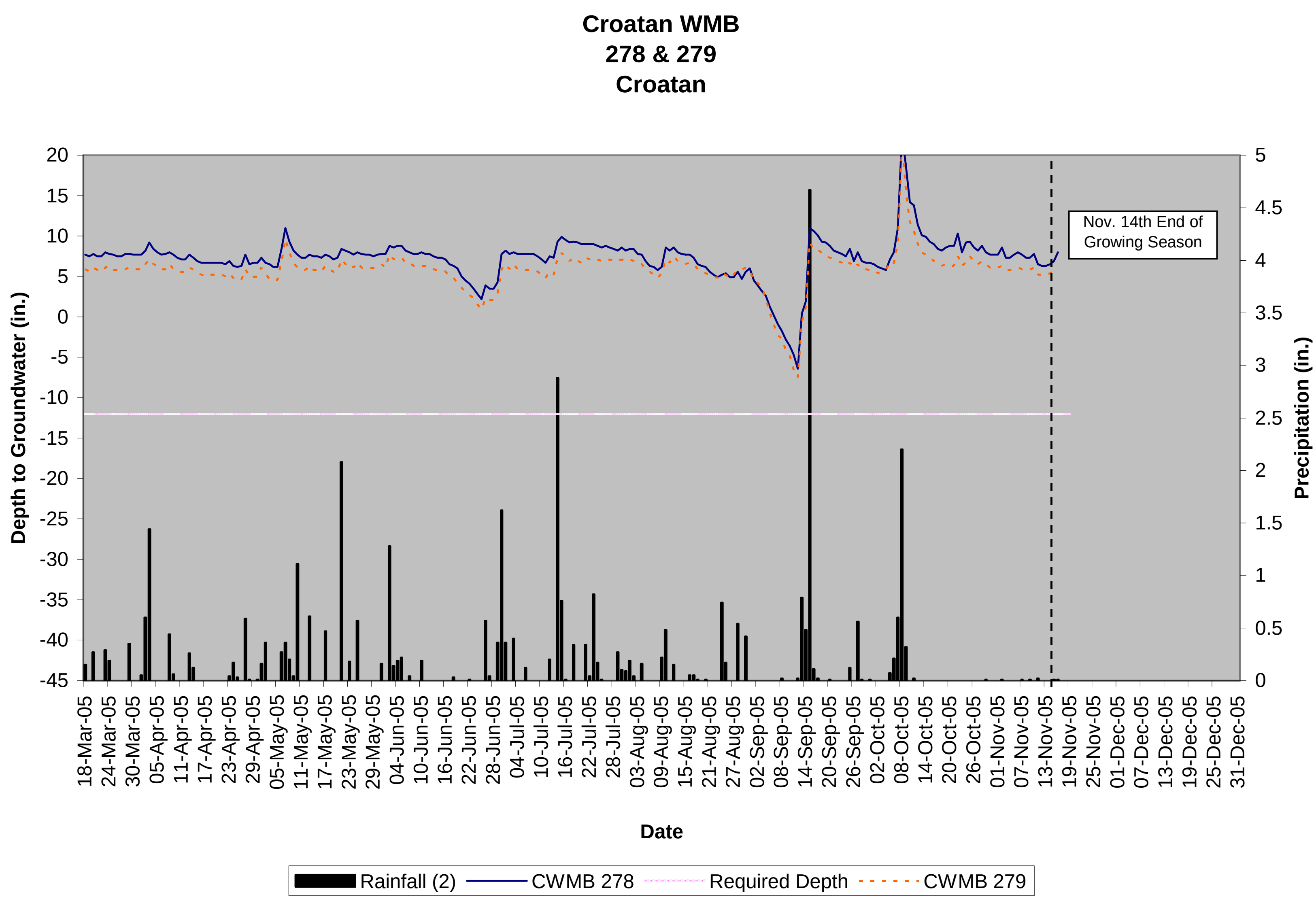

Croatan WMB
144
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Missing Data
Rainfall (2)
CWMB 144
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05



Croatan WMB
232 & 276
Rains
Gauge Installed
No Gauge Available for Installation
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 232
Required Depth
CWMB 276

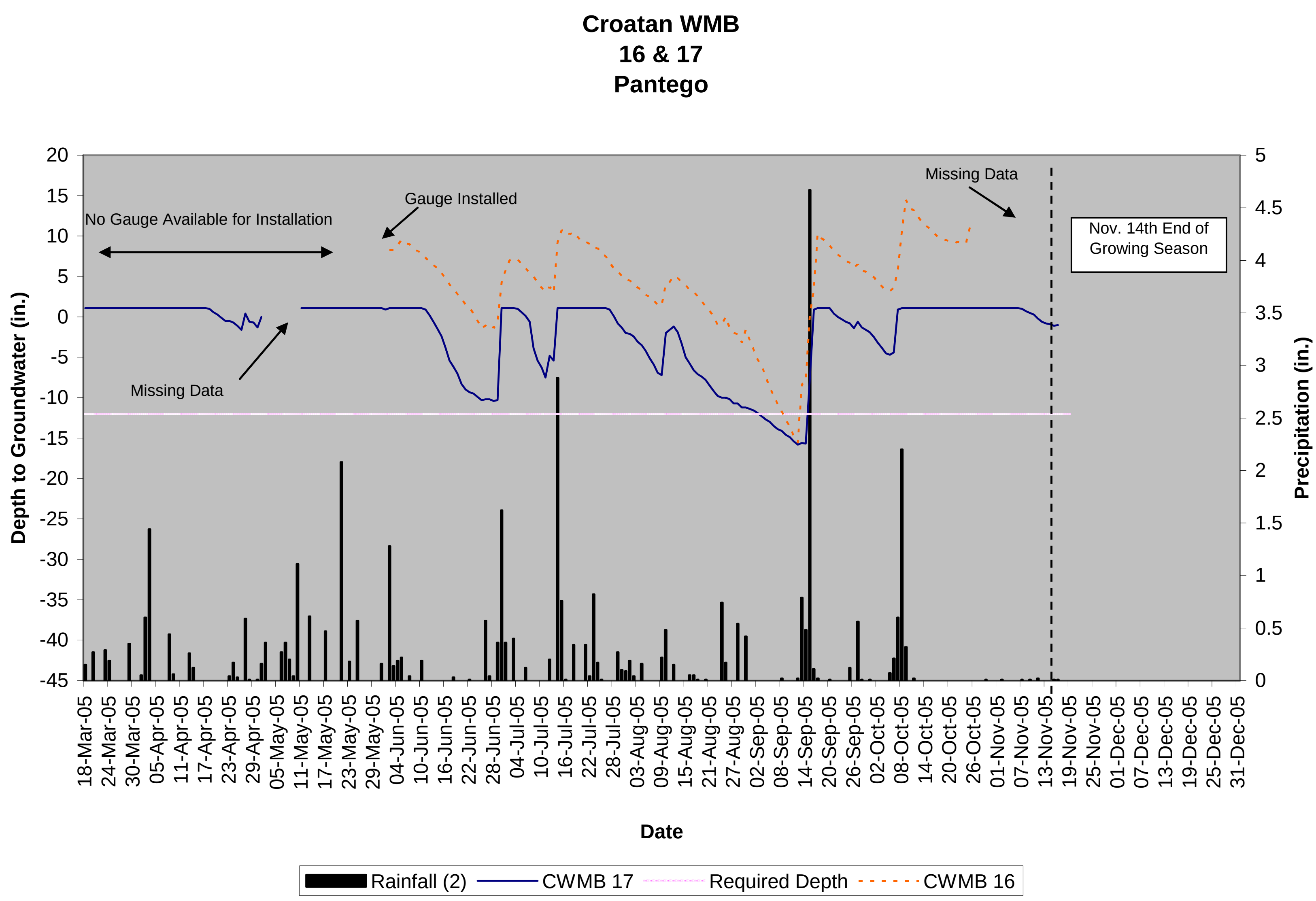
Croatan WMB
275
Rains



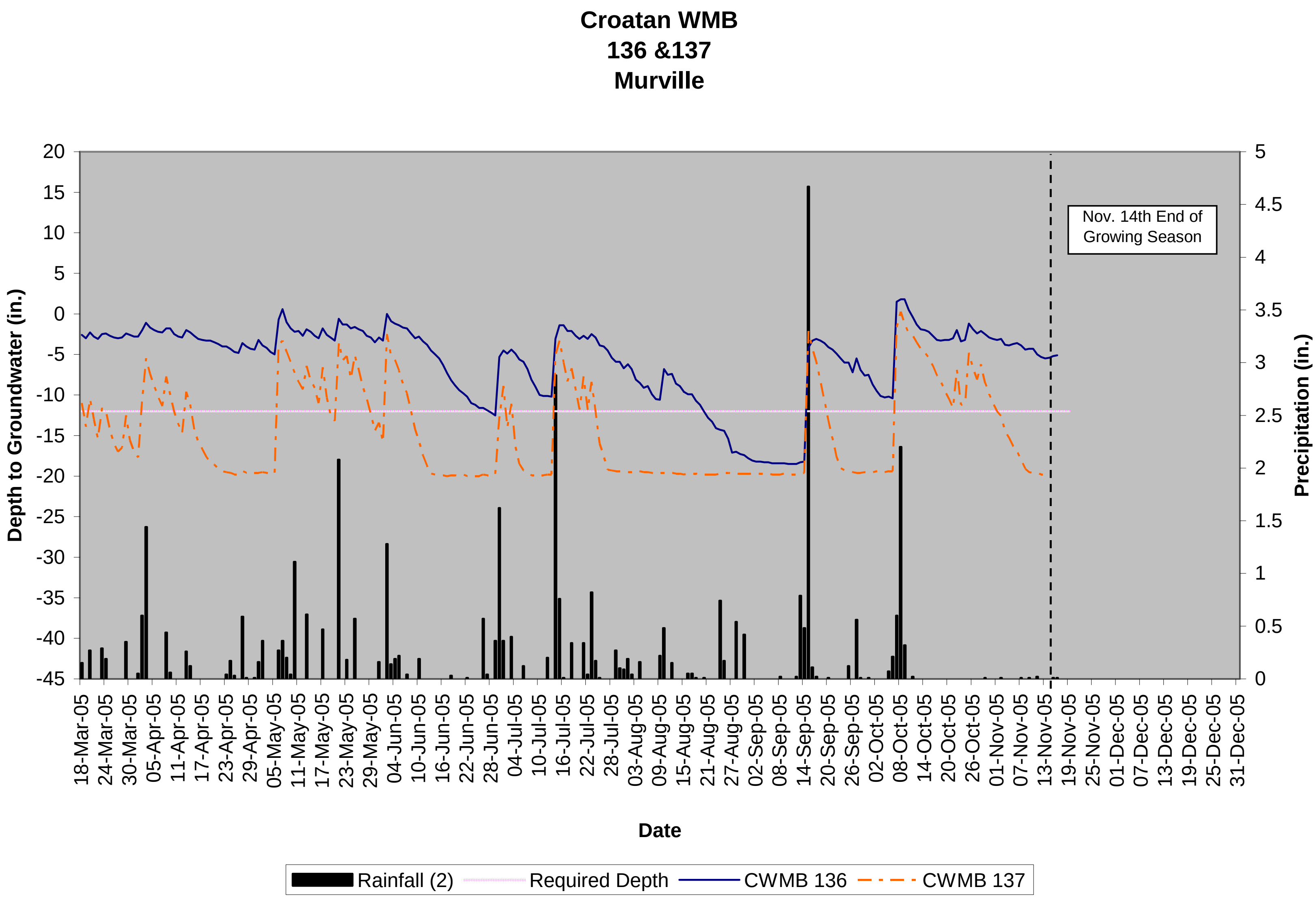


Croatan WMB
278 & 279
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 278
Required Depth
CWMB 279

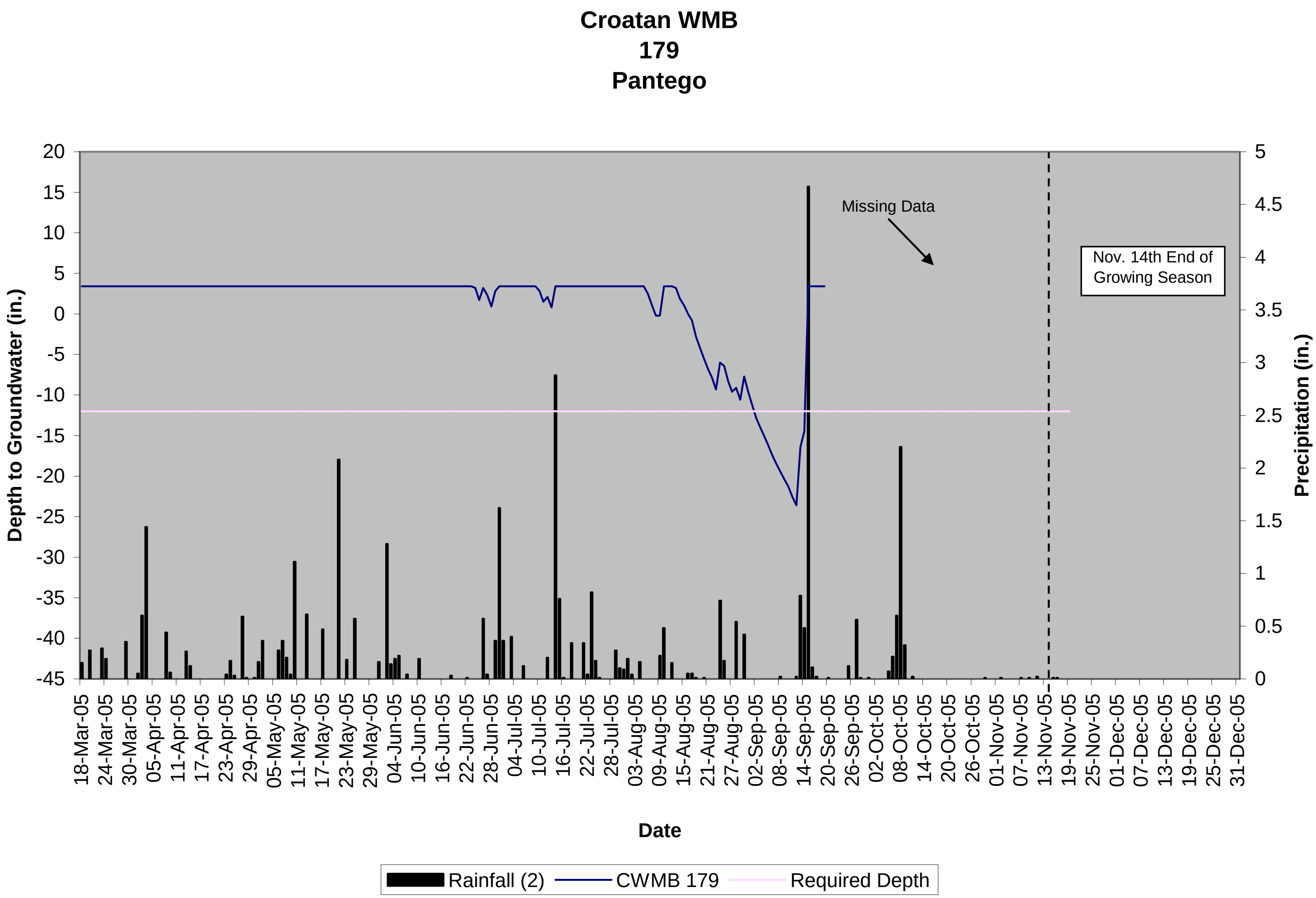
MU 12A



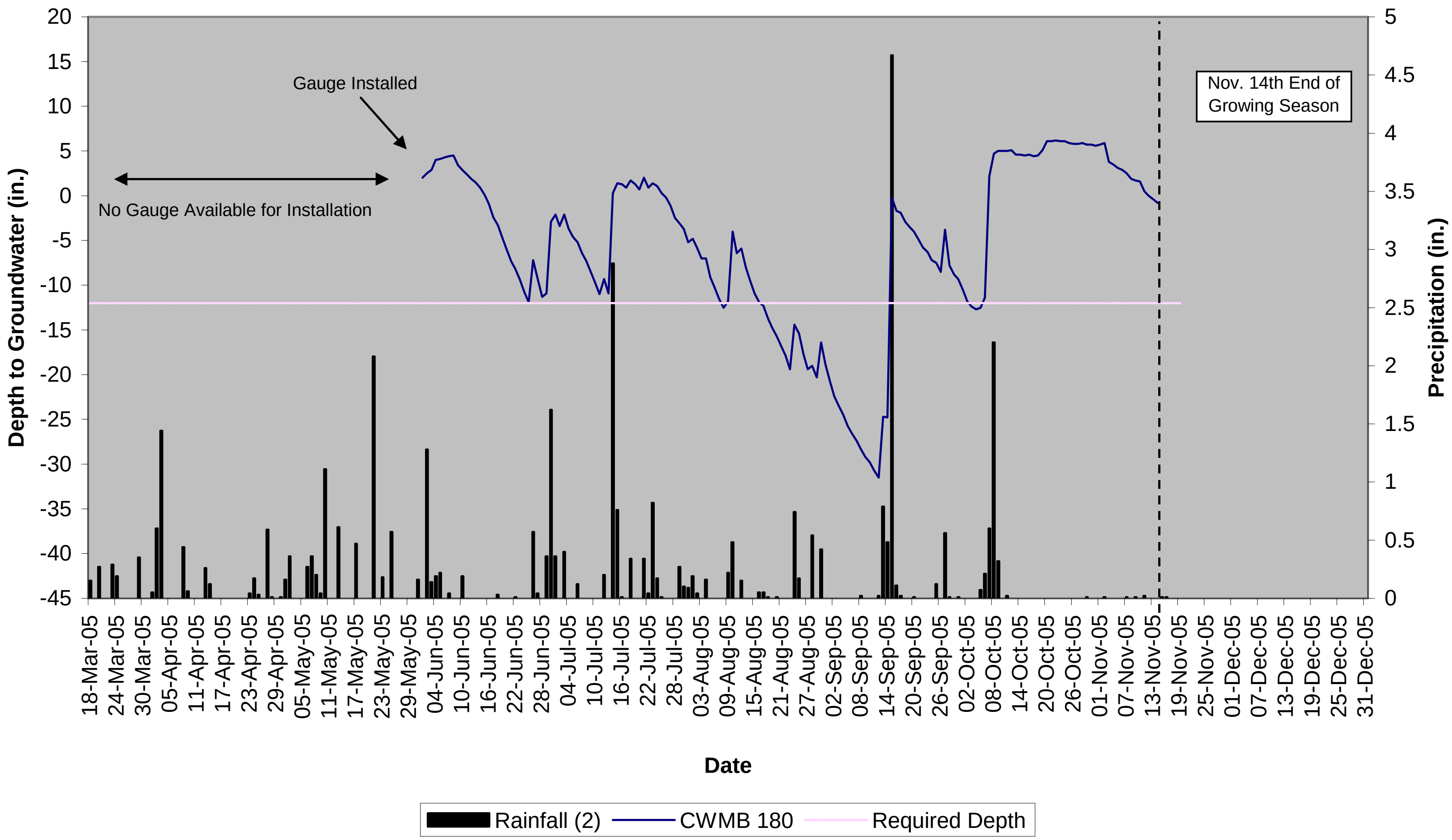
Croatan WMB
16 & 17
Pantego
No Gauge Available for Installation
Gauge Installed
Missing Data
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 17
Required Depth
CWMB 16



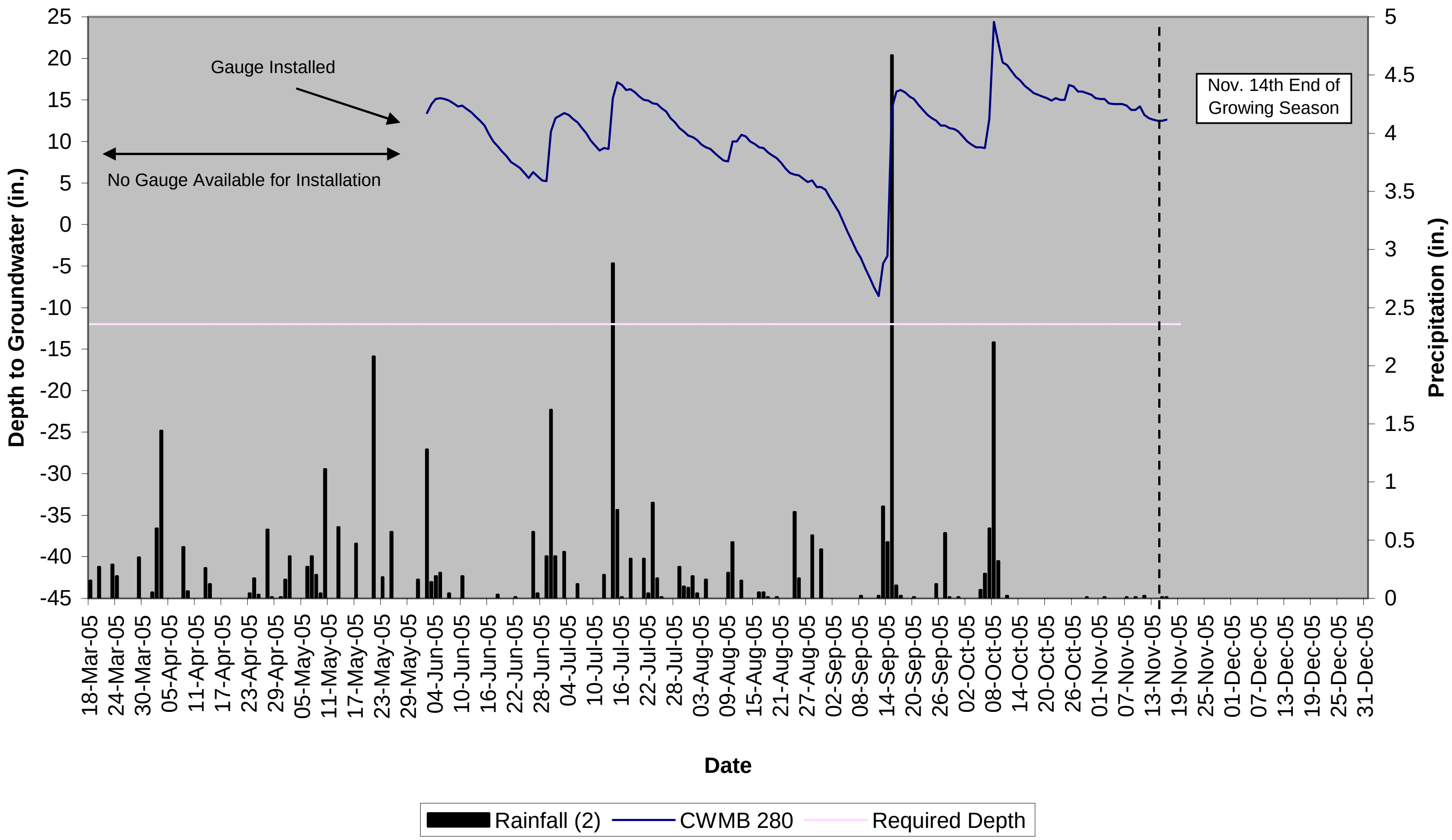
Croatan WMB
136 &137
Murville
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
Required Depth
CWMB 136
CWMB 137

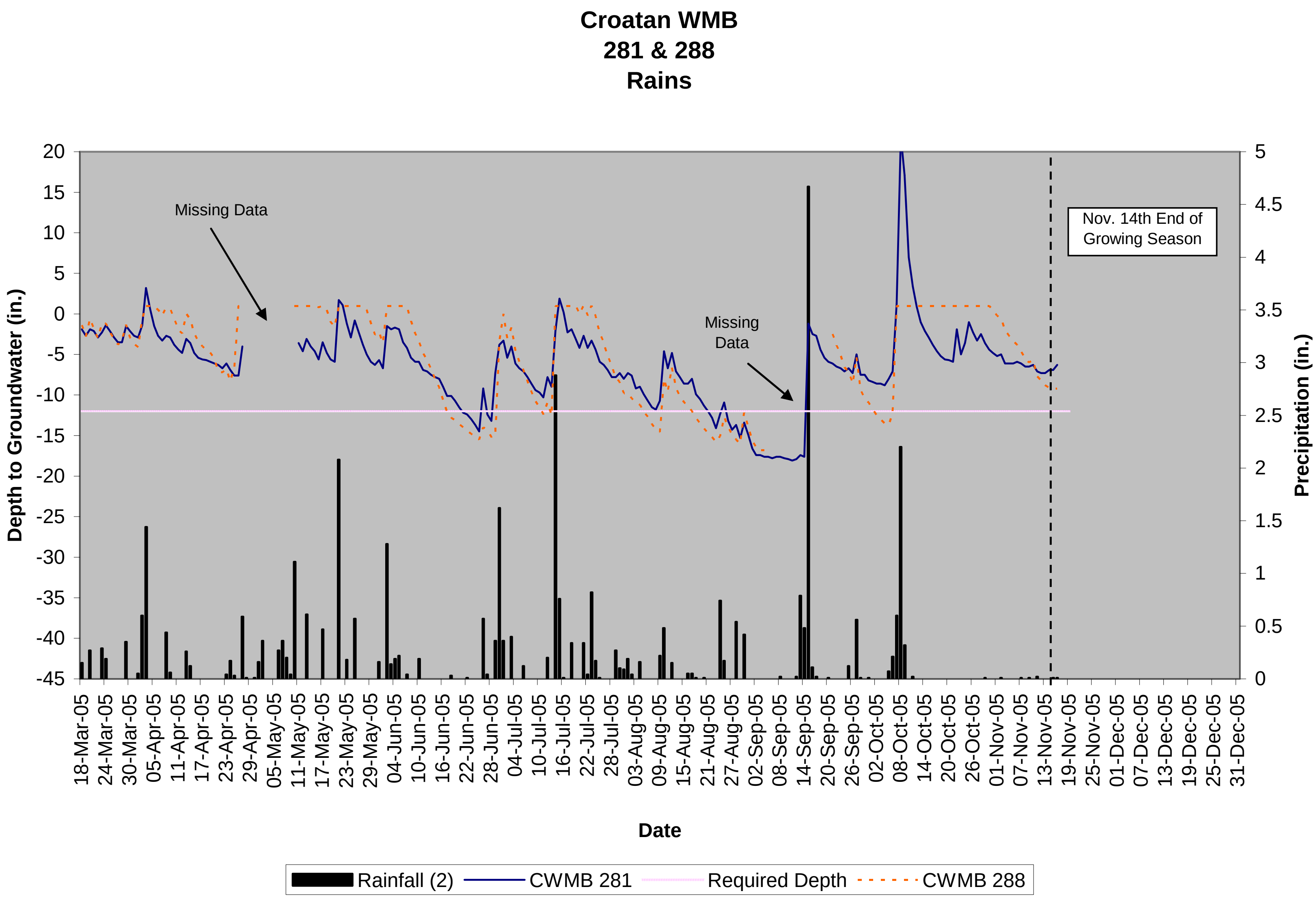

Croatan WMB
179
Pantego
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 179
Required Depth

Croatan WMB
180
Bayboro



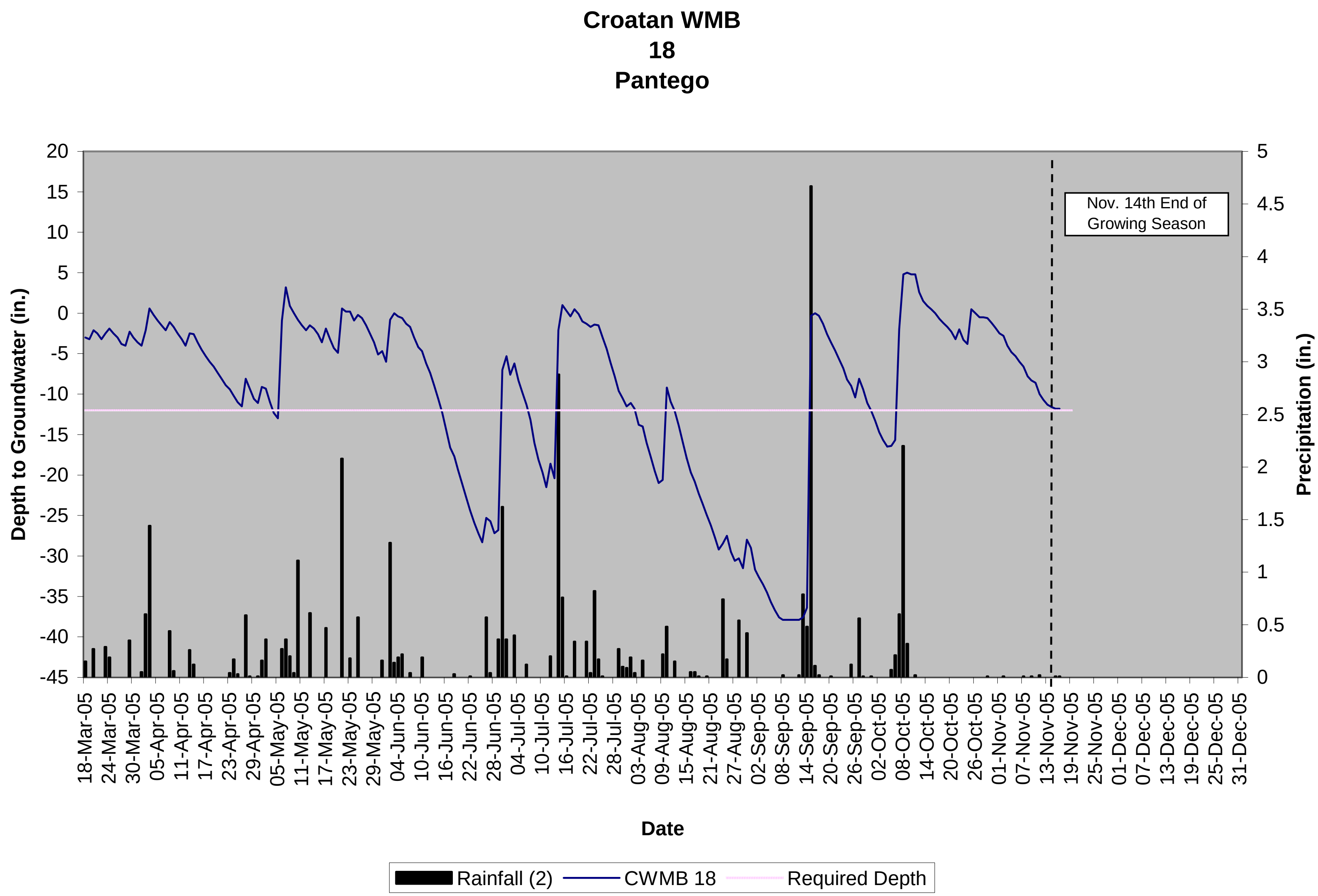
Croatan WMB
280
Pantego





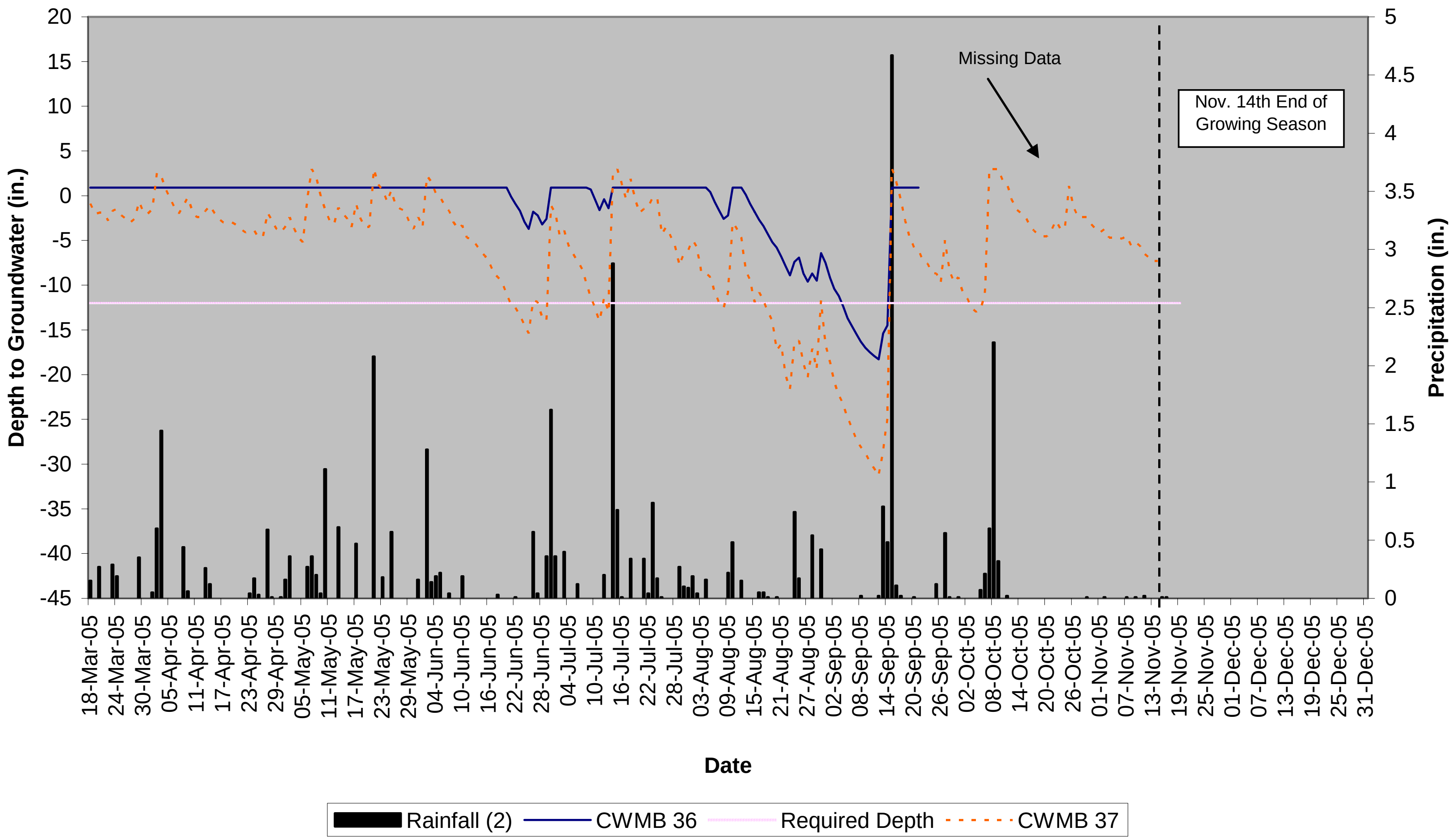
Croatan WMB
281 & 288
Rains
Missing Data
Missing
Data
Nov. 14th End of
Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 281
Required Depth
CWMB 288

MU 12B

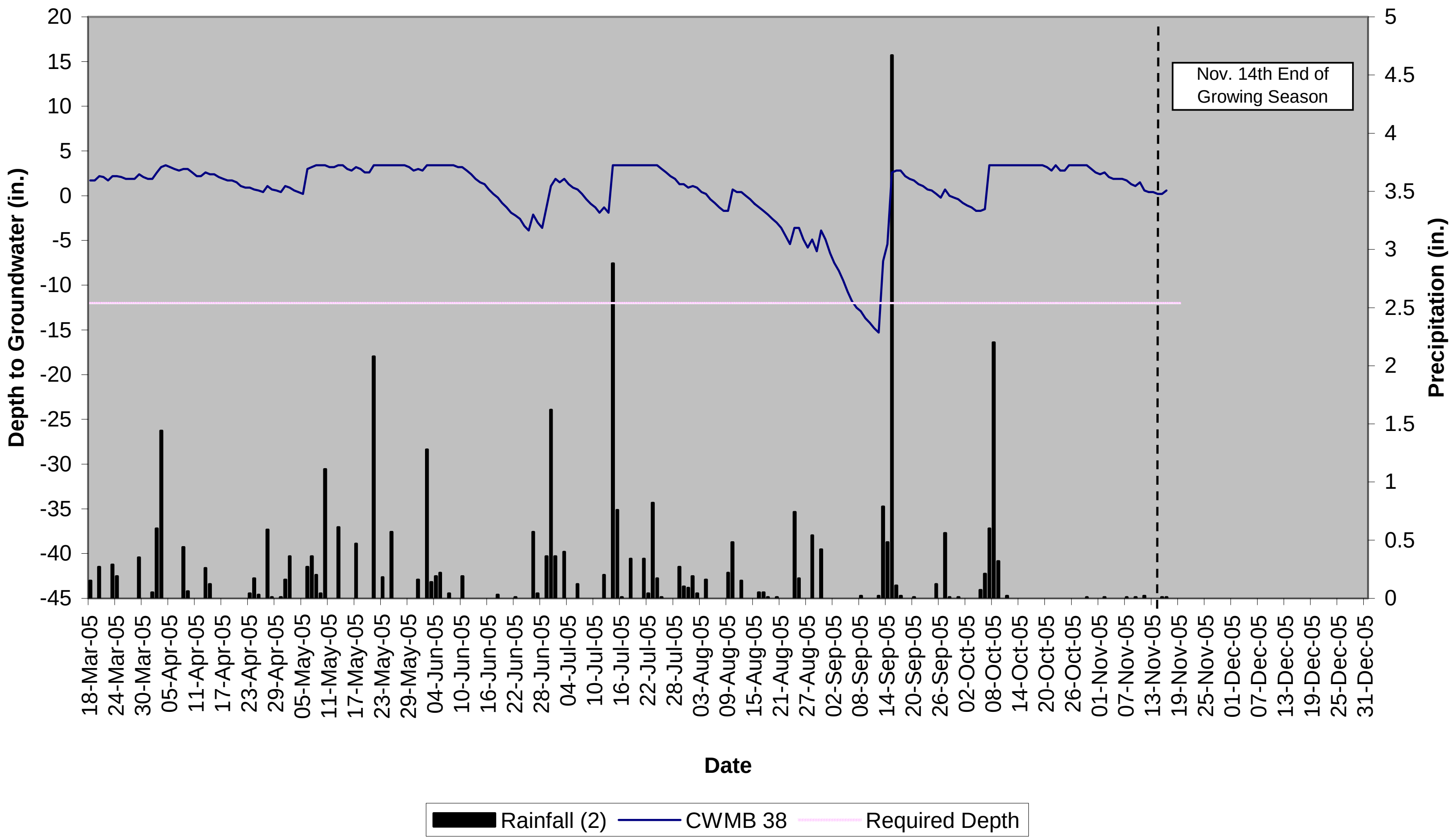


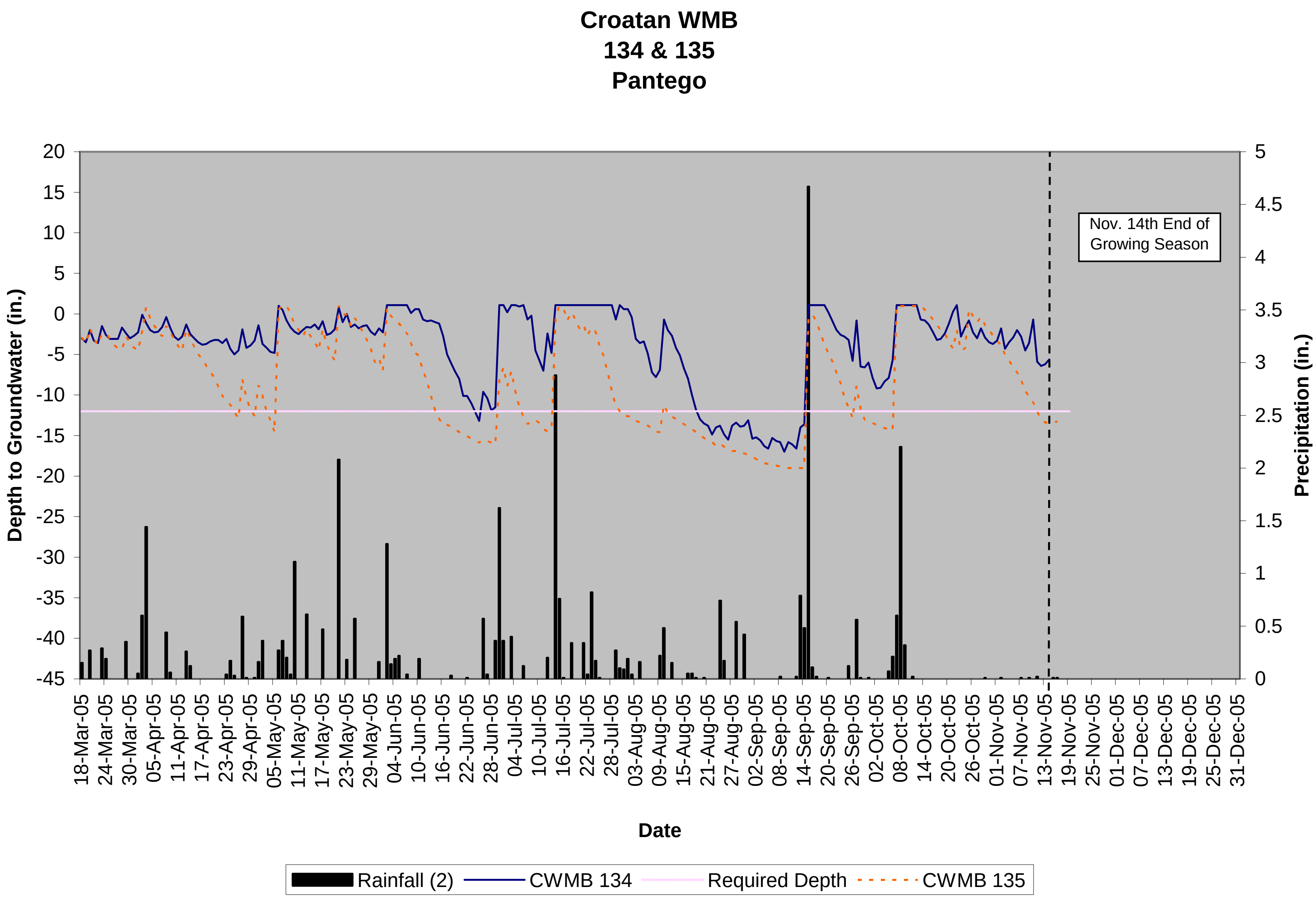
Croatan WMB
18
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Date
Rainfall (2)
CWMB 18
Required Depth

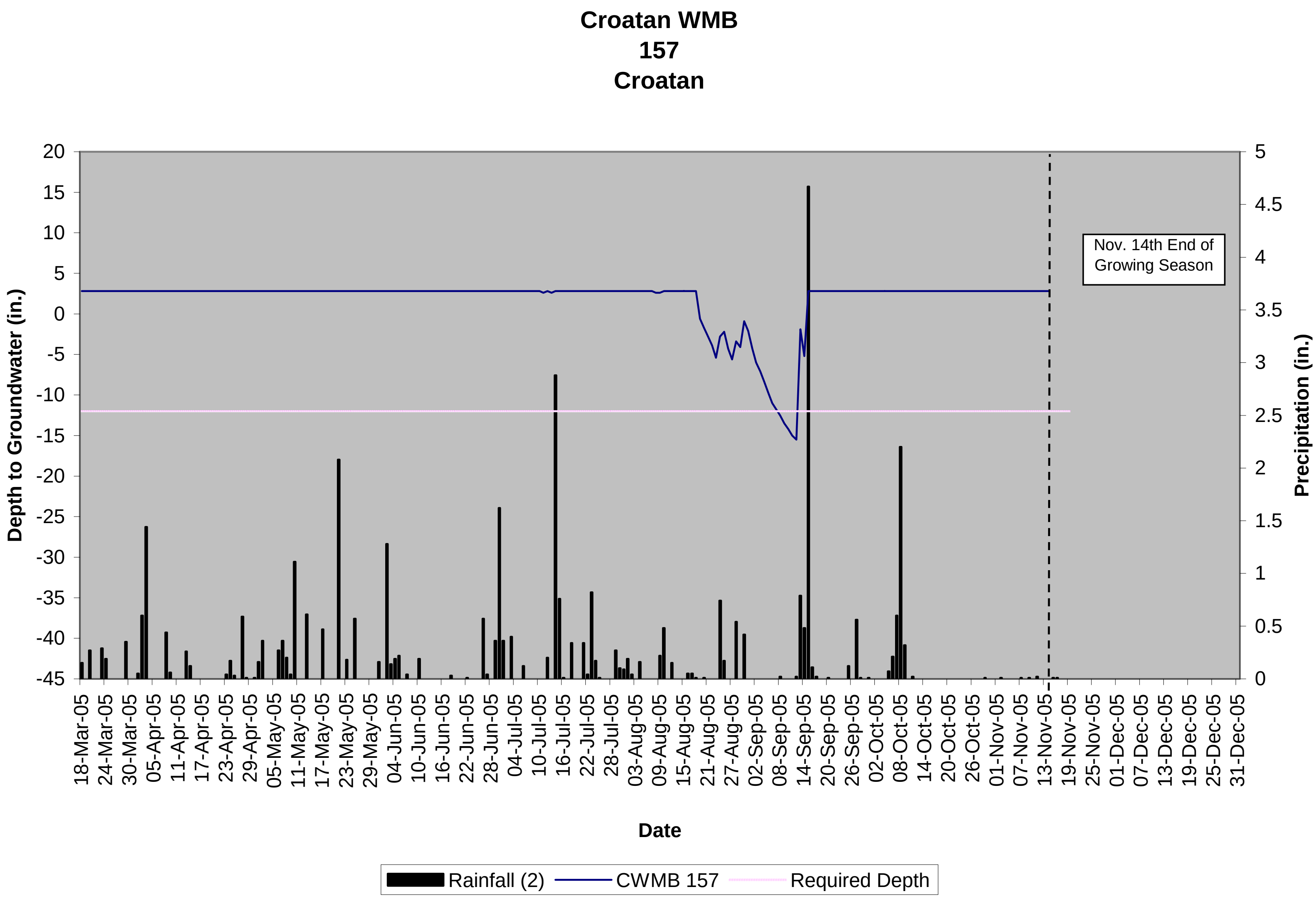
Croatan WMB
36 & 37
Pantego



Croatan WMB
38
Murville

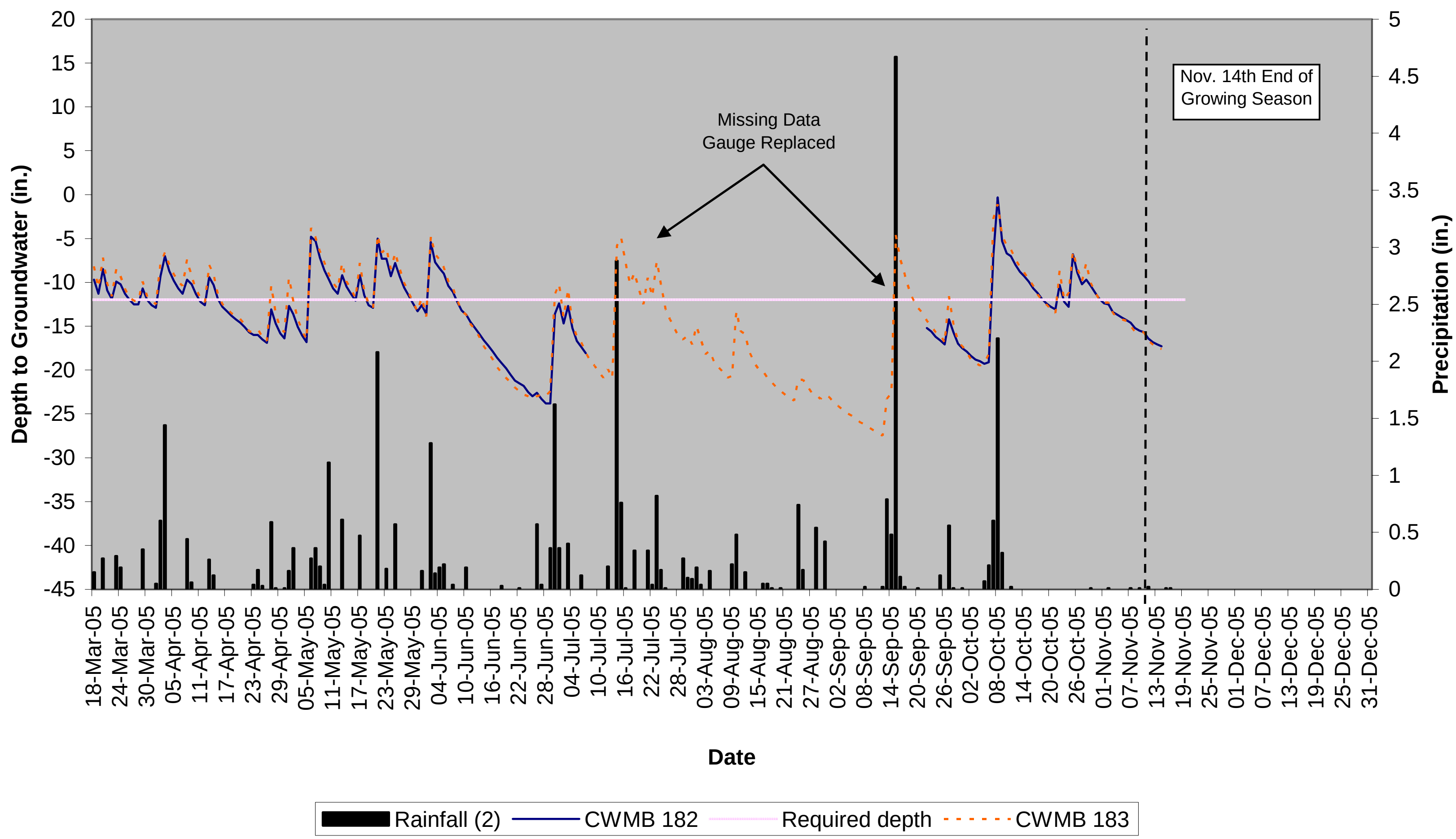



Croatan WMB
134 & 135
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 134
Required Depth
CWMB 135

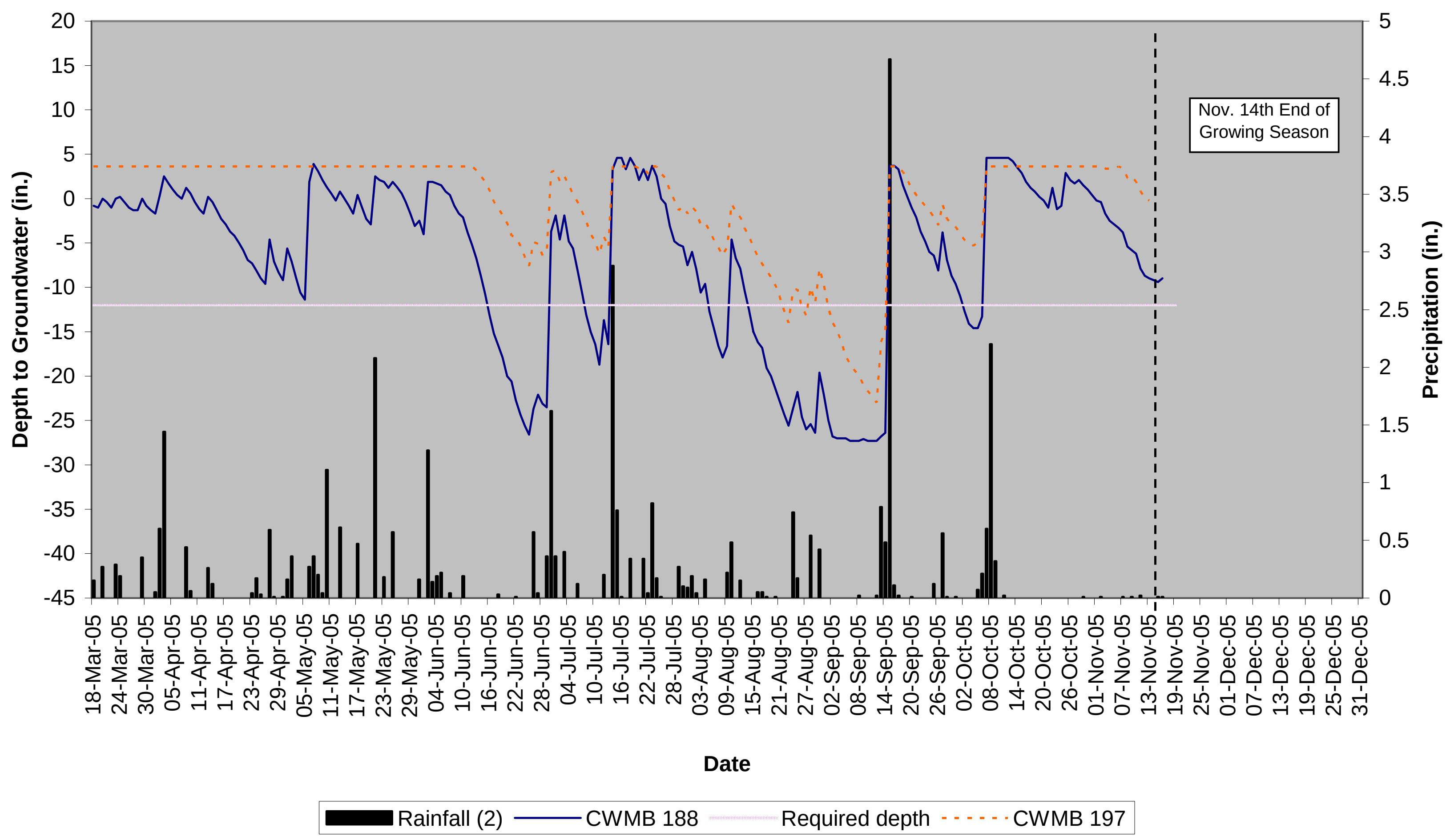


Croatan WMB
157
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 157
Required Depth

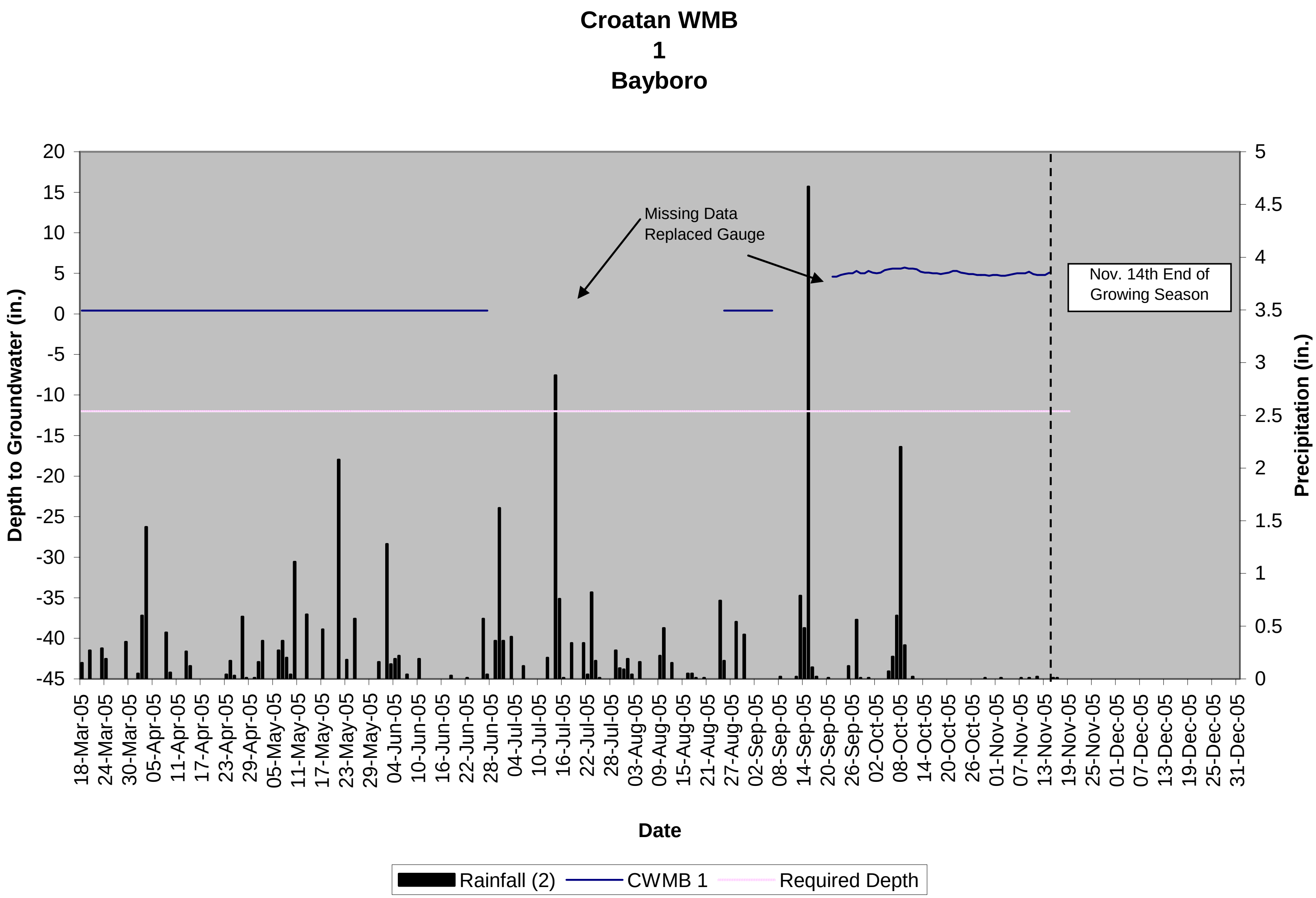
Croatan WMB
182 & 183
Murville



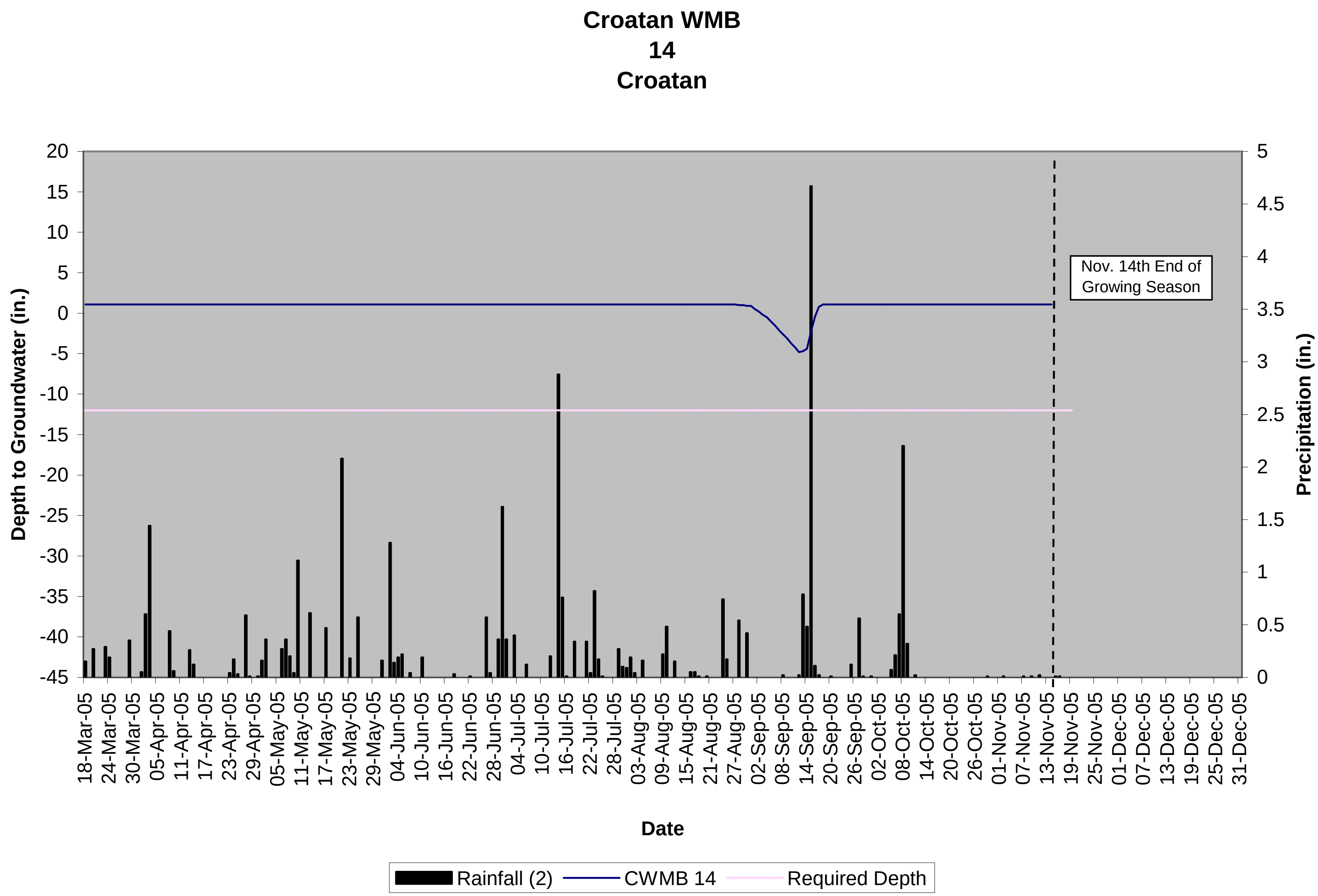
Croatan WMB
188 & 197
Pantego



MU 13A

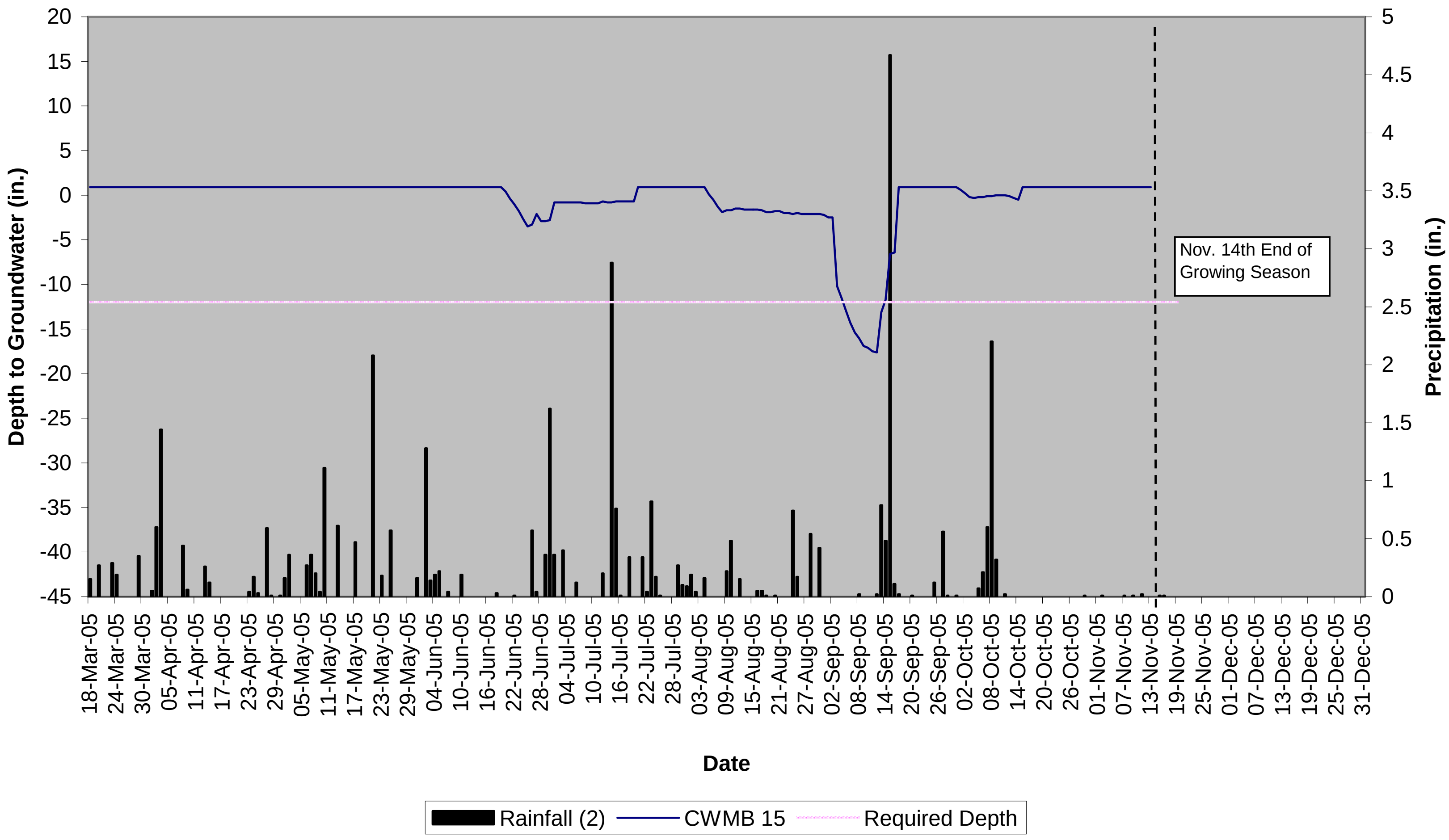


Croatan WMB
1
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Missing Data
Replaced Gauge
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 1
Required Depth

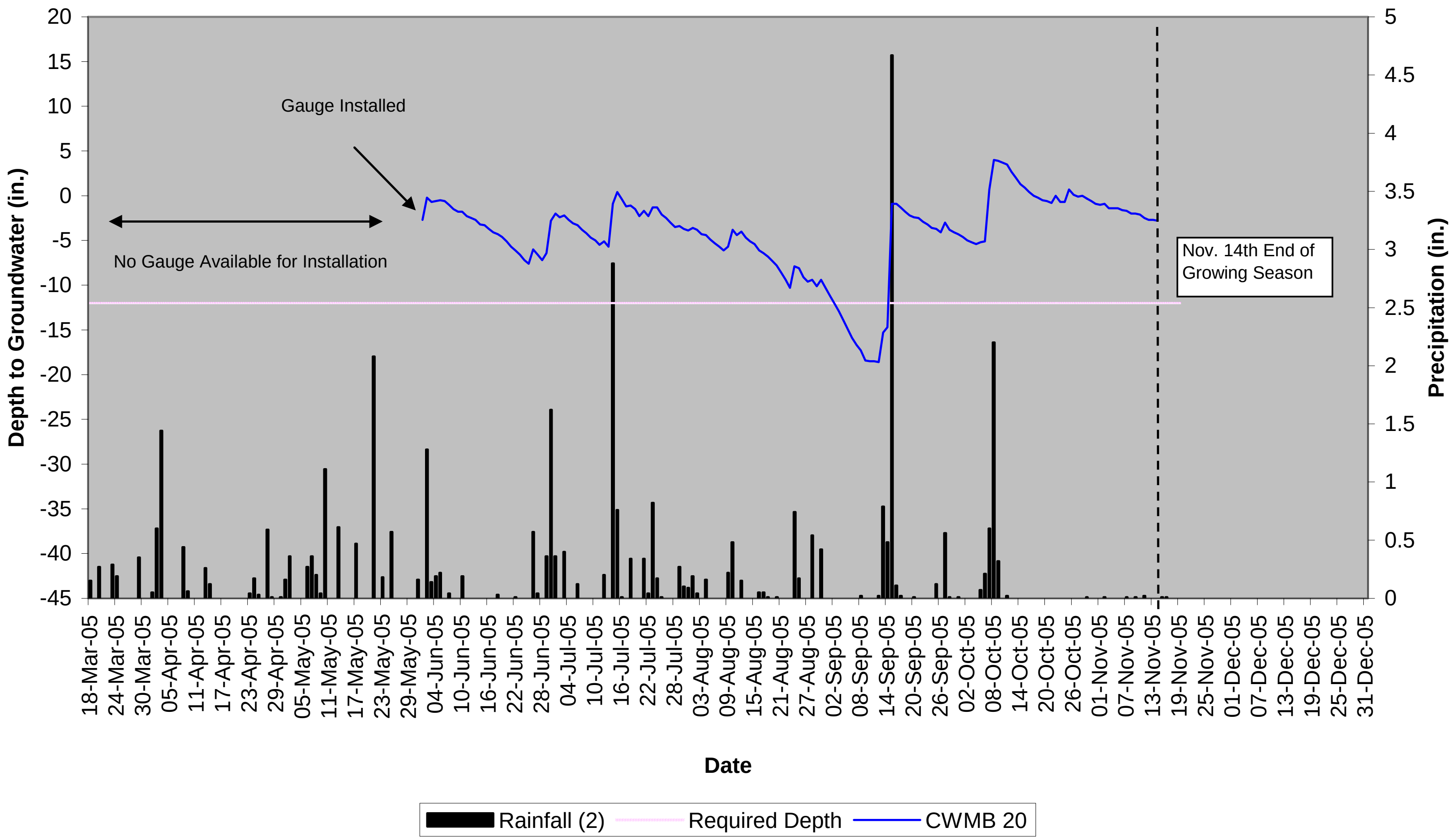


Croatan WMB
14
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
Rainfall (2)
CWMB 14
Required Depth

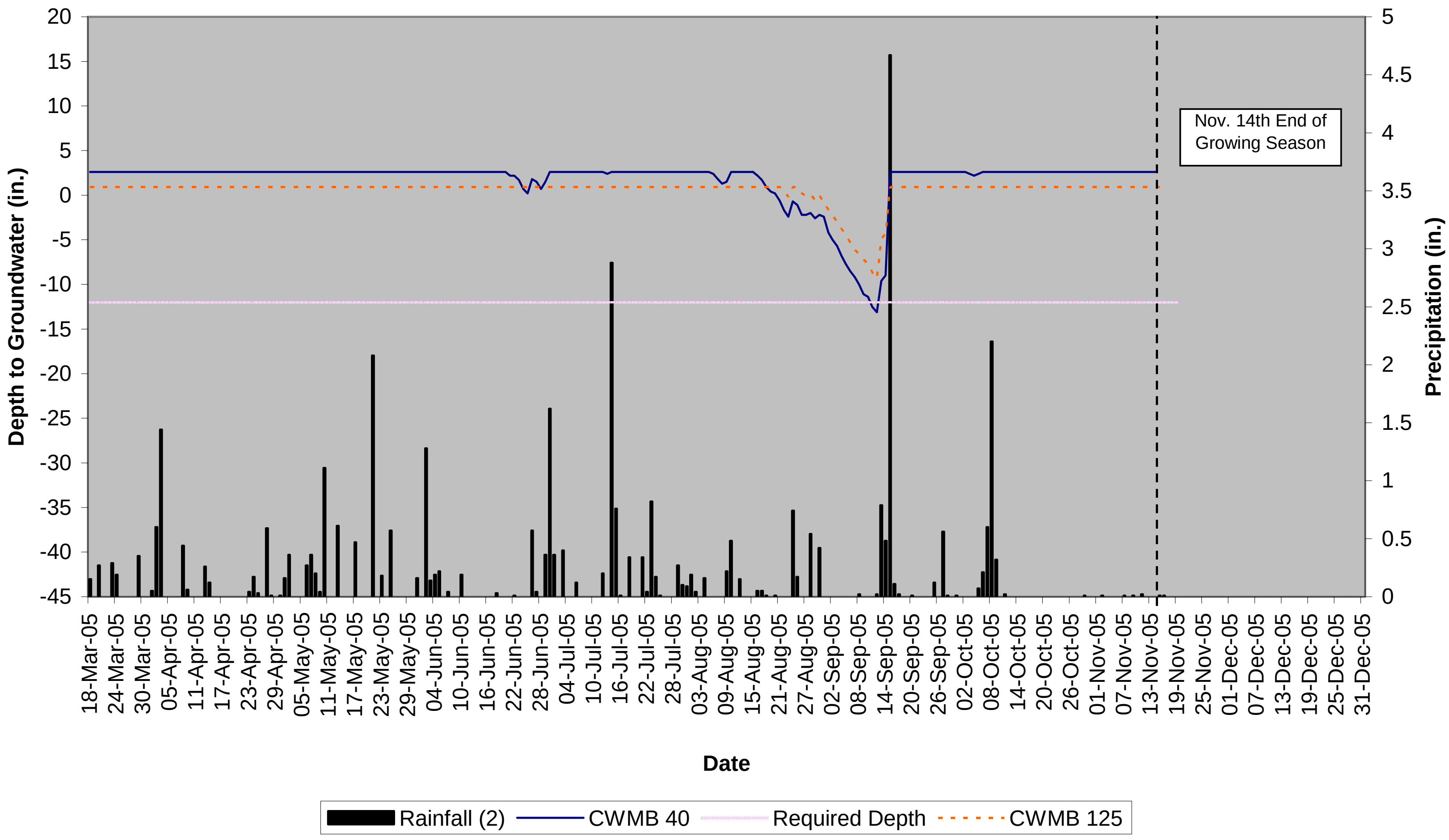
Croatan WMB
15
Pantego

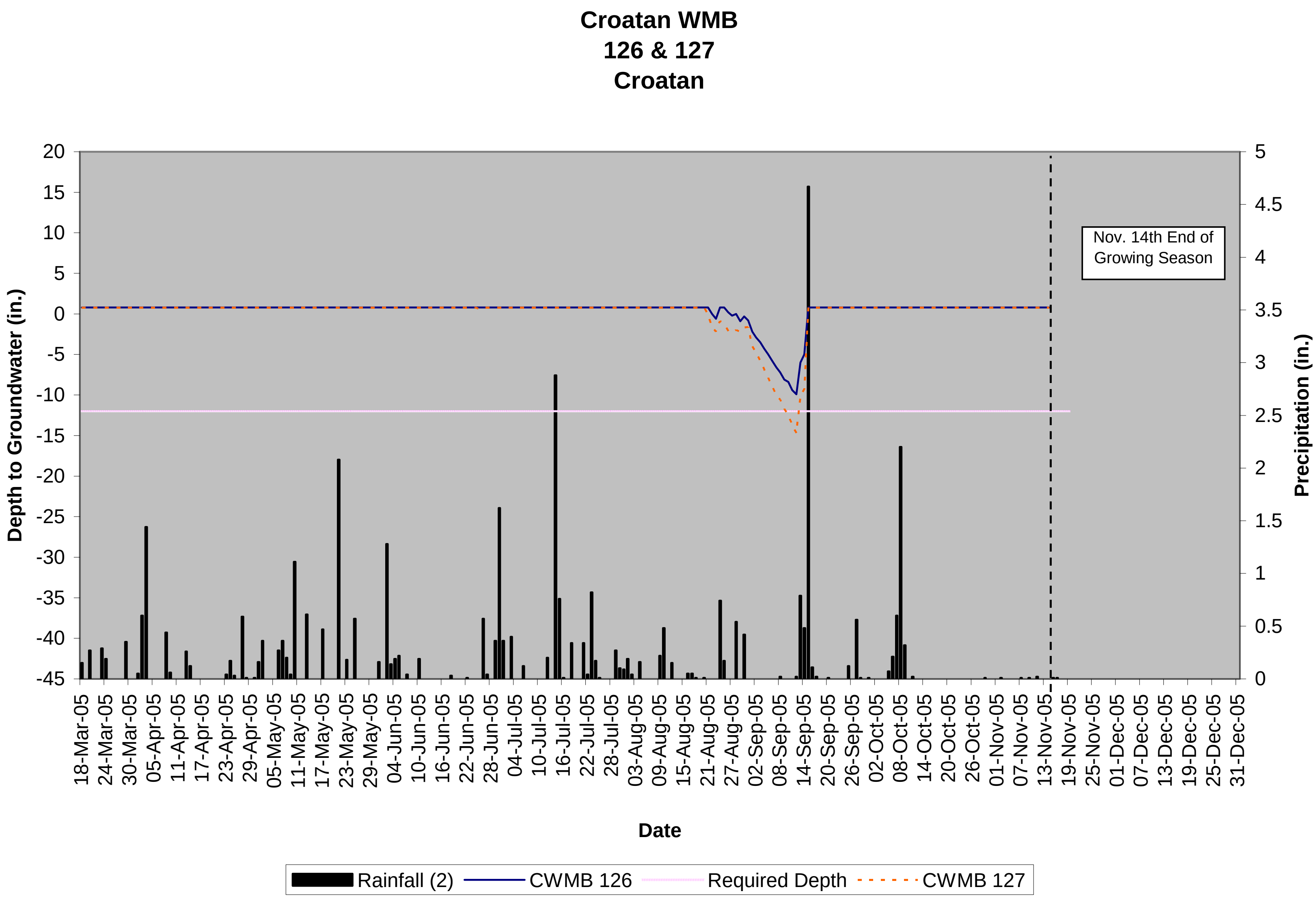


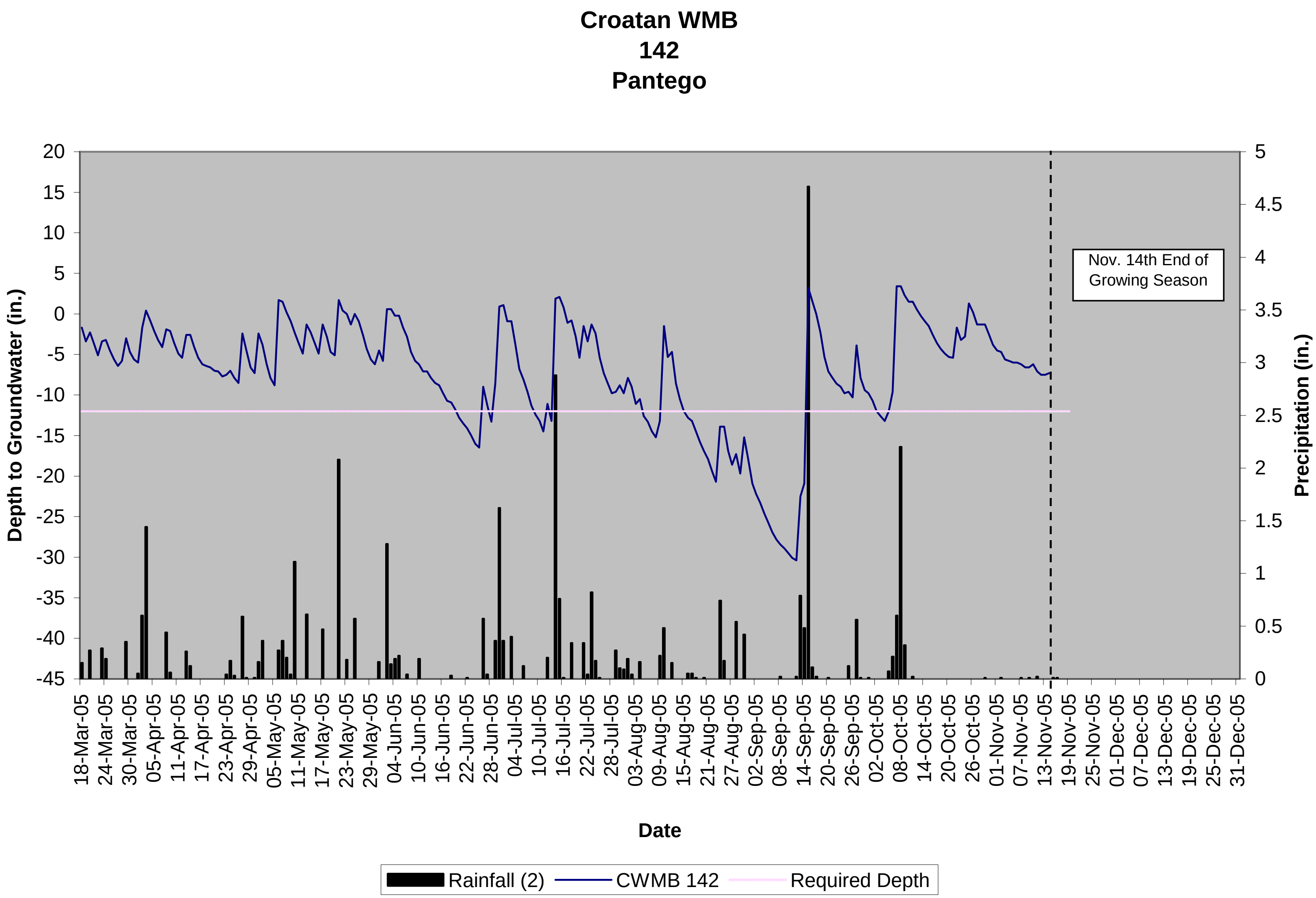
Croatan WMB
20
Pantego



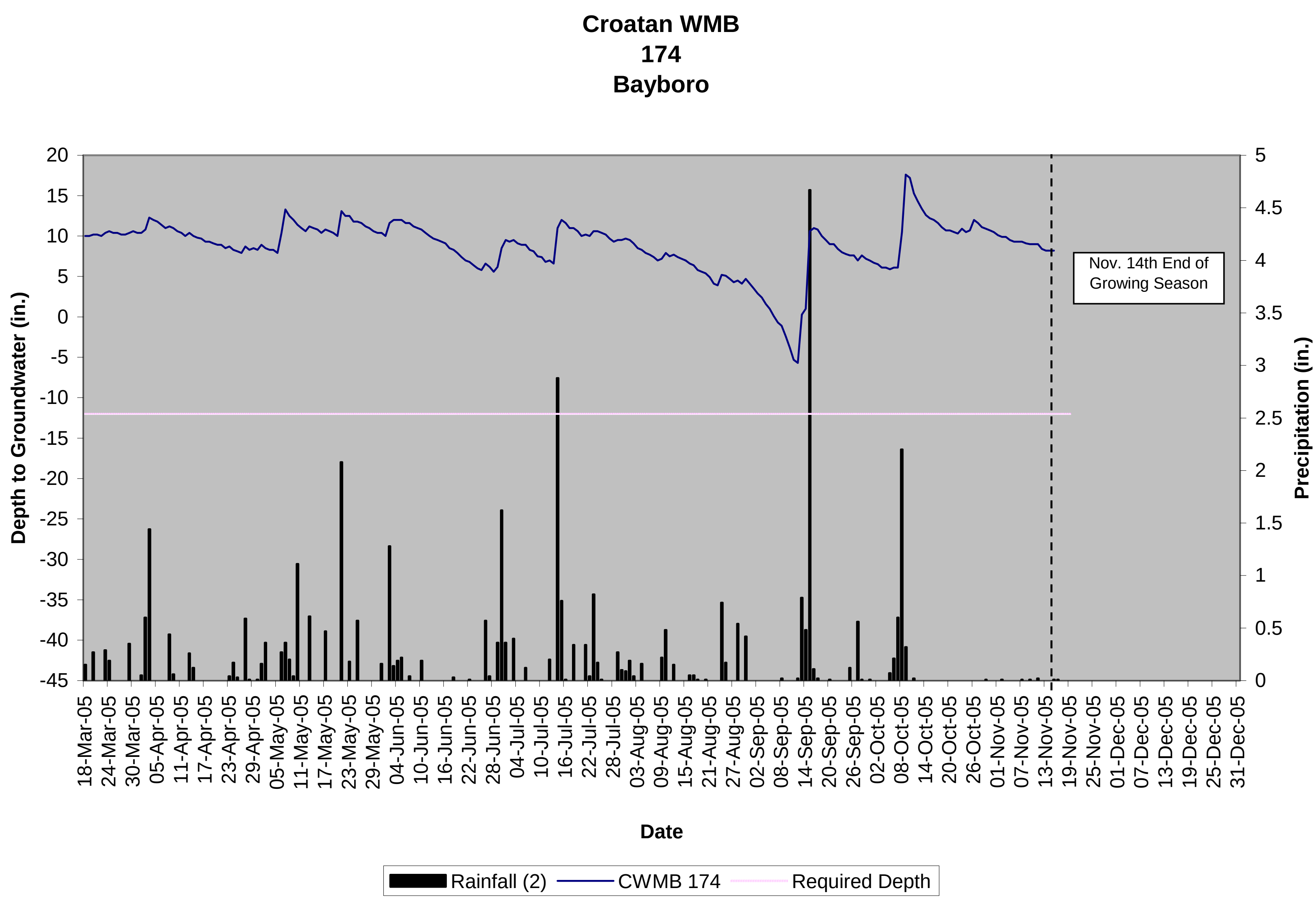
Croatan WMB
40 & 125
Croatan




Croatan WMB
126 & 127
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 126
Required Depth
CWMB 127

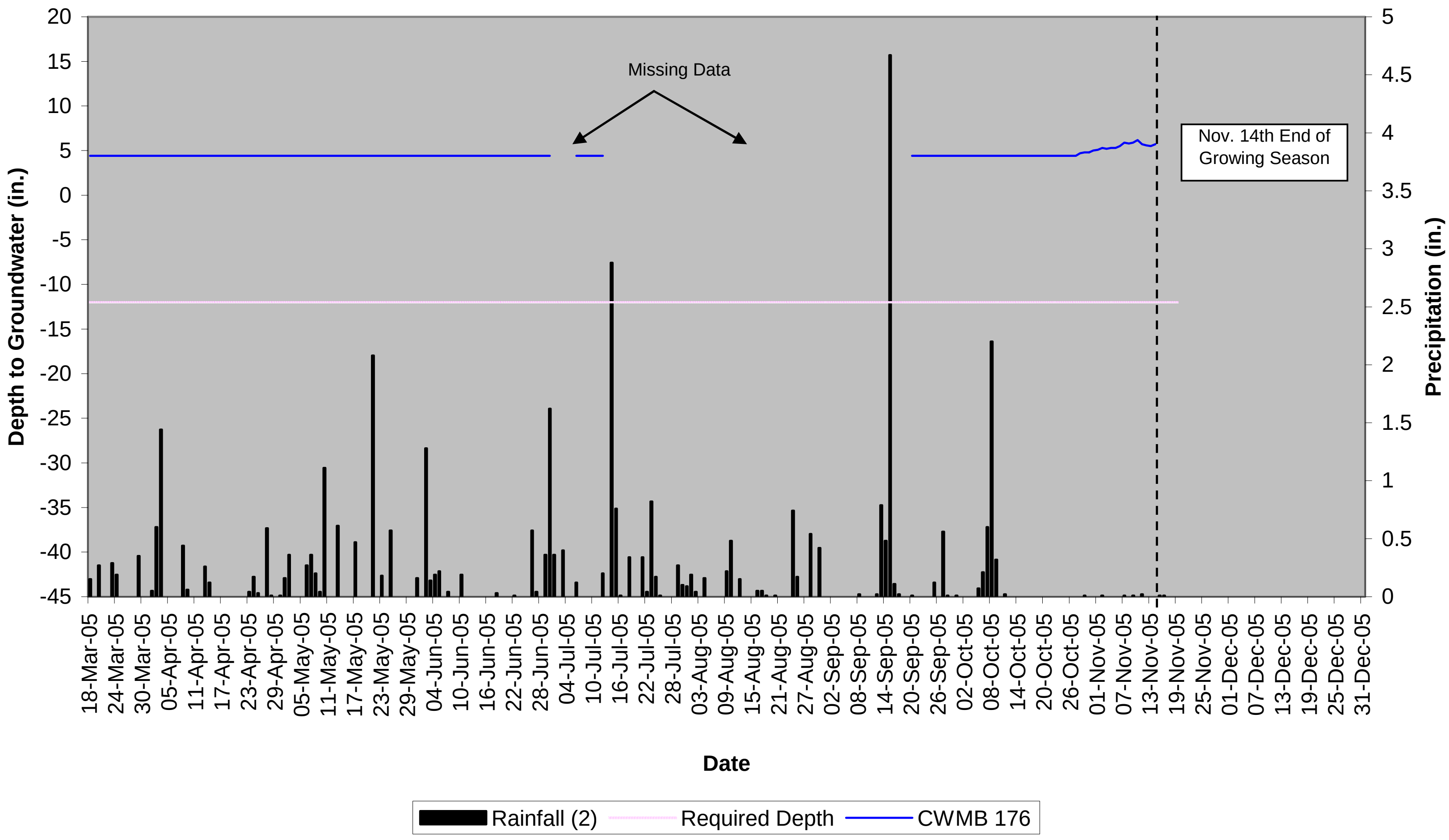


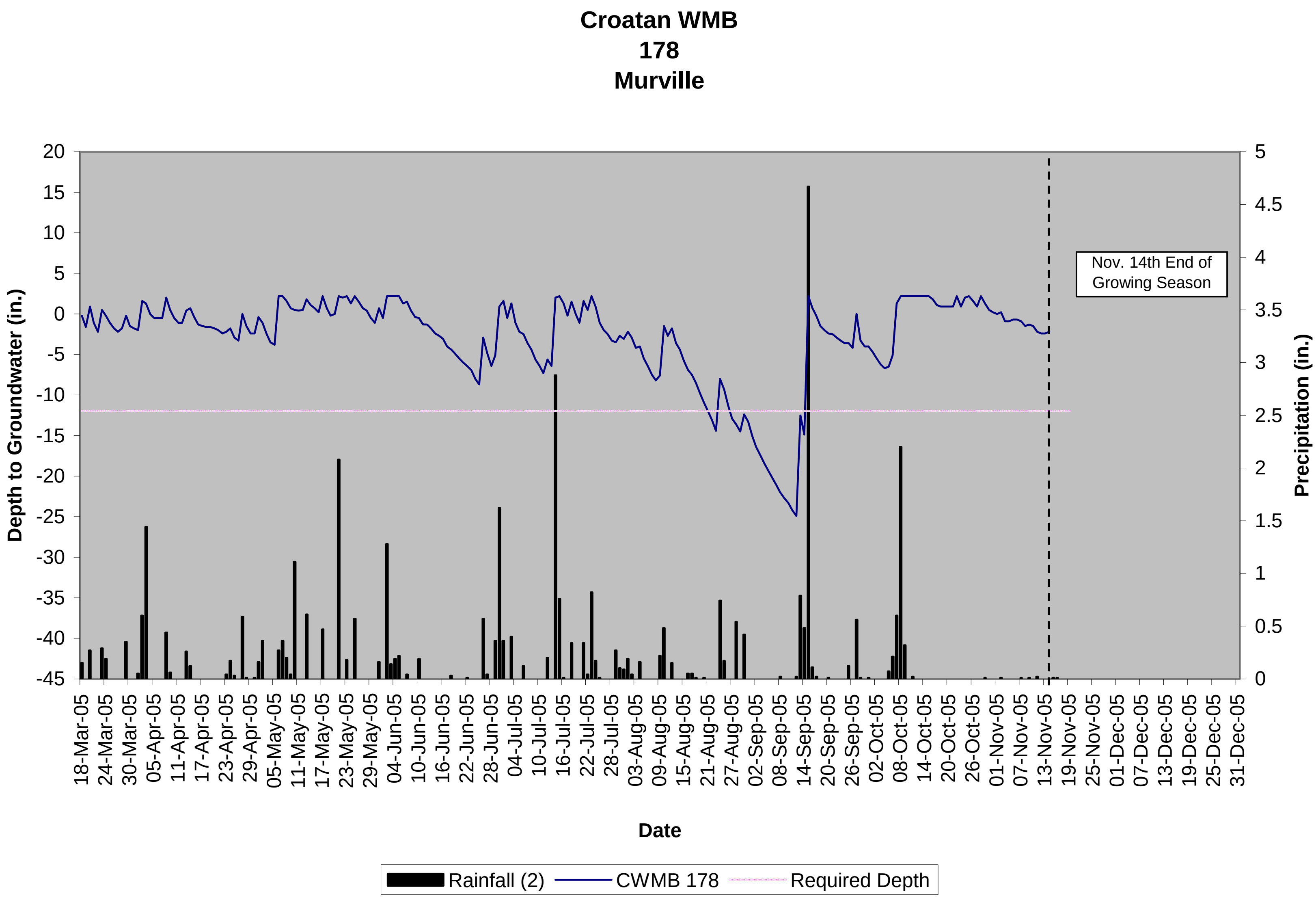
Croatan WMB
142
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 142
Required Depth



Croatan WMB
174
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Nov. 14th End of Growing Season
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Date
Rainfall (2)
CWMB 174
Required Depth

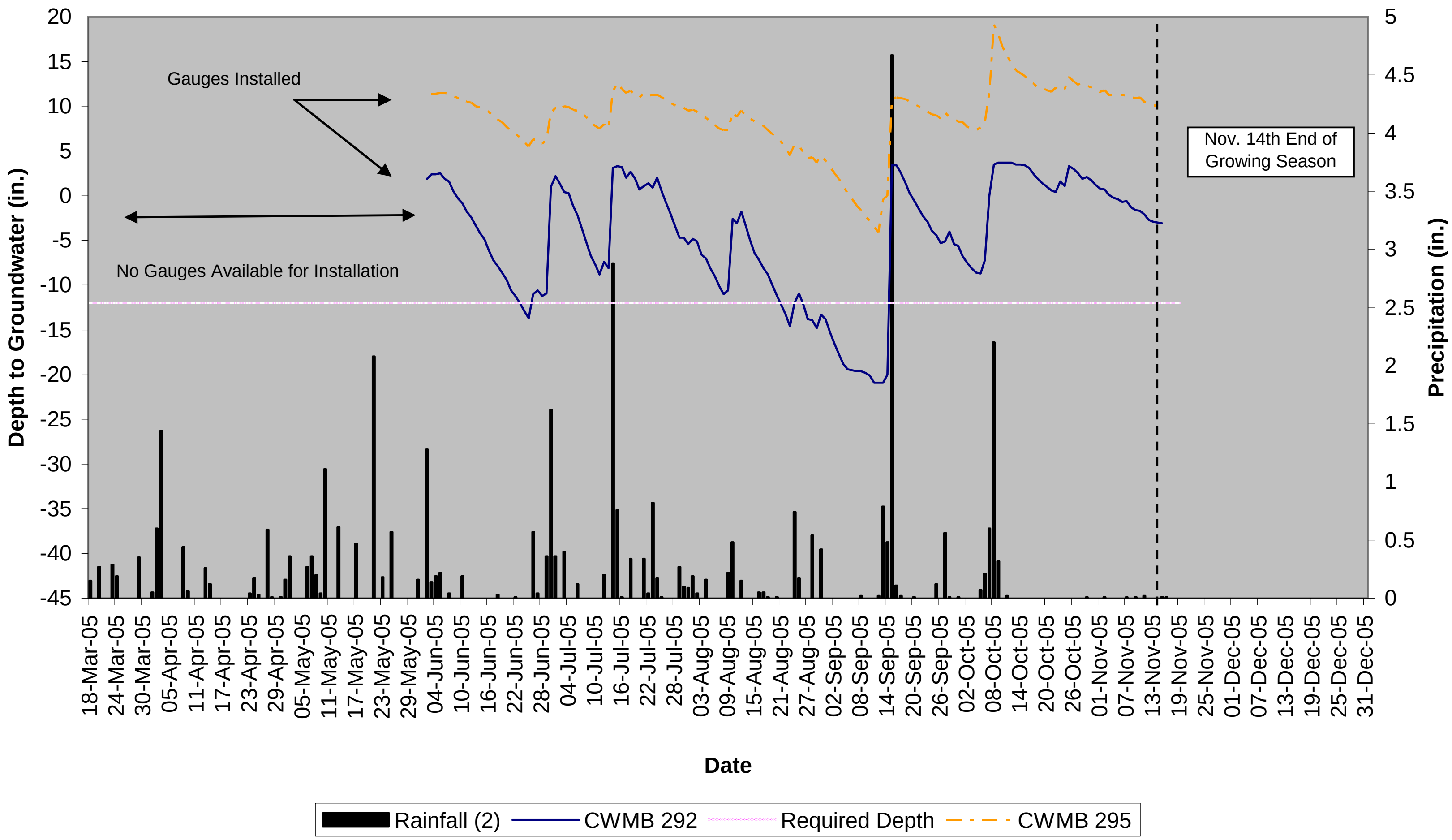
**Croatan WMB
176
Bayboro**

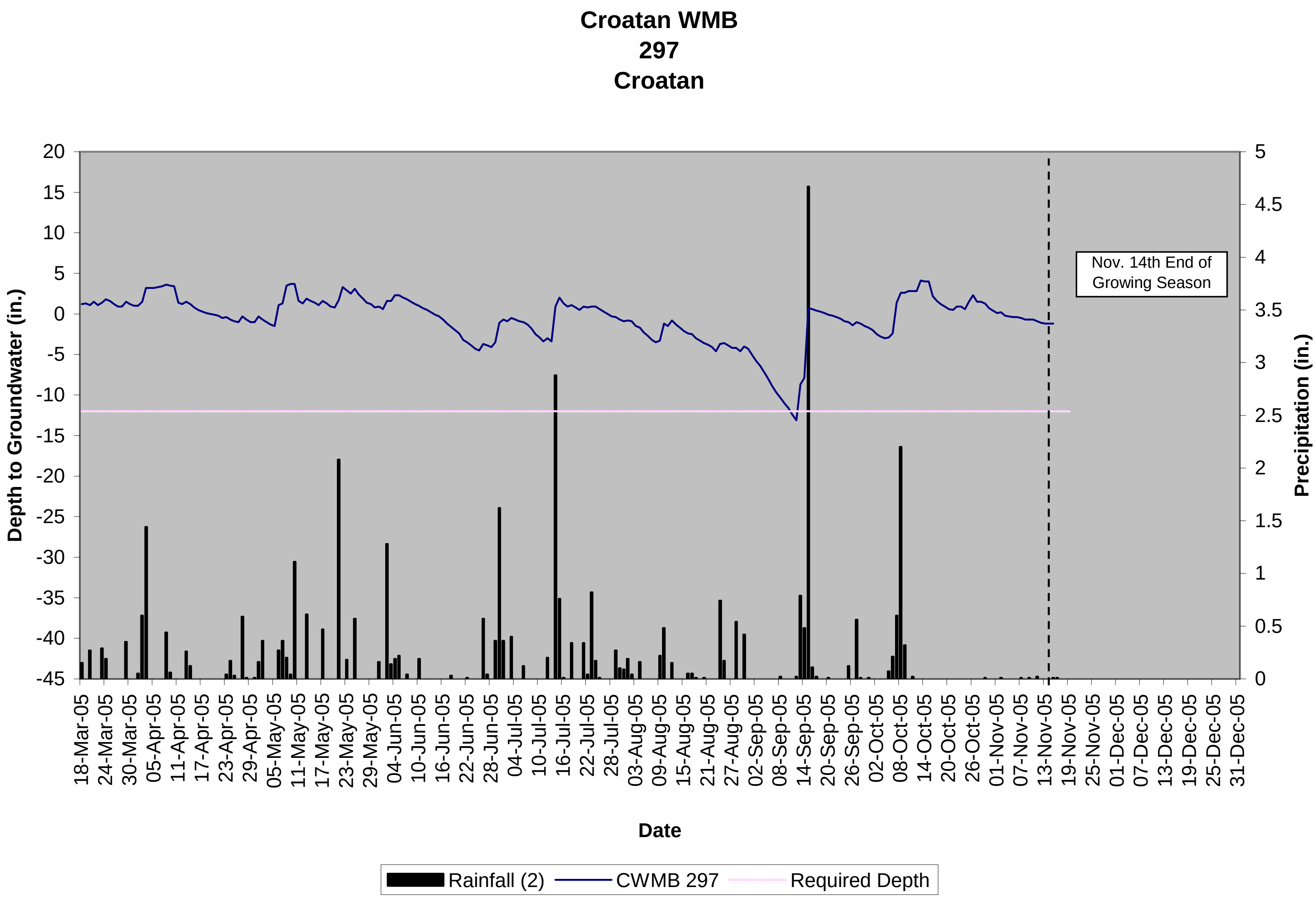




Croatan WMB
178
Murville
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 178
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

Croatan WMB
292 & 295
Pantego

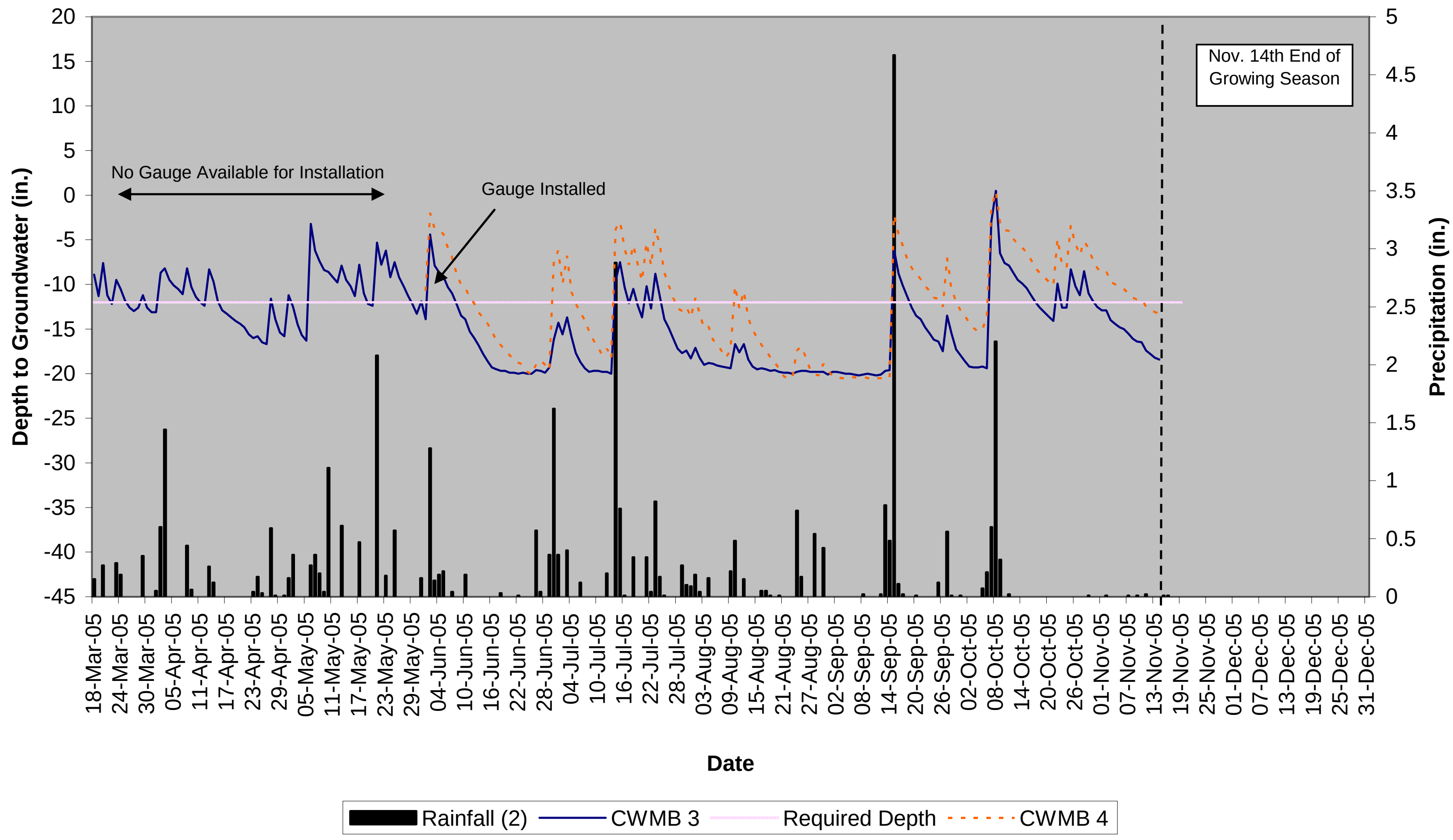




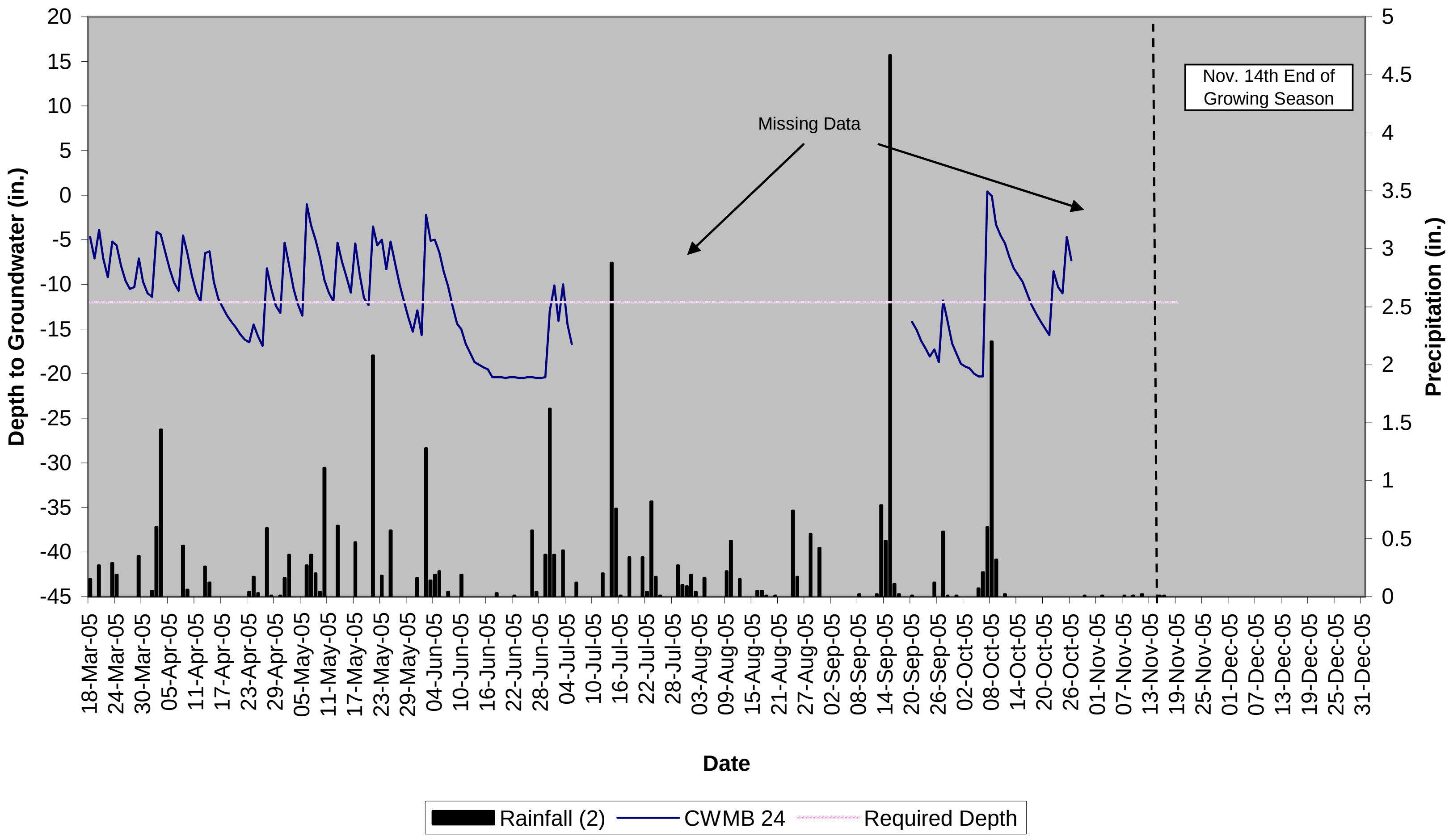
Croatan WMB
297
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 297
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

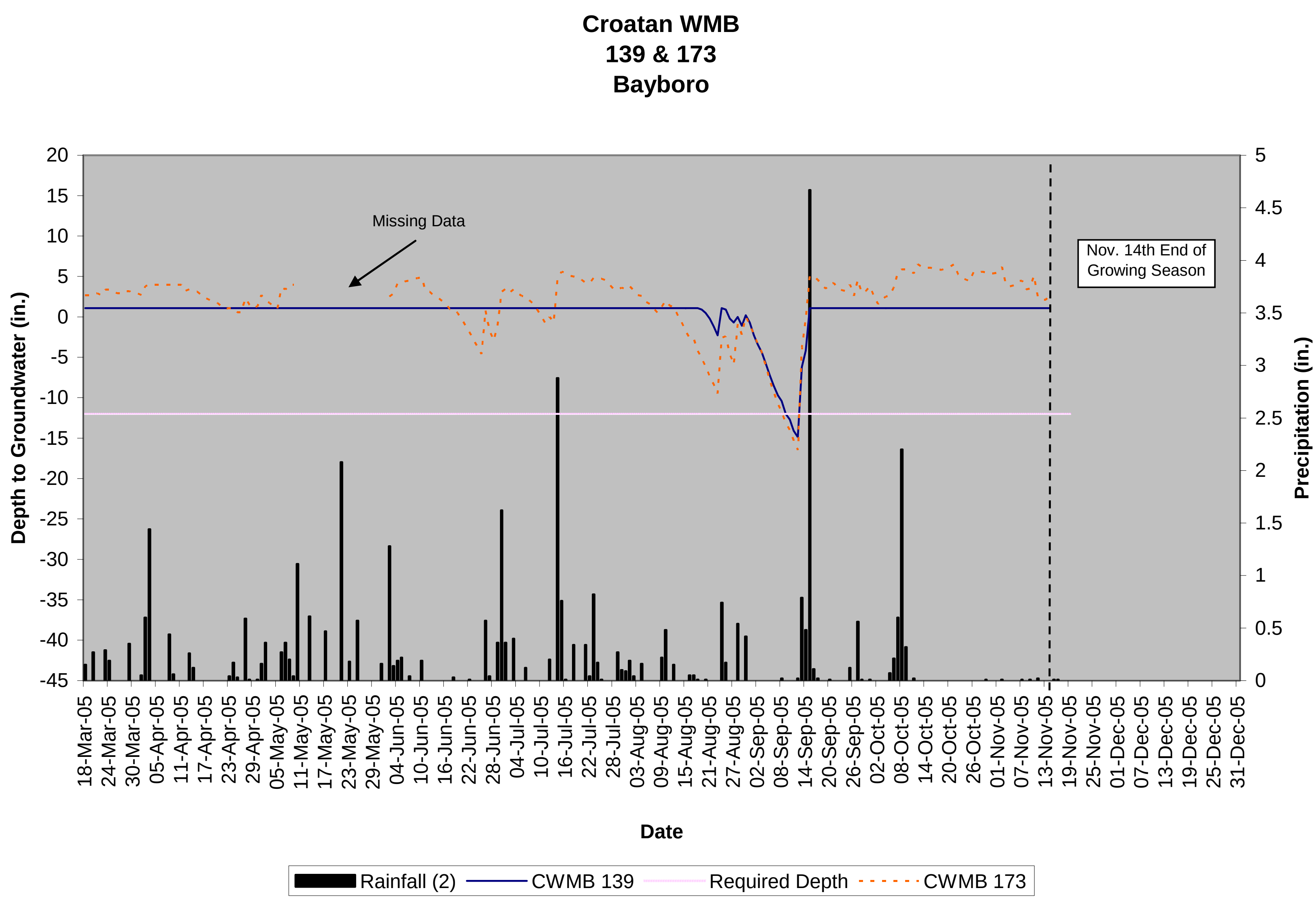
MU 13B

Croatan WMB
3 & 4
Murville

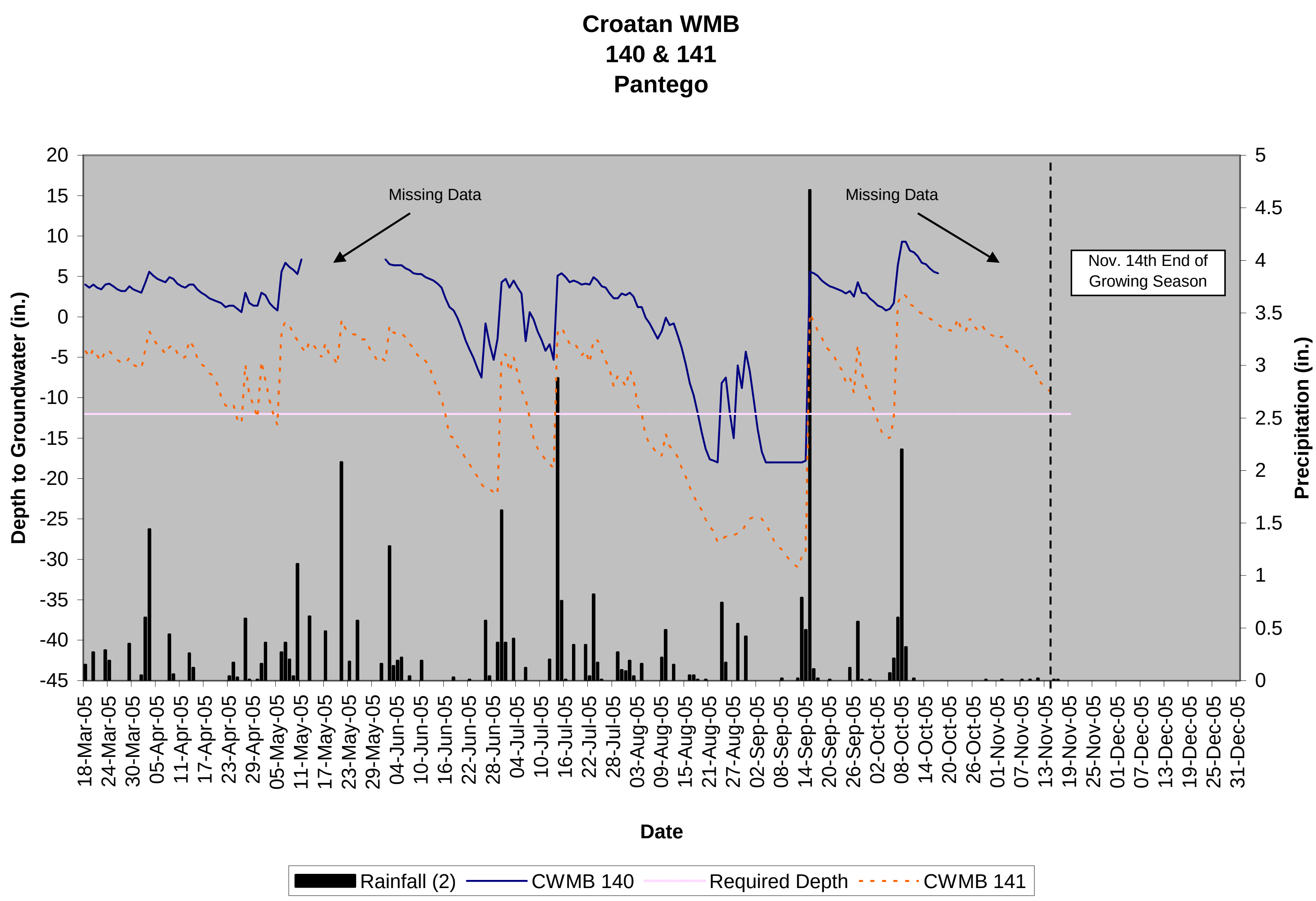


Croatan WMB
24
Murville



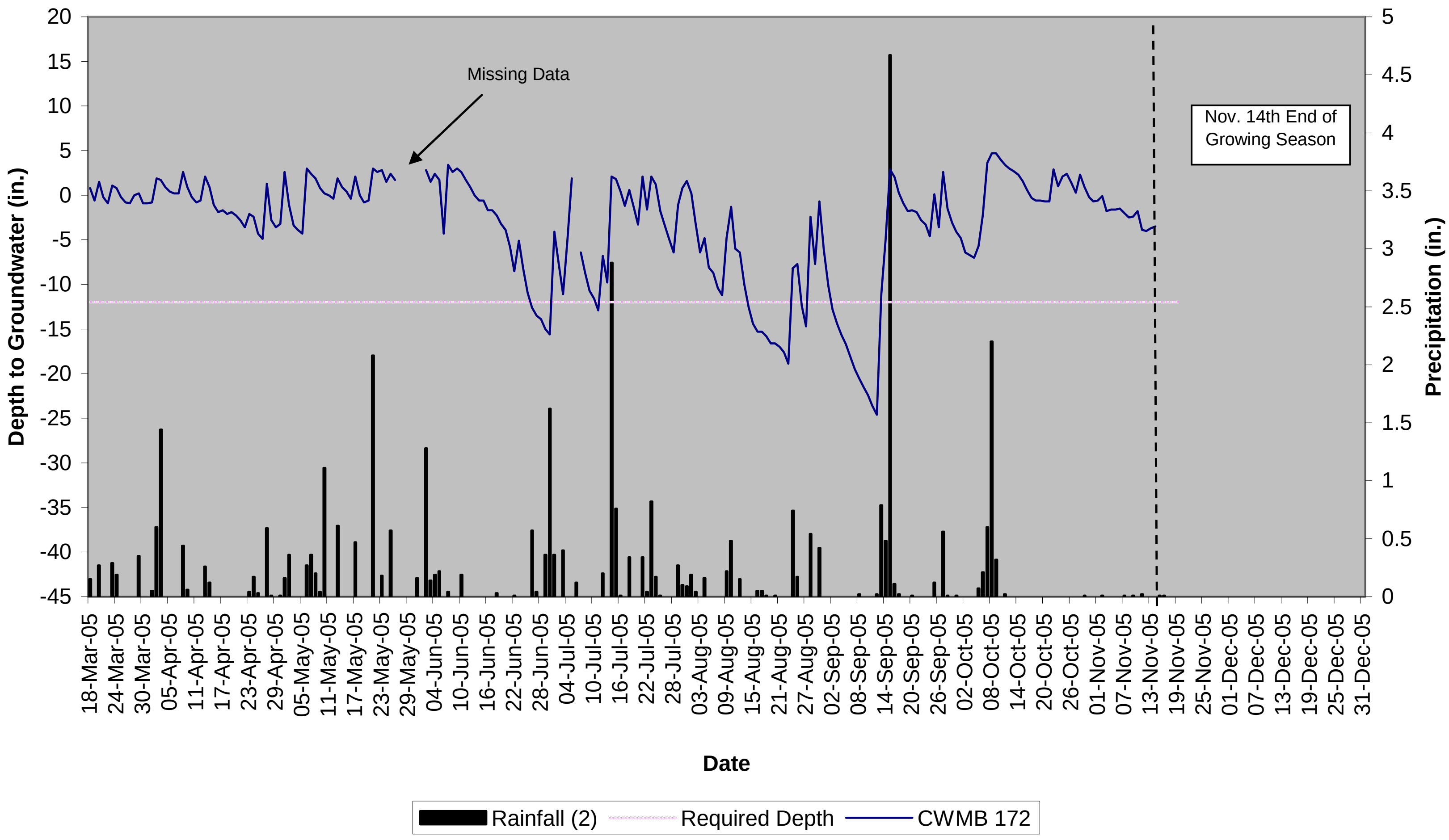


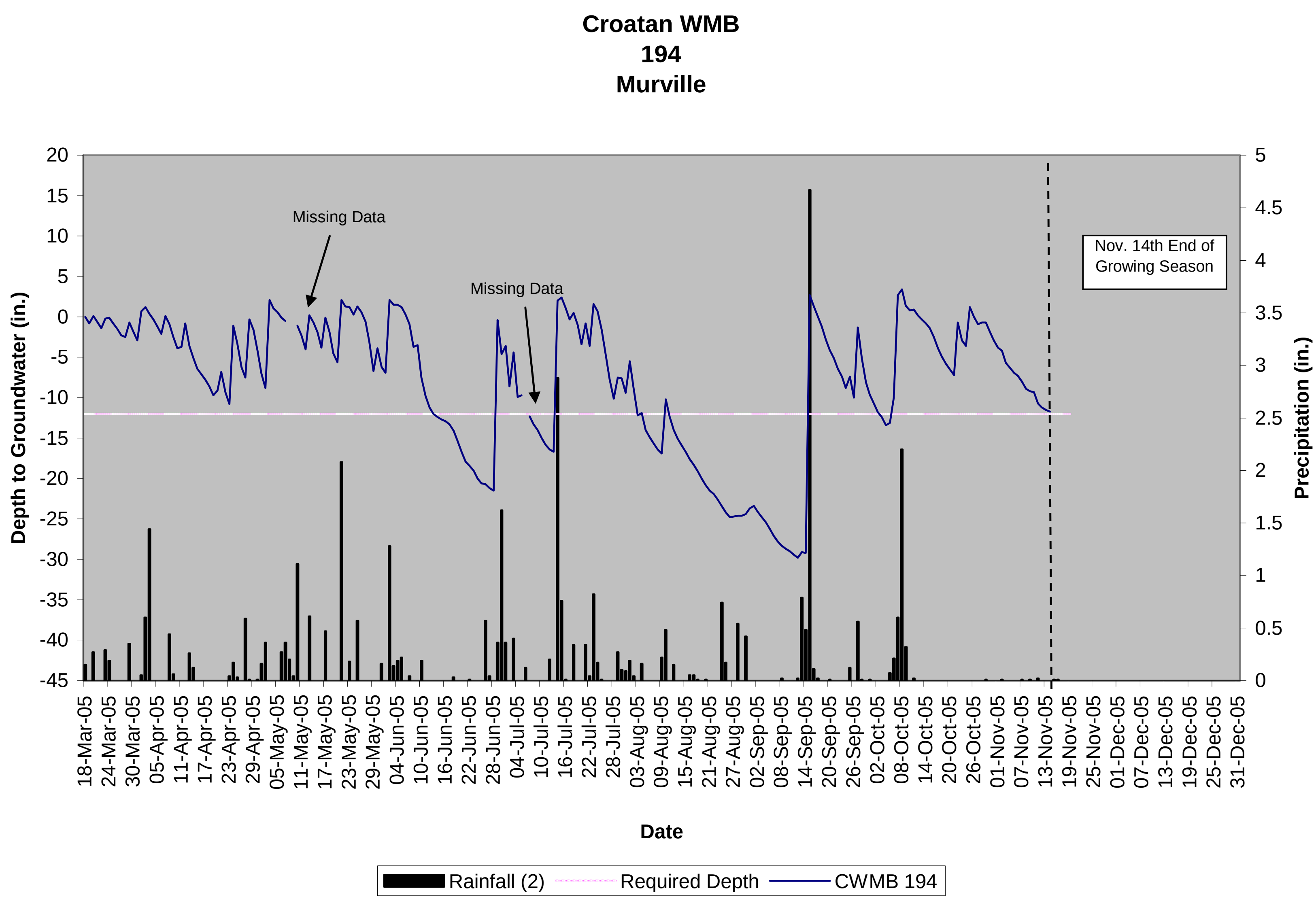
Croatan WMB
139 & 173
Bayboro
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 139
Required Depth
CWMB 173



Croatan WMB
140 & 141
Pantego
Missing Data
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 140
Required Depth
CWMB 141

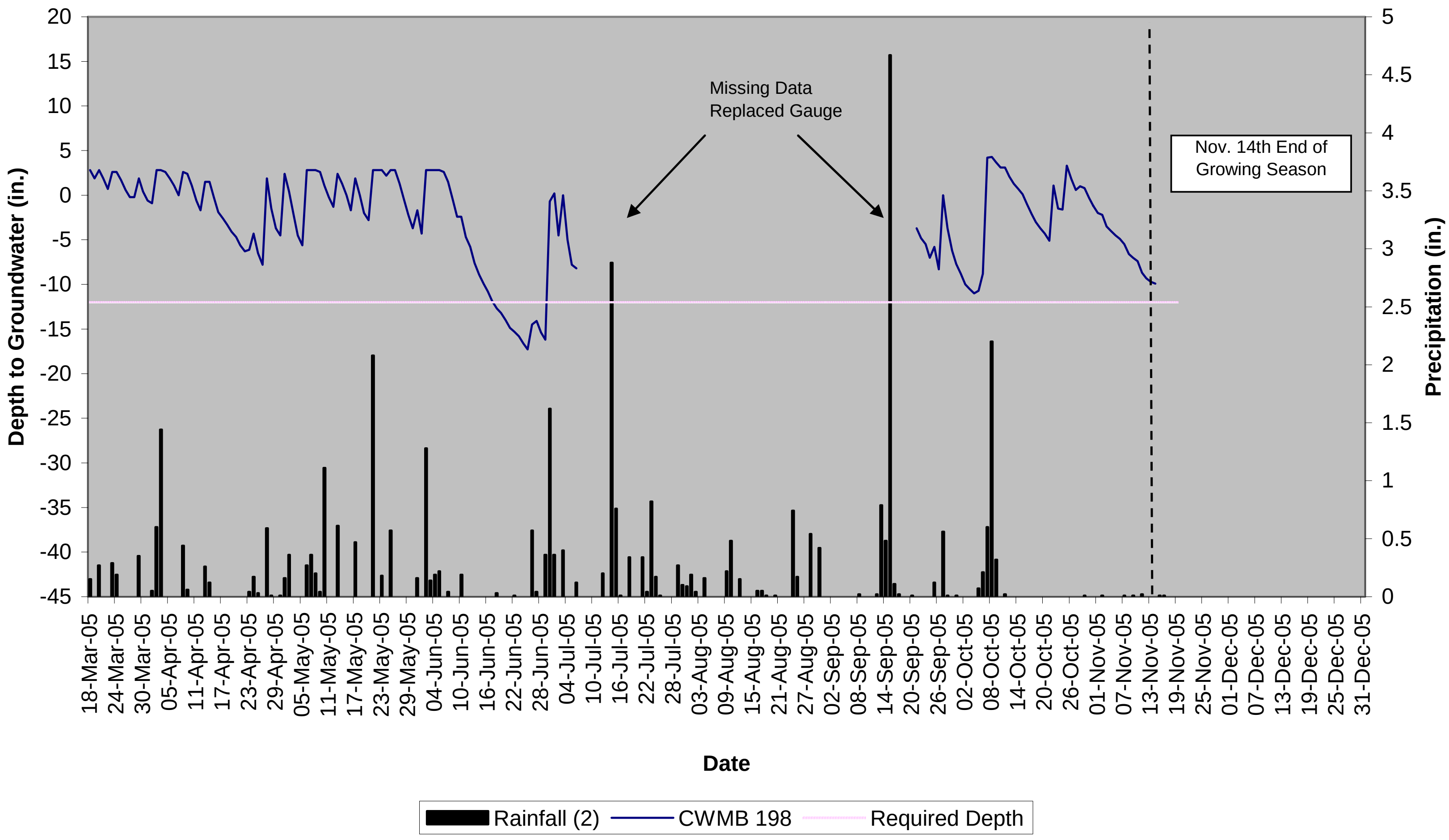
Croatan WMB
172
Bayboro





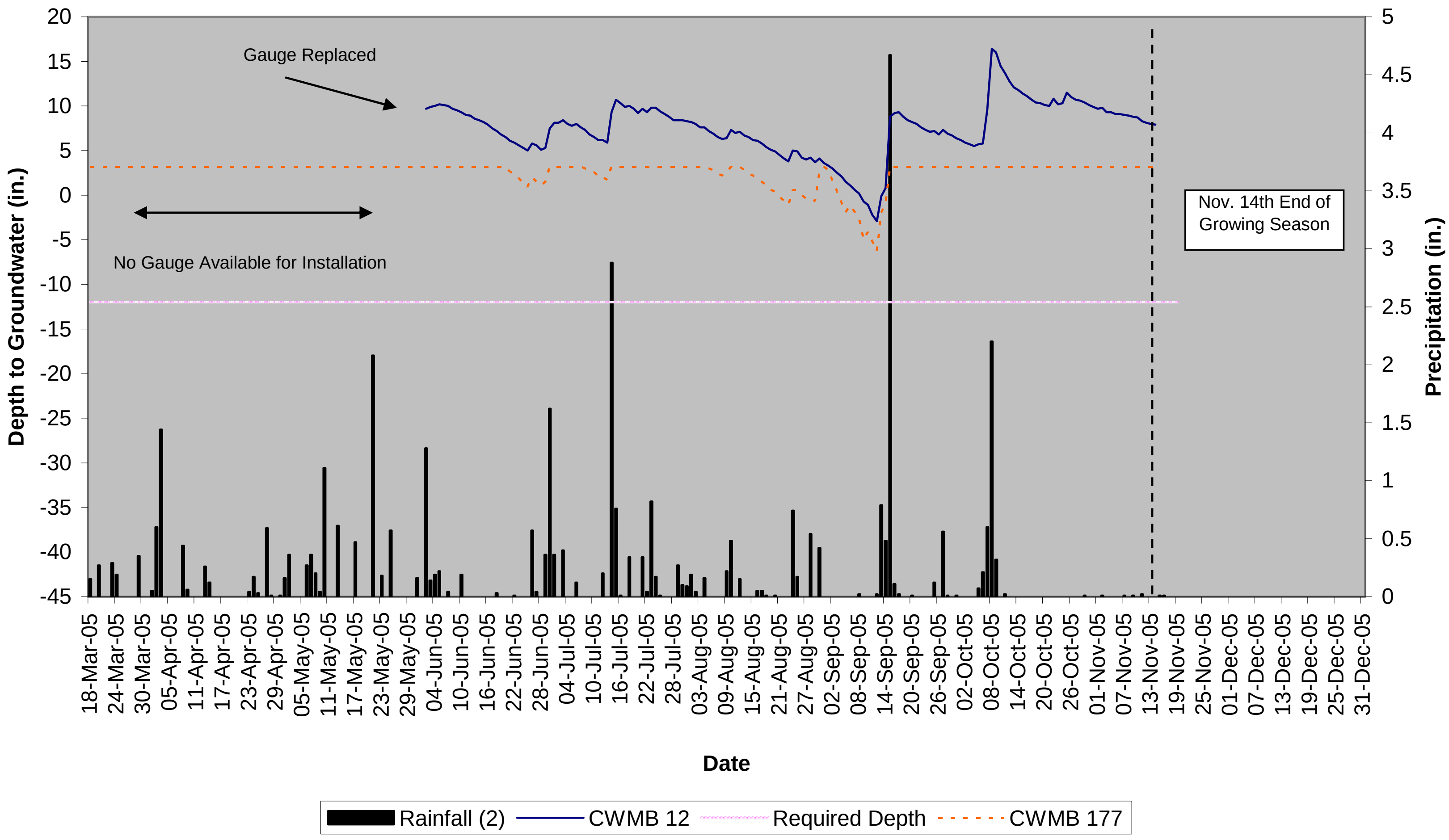
Croatan WMB
194
Murville
Missing Data
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
Required Depth
CWMB 194

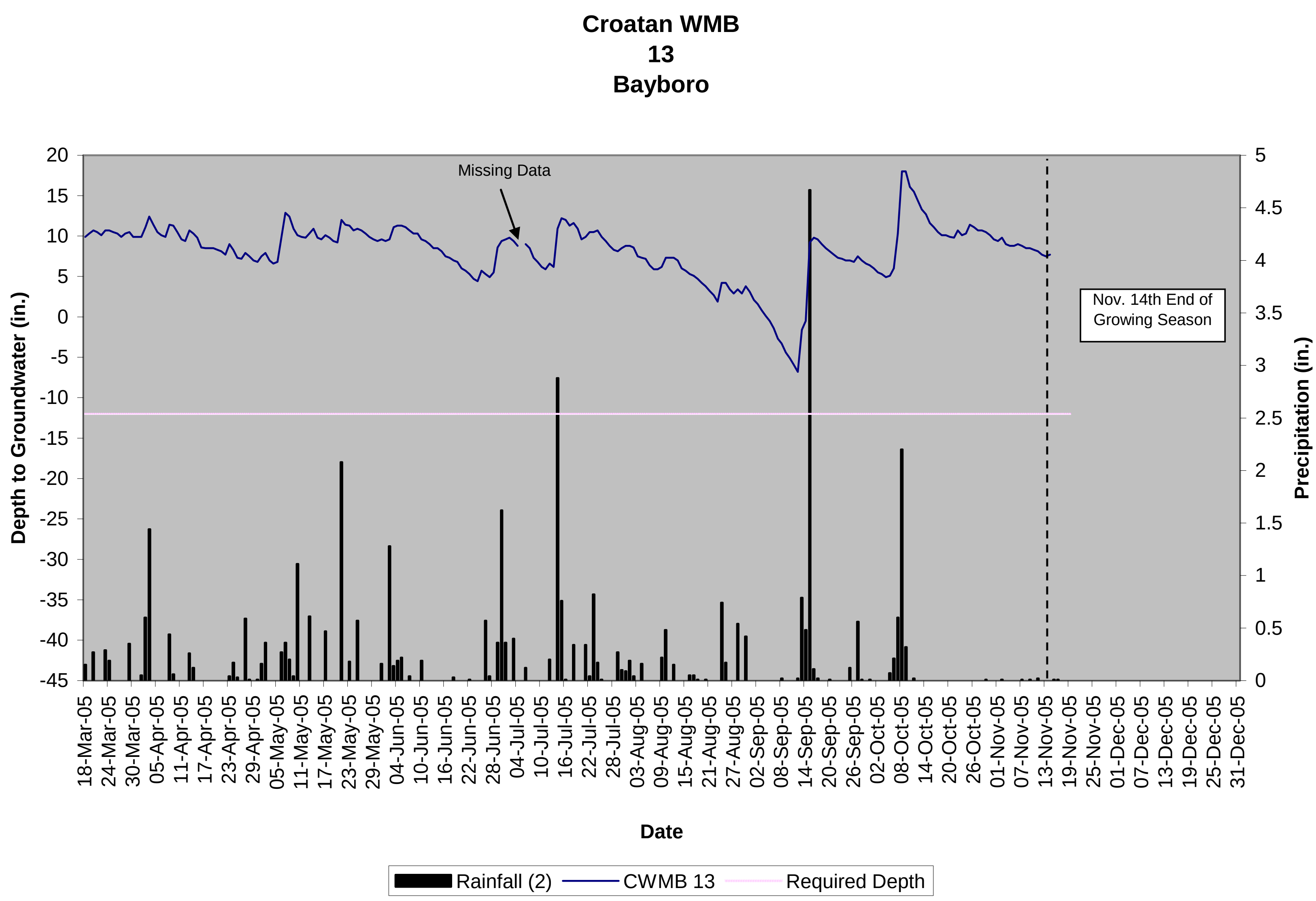
Croatan WMB
198
Leon



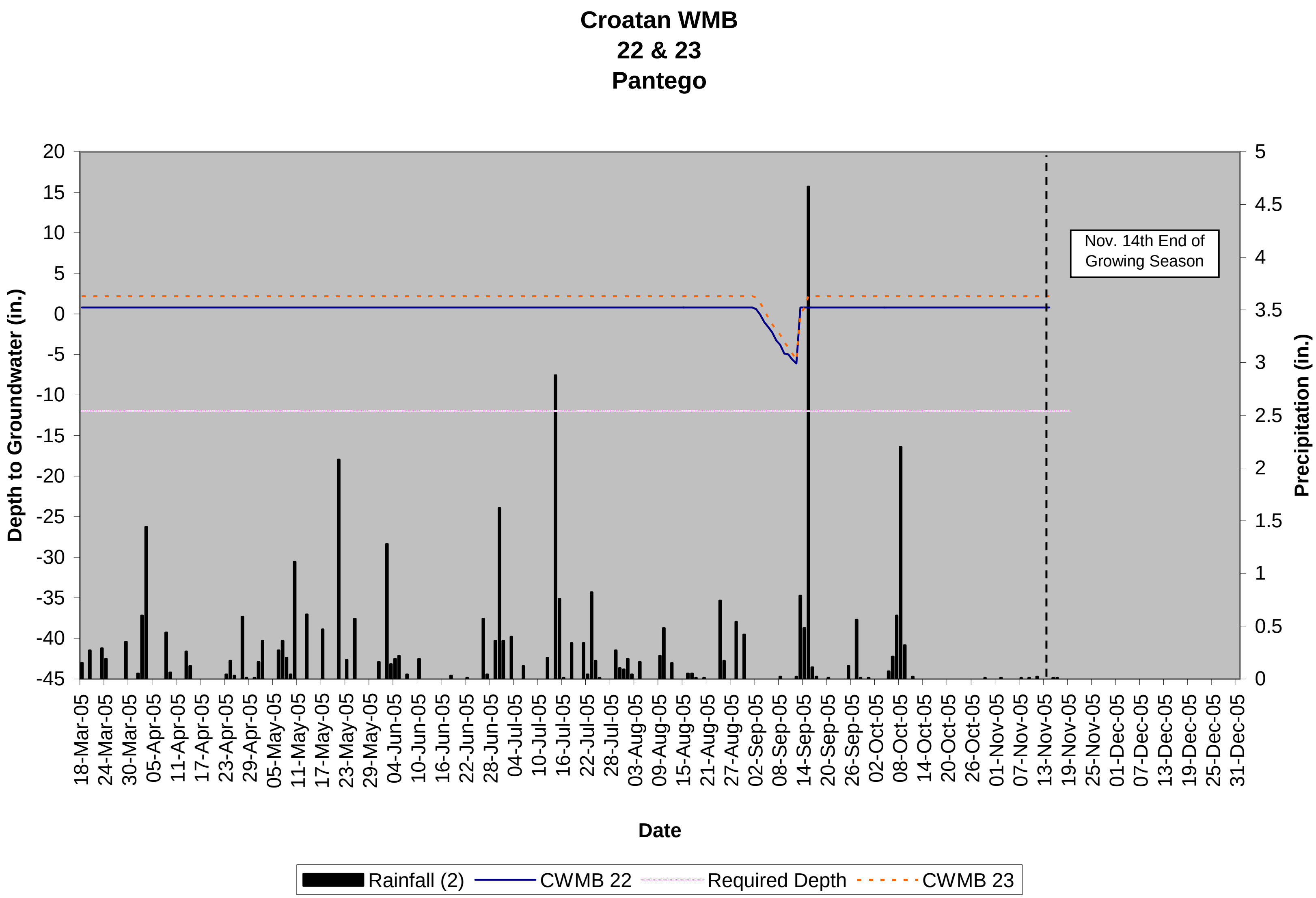
MU 14

Croatan WMB
12 & 177
Pantego

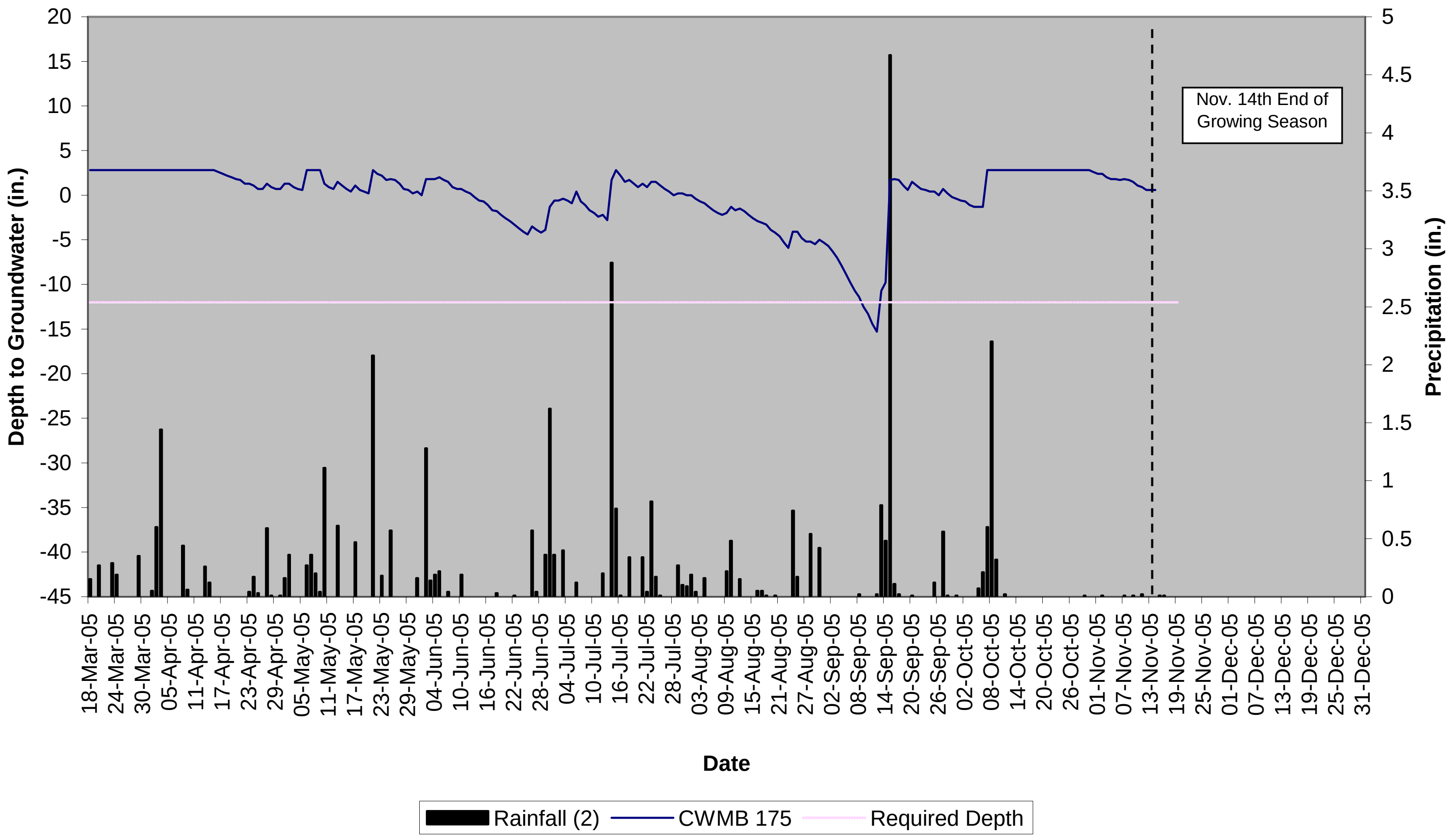


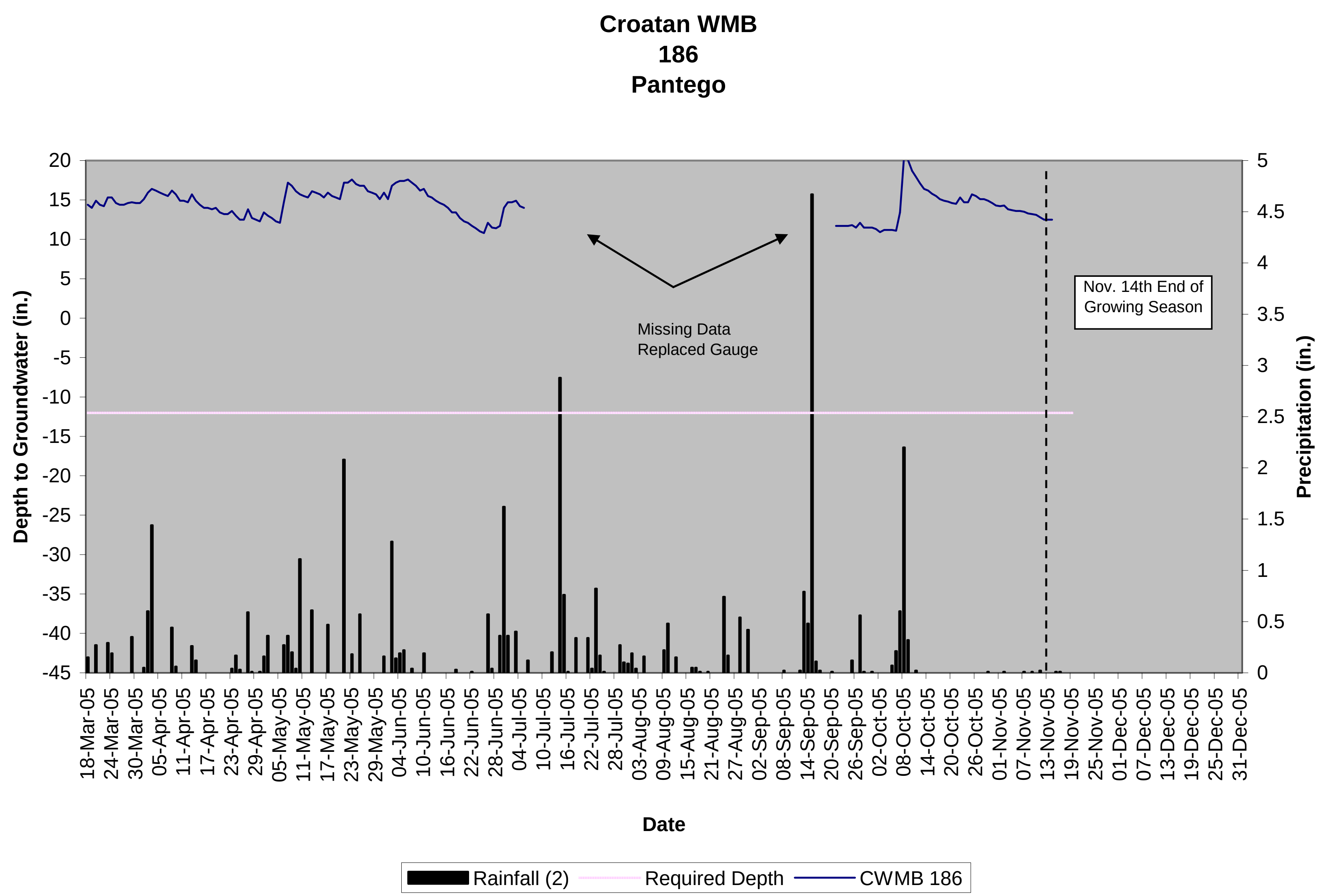


Croatan WMB
13
Bayboro
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 13
Required Depth

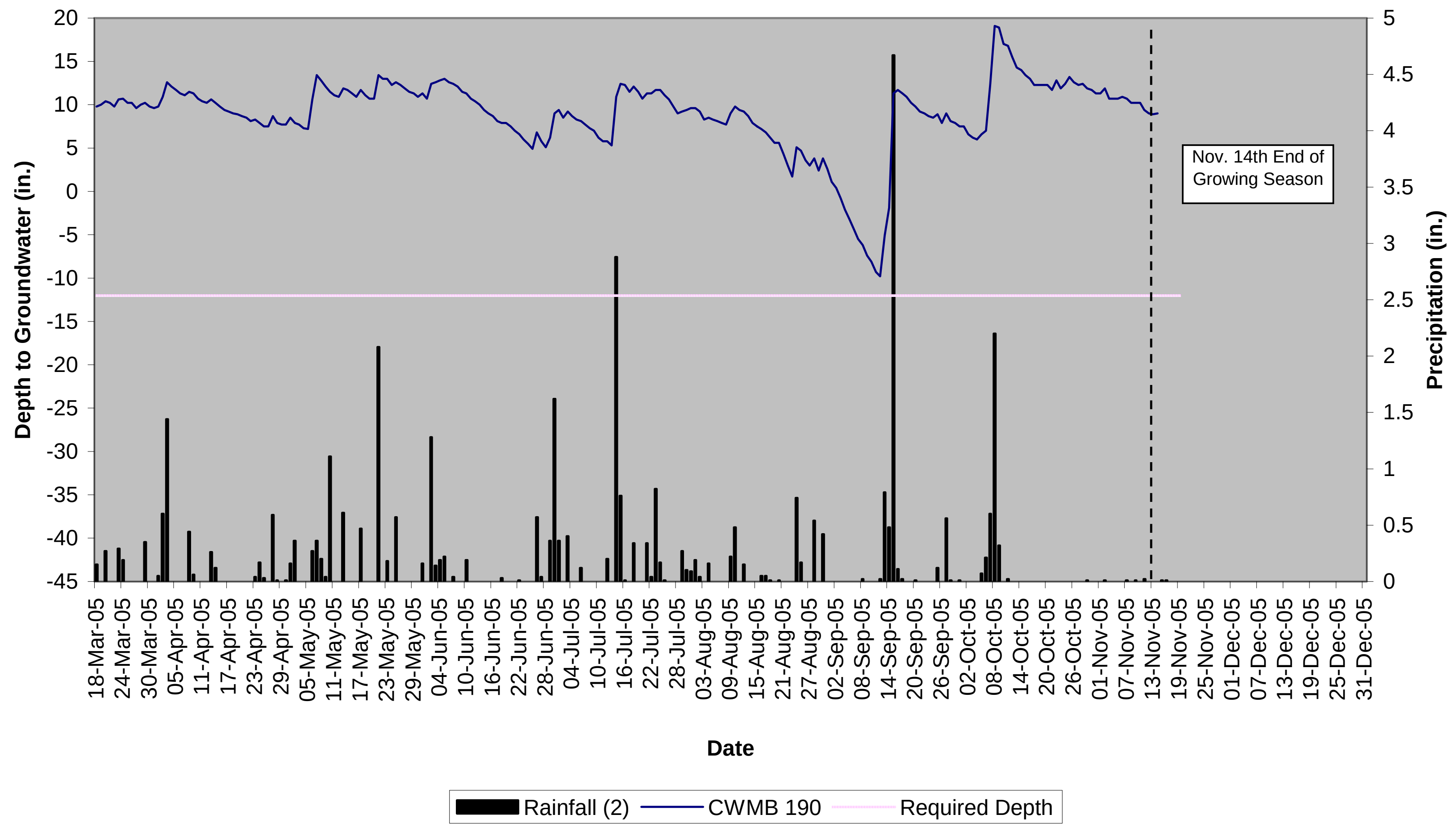

Croatan WMB
22 & 23
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 22
Required Depth
CWMB 23

Croatan WMB
175
Bayboro

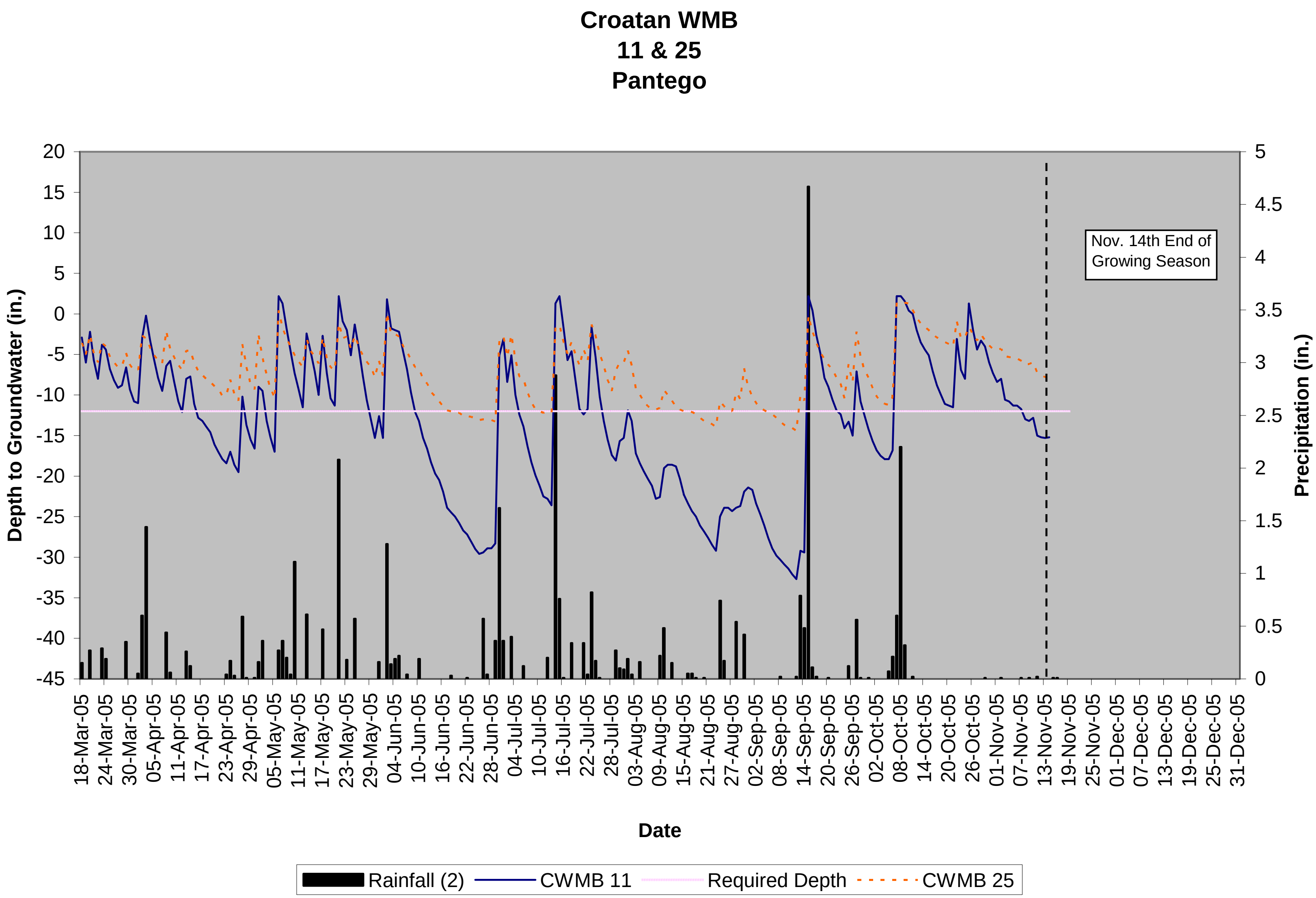



Croatan WMB
186
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Date
Missing Data
Replaced Gauge
Nov. 14th End of Growing Season
Rainfall (2)
Required Depth
CWMB 186

Croatan WMB
190
Pantego



MU 15



Croatan WMB
11 & 25
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 11
Required Depth
CWMB 25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
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4.5
4
3.5
3
2.5
2
1.5
1
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0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
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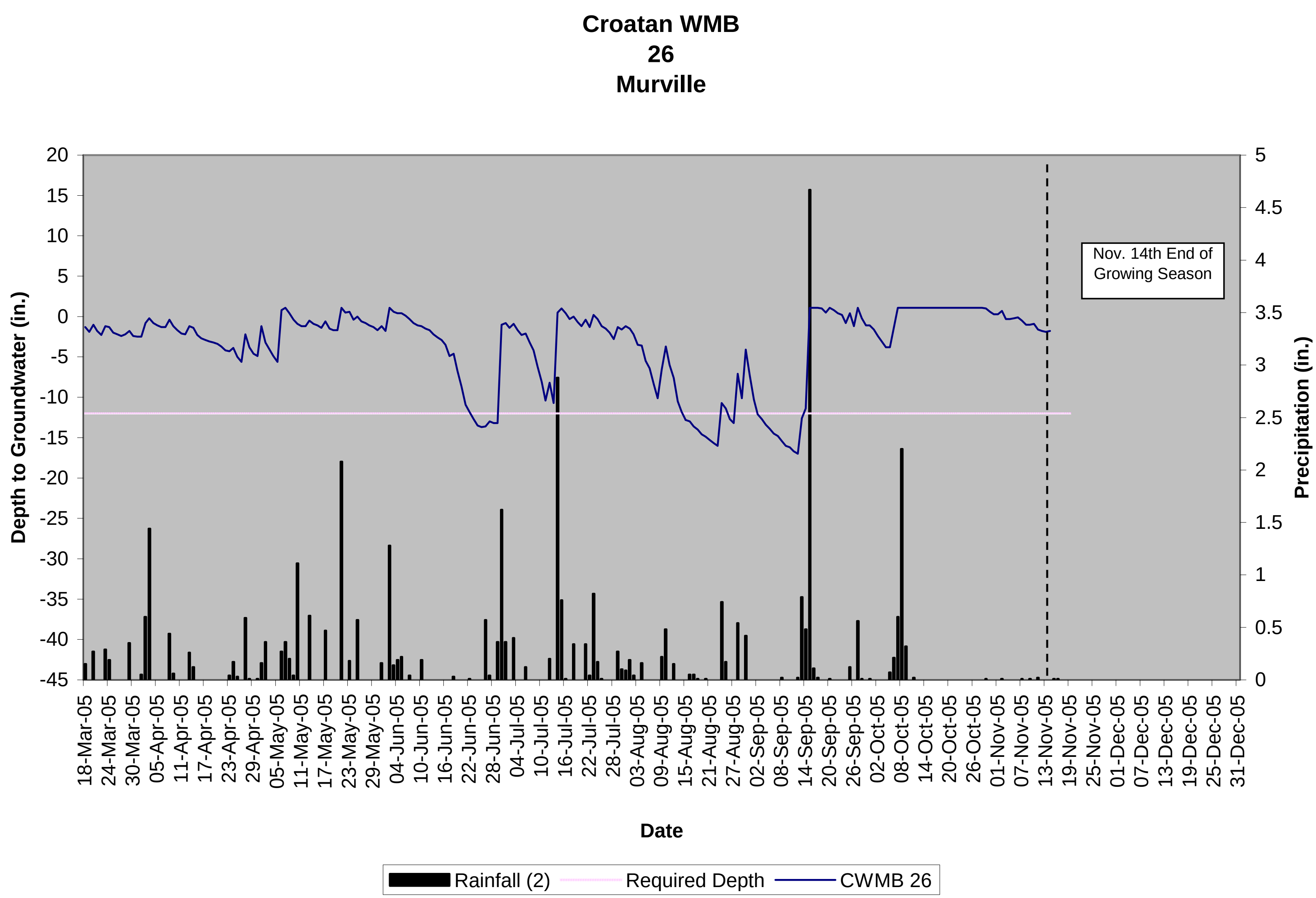
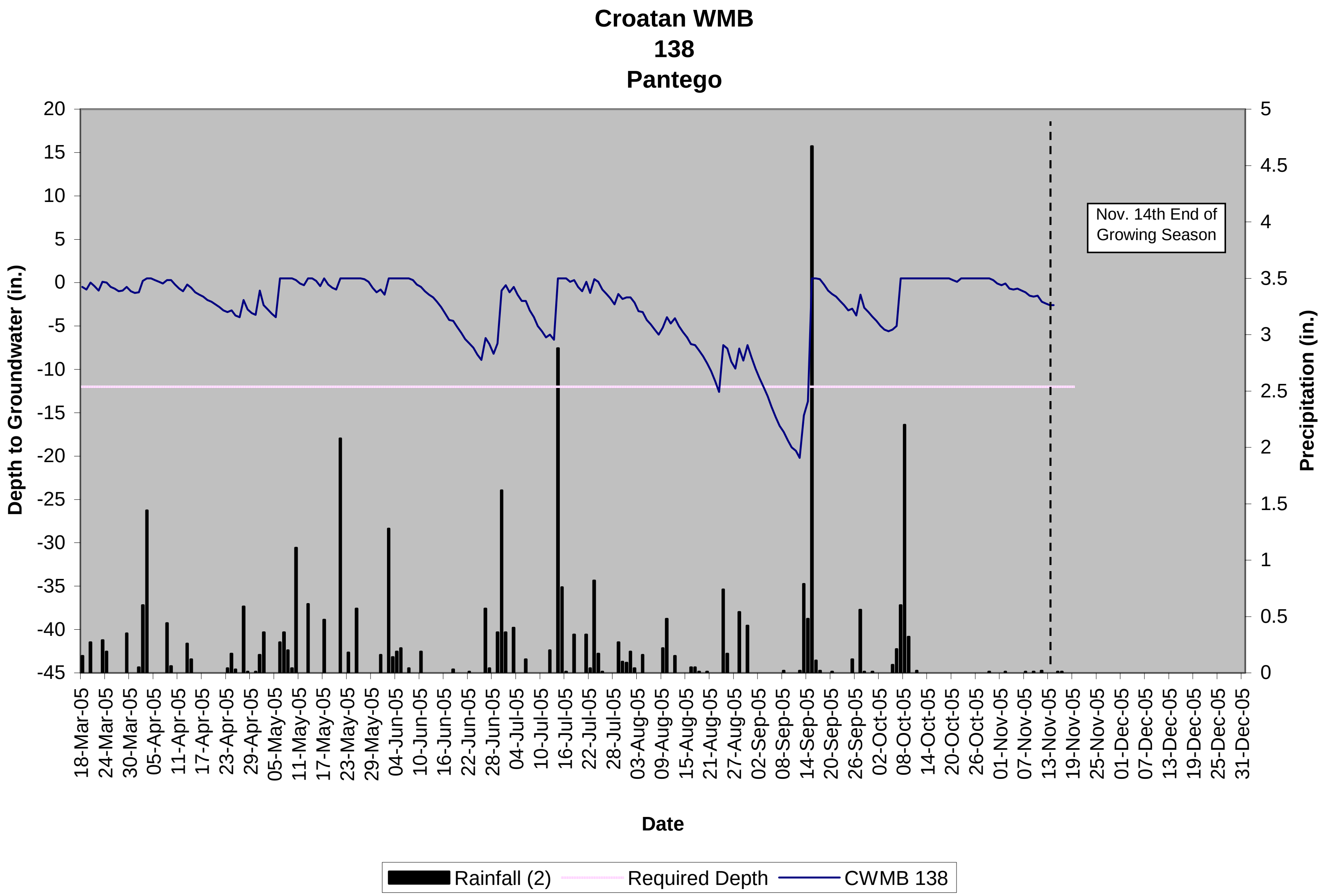
25-Dec-05
31-Dec-05


Croatan WMB
26
Murville
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
Required Depth
CWMB 26



Croatan WMB
138
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
Rainfall (2)
Required Depth
CWMB 138
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
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01-Nov-05
07-Nov-05
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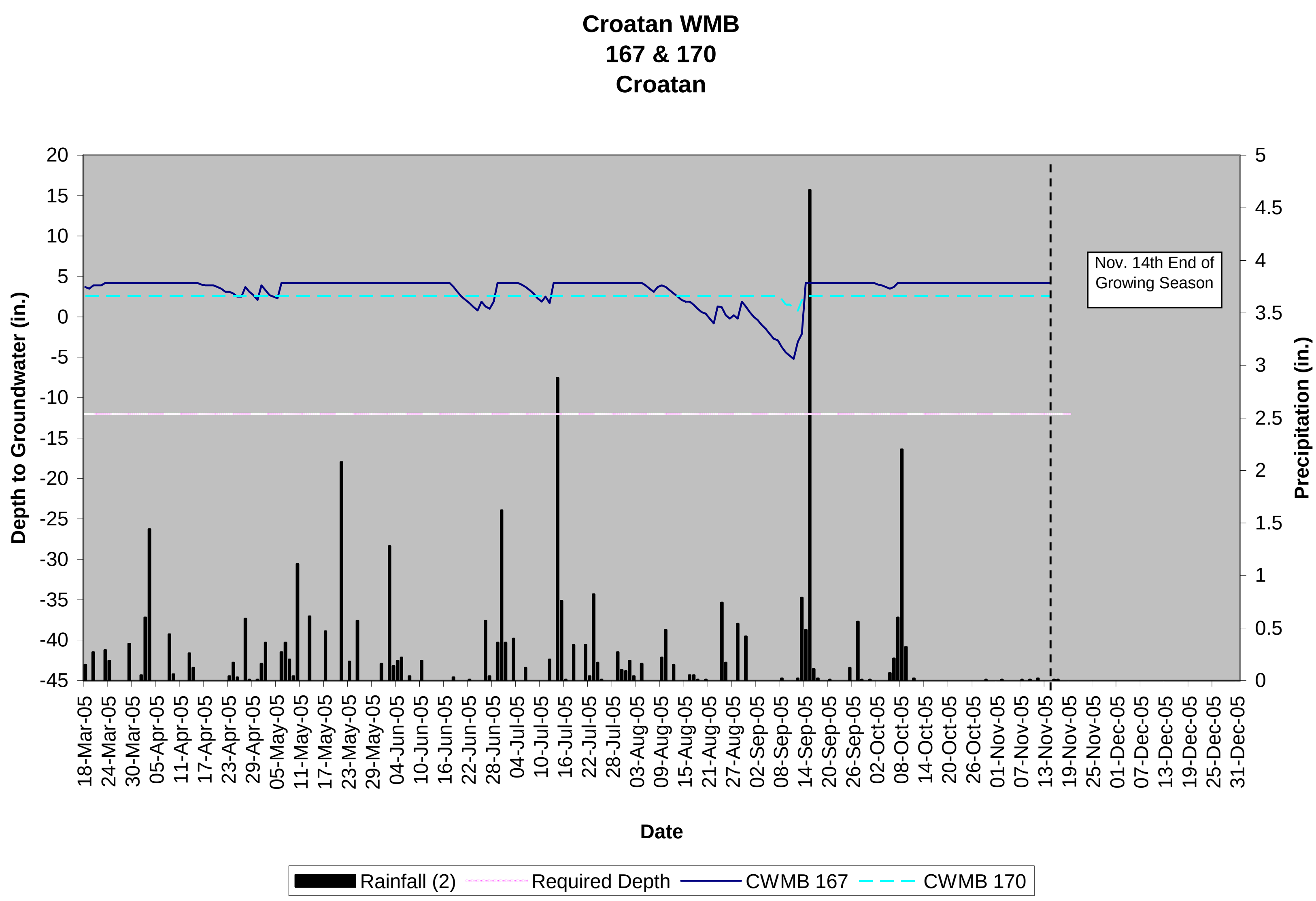
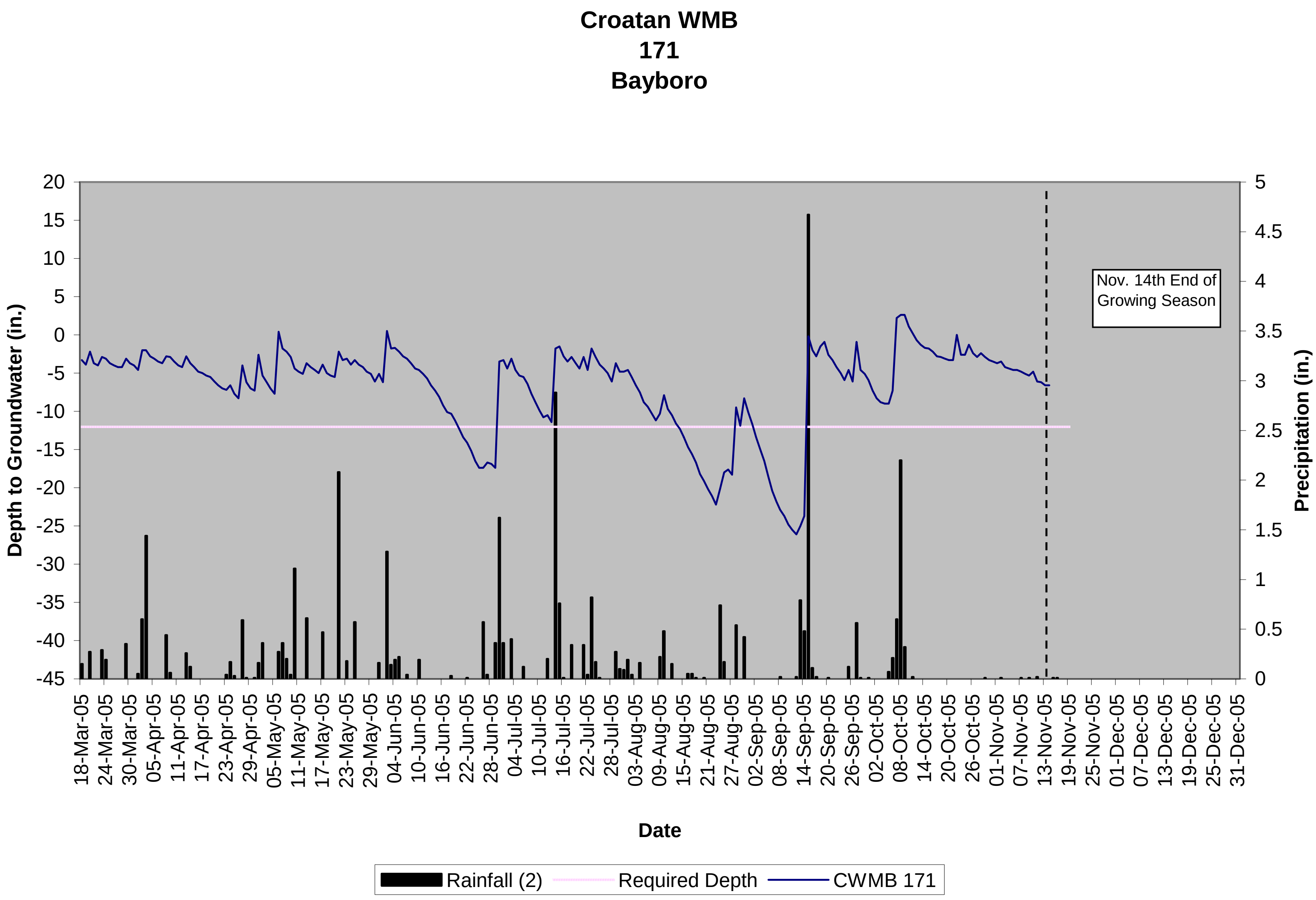
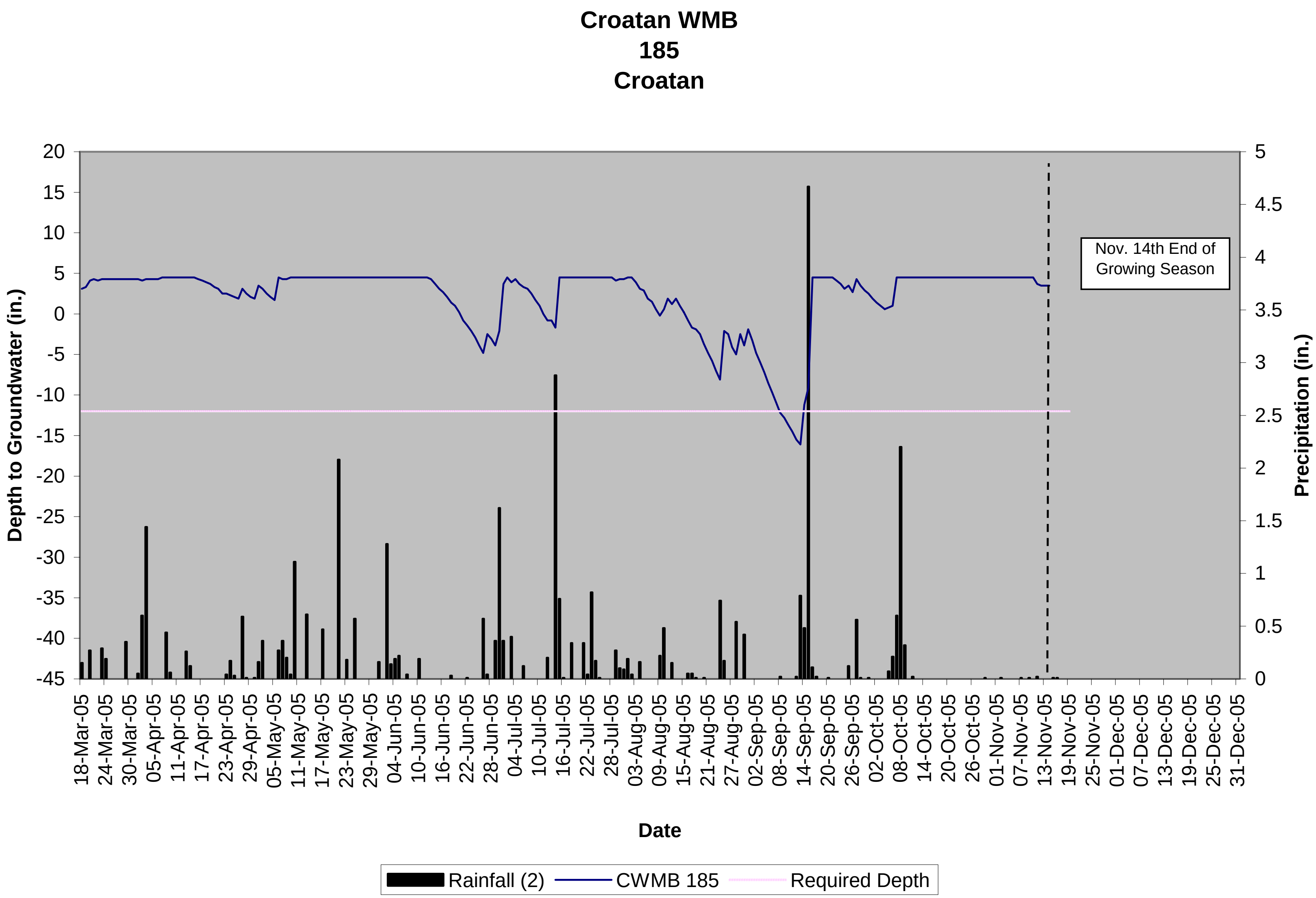
25-Dec-05
31-Dec-05



Croatan WMB
167 & 170
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
Required Depth
CWMB 167
CWMB 170



Croatan WMB
171
Bayboro
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
Required Depth
CWMB 171


Croatan WMB
185
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 185
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
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27-Aug-05
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20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
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01-Nov-05
07-Nov-05
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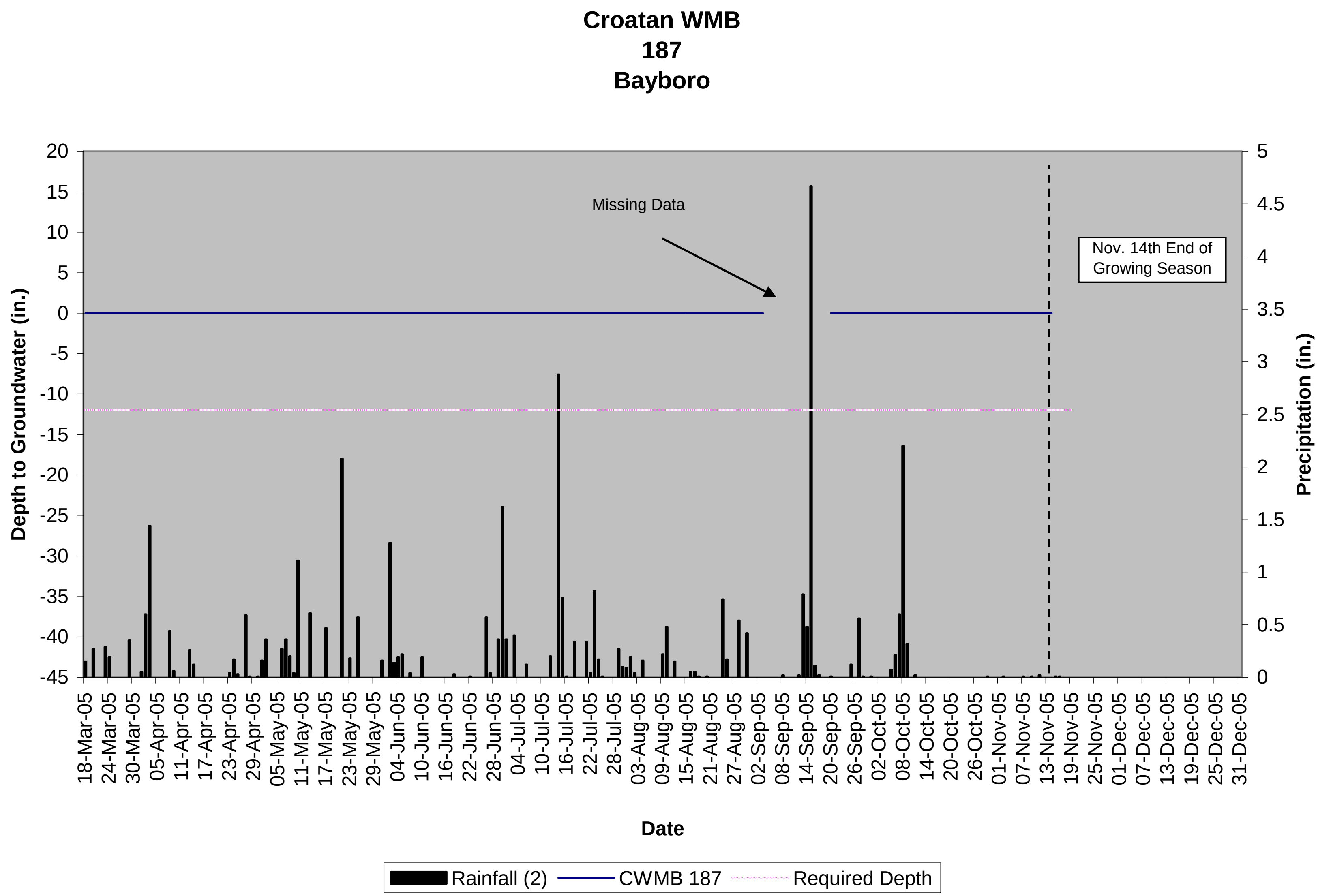
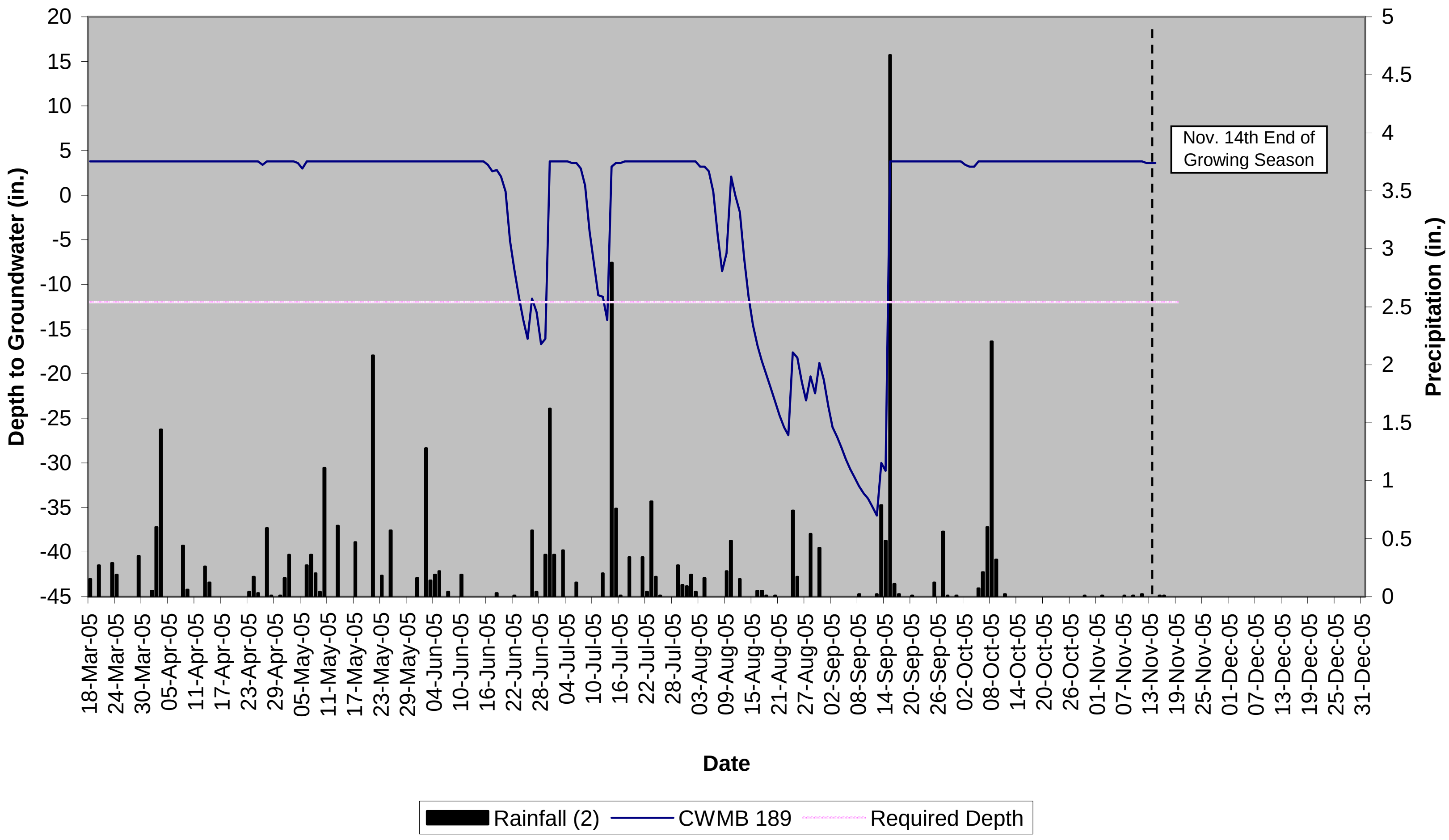
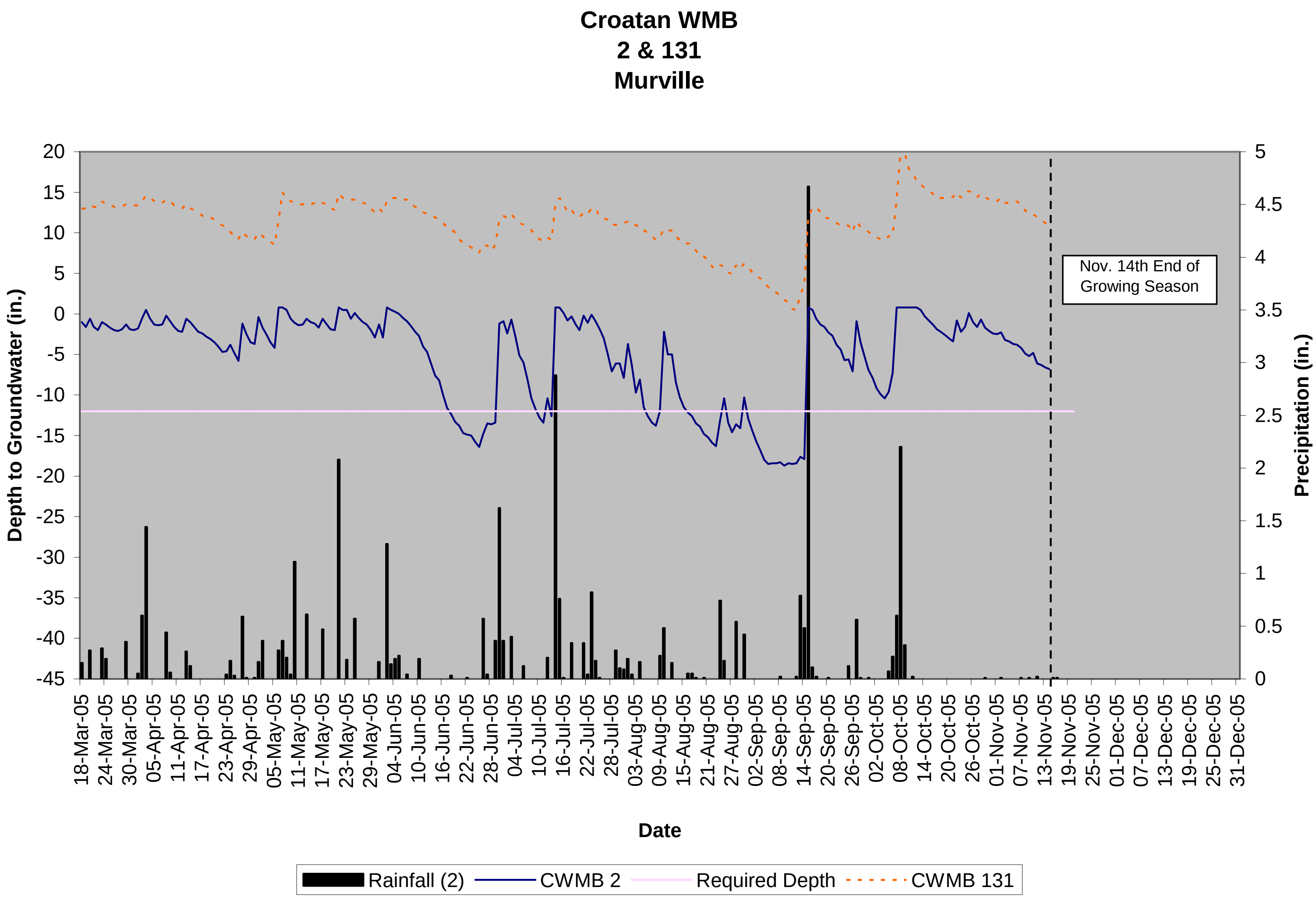
25-Dec-05
31-Dec-05


Croatan WMB
187
Bayboro
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 187
Required Depth

Croatan WMB
189
Pantego



MU 16


Croatan WMB
2 & 131
Murville
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 2
Required Depth
CWMB 131
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
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05-May-05
11-May-05
17-May-05
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29-May-05
04-Jun-05
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01-Nov-05
07-Nov-05
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19-Nov-05
25-Nov-05
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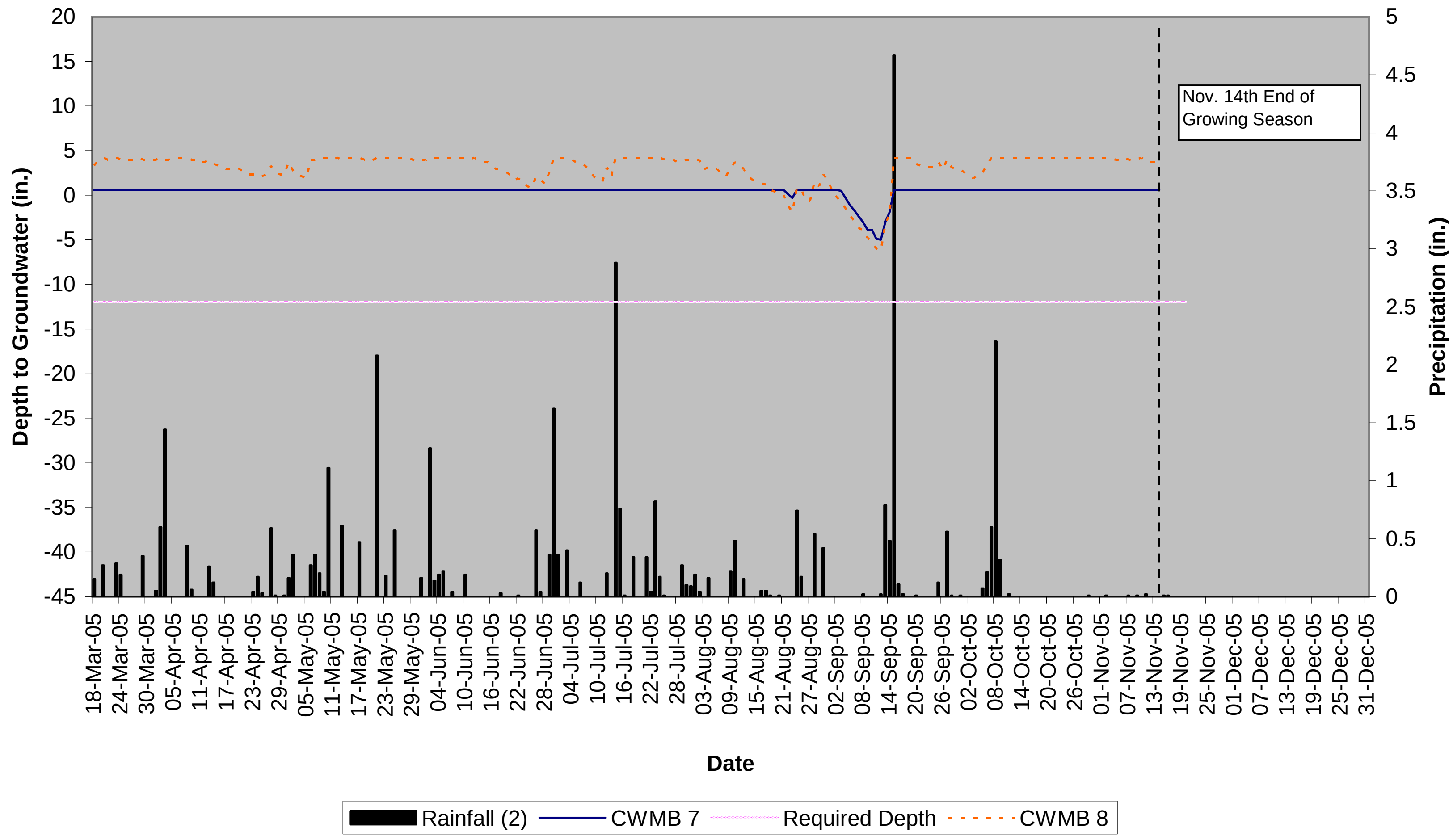
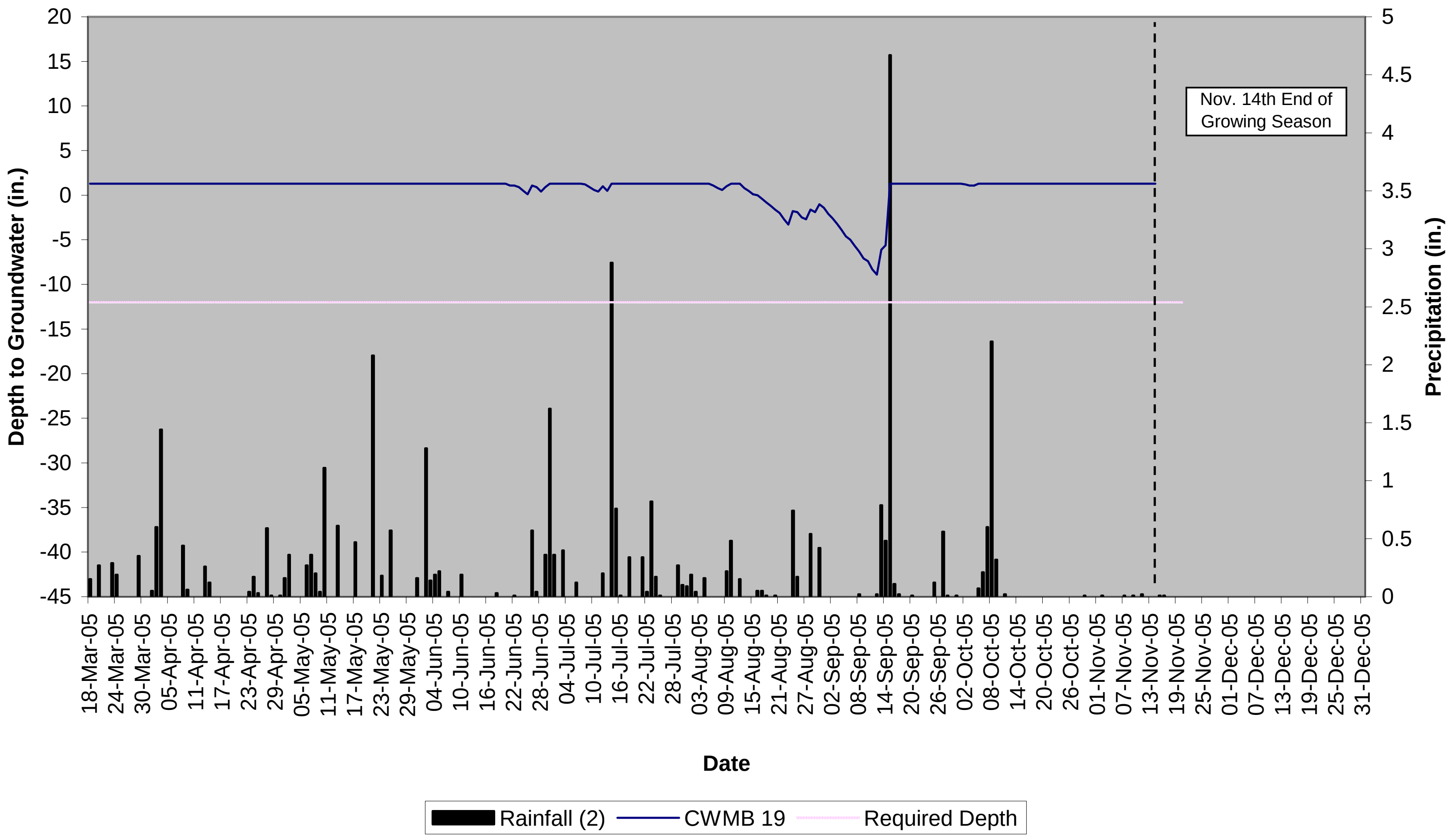
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

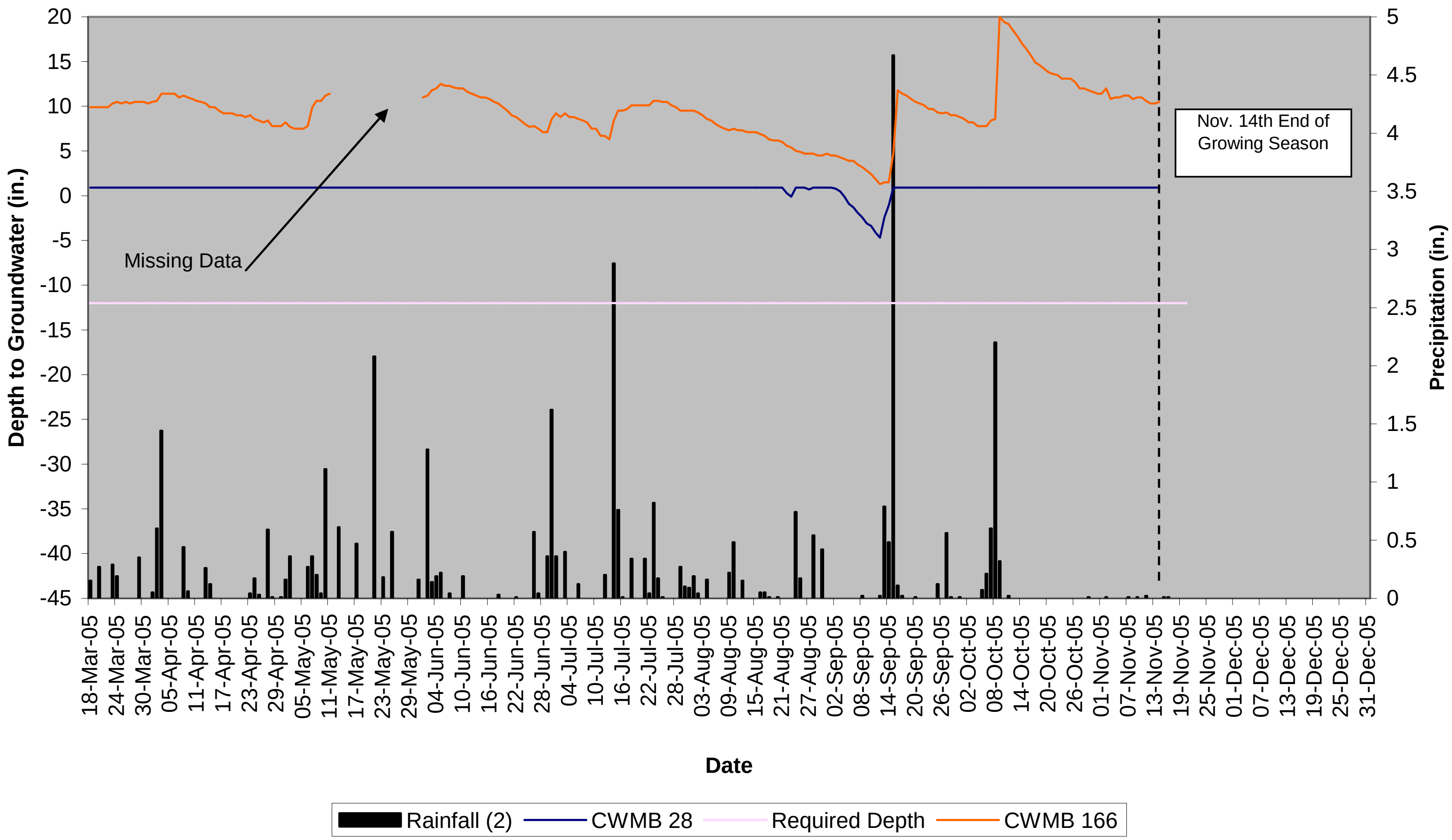
Croatan WMB
7 & 8
Croatan

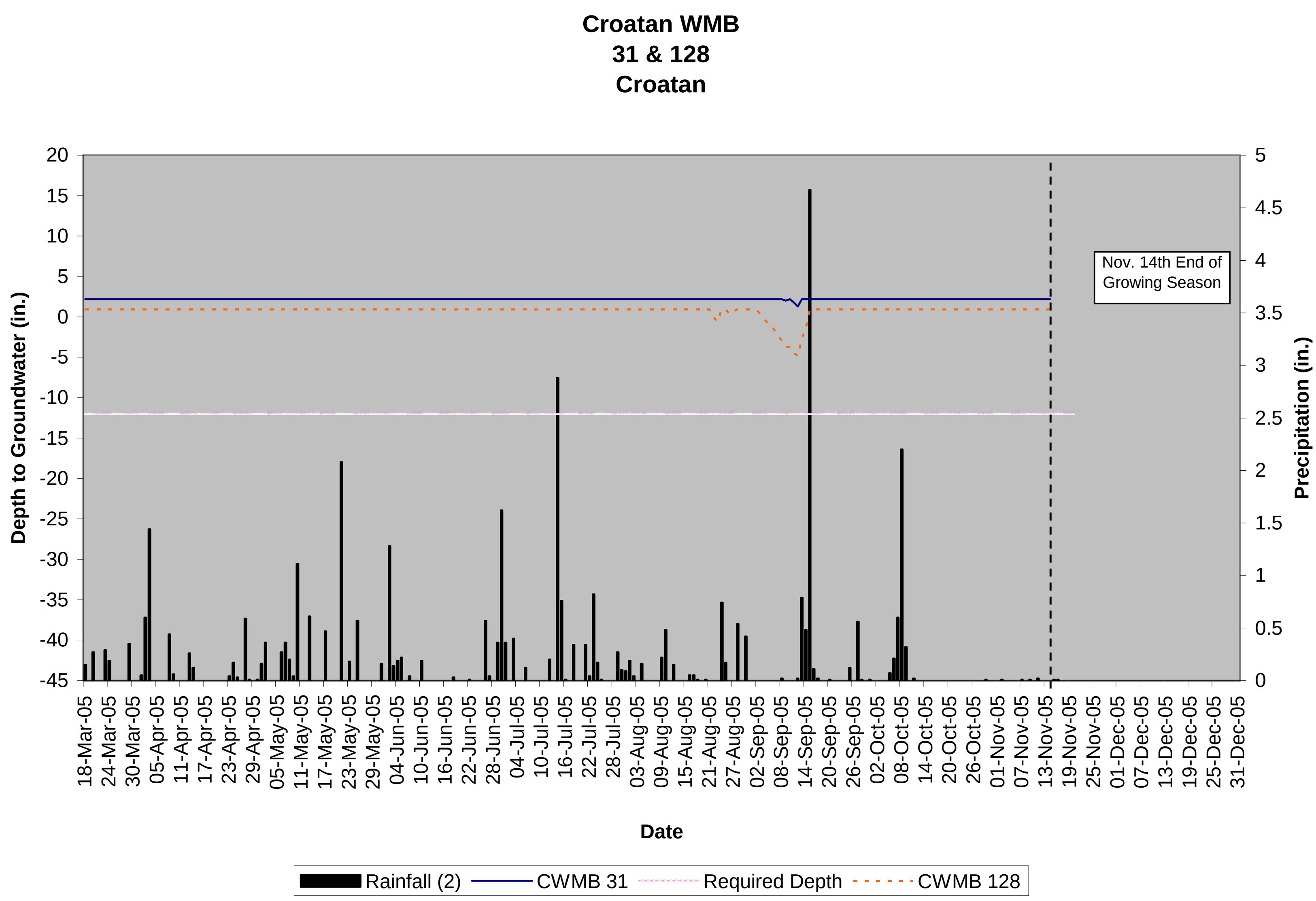


Croatan WMB
19
Pantego

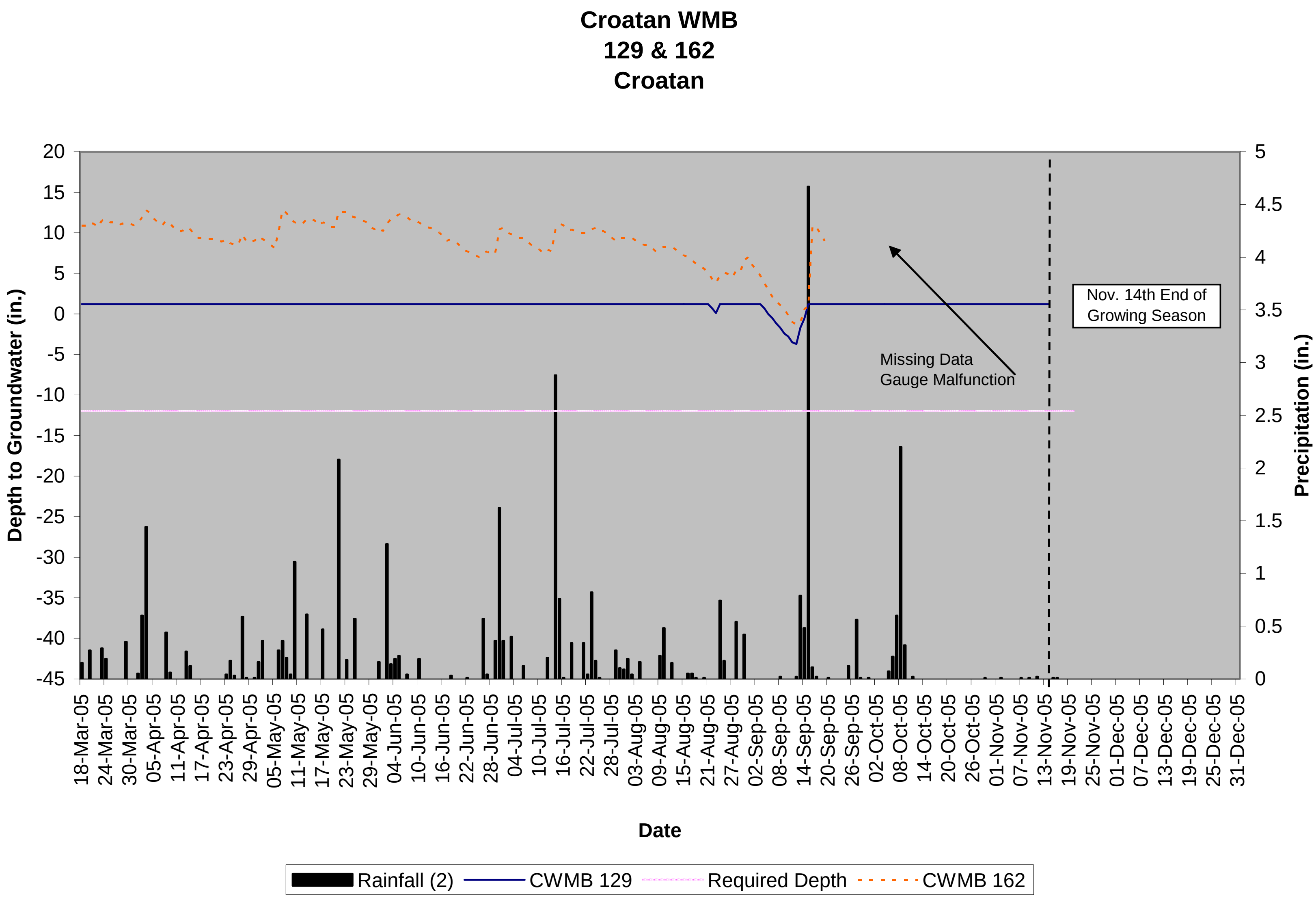


Croatan WMB
28 & 166
Dare

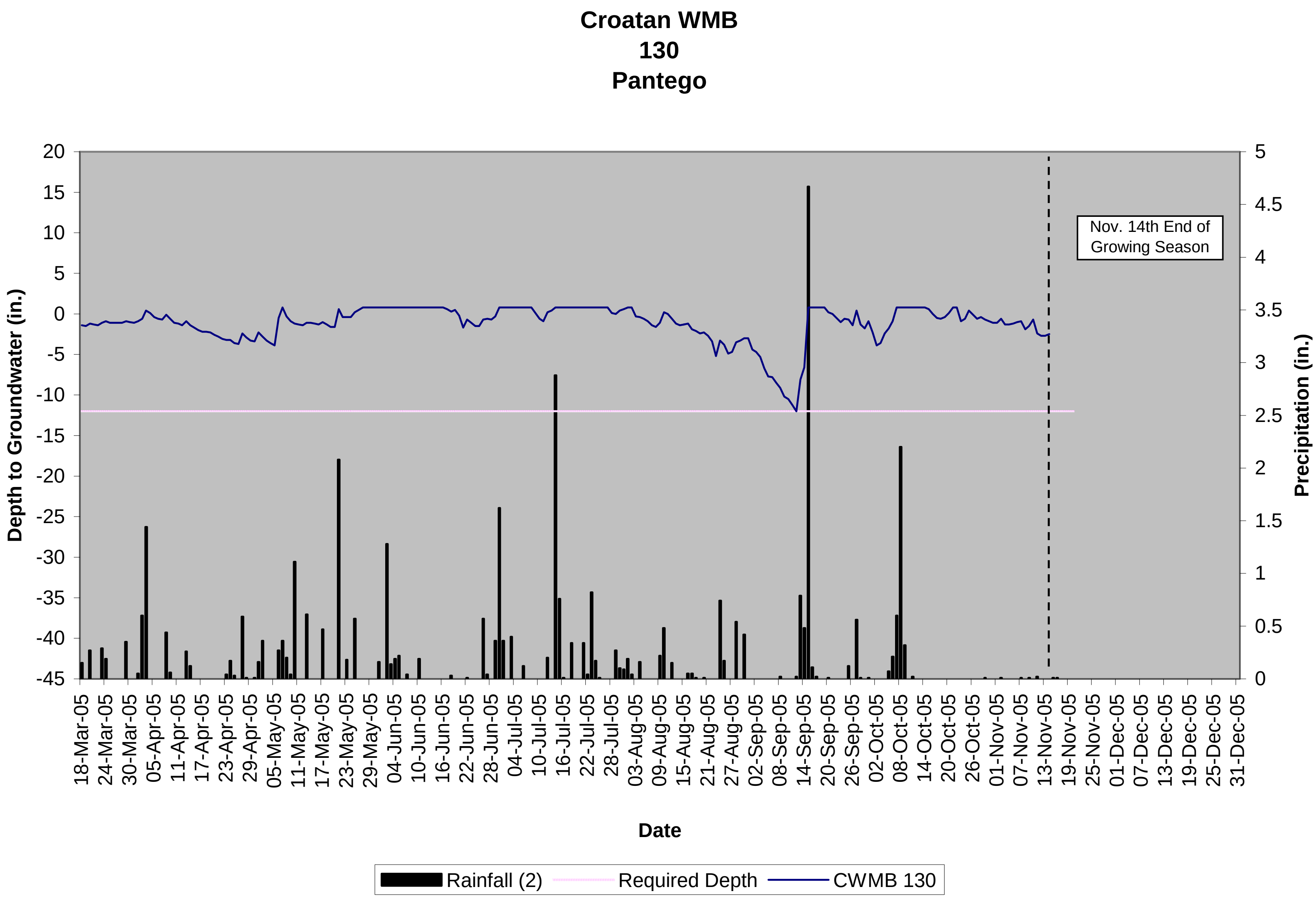




Croatan WMB
31 & 128
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 31
Required Depth
CWMB 128



Croatan WMB
129 & 162
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Missing Data
Gauge Malfunction
Rainfall (2)
CWMB 129
Required Depth
CWMB 162


Croatan WMB
130
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
Required Depth
CWMB 130
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
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23-Apr-05
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23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
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13-Nov-05
19-Nov-05
25-Nov-05
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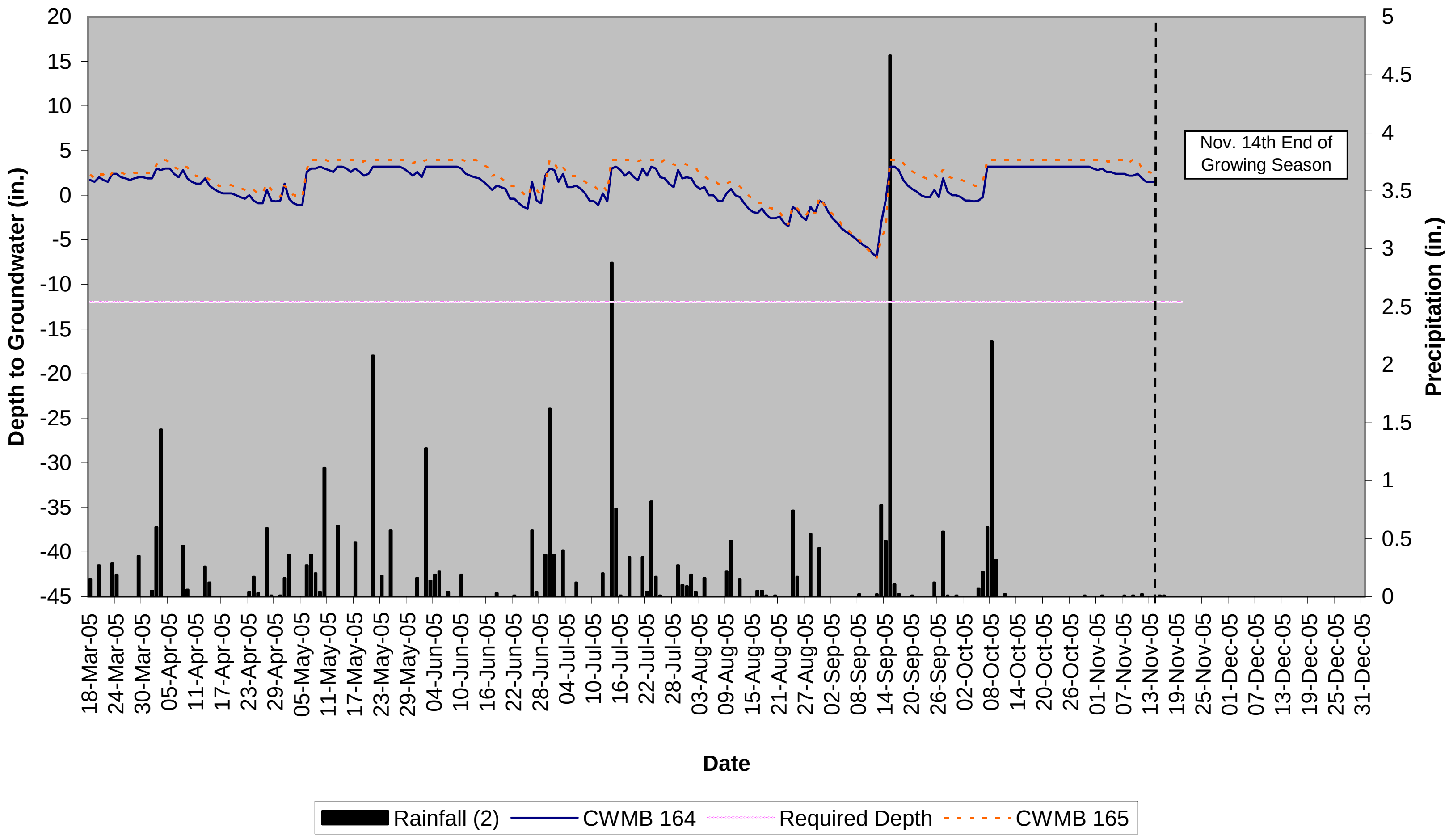
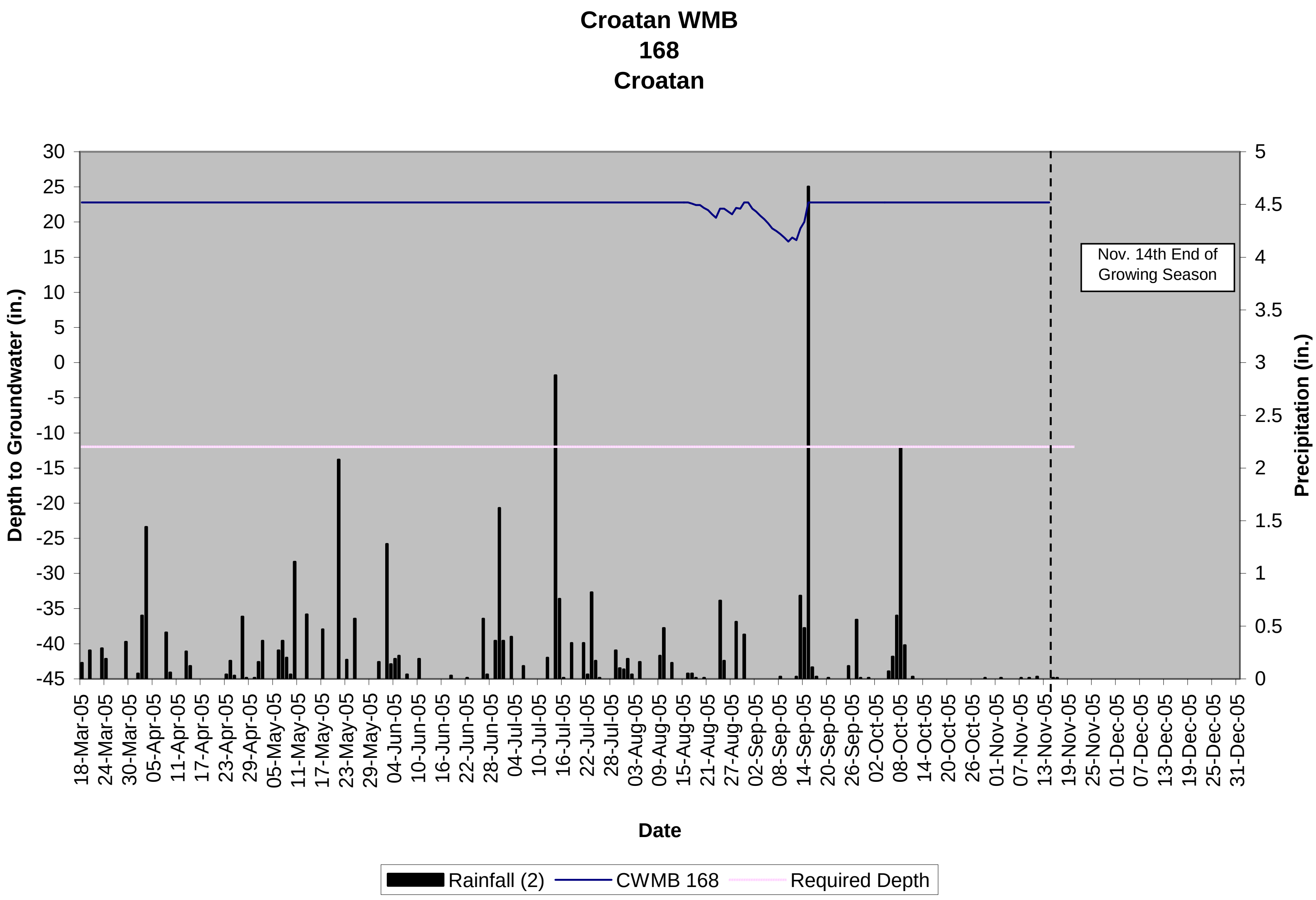
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

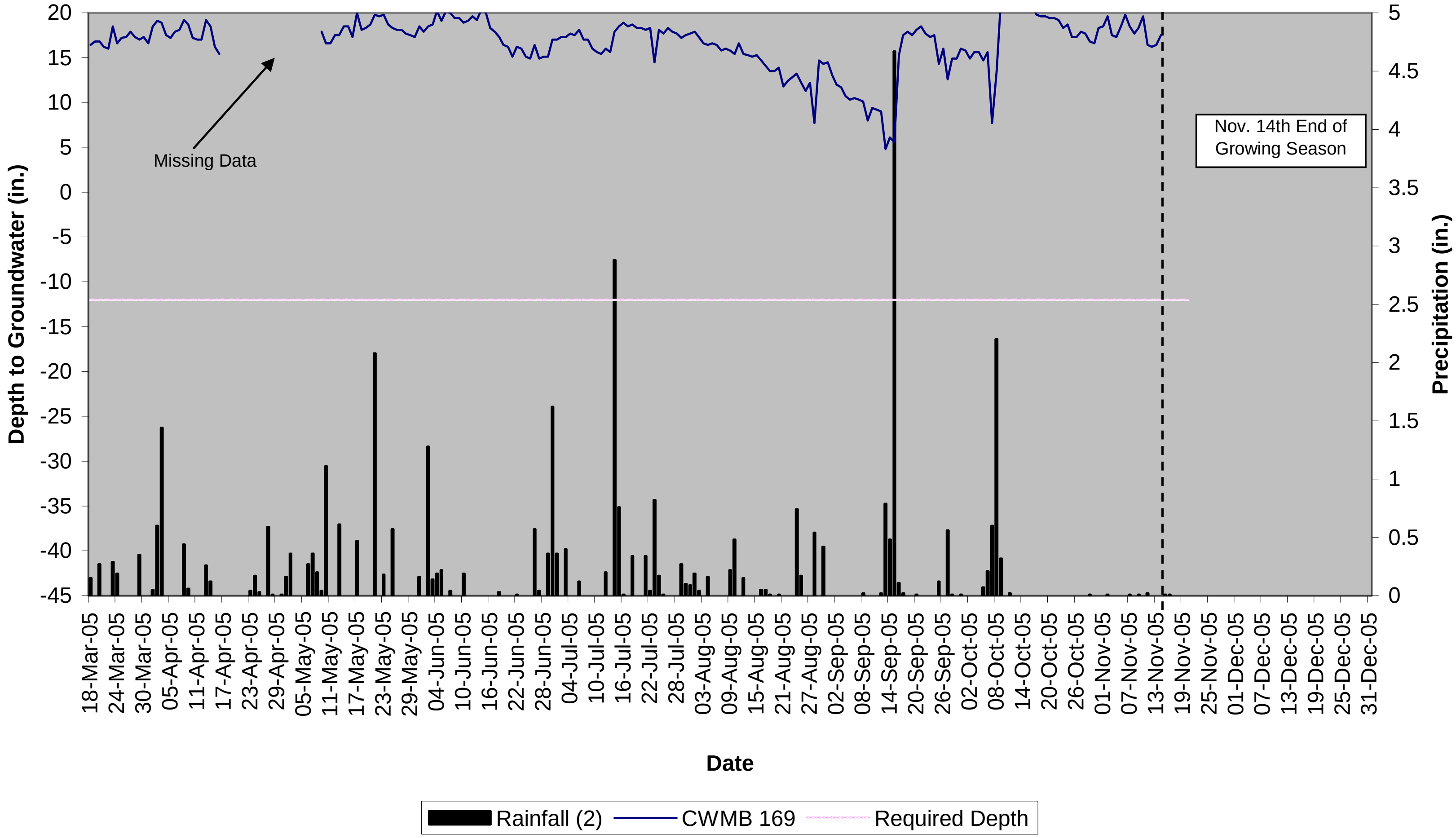
Croatan WMB
164 & 165
Croatan

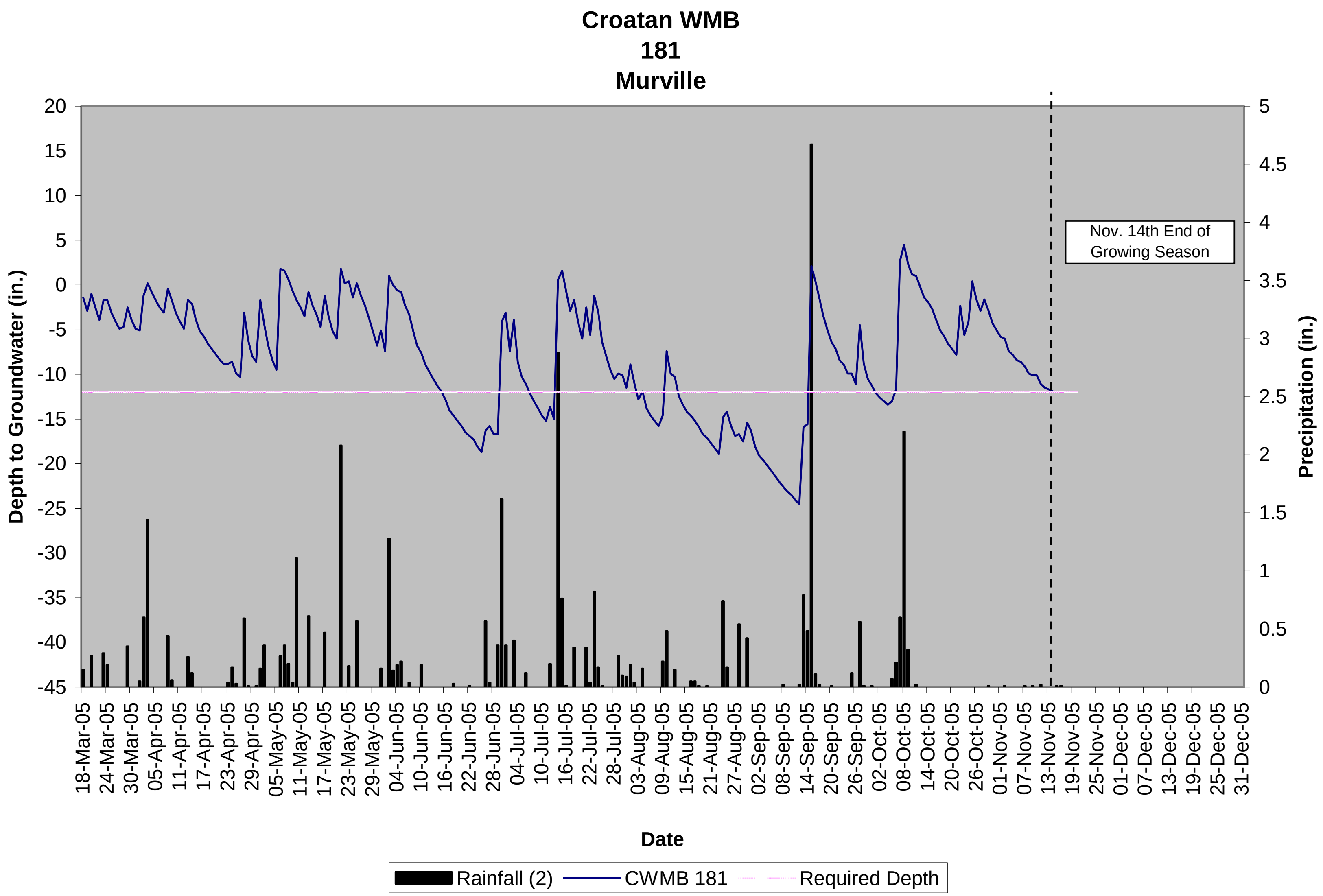




Croatan WMB
168
Croatan
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 168
Required Depth

Croatan WMB
169
Pantego





Croatan WMB
181
Murville
Depth to Groundwater (in.)
Precipitation (in.)
Nov. 14th End of Growing Season
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
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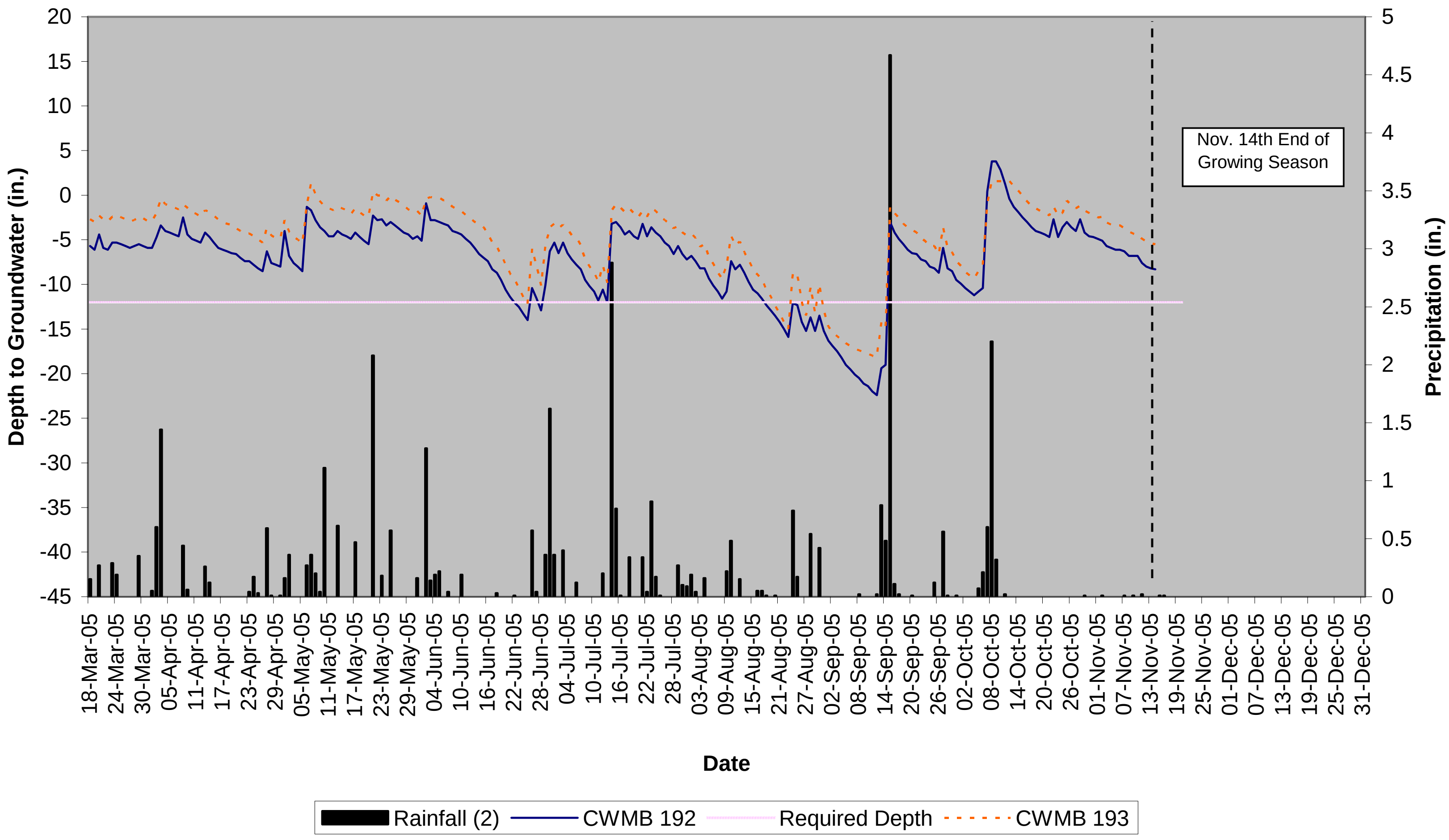
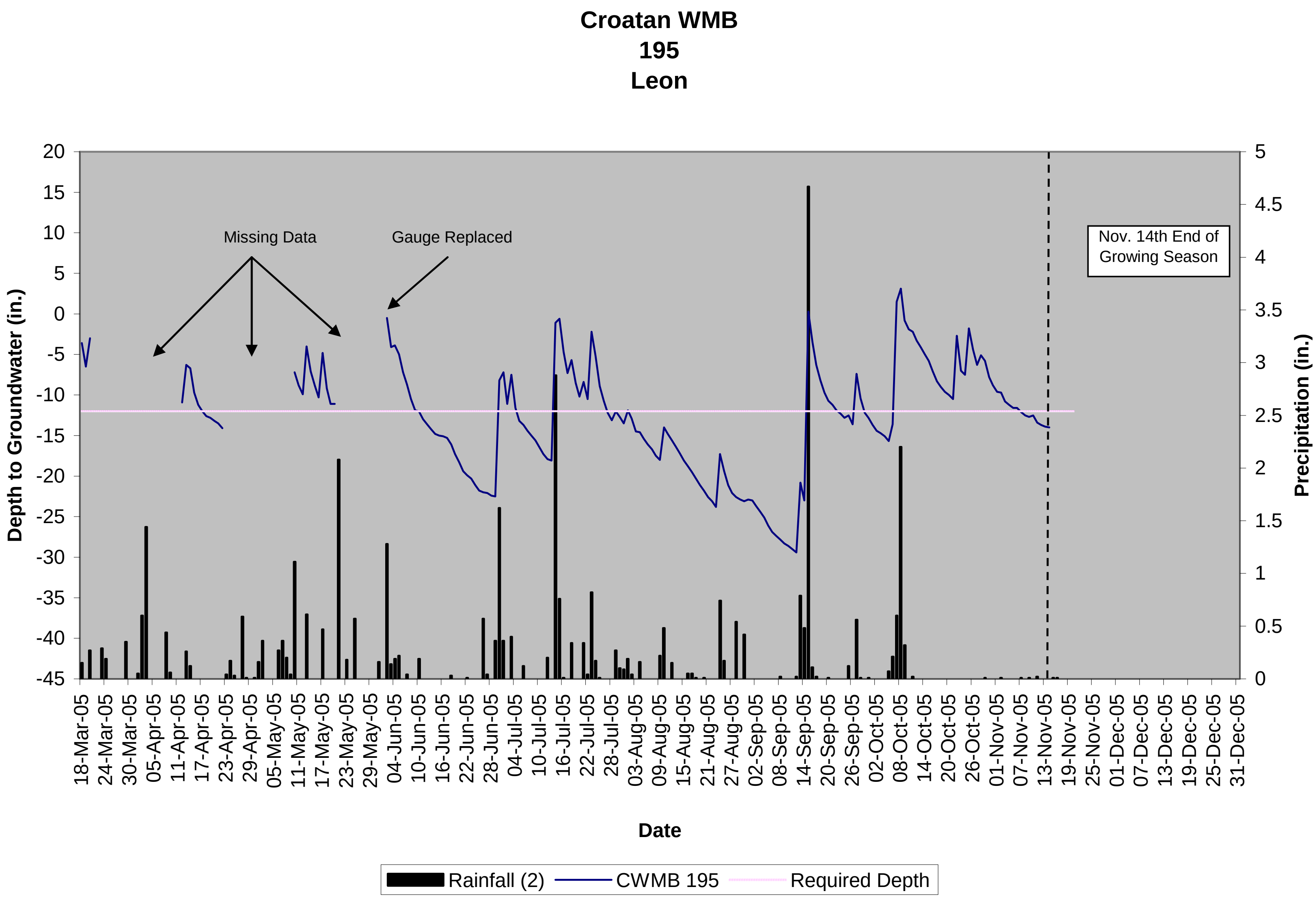
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 181
Required Depth

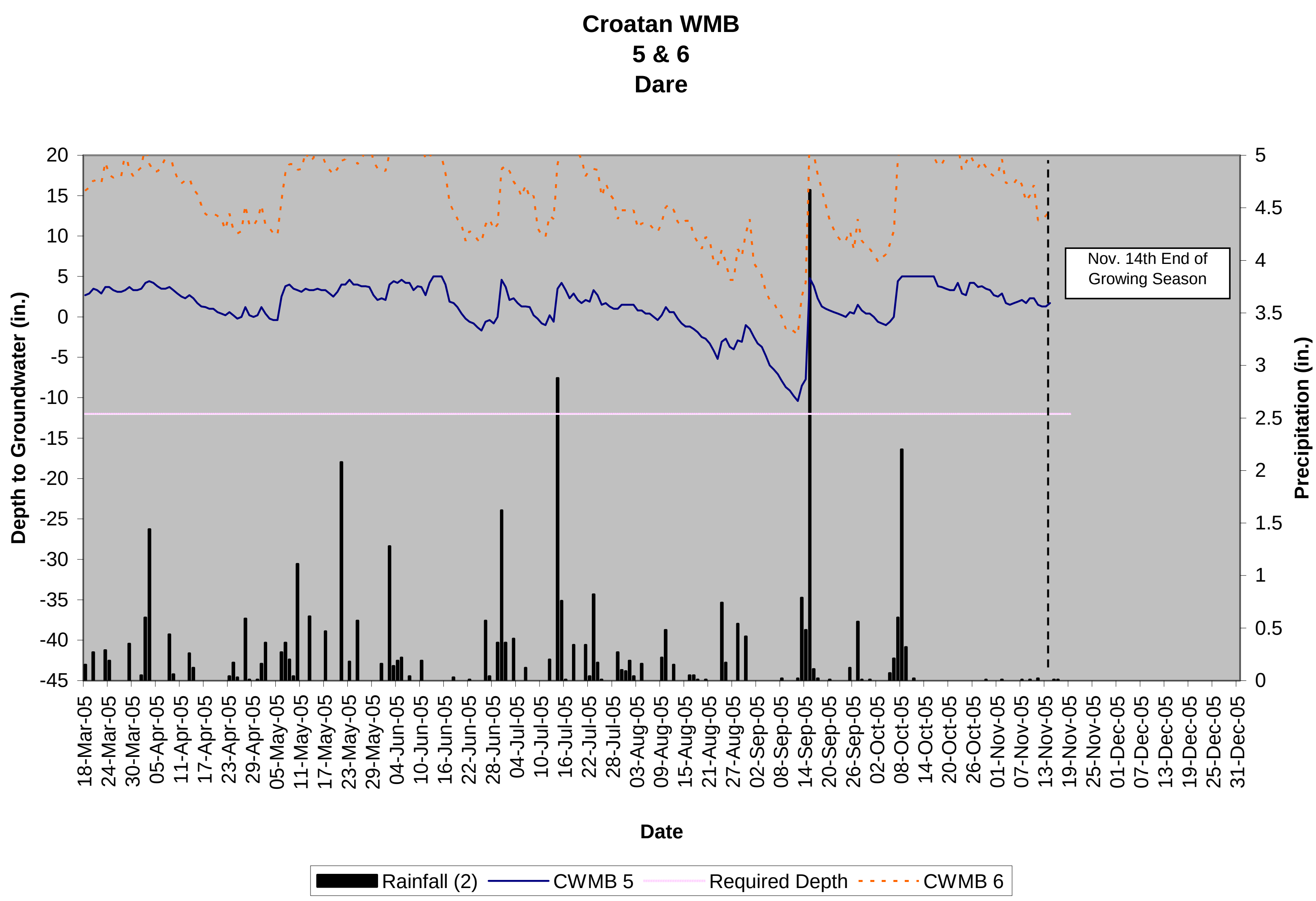
Croatan WMB
192 & 193
Murville





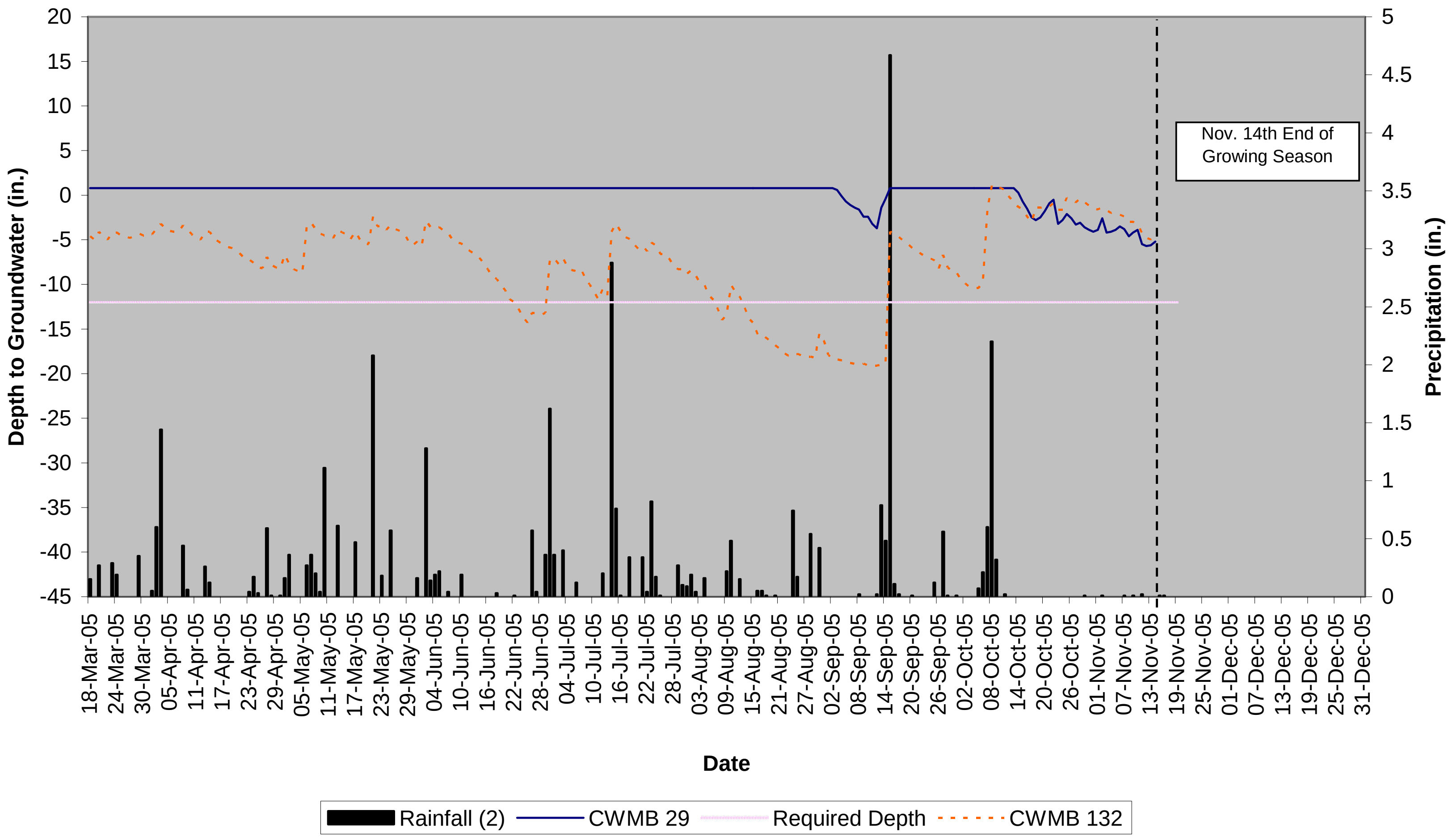
Croatan WMB
195
Leon
Missing Data
Gauge Replaced
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 195
Required Depth

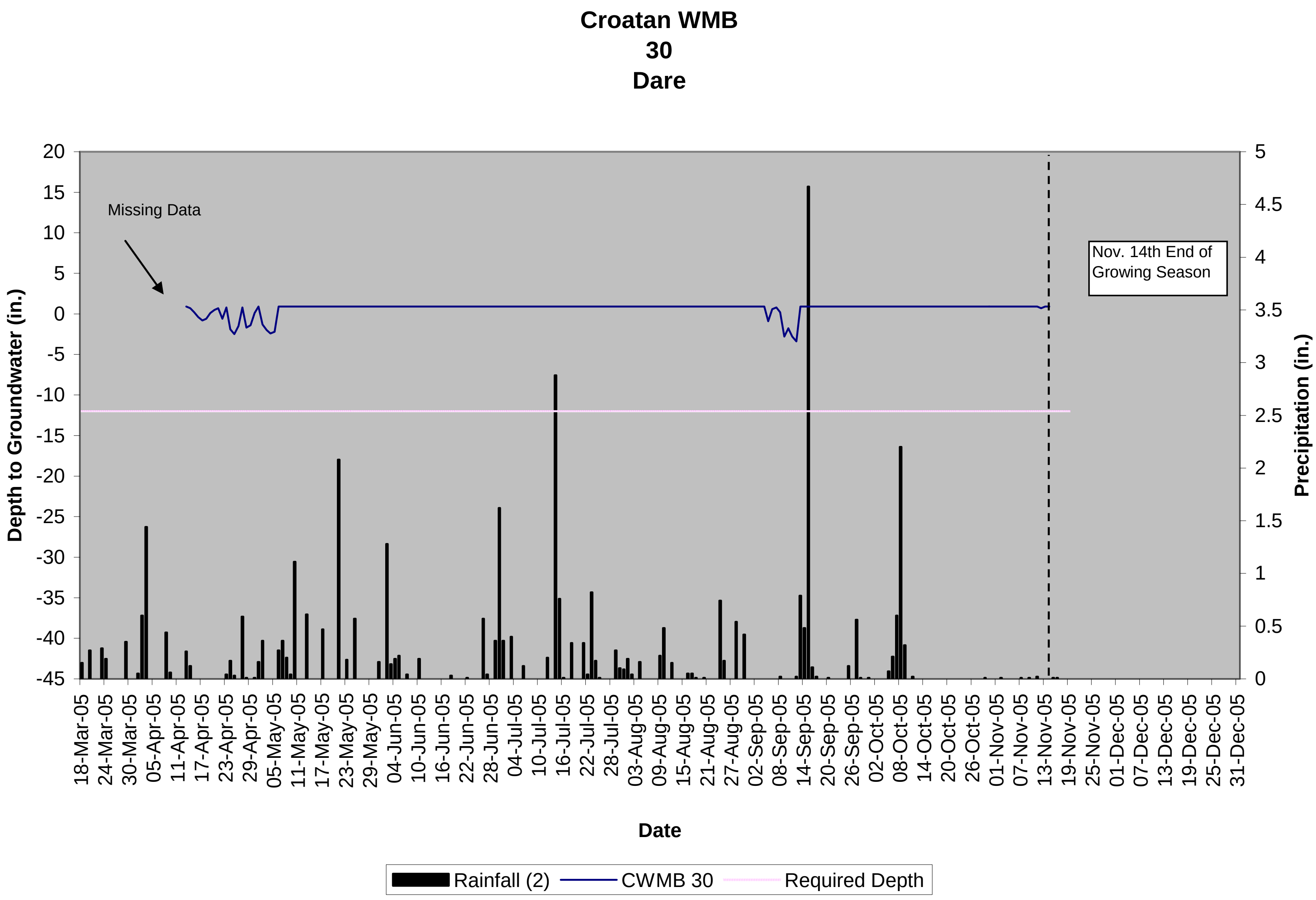
MU 17



Croatan WMB
5 & 6
Dare
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 5
Required Depth
CWMB 6

Croatan WMB
29 & 132
Croatan





Croatan WMB
30
Dare
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
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4.5
4
3.5
3
2.5
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1.5
1
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18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
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29-May-05
04-Jun-05
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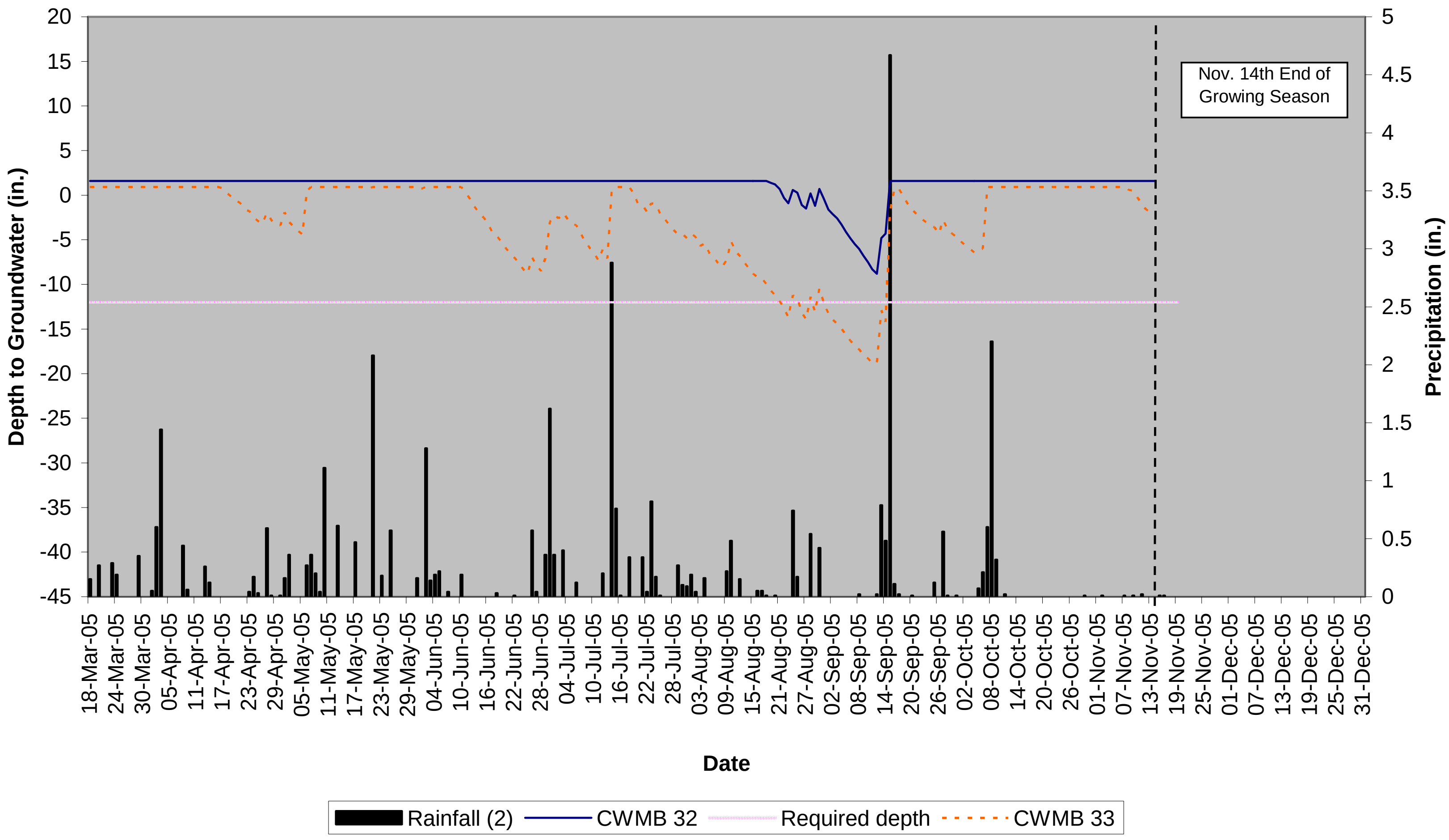
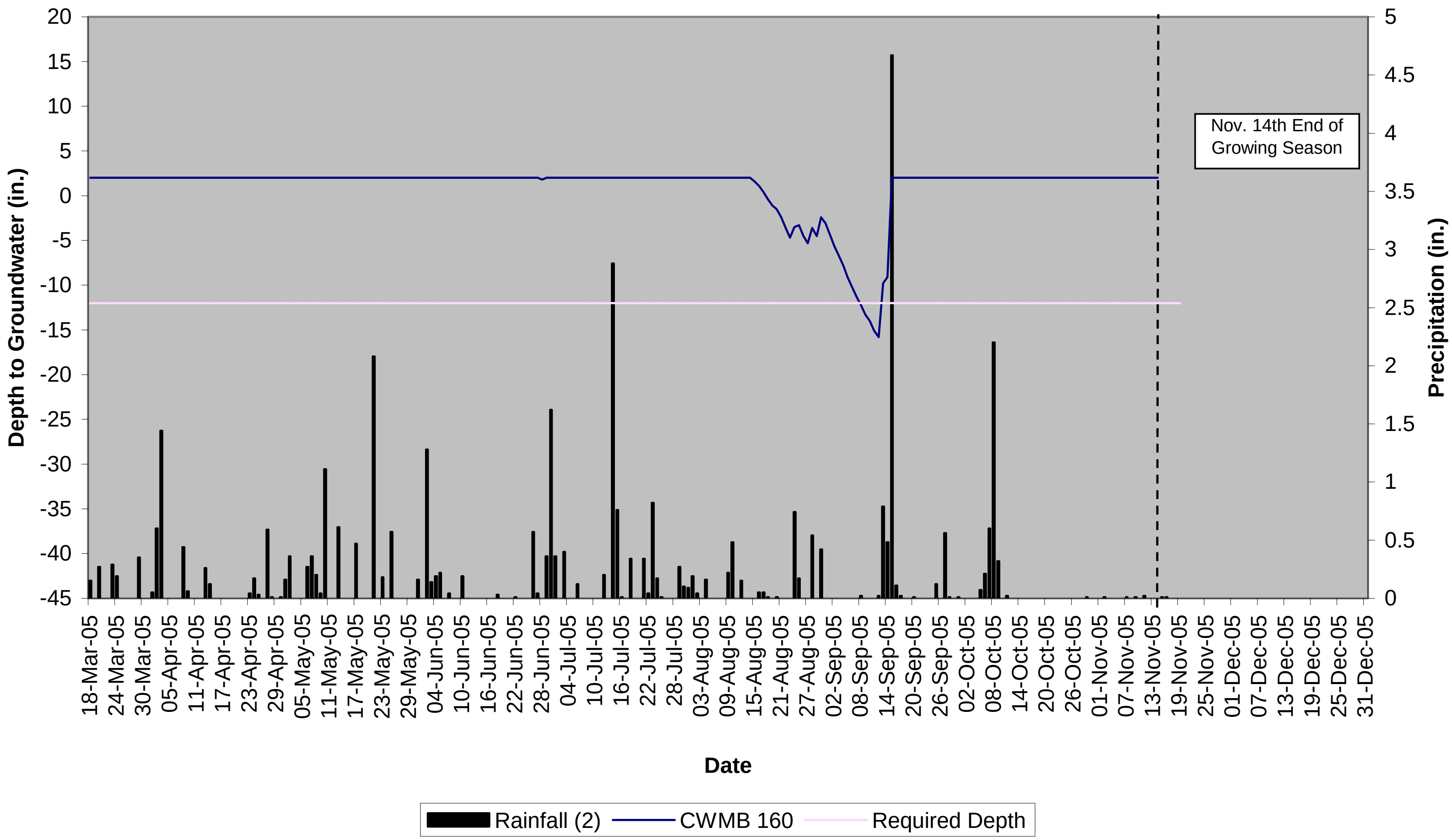
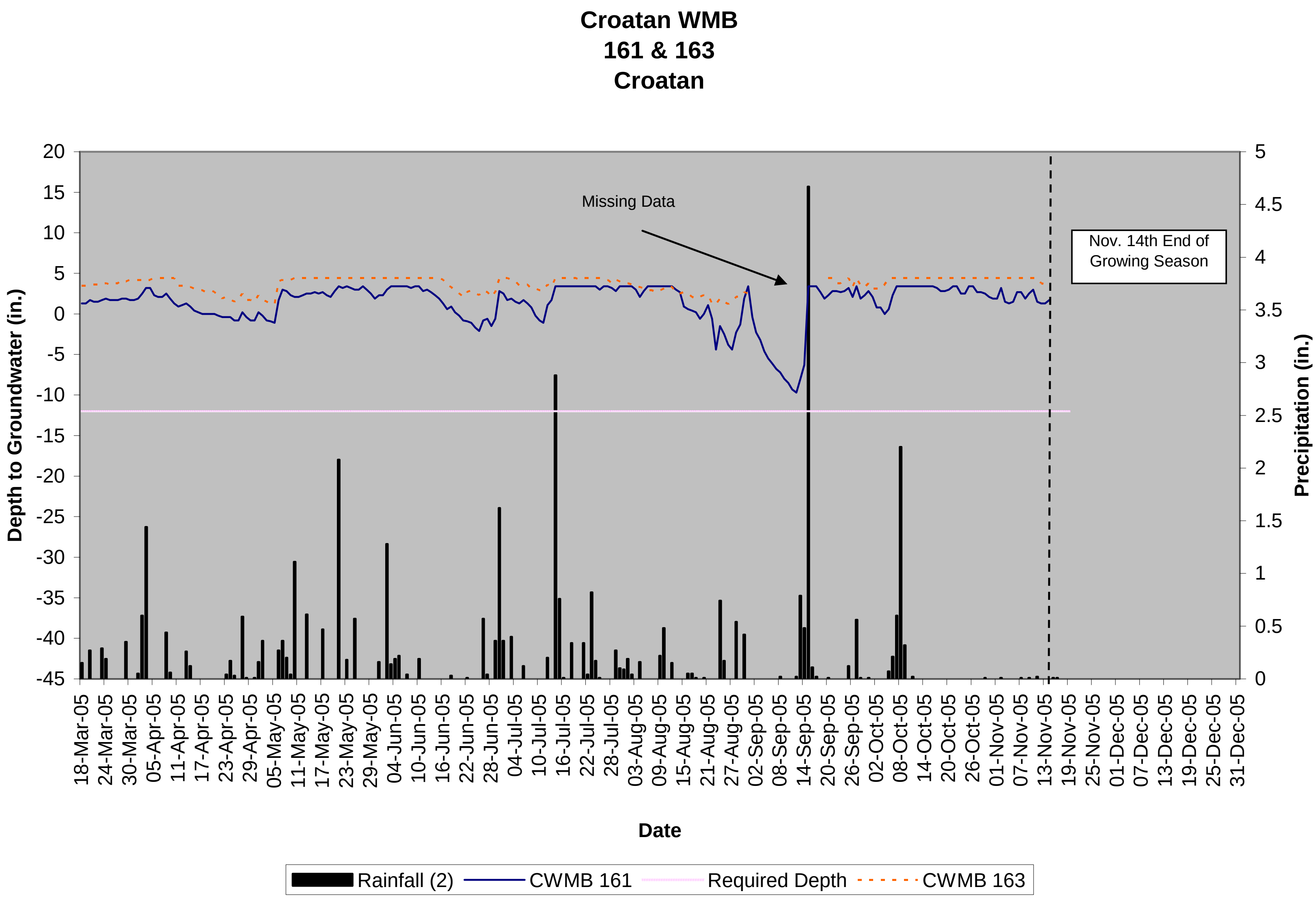
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 30
Required Depth

Croatan WMB
32 & 33
Bayboro



Croatan WMB
160
Bayboro

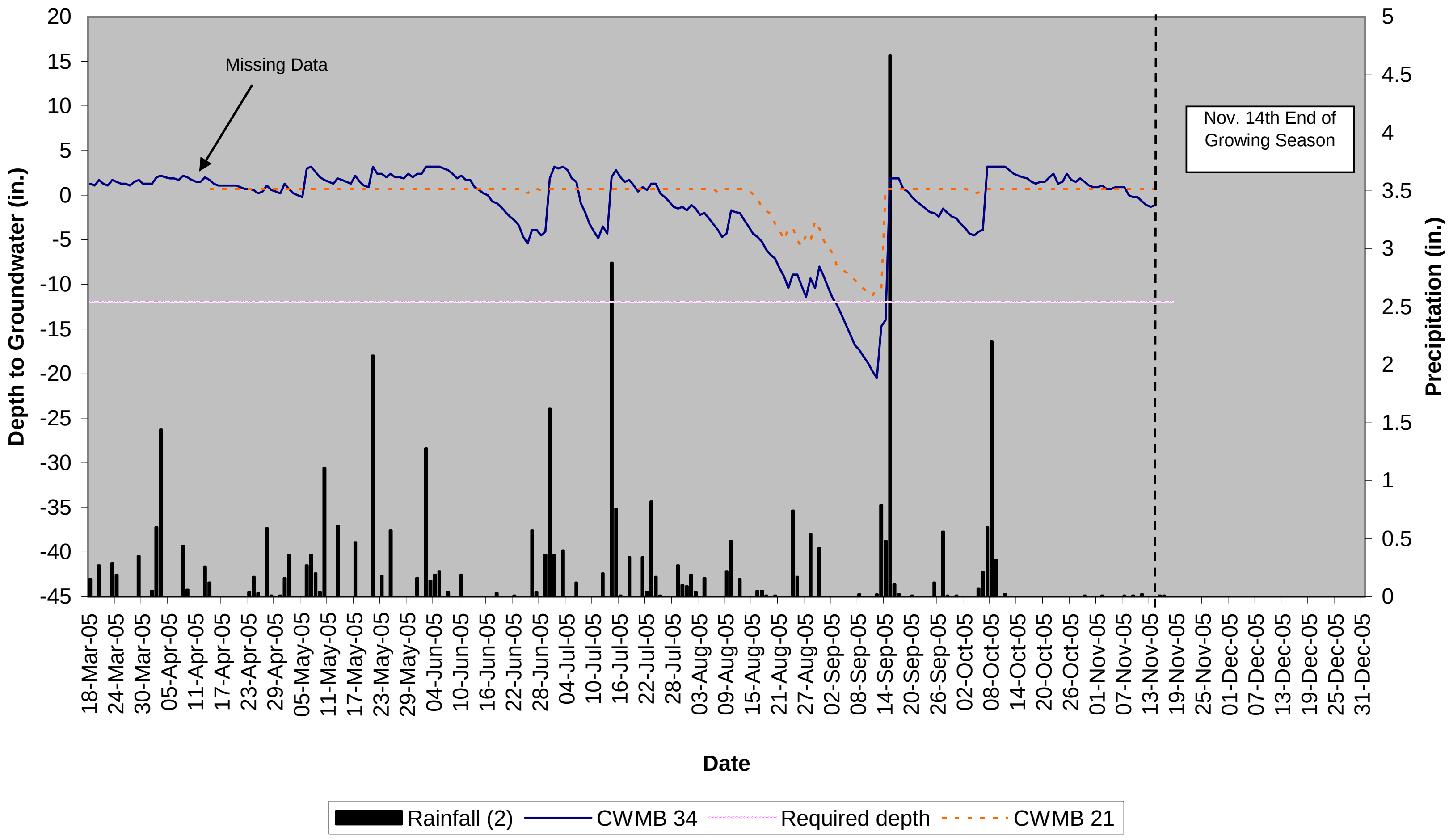




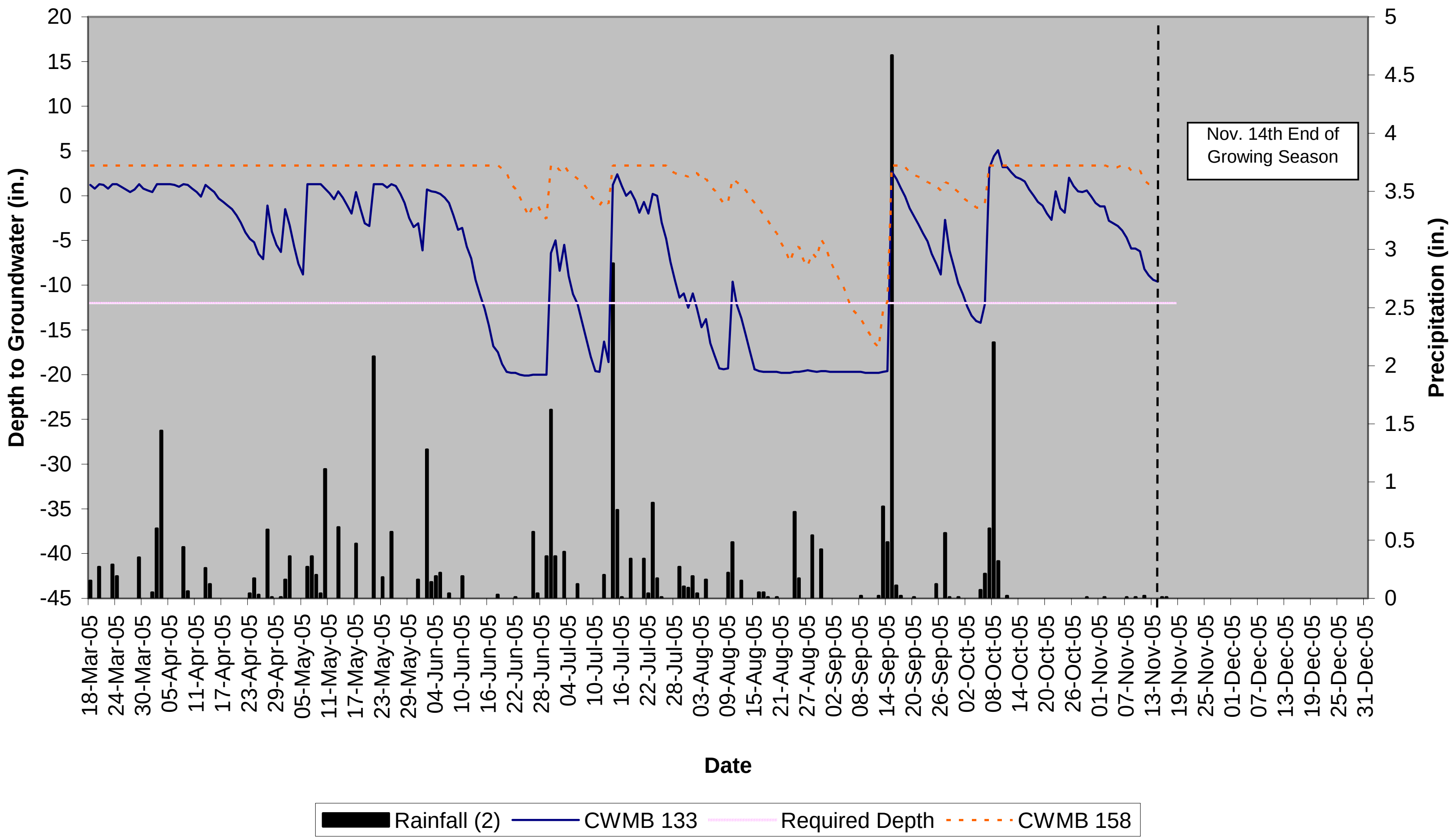
Croatan WMB
161 & 163
Croatan
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 161
Required Depth
CWMB 163

MU 18

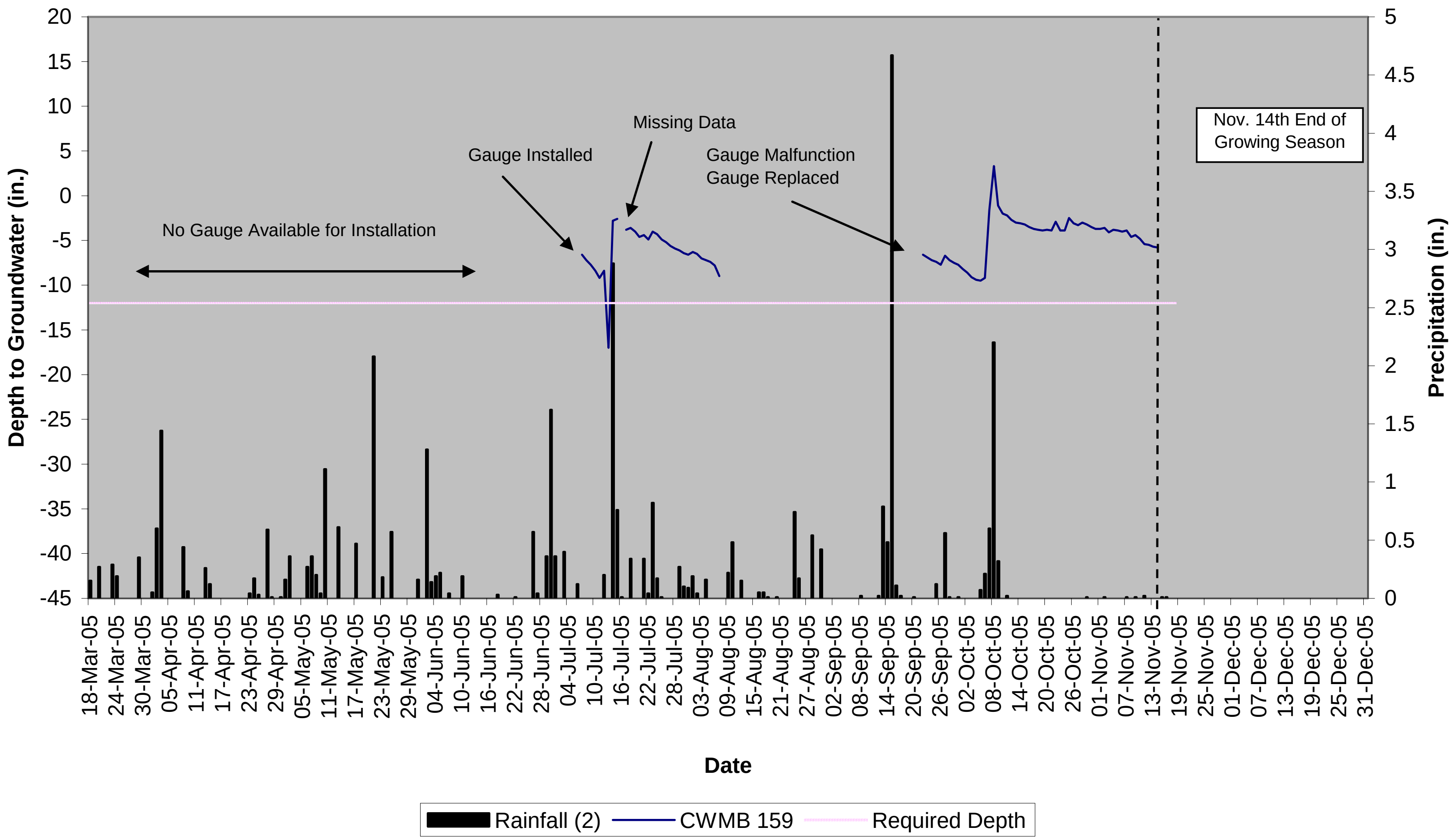
Croatan WMB
21 & 34
Pantego

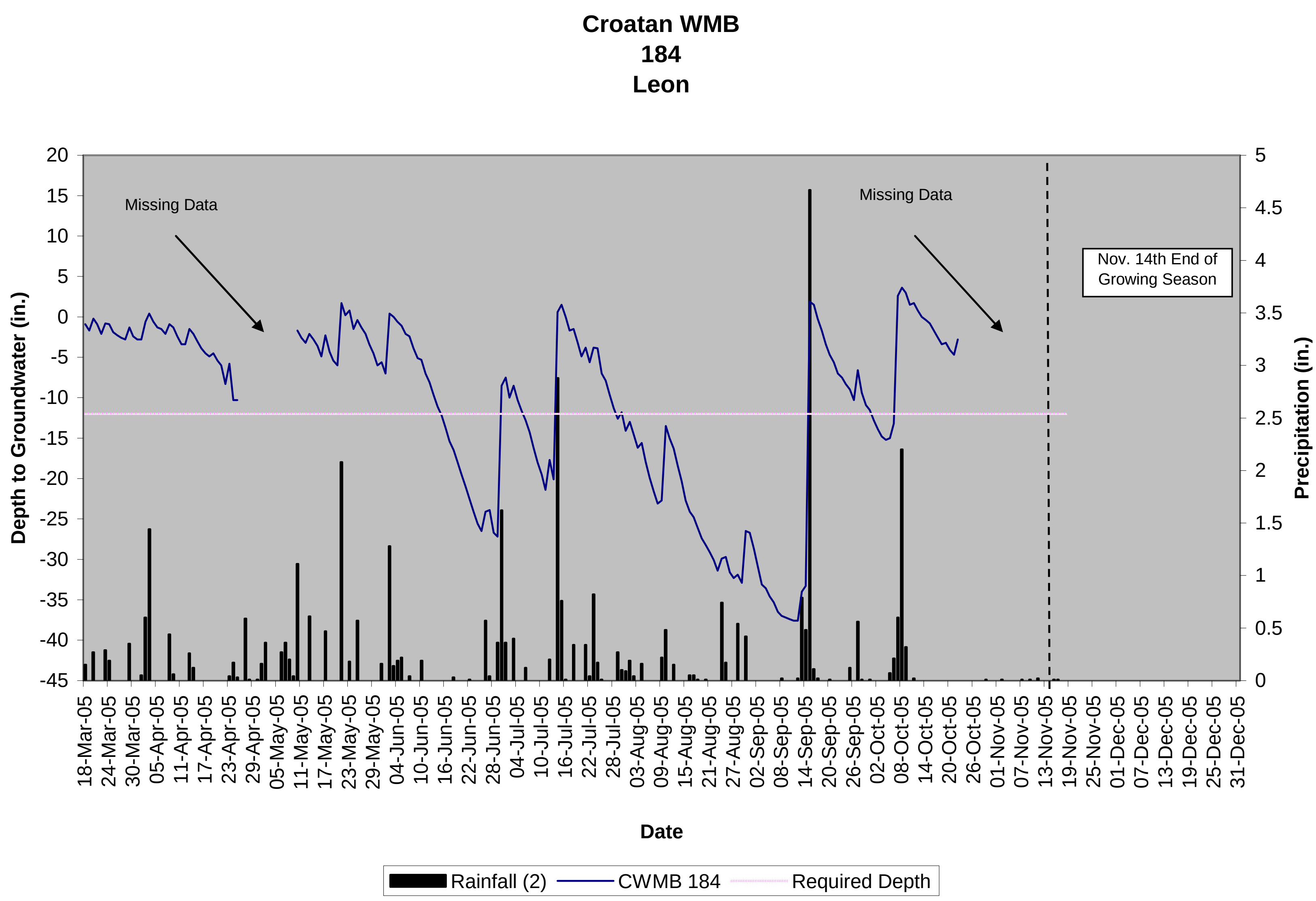


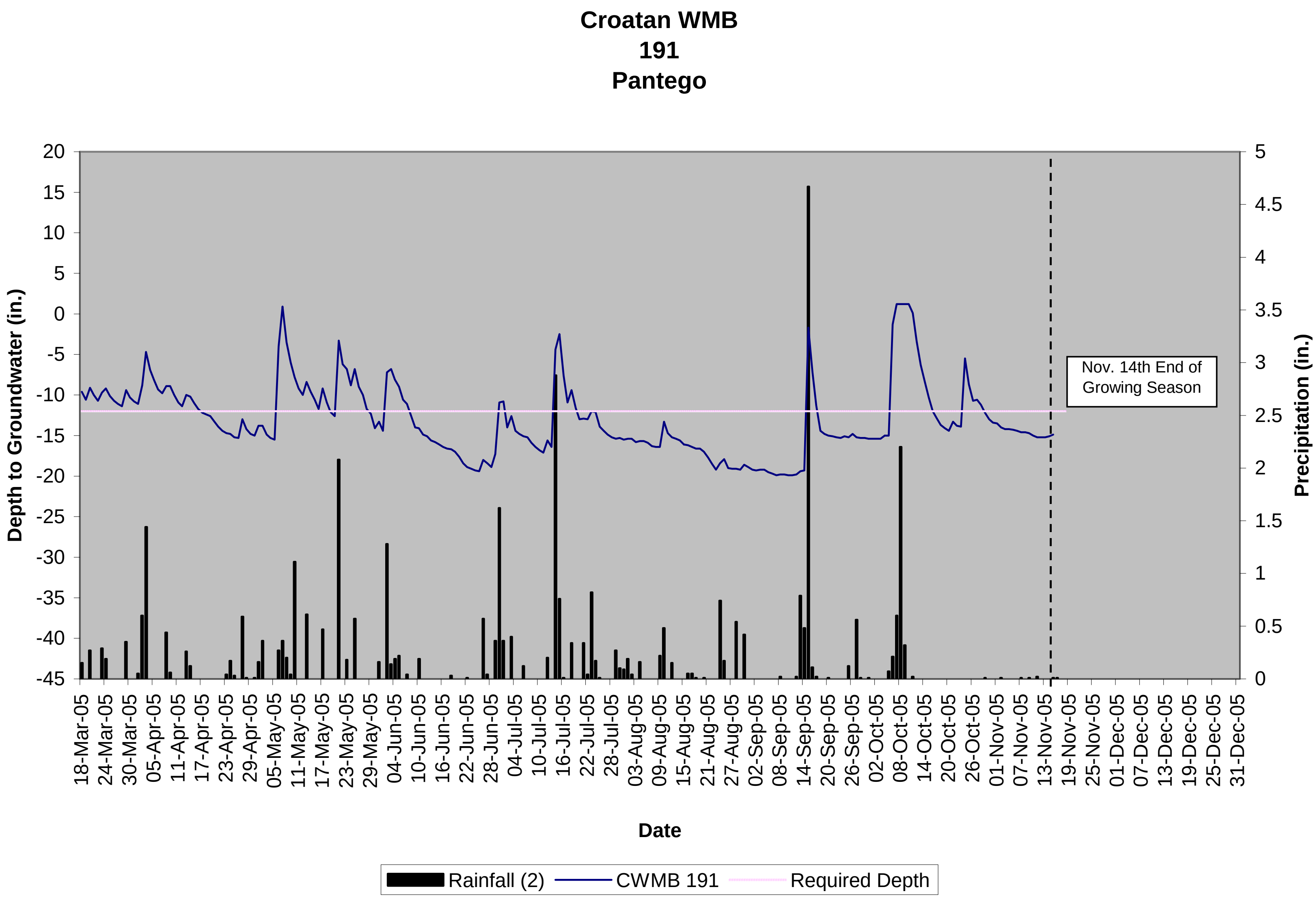
Croatan WMB
133 & 158
Croatan



Croatan WMB
159
Croatan




Croatan WMB
184
Leon
Missing Data
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 184
Required Depth

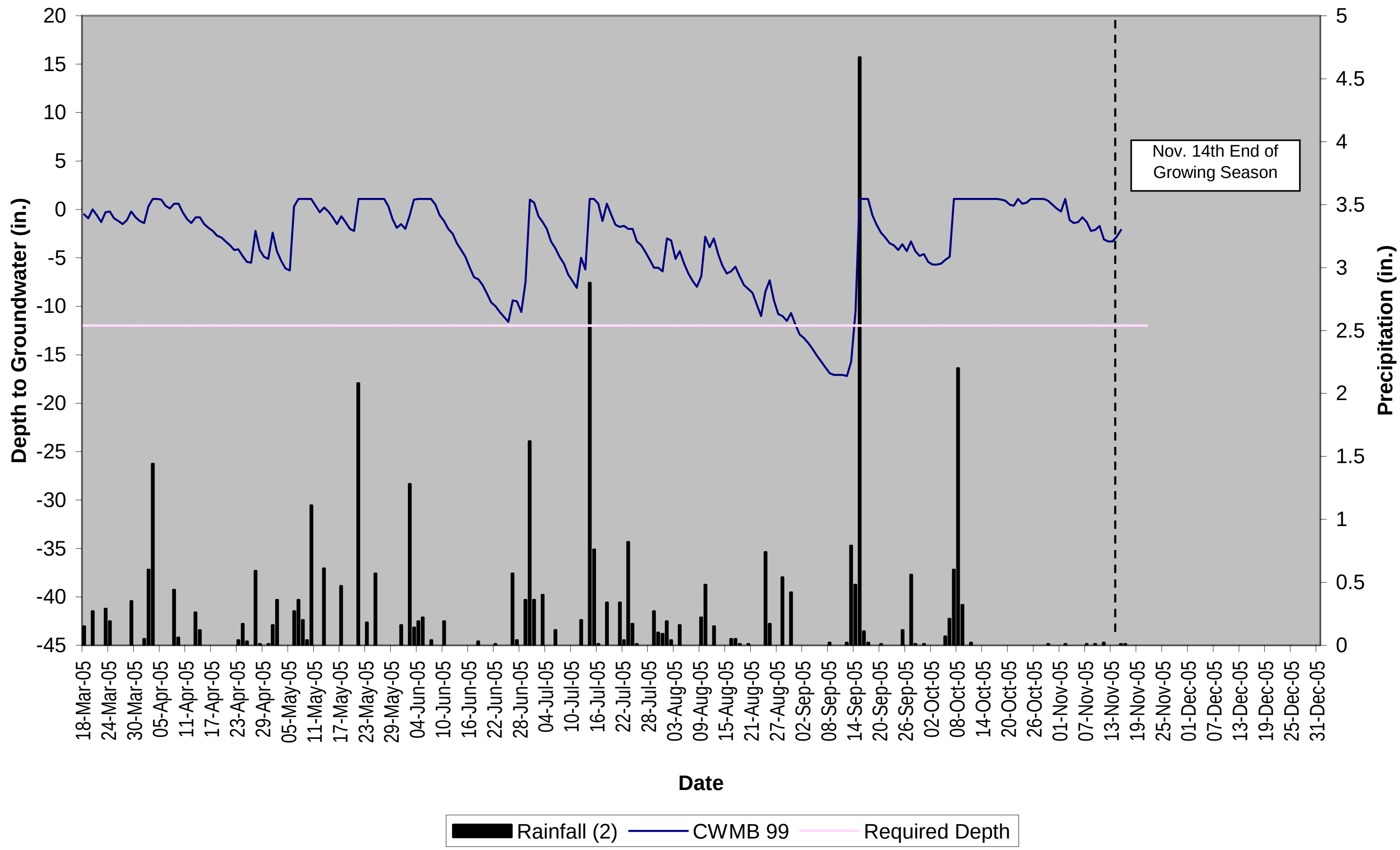


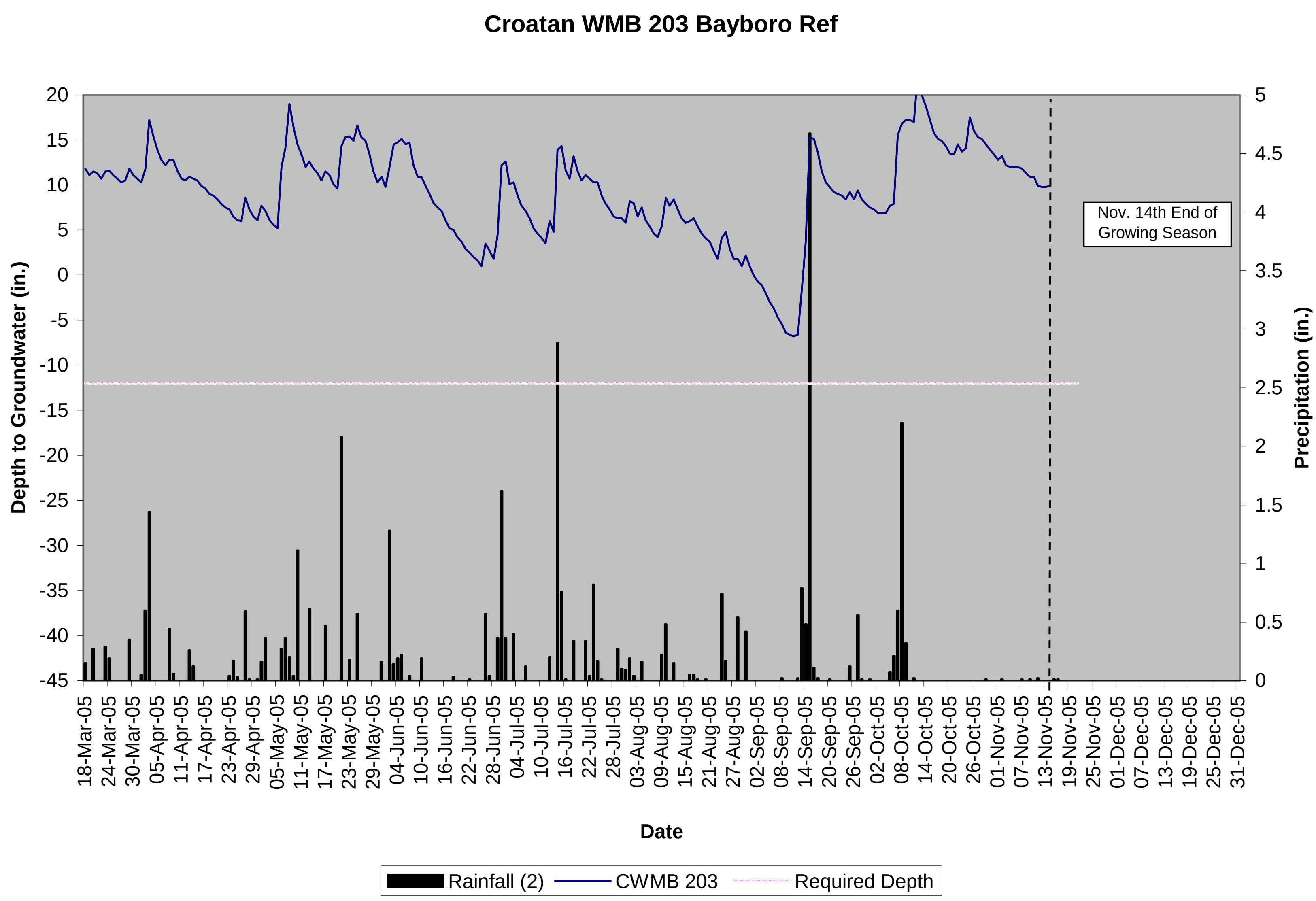
Croatan WMB
191
Pantego
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 191
Required Depth

REFERENCE GAUGE HYDROGRAPHS

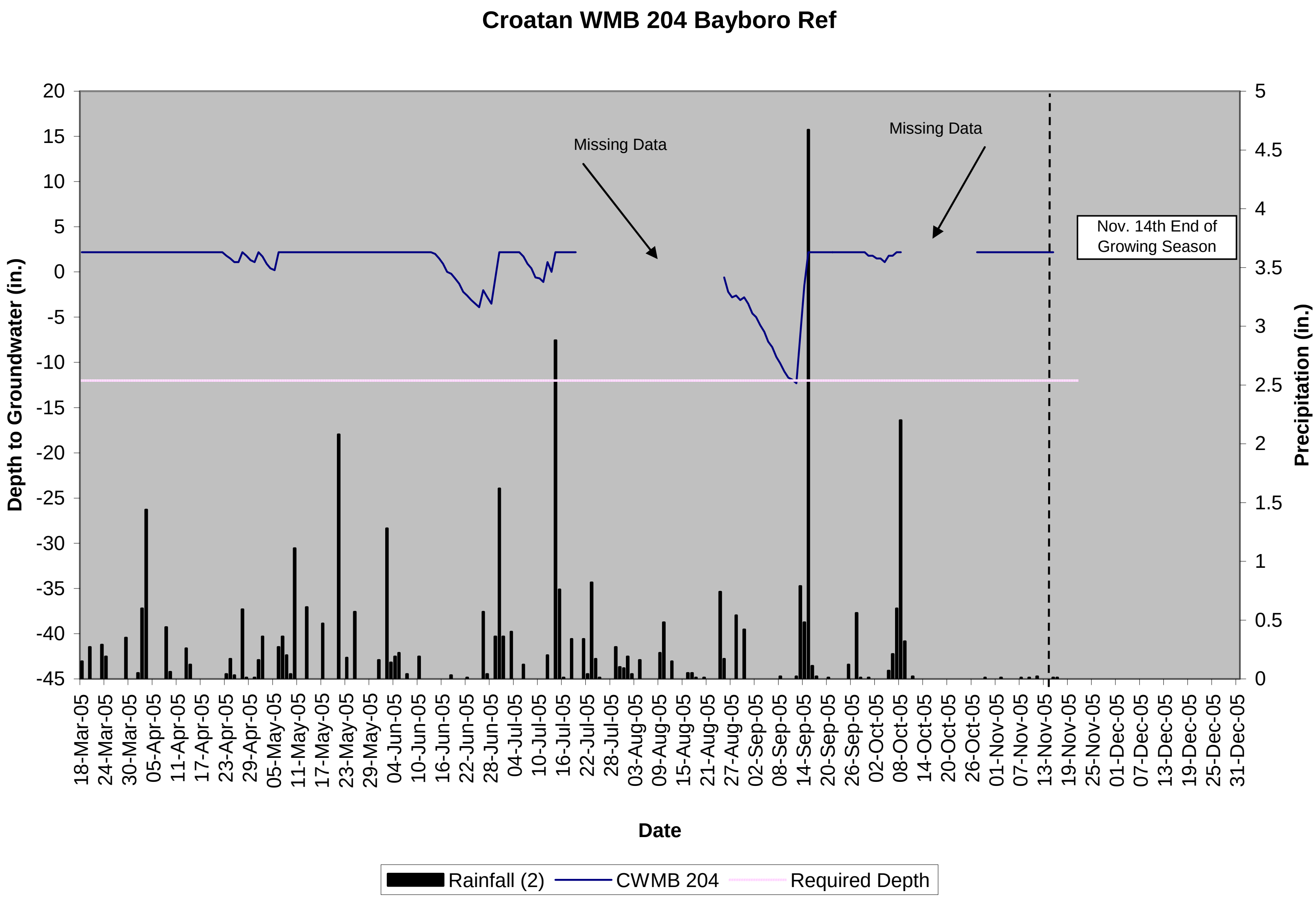
Bayboro

Croatan WMB 99 Bayboro Ref



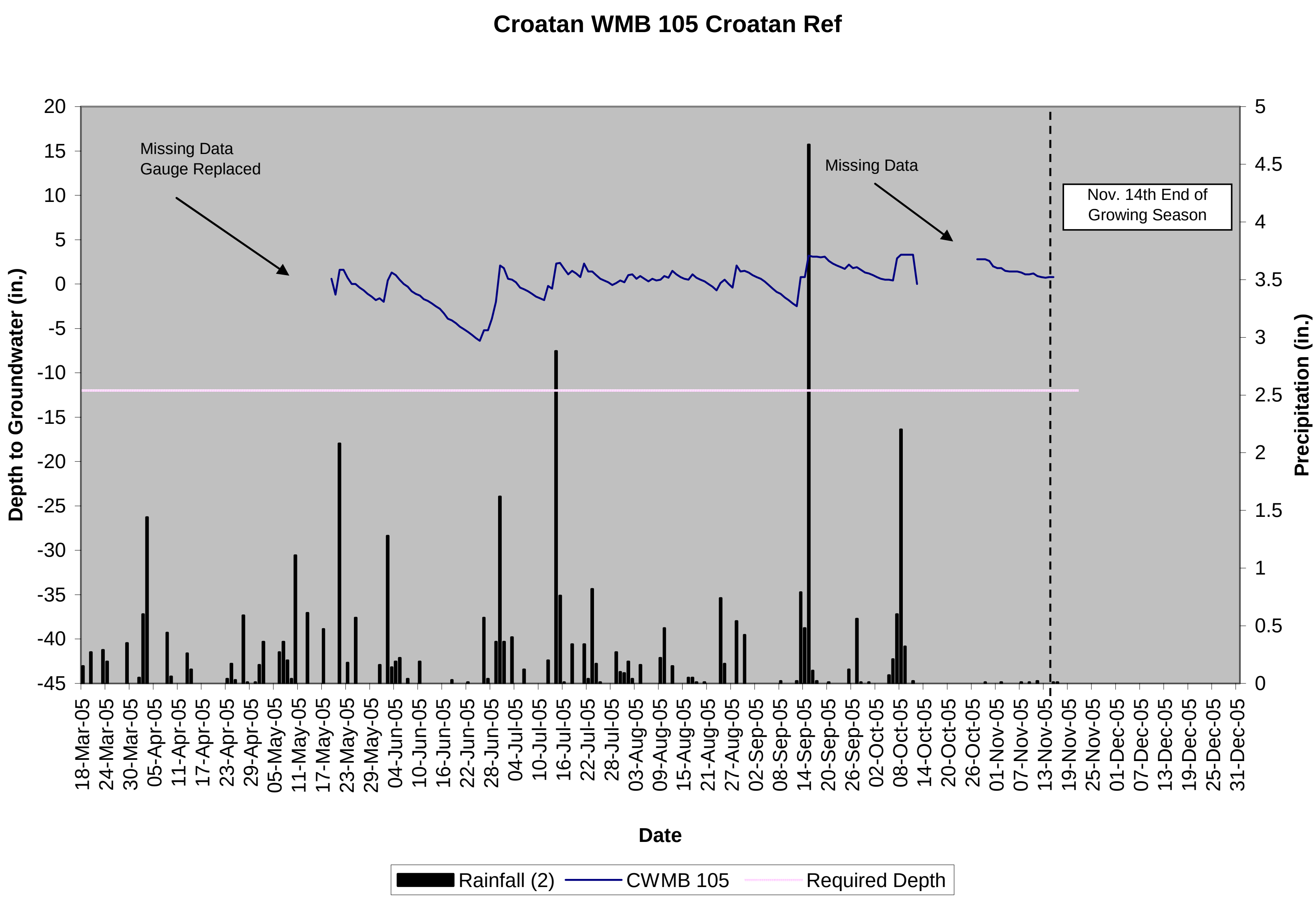


Croatan WMB 203 Bayboro Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 203
Required Depth

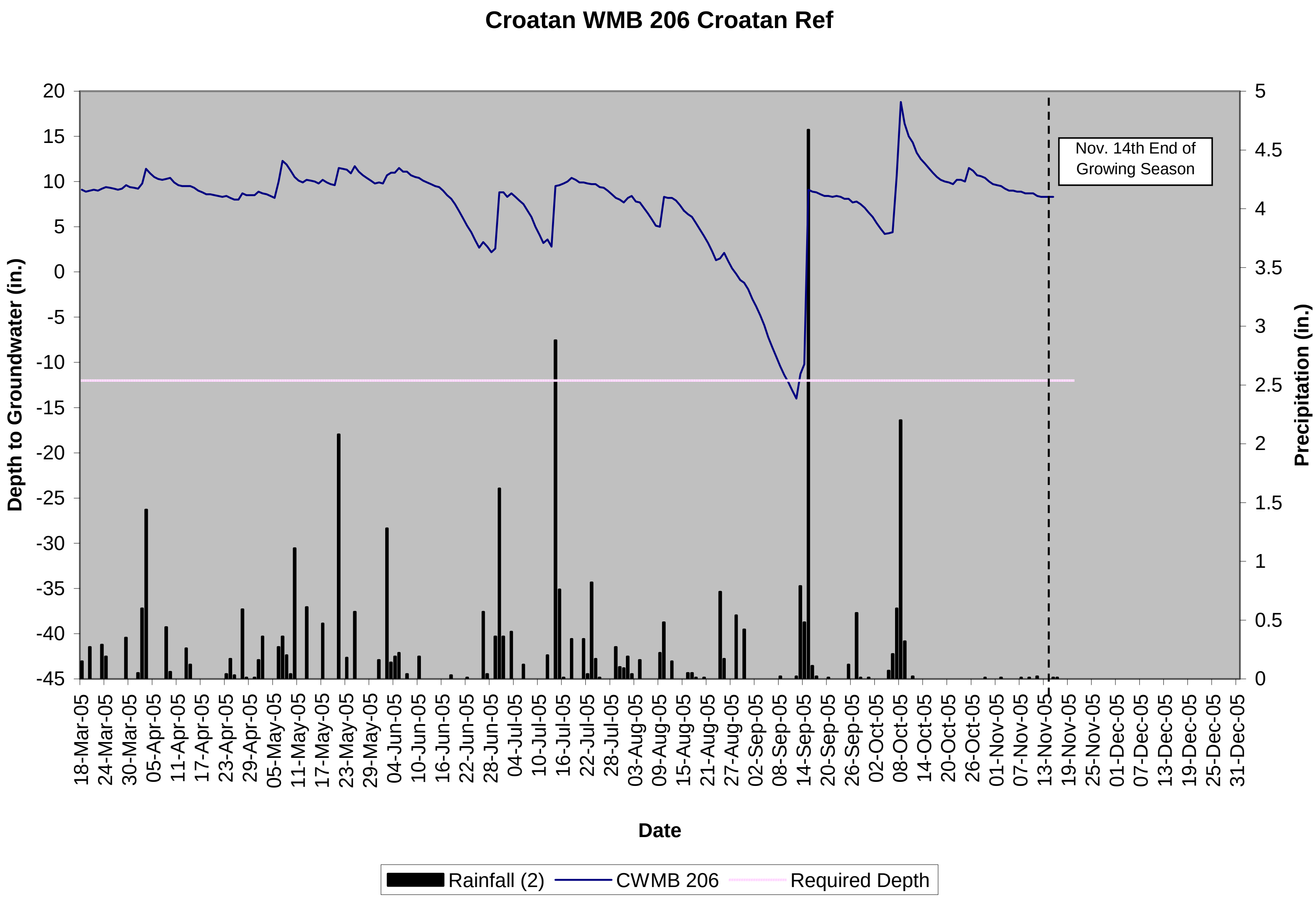


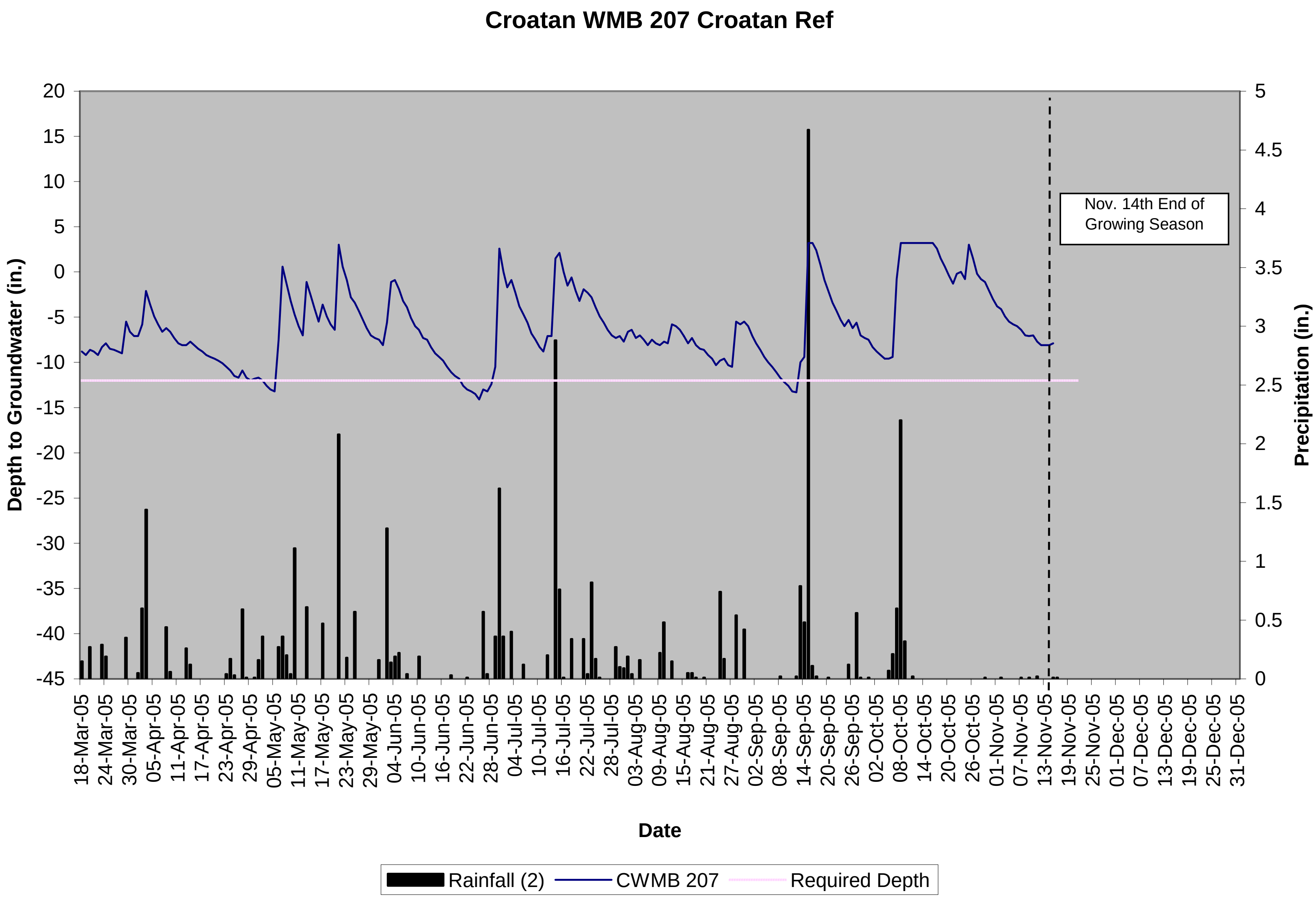
Croatan WMB 204 Bayboro Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Missing Data
Missing Data
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 204
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

Croatan

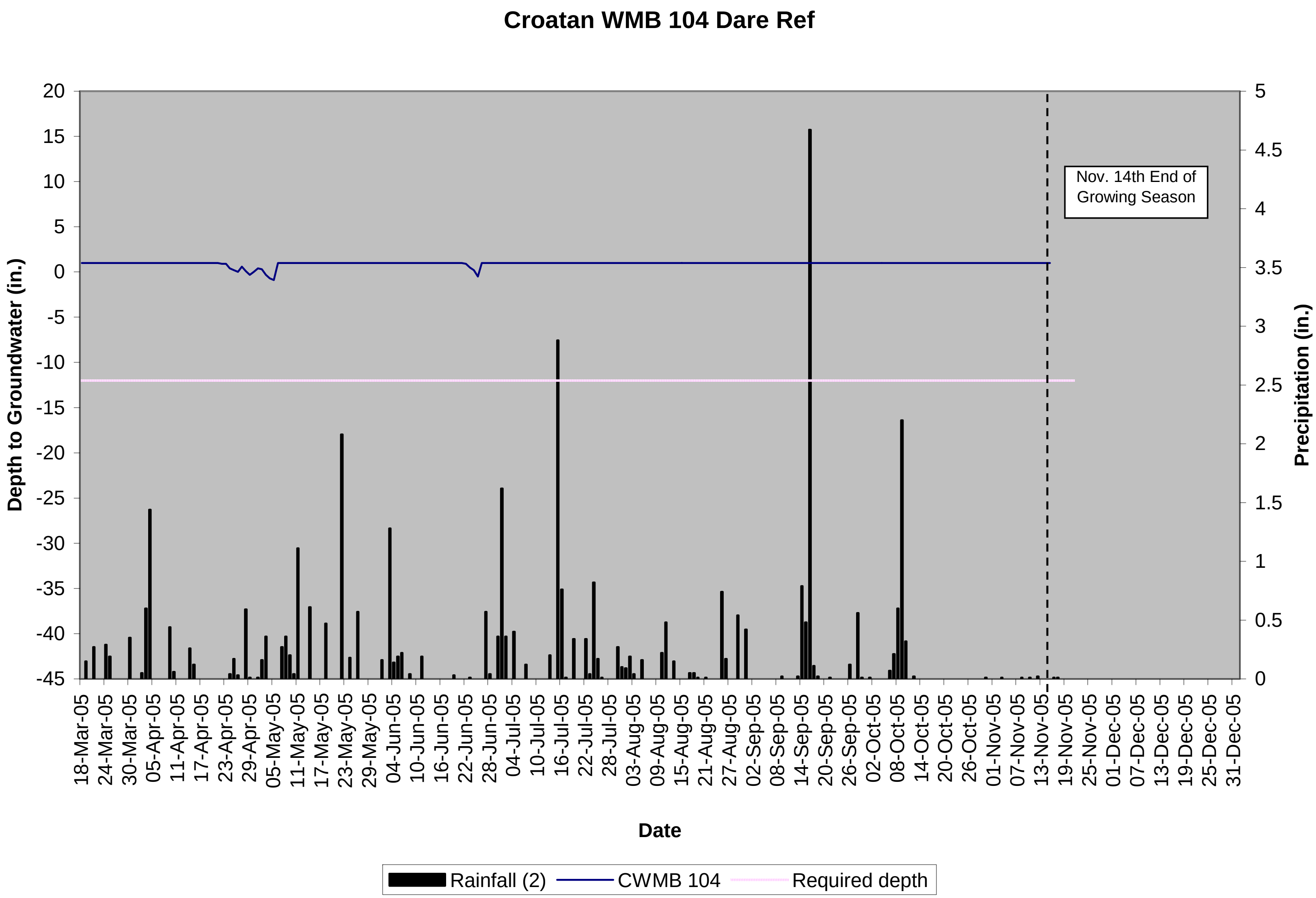


Croatan WMB 105 Croatan Ref
Missing Data
Gauge Replaced
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Date
Rainfall (2)
CWMB 105
Required Depth

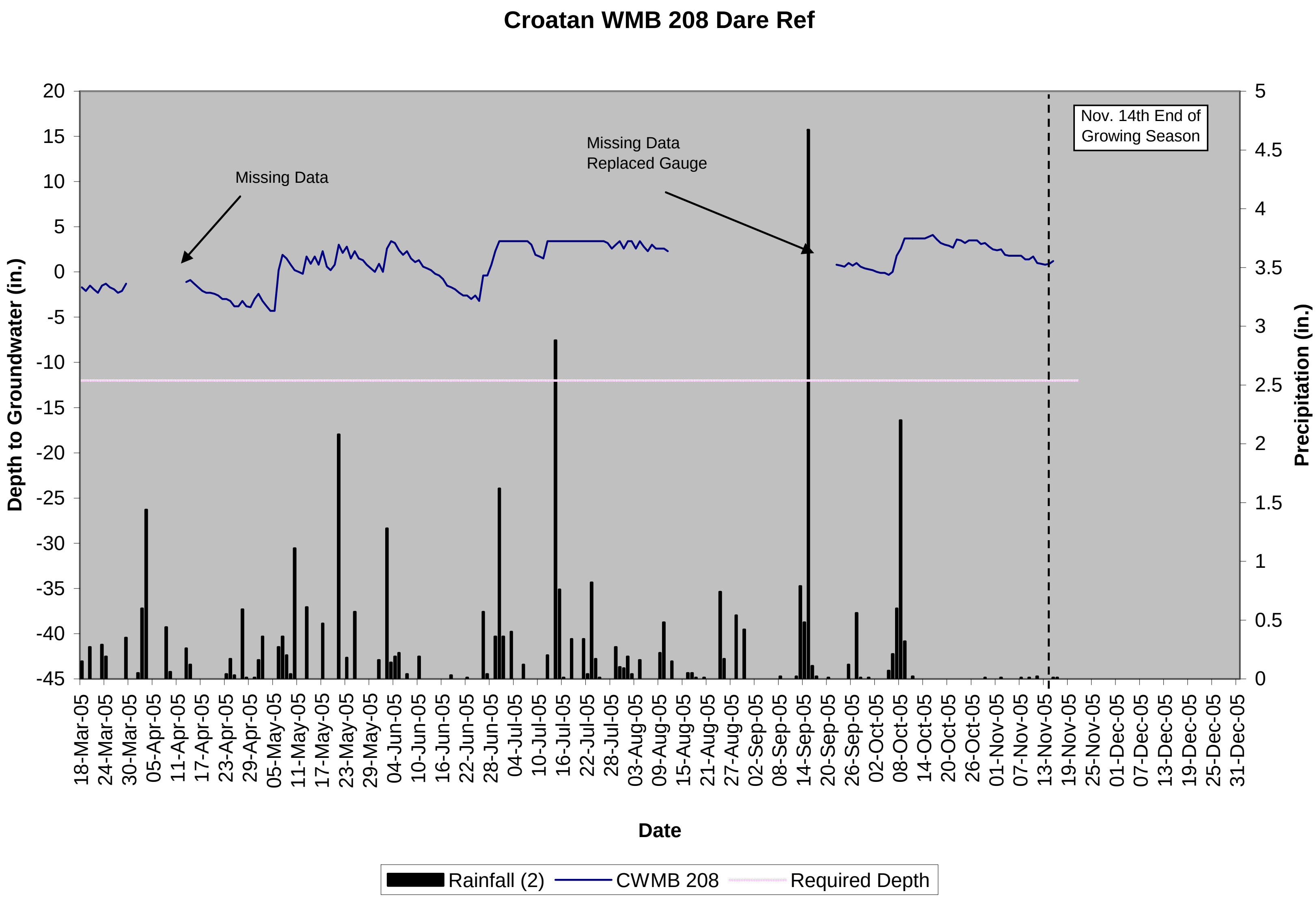

Croatan WMB 206 Croatan Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 206
Required Depth



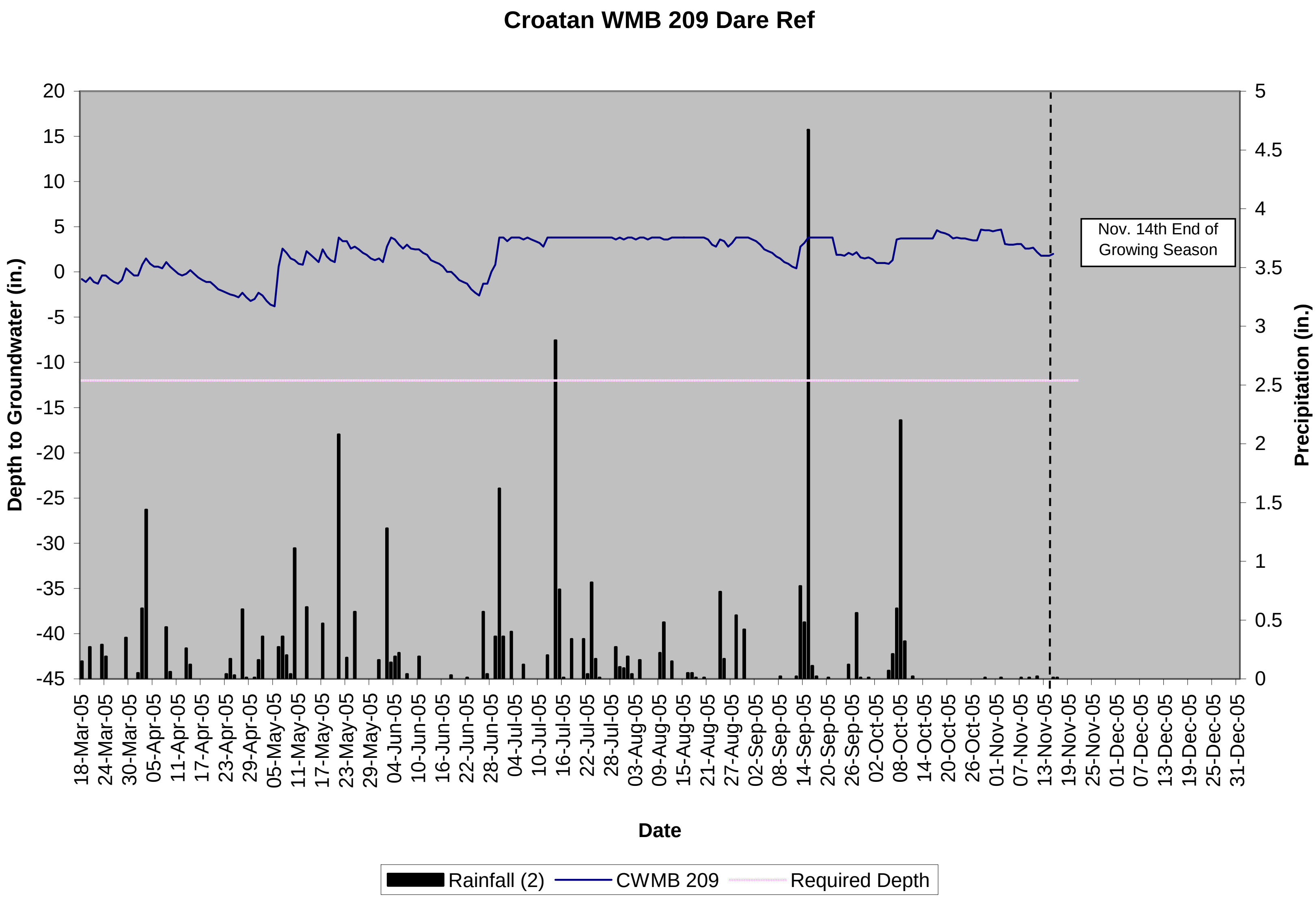
Croatan WMB 207 Croatan Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 207
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05



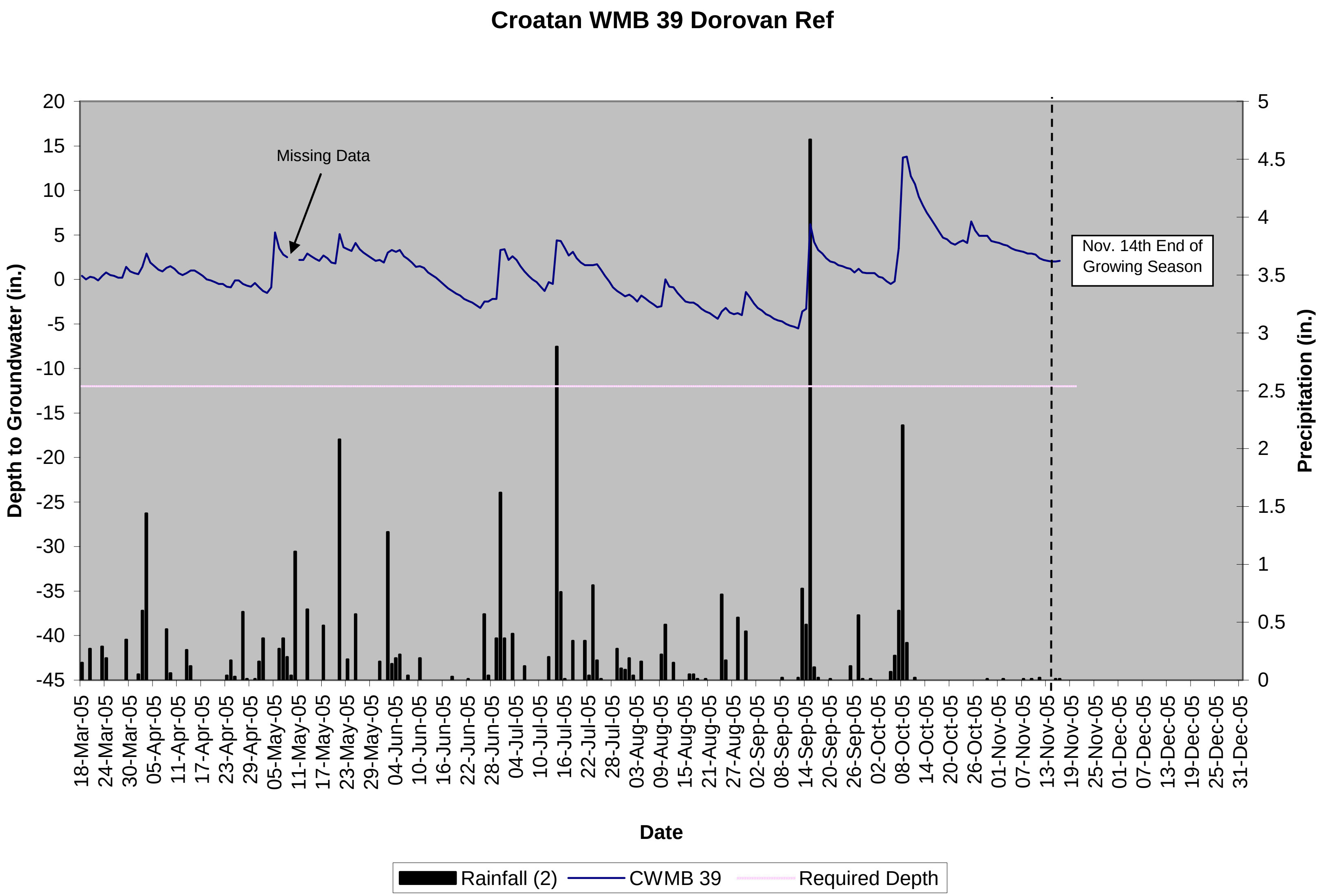
Croatan WMB 104 Dare Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 104
Required depth



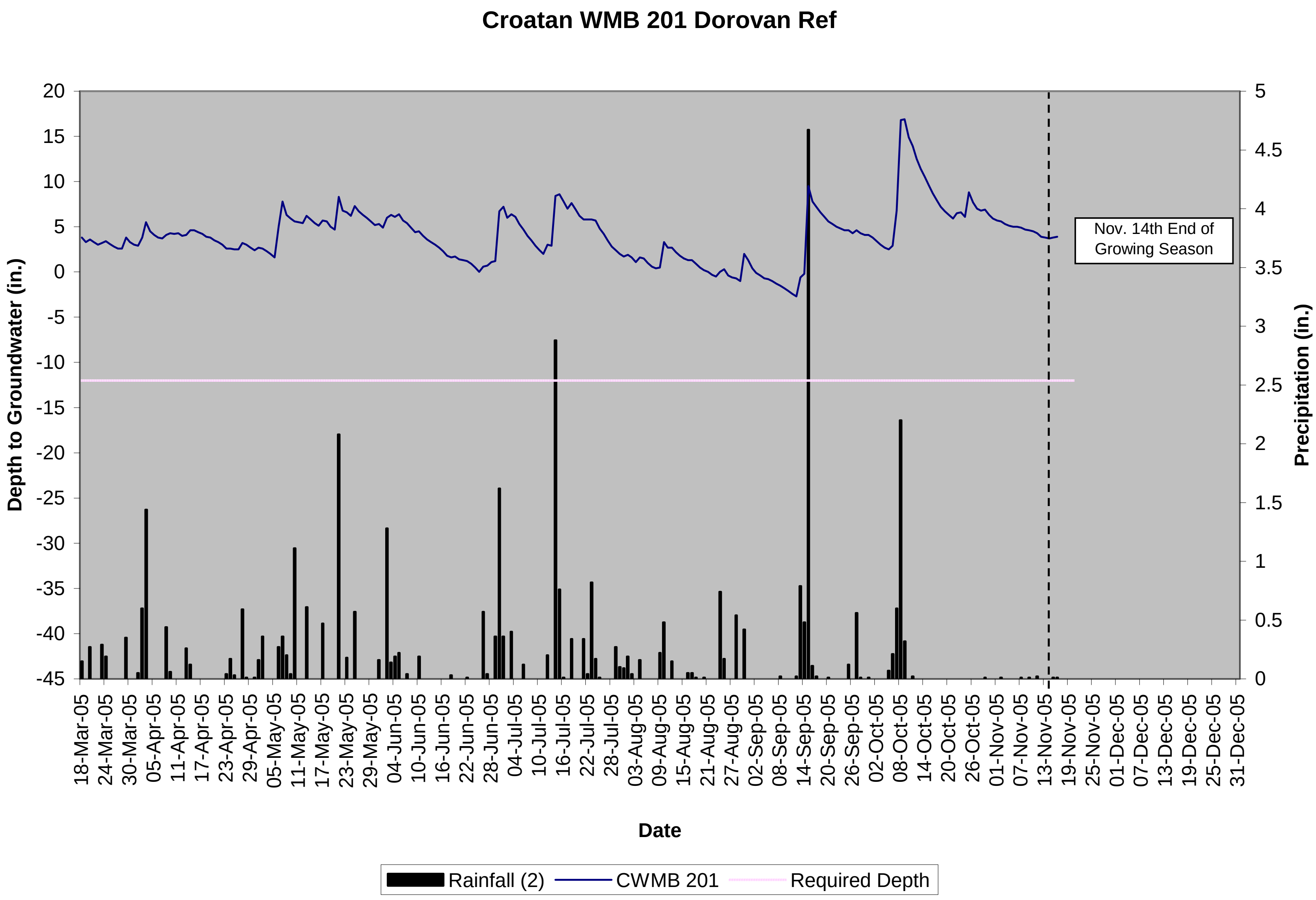
Croatan WMB 208 Dare Ref
Nov. 14th End of Growing Season
Missing Data Replaced Gauge
Missing Data
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 208
Required Depth


Croatan WMB 209 Dare Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 209
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

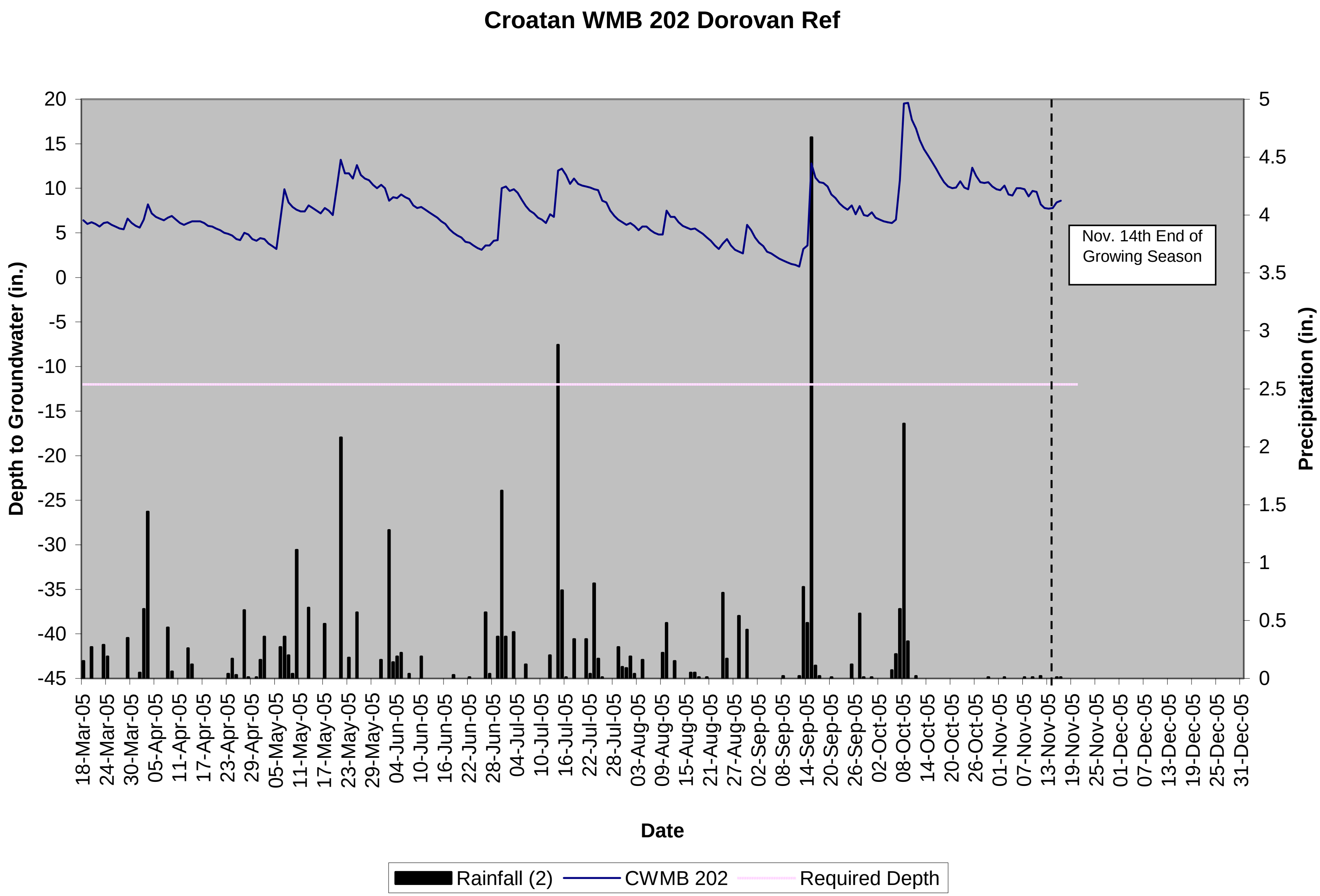
Dorovan



Croatan WMB 39 Dorovan Ref
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 39
Required Depth

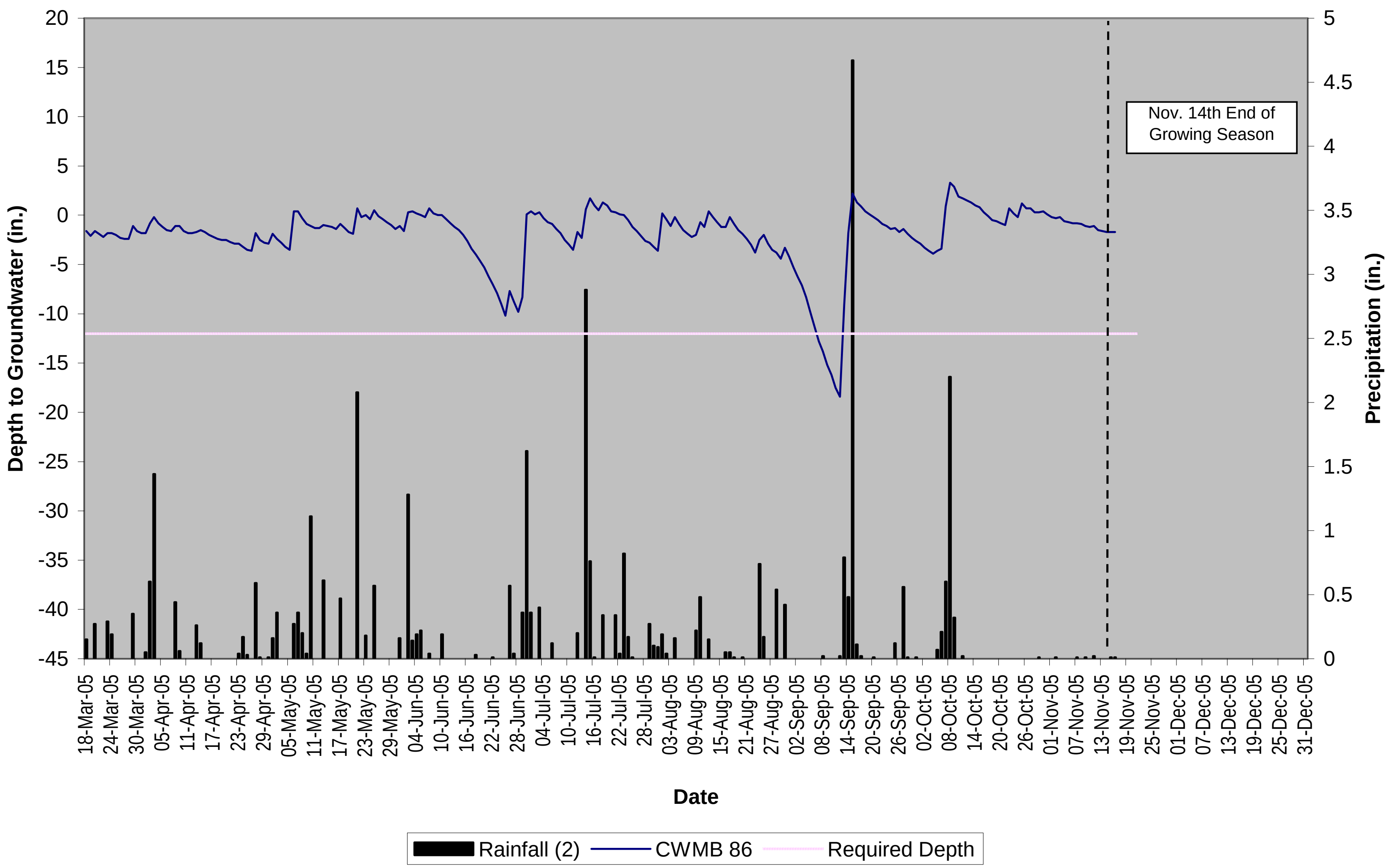


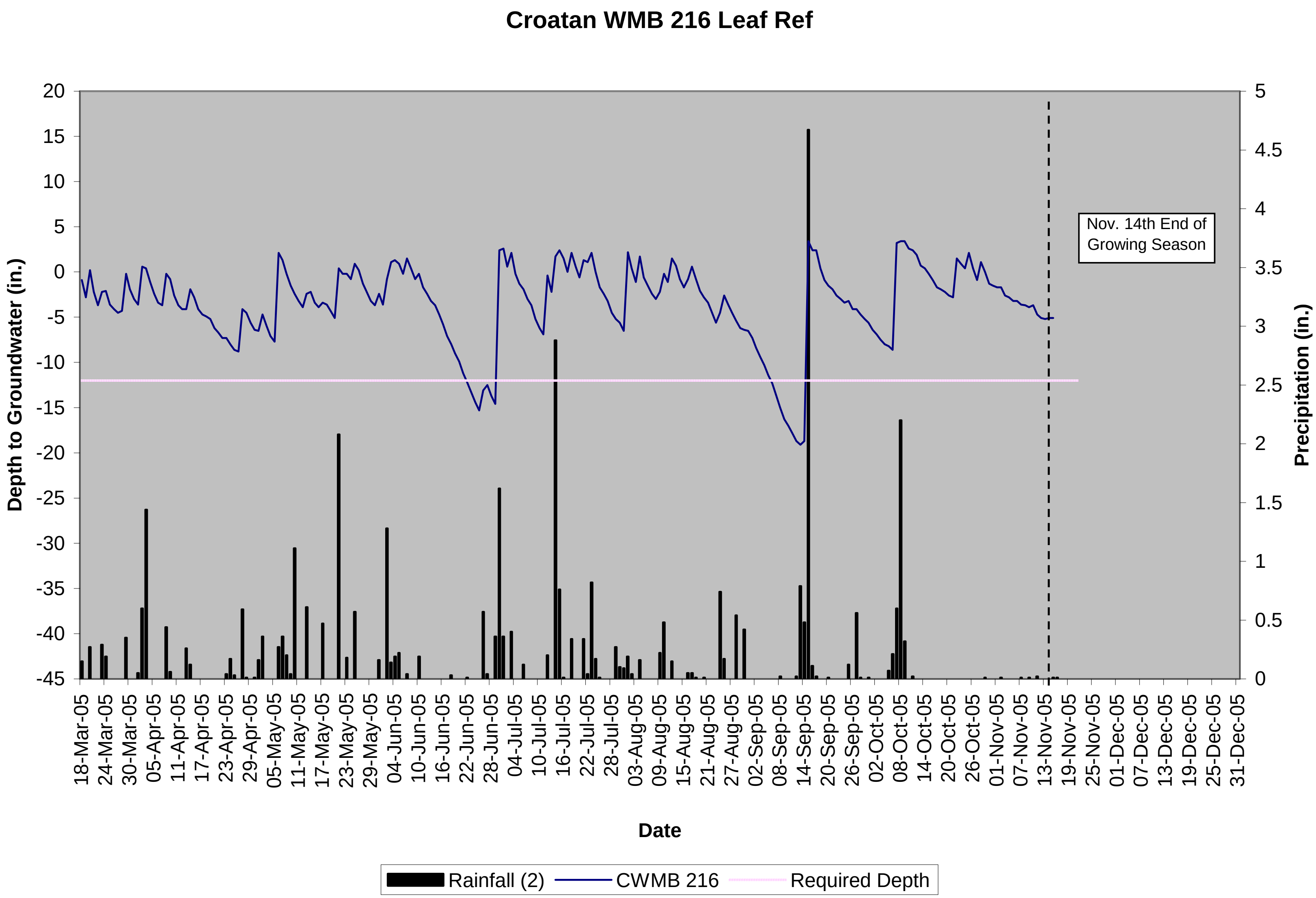
Croatan WMB 201 Dorovan Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 201
Required Depth

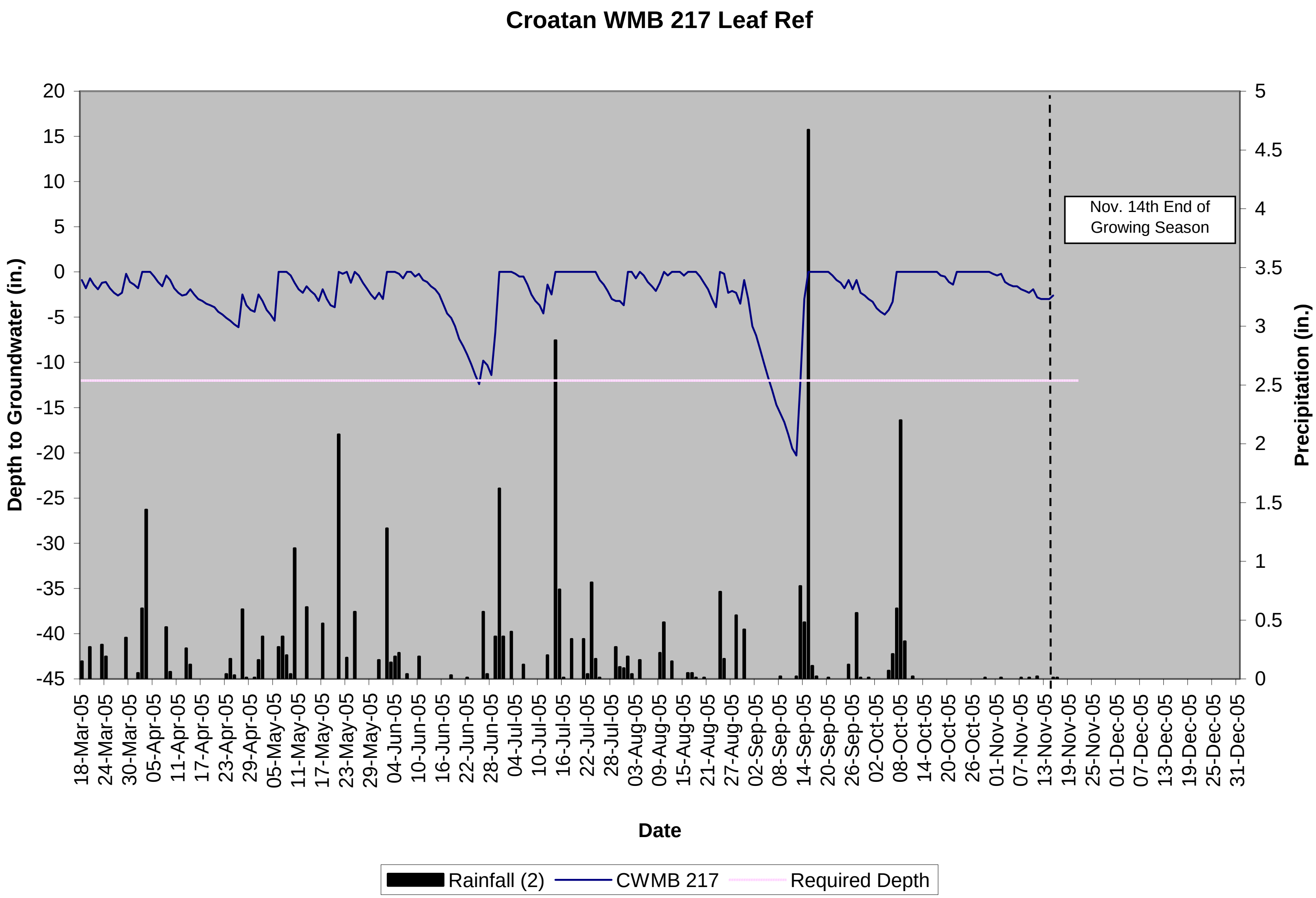

Croatan WMB 202 Dorovan Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 202
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

Leaf

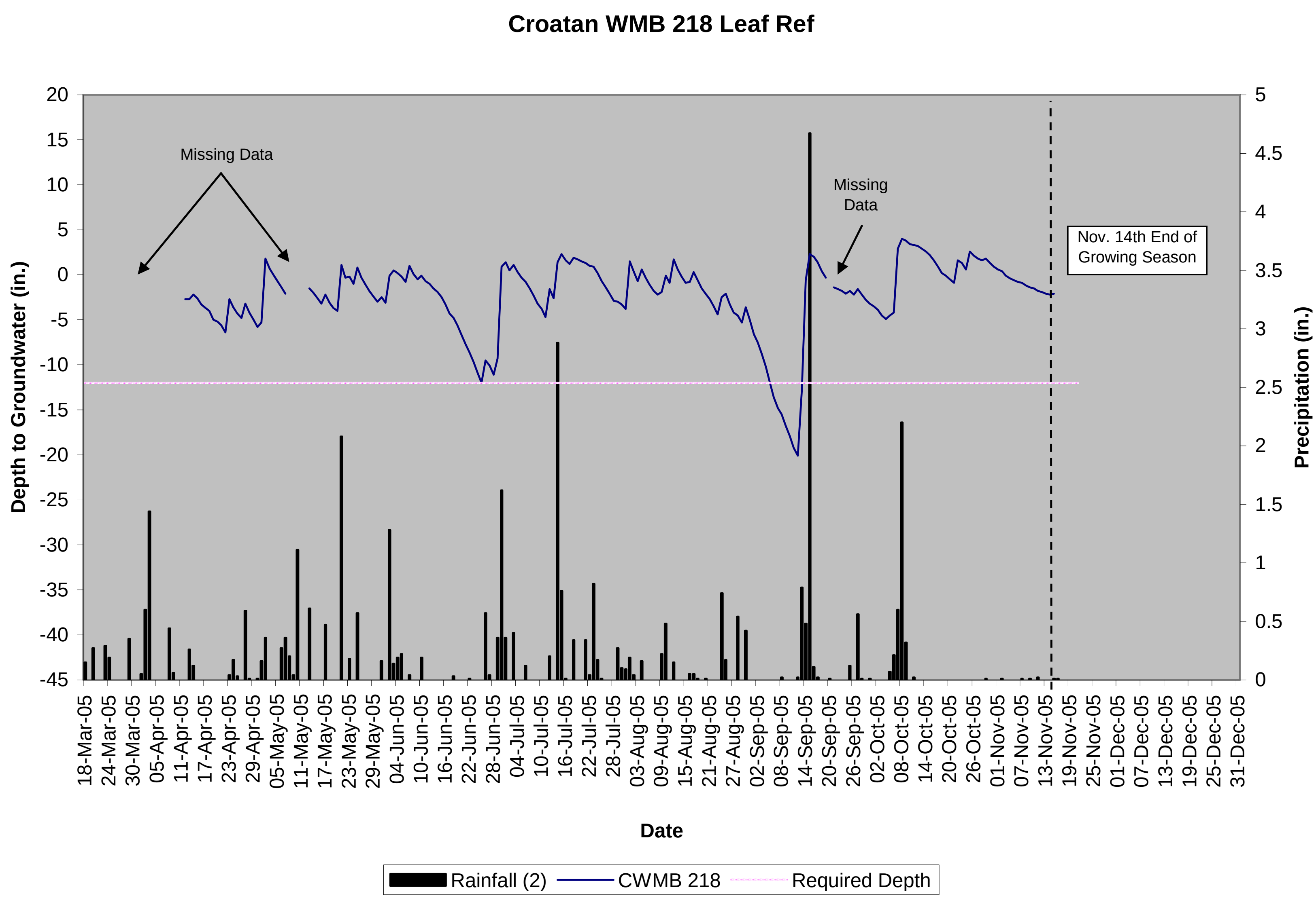
Croatan WMB 86 Leaf Ref




Croatan WMB 216 Leaf Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 216
Required Depth

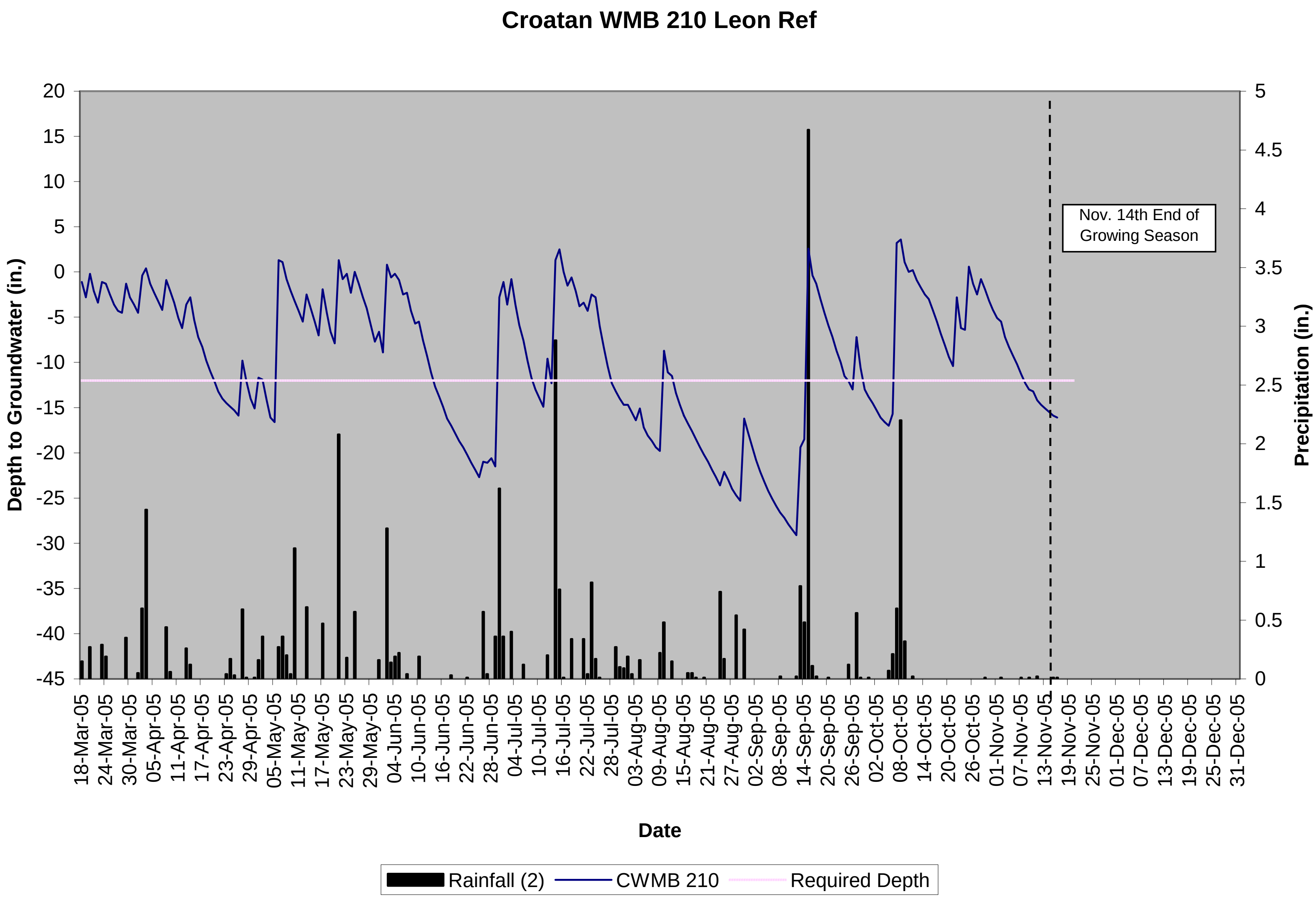


Croatan WMB 217 Leaf Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 217
Required Depth



Croatan WMB 218 Leaf Ref
Missing Data
Missing
Data
Nov. 14th End of
Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 218
Required Depth

Leon



Croatan WMB 210 Leon Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 210
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
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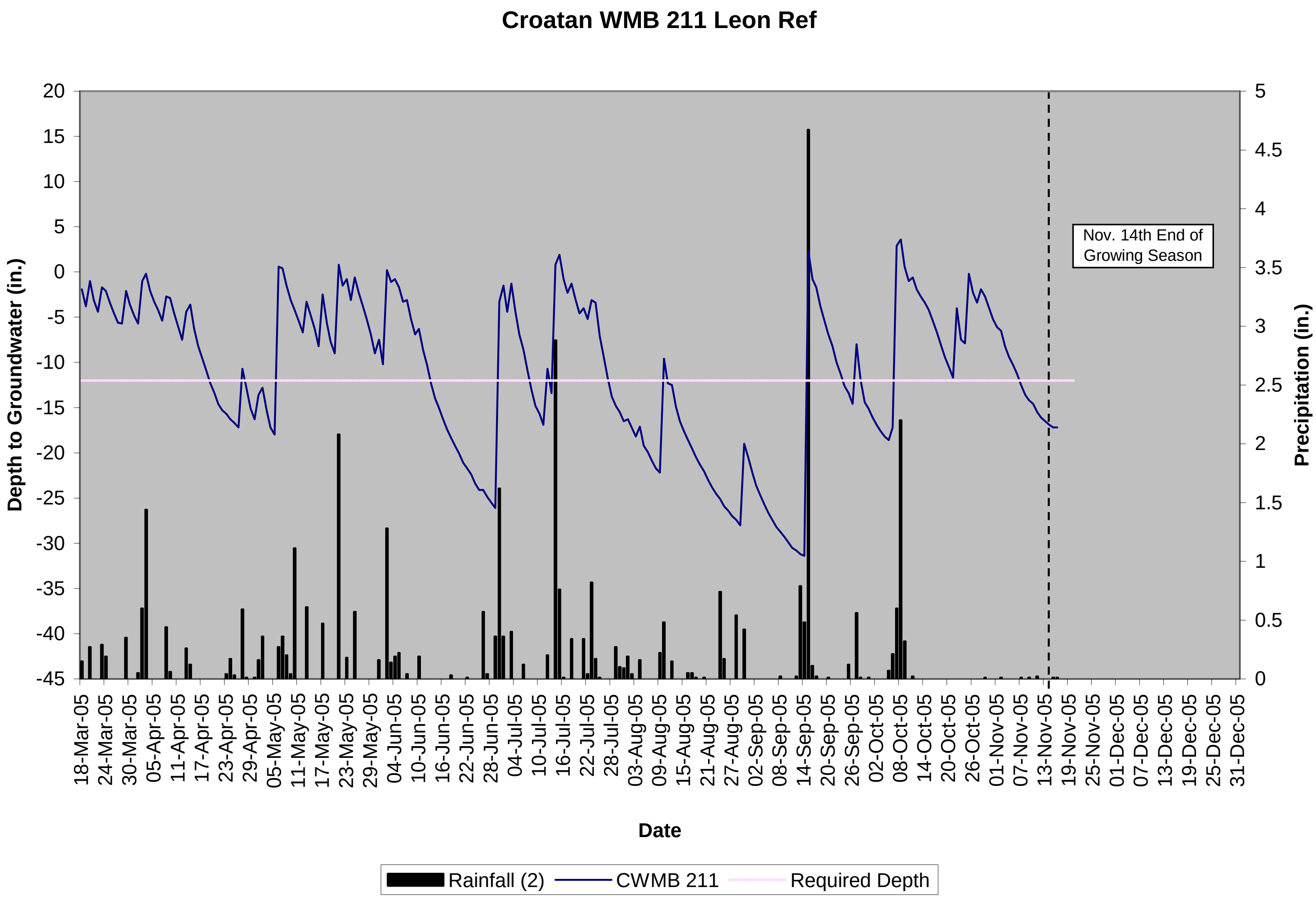
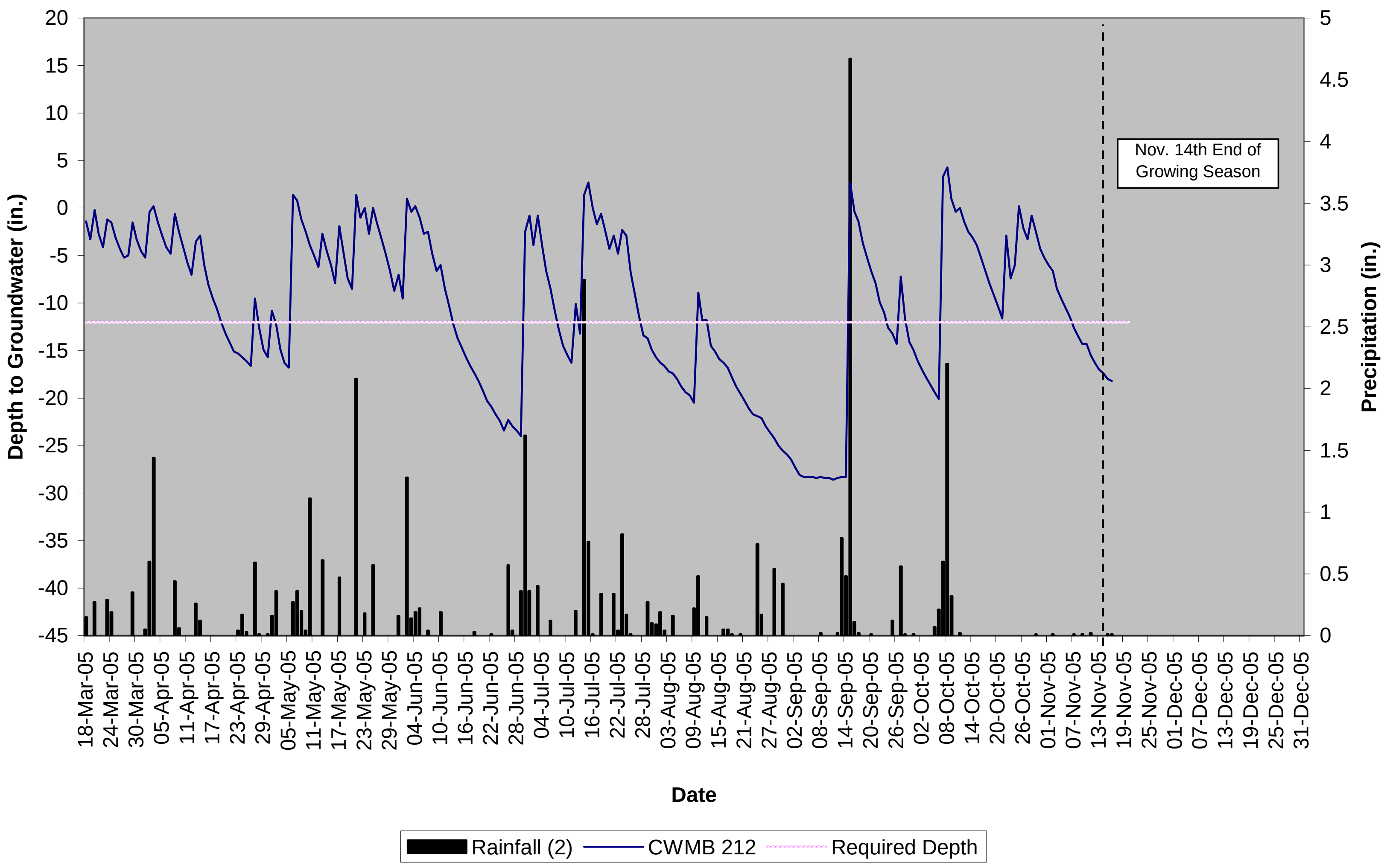
25-Dec-05
31-Dec-05

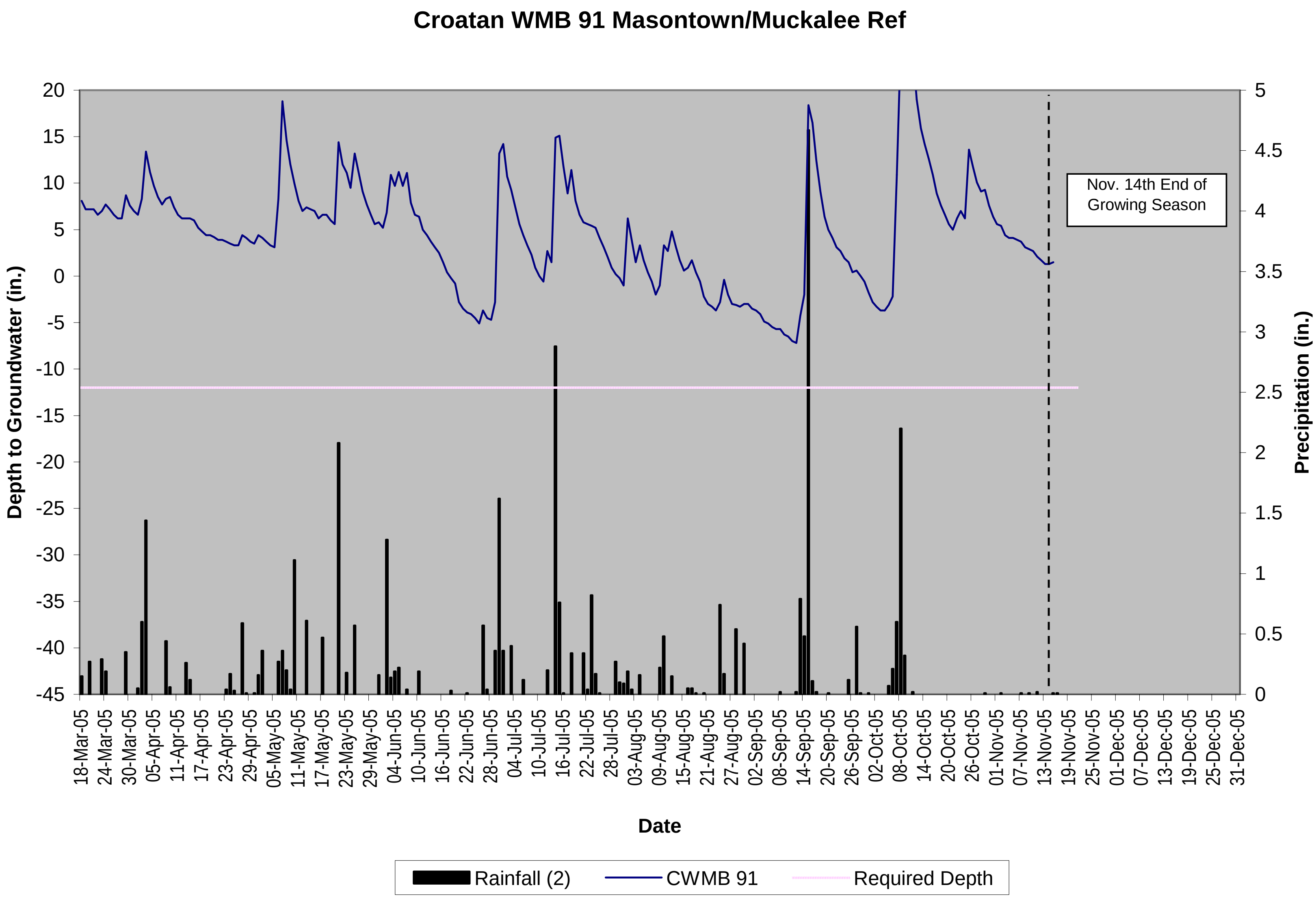


Croatan WMB 211 Leon Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 211
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

Croatan WMB 212 Leon Ref



Masontown/Muckalee


Croatan WMB 91 Masontown/Muckalee Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 91
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
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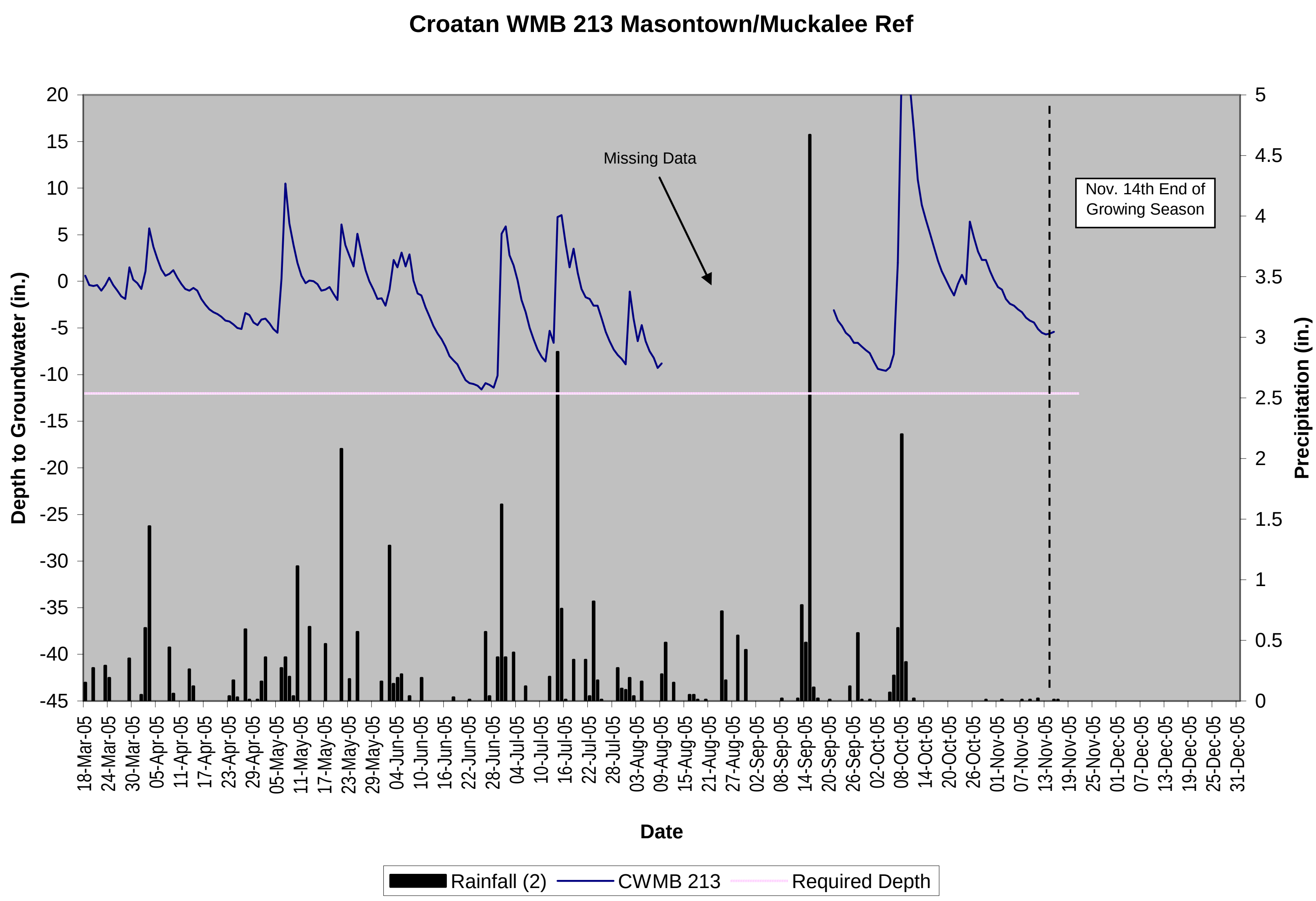
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05



Croatan WMB 213 Masontown/Muckalee Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Missing Data
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 213
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
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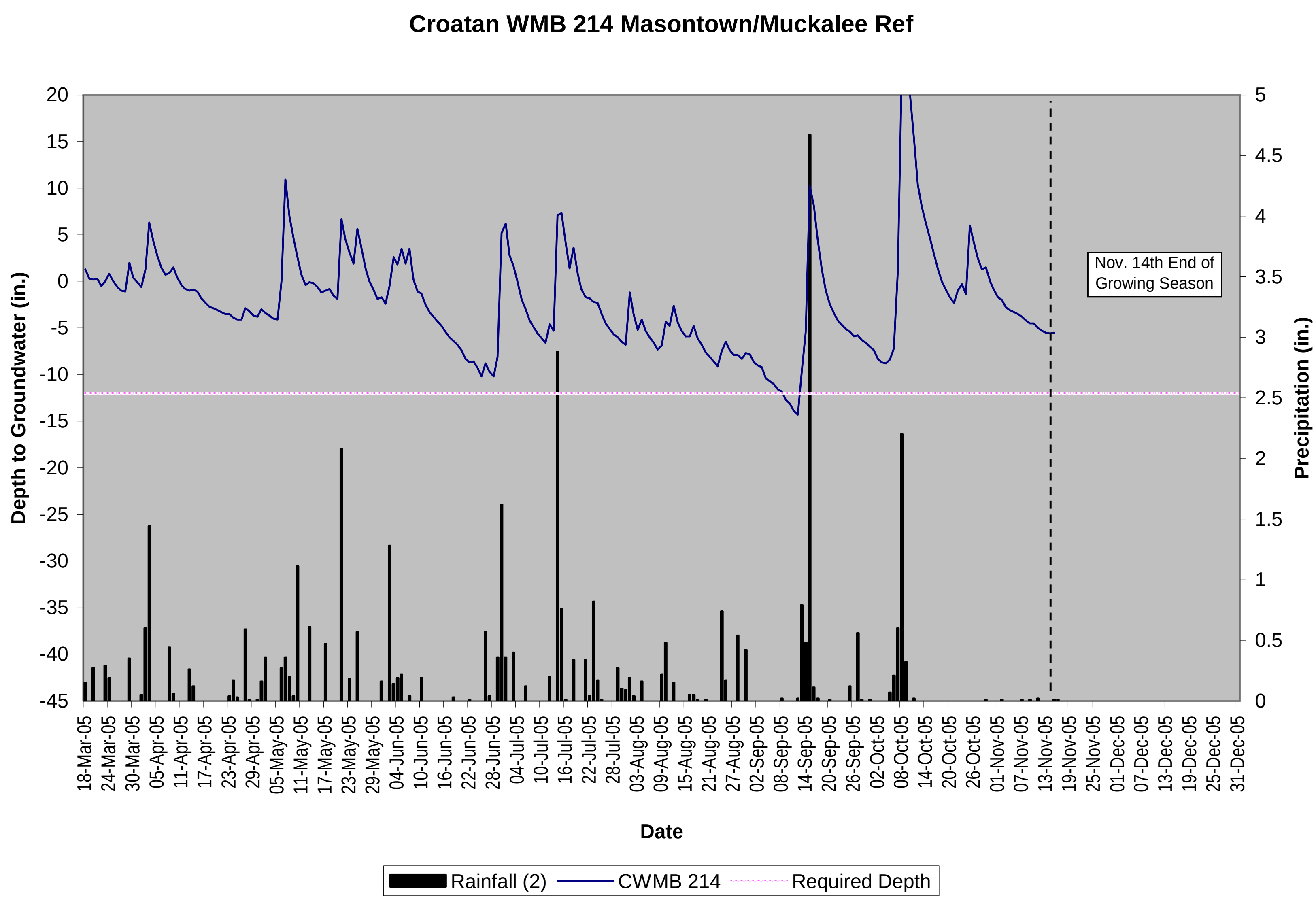
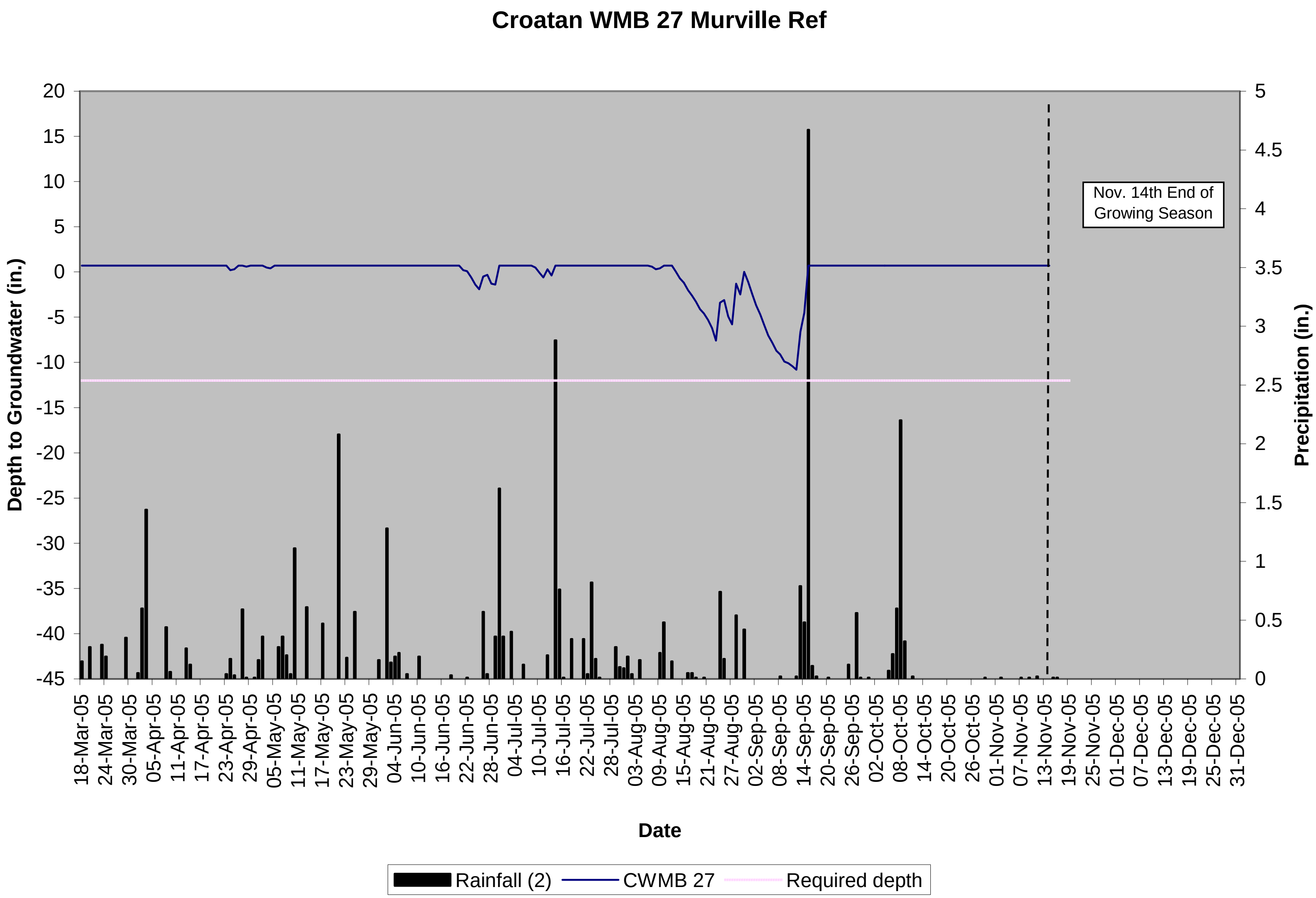
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

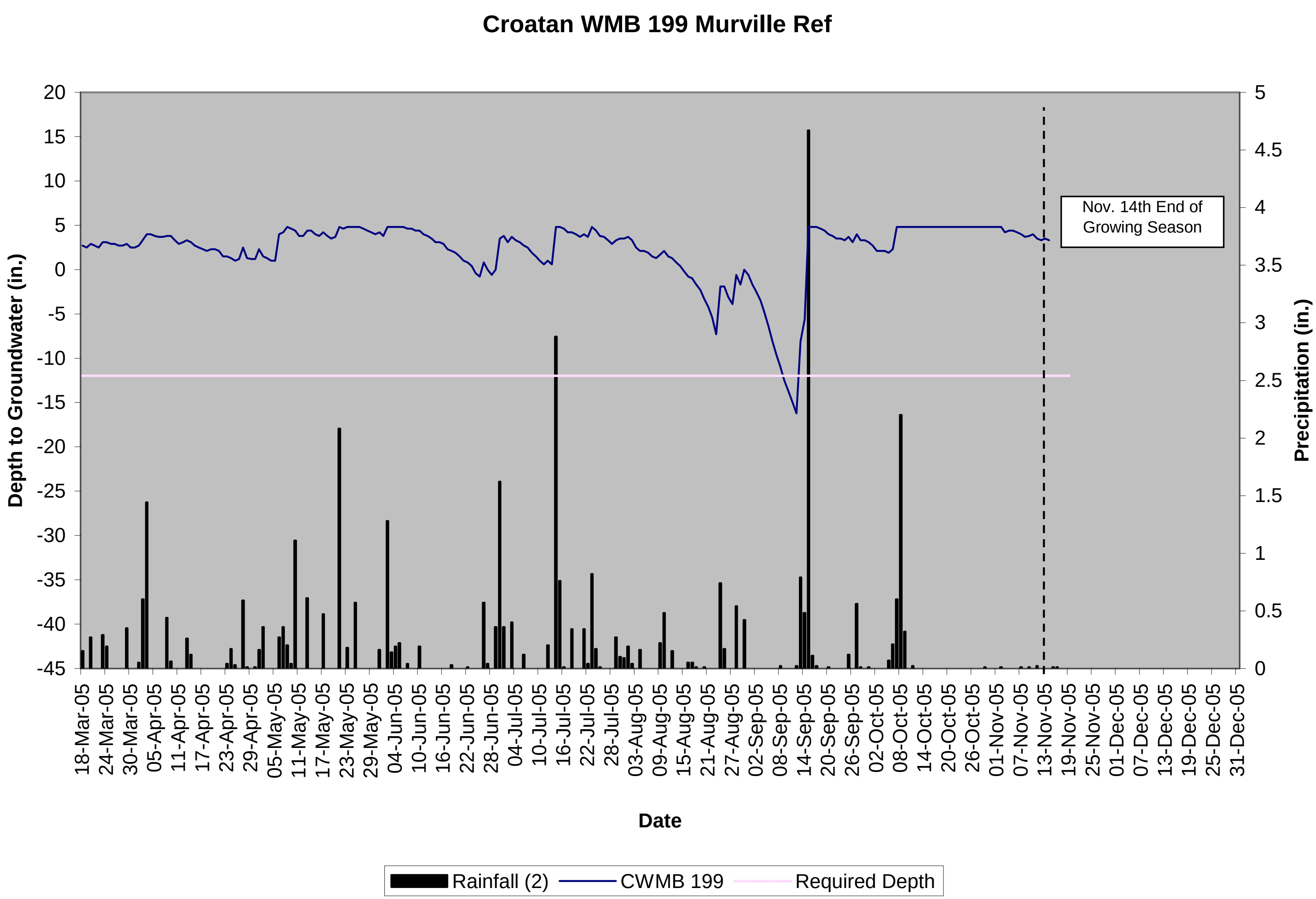


Croatan WMB 214 Masontown/Muckalee Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 214
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

Murville

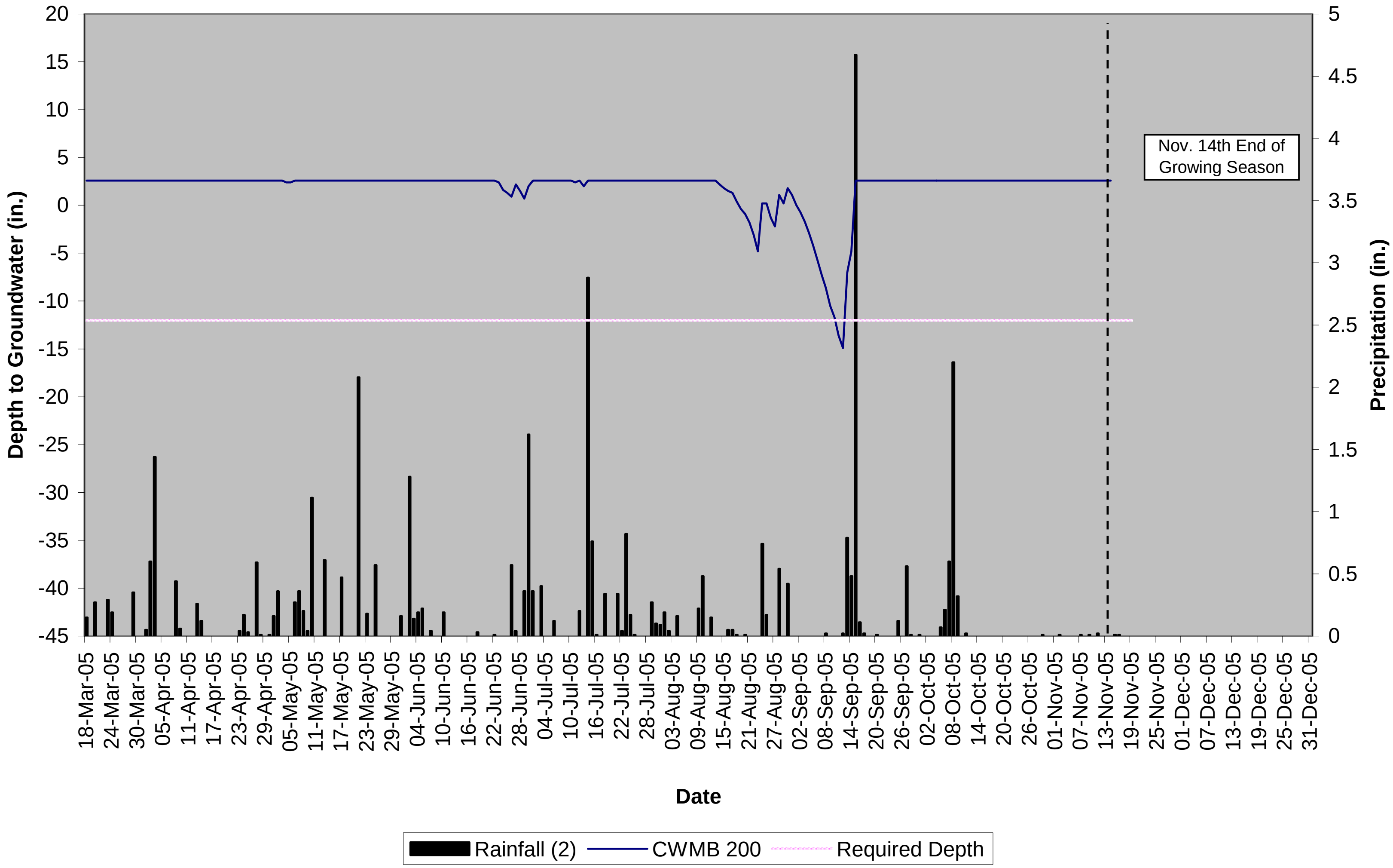


Croatan WMB 27 Murville Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 27
Required depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

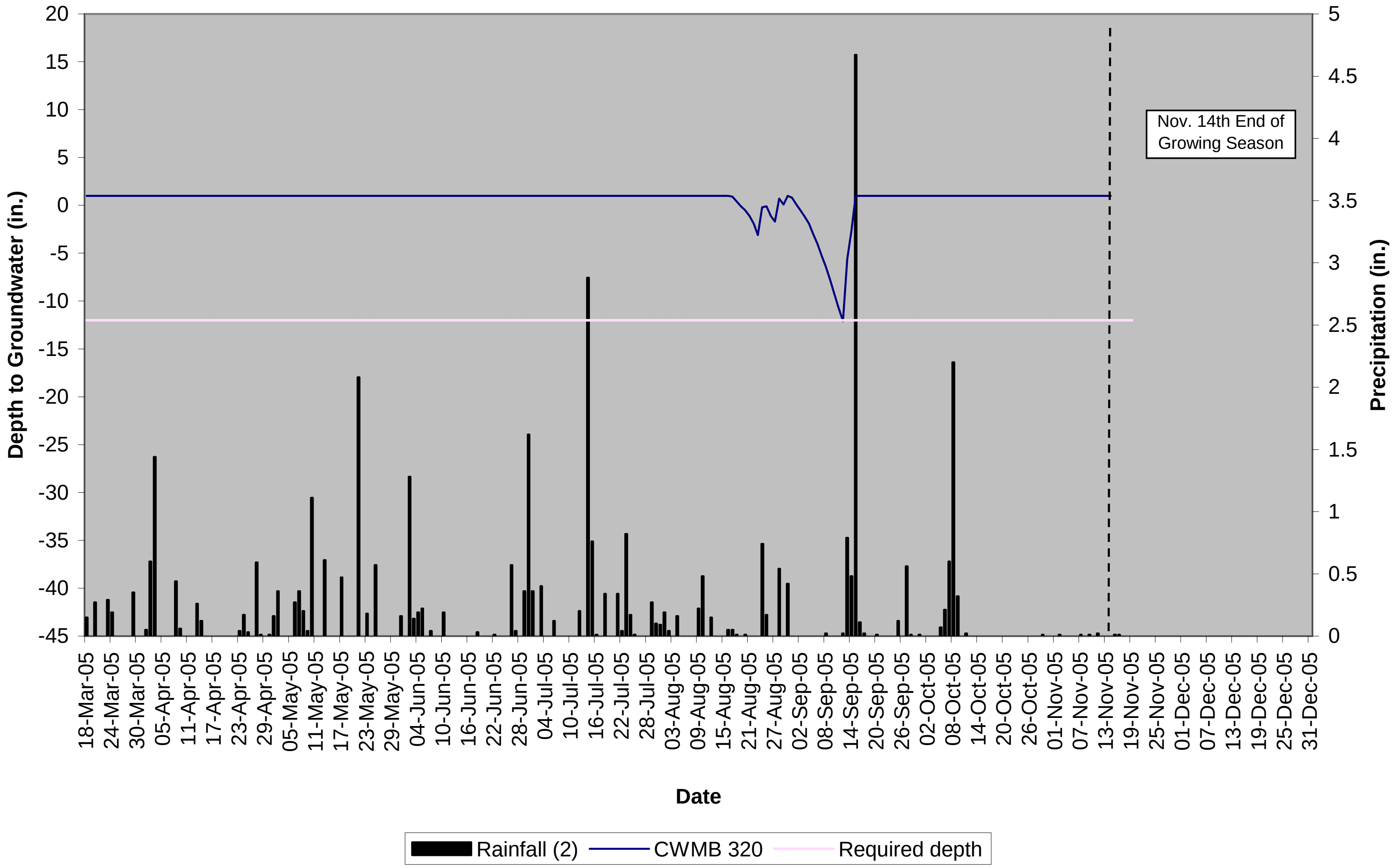


Croatan WMB 199 Murville Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 199
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05

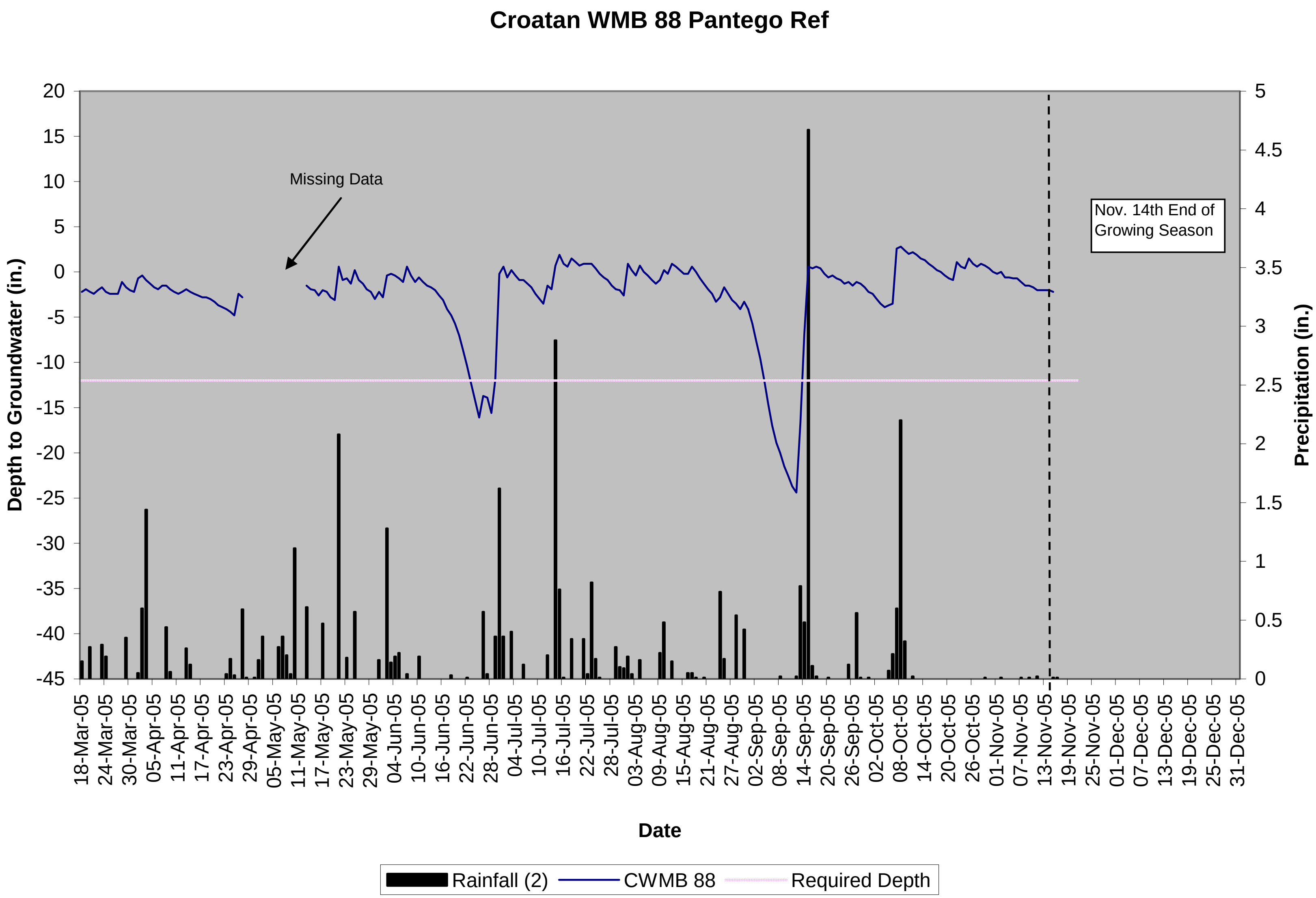
Croatan WMB 200 Murville Ref



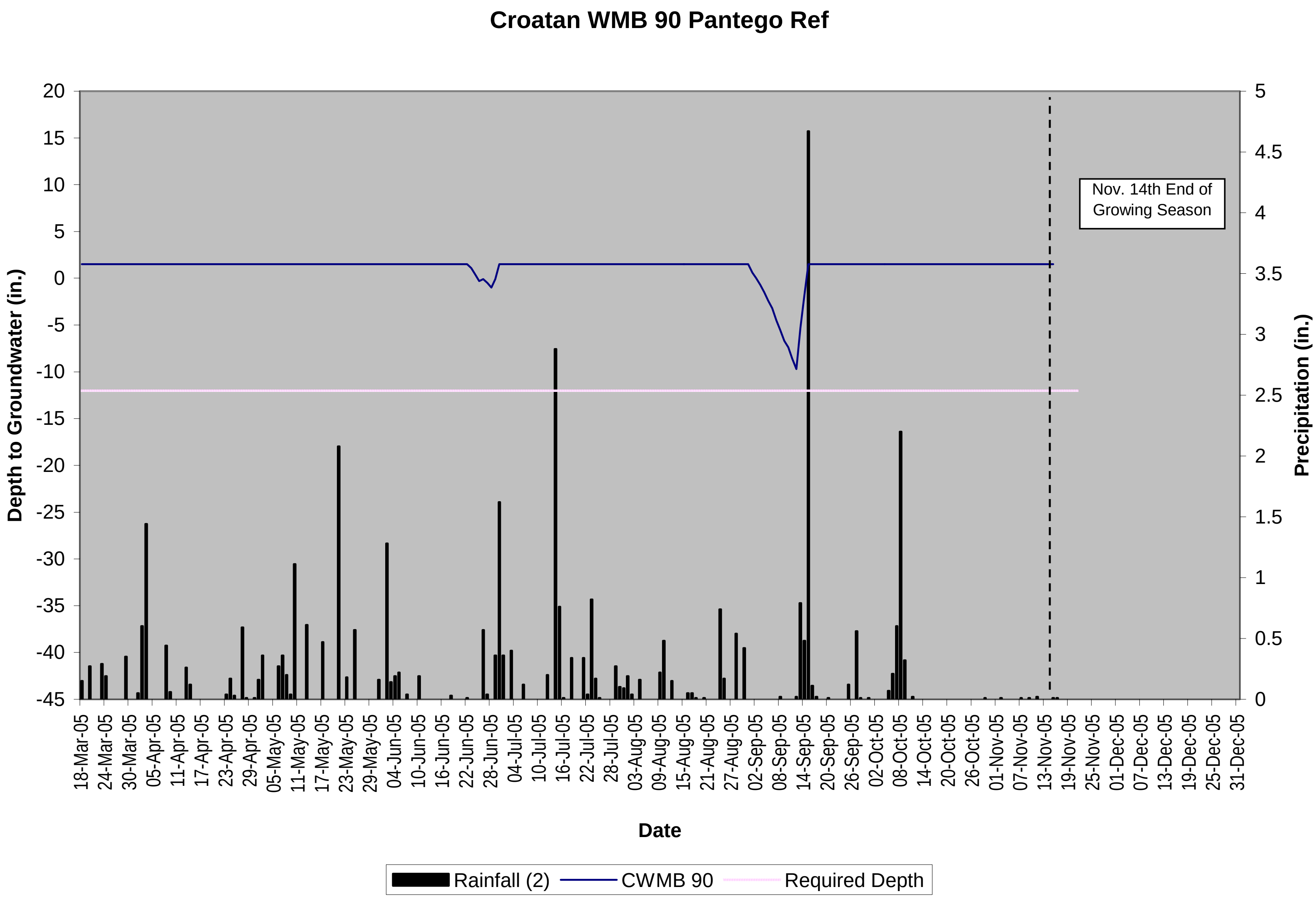
Croatan WMB 320 Murville Ref



Pantego



Croatan WMB 88 Pantego Ref
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 88
Required Depth



Croatan WMB 90 Pantego Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 90
Required Depth
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
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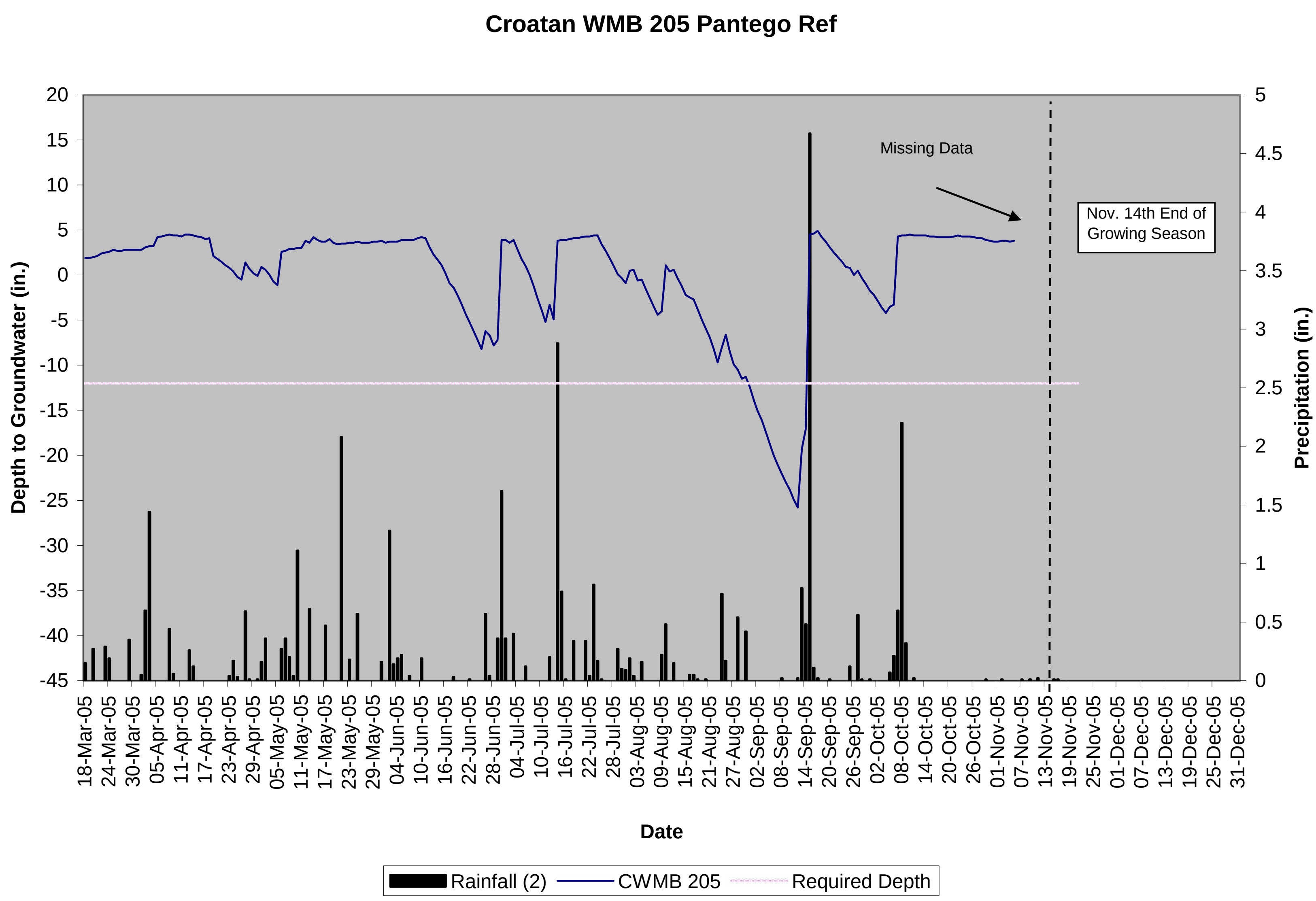
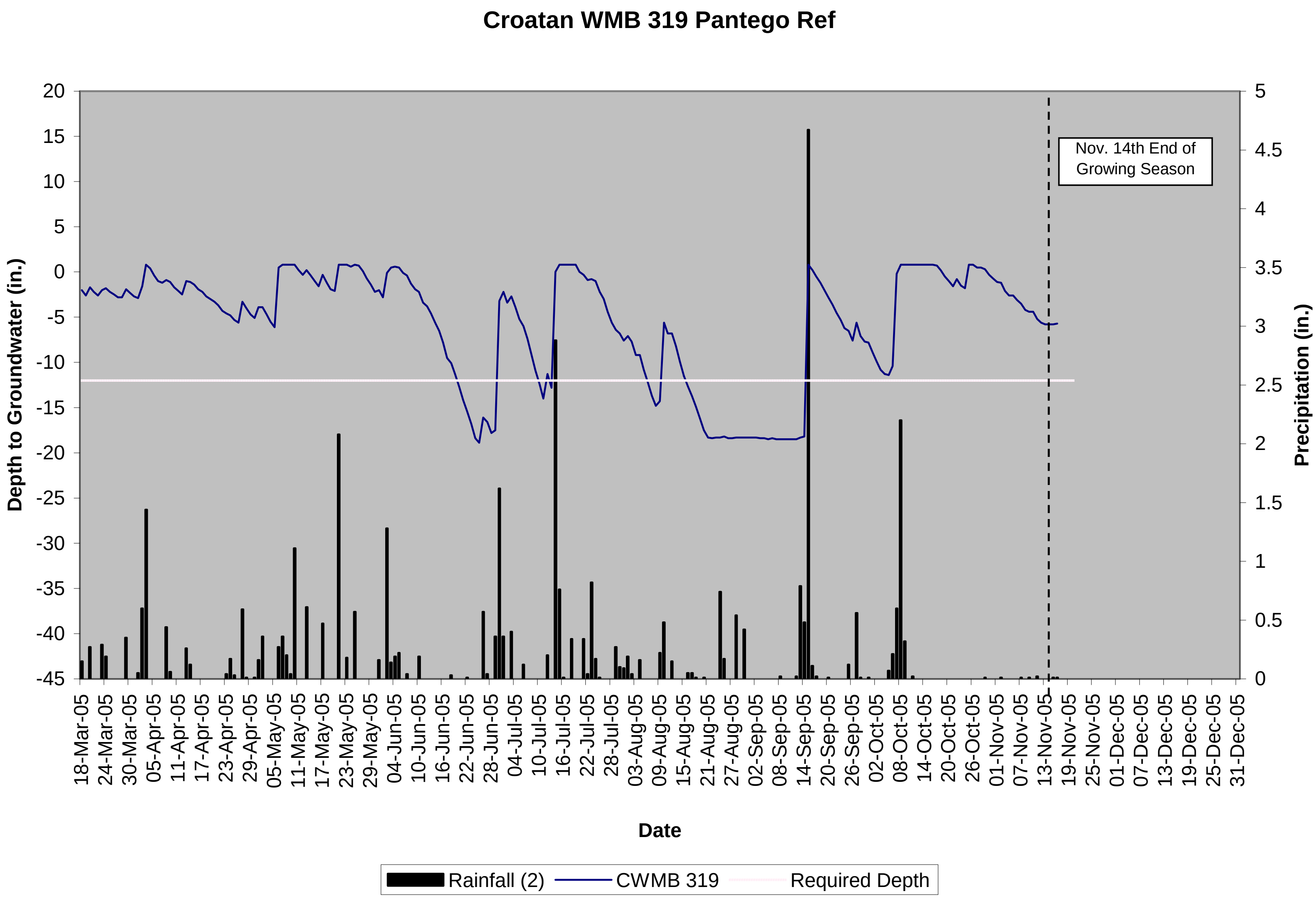
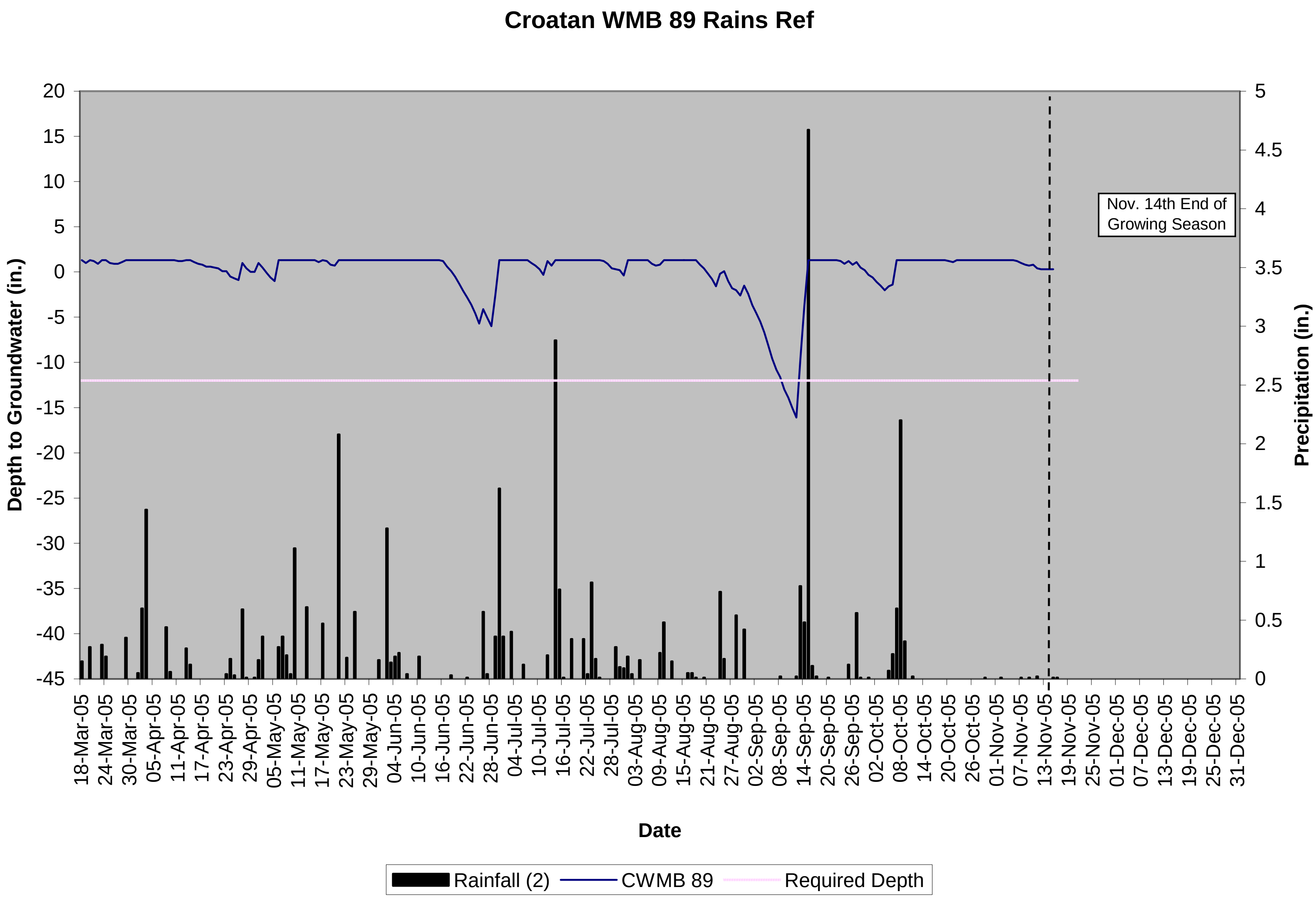
25-Dec-05
31-Dec-05



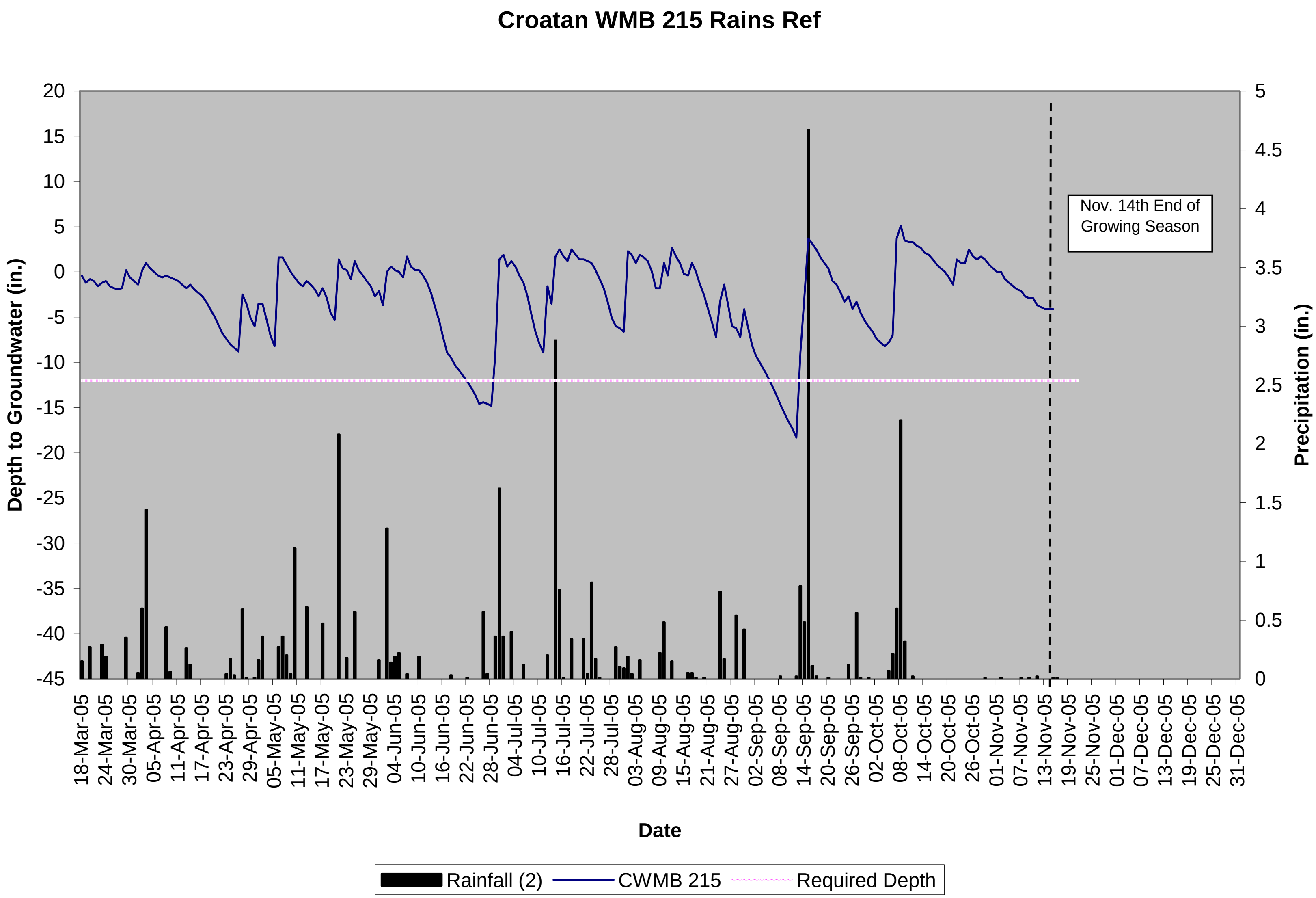
Croatan WMB 205 Pantego Ref
Missing Data
Nov. 14th End of Growing Season
Depth to Groundwater (in.)
Precipitation (in.)
Date
Rainfall (2)
CWMB 205
Required Depth


Croatan WMB 319 Pantego Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
Rainfall (2)
CWMB 319
Required Depth

Rains

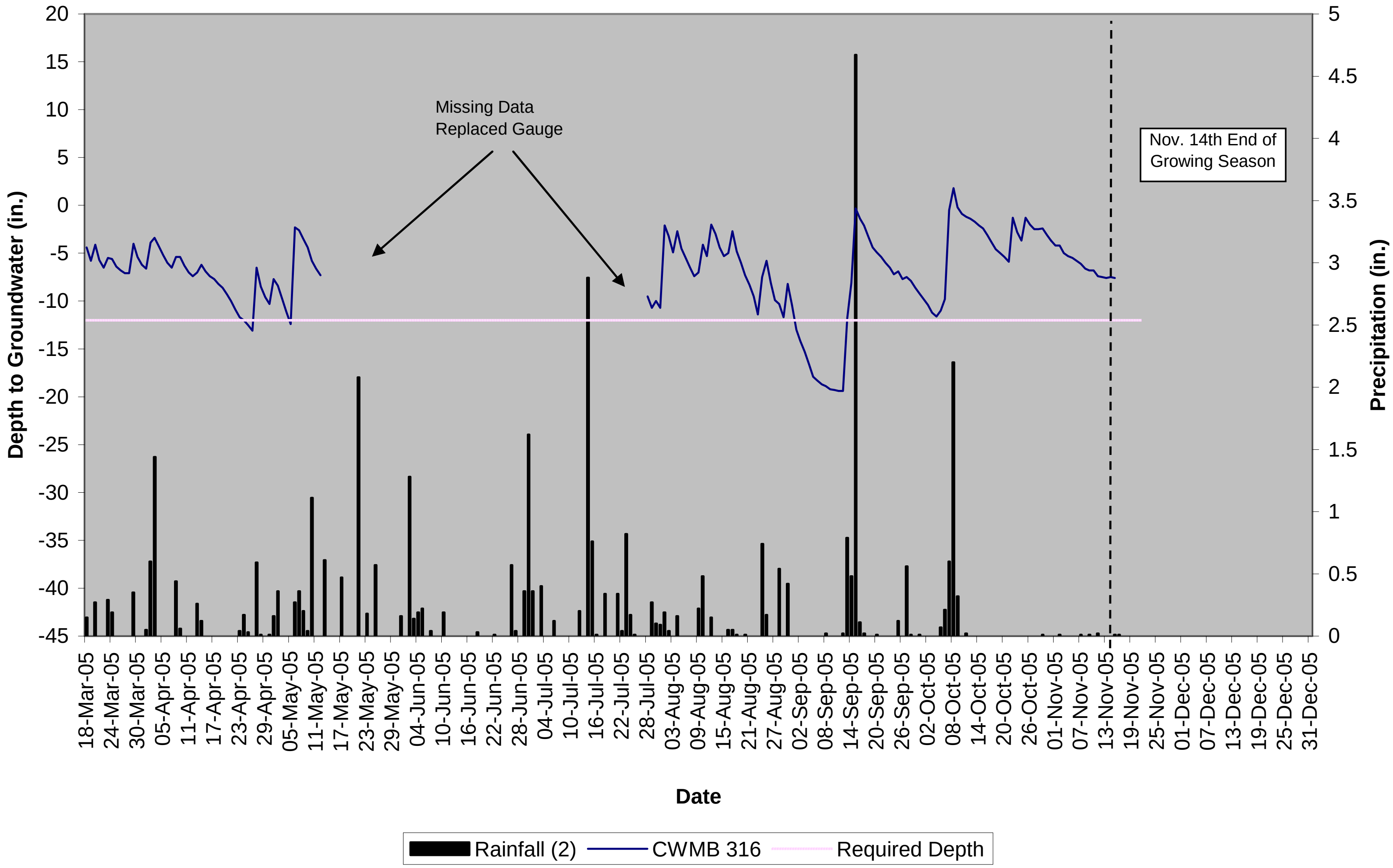


Croatan WMB 89 Rains Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 89
Required Depth



Croatan WMB 215 Rains Ref
Depth to Groundwater (in.)
Precipitation (in.)
Date
Nov. 14th End of Growing Season
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
18-Mar-05
24-Mar-05
30-Mar-05
05-Apr-05
11-Apr-05
17-Apr-05
23-Apr-05
29-Apr-05
05-May-05
11-May-05
17-May-05
23-May-05
29-May-05
04-Jun-05
10-Jun-05
16-Jun-05
22-Jun-05
28-Jun-05
04-Jul-05
10-Jul-05
16-Jul-05
22-Jul-05
28-Jul-05
03-Aug-05
09-Aug-05
15-Aug-05
21-Aug-05
27-Aug-05
02-Sep-05
08-Sep-05
14-Sep-05
20-Sep-05
26-Sep-05
02-Oct-05
08-Oct-05
14-Oct-05
20-Oct-05
26-Oct-05
01-Nov-05
07-Nov-05
13-Nov-05
19-Nov-05
25-Nov-05
01-Dec-05
07-Dec-05
13-Dec-05
19-Dec-05
25-Dec-05
31-Dec-05
Rainfall (2)
CWMB 215
Required Depth

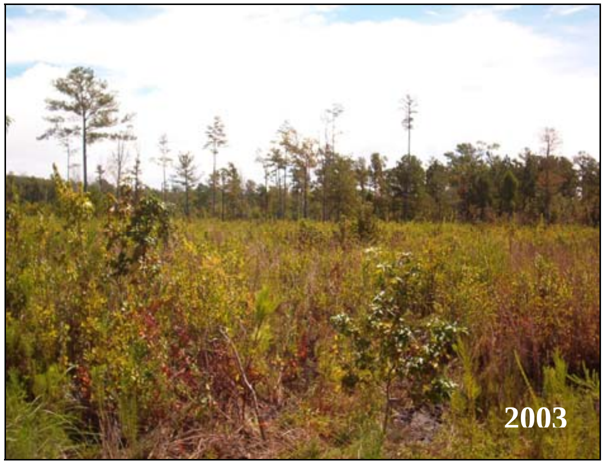
Croatan WMB 316 Rains Ref



Appendix B

Site Photos
and
Vegetation Data

Phase I



PP1, facing Southeast

PP2, facing South

PP3, facing South-Southeast

PP4, facing North-Northeast

PP5, facing South

PP6, facing Northwest

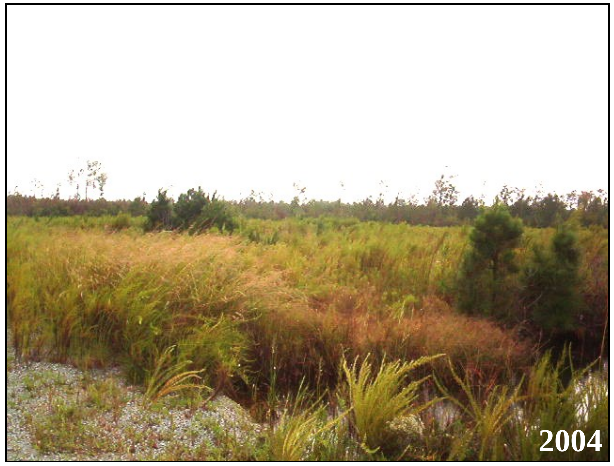
PP7, facing East-Northeast

PP8, facing Northeast

Phase II

PP9, facing South

PP10, facing East



PP11, facing West

PP12, facing East-Northeast

PP13, facing West

PP14, facing South

PP15, facing North

PP16, facing West-Southwest

PP17, facing North

PP18, facing East-Northeast

PP19, facing West-Southwest

Appendix B

Site Photos
and
Vegetation Data

The following tables show the stem count, plot density, and success of the individual plots for each year. The table also shows two different ways of calculating the 2005 data. The first way is consistant with the calculations of previous consultants and the new 2005 data columns represent the way that Environmental Services, Inc. presented the data in the 2005 report. Differences in the methods for the calculations are noted beneath each table.

Table B1. Phase I Yearly Summaries

	Plot Number	Total (at planting)	Total 2002 (Year 1)	Plot Density 2002 (Trees/Acre)	Meets Success Criteria (Y/N)	Total 2003 (Year 2)	Plot Density 2003 (Trees/Acre)	Meets Success Criteria (Y/N)	Total 2004 (Year 3)	Plot Density 2004 (Trees/Acre)	Meets Success Criteria (Y/N)	Total 2005 (Year 4)	Plot Density 2005 (Trees/Acre)	Meets Success Criteria (Y/N)	New Plot Density 2005 (Trees/Acre)	Meets New Success Criteria (Y/N)
Zone 1	6	36	29	548	Y	26	491	Y	26	491	Y	27	510	Y	470	Y
	8[a]	42	42	680	Y	40	664	Y	40	647	Y	40	648	Y	697	Y
	10	30	28	635	Y	28	635	Y	27	612	Y	26	589	Y	453	Y
	12	31	30	658	Y	22	483	Y	22	483	Y	23	505	Y	401	Y
	14	28	16	389	Y	15	364	Y	14	340	Y	14	340	Y	244	N
	19	35	35	680	Y	35	680	Y	32	622	Y	38	680[b]	Y	662	Y
	20	33	30	618	Y	28	577	Y	27	556	Y	25	515	Y	436	Y
	25	44	40	618	Y	40	618	Y	15	232	N	15	232	N	261	N
Zone 1 Average				**603**	**Y**		**564**	**Y**		**498**	**Y**		**502**	**Y**	**453**	**Y**
Zone 2	3	24	17	482	Y	17	482	Y	16	453	Y	20	567	Y	348	Y
	4	22	10	309	N	7	216	N	8	247	N	10	309	Y	174	N
	5	12	7	397	Y	6	340	Y	6	340	Y	7	397	Y	122	N
	7	21	18	583	Y	15	485	Y	15	483	Y	19	615	Y	331	Y
	9	36	27	510	Y	24	453	Y	23	434	Y	22	416	Y	383	Y
	11	30	14	317	N	14	317	N	13	295	N	14	317	Y	244	N
	13	40	32	544	Y	30	510	Y	30	510	Y	25	425	Y	436	Y
	15[b]	23	21	621	Y	23	680	Y	23	680	Y	24	680[b]	Y	418	Y
	18	32	31	659	Y	31	659	Y	30	638	Y	29	616	Y	505	Y
Zone 2 Average				**491**	**Y**		**460**	**Y**		**453**	**Y**		**482**	**Y**	**329**	**Y**
Zone 3	16	30	26	589	Y	26	589	Y	24	544	Y	25	567	Y	436	Y
	17	16	13	553	Y	11	468	Y	12	510	Y	12	510	Y	209	N
	21	27	8	201	N	7	176	N	7	176	N	11	277	N	192	N
	22	30	28	635	Y	23	521	Y	19	431	Y	22	499	Y	383	Y
	23	76	74	662	Y	55	492	Y	44	394	Y	38	340	Y	662	Y
	24	40	11	187	N	8	136	N	4	68	N	6	102	N	105	N
Zone 3 Average				**471**	**Y**		**397**	**Y**		**354**	**Y**		**383**	**Y**	**331**	**Y**
Zone 4	1	40	25	425	Y	4	68	N	1	17	N	2	34	N	35	N
	2	37	23	423	Y	7	129	N	6	110	N	7	129	N	122	N
Zone 4 Average				**424**	**Y**		**99**	**N**		**64**	**N**		**82**	**N**	**79**	**N**
Phase I Average				**517**	**Y**		**449**	**Y**		**413**	**Y**		**433**	**Y**	**349**	**Y**

a- *Plot density (trees/acre) were different for consecutive years despite equal stem counts for those years.*

b- *Total flagged and/or tagged trees found exceeded the original amount planted, therefore plot density (trees/acre) would have exceeded the maximum of 680 trees/acre.*

Notes: Density calculations for years 2002 –2005 were completed by taking the number of trees counted in that year, dividing by the total number of trees planted in the plot, and multiplying by 680. Any counts exceeding the total at planting are represented by a maximum density of 680 trees per acre. New density calculations were completed by taking the number of trees counted in 2005 and dividing by the plot size in acres (0.0573921ac). Specific information regarding each zone is presented after the tables. Environmental Services, Inc. began Croatan vegetation monitoring in 2005, therefore all data and calculations prior to 2005 were obtained from previous consultants.

Table B2. Phase II Yearly Summaries

	Plot Number	Total (at planting)	Total 2003 (Year 1)	Plot Density 2003 (Trees/Acre)	Meets Success Criteria (Y/N)	Total 2004 (Year 2)	Plot Density 2004 (Trees/Acre)	Meets Success Criteria (Y/N)	Total 2005 (Year 3)	Plot Density 2005 (Trees/Acre)	Meets Success Criteria (Y/N)	New Plot Density 2005 (Trees/Acre)	Meets New Success Criteria (Y/N)
Zone 1	26	39	36	628	Y	36	627	Y	34	593	Y	592	Y
	34	39	18	314	N	13	227	N	8	139	N	139	N
	47	39	60	680[a]	Y	56	680[a]	Y	52	680[a]	Y	906	Y
Zone 1 Average				**541**	**Y**		**511**	**Y**		**471**	**Y**	**546**	**Y**
Zone 3	31	39	23	401	Y	18	314	N	22	384	Y	383	Y
	33	39	4	70	N	3	52	N	3	52	N	52	N
	45	39	10	174	N	9	157	N	10	174	N	174	N
	46	39	18	314	N	14	244	N	19	331	Y	331	Y
Zone 3 Average				**240**	**N**		**192**	**N**		**235**	**N**	**235**	**N**
Zone 4	27	39	22	383	Y	18	314	N	23	401	Y	401	Y
	28	39	49	680[a]	Y	40	680[a]	Y	39	680	Y	680	Y
	29	39	25	436	Y	18	314	N	15	262	N	261	N
	30	39	32	558	Y	24	418	Y	27	471	Y	470	Y
	35	39	18	314	N	10	174	N	8	139	N	139	N
	36	39	49	680[a]	Y	37	645	Y	33	575	Y	575	Y
	37	39	6	105	N	6	105	N	7	122	N	122	N
	38	39	17	296	N	19	331	Y	16	279	N	279	N
	39	39	11	192	N	4	70	N	9	157	N	157	N
	40	39	41	680[a]	Y	20	348	Y	19	331	Y	331	Y
	41	39	6	105	N	3	52	N	1	17	N	17	N
	42	39	11	192	N	0	0	N	1	17	N	17	N
	43	39	9	157	N	8	139	N	14	244	N	244	N
	44	39	19	331	Y	15	261	N	11	192	N	192	N
Zone 4 Average				**365**	**Y**		**275**	**N**		**278**	**N**	**278**	**N**
Zone 5	32	39	48	680[a]	Y	47	680[a]	Y	44	680[a]	Y	767	Y
	48	39	59	680[a]	Y	58	680[a]	Y	56	680[a]	Y	976	Y
Zone 5 Average				**680**	**Y**		**680**	**Y**		**680**	**Y**	**872**	**Y**
Phase II Average				**393**	**Y**		**327**	**Y**		**330**	**Y**	**357**	**Y**

a- Total flagged and/or tagged trees found exceeded the original amount planted, therefore plot density (trees/acre) would have exceeded the maximum of 680 trees/acre.

Notes: No "at-planting counts" were conducted for Phase II since no consultants were under contract during that period. Therefore, it is assumed that 39 total stems were planted in each plot. Density calculations for years 2003 –2005 were completed by taking the number of trees counted in that year, dividing by the total number of trees planted in the plot, and multiplying by 680. Any counts exceeding the total at planting are represented by a maximum density of 680 trees per acre. New density calculations were completed by taking the number of trees counted in 2005 and dividing by the plot size in acres (0.0573921ac). Specific information regarding each zone is presented after the tables. Environmental Services, Inc. began Croatan vegetation monitoring in 2005, therefore all data and calculations prior to 2005 were obtained from previous consultants.

RELATIVE ABUNDANCE OF VASCULAR PLANT SPECIES
RECORDED WITHIN 50' X 50' PLOTS AT
THE CROATAN MITIGATION BANK
COMPILED BY DAVE DUMMOND

Scientific names are followed by three subjective, non-quantitative designations of relative abundance as observed in the field. These designations mean dominant or co-dominant (D), common (C), uncommon (U), and rare (R). The scientific names are taken from the accompanying List Of Vascular Plant Species Encountered In Forty-Eight Plots During The 2005 Sampling Of The Croatan Mitigation Bank.

Phase I

Zone 1

Plot #6 ***Aristida stricta* D** ***Gaylussacia frondosa* D** ***Kalmia Carolina* D** ***Persea palustris* D** ***Pteridium aquilinum* D** ***Vaccinium crassifolium* D** *Andropogon glaucopsis* C *Andropogon glomeratus* C *Cyrilla racemiflora* C *Gaultheria procumbens* C *Ilex glabra* C *Ilex coriacea* C *Morella caroliniensis* C *Lyonia lucida* U *Photinia pyrifolia* U *Pinus serotina* U *Polygala lutea* U *Schizachyrium scoparium* U *Quercus laurifolia* U *Quercus nigra* U *Vitis rotundifolia* U	**Plot #8** ***Dichanthelium strigosum* D** ***Vaccinium crassifolium* D** *Agalinis purpurea* C *Andropogon glaucopsis* C *Cyrilla racemiflora* C *Ilex glabra* C *Juncus scirpoides* C *Lyonia mariana* C *Pinus serotina* C *Pinus* sp. C *Polygala lutea* C *Pyxidanthera barbulata* C *Rhynchospora fascicularis* C *Schizachyrium scoparium* C *Aristida stricta* U *Gaylussacia frondosa* U *Eupatorium mohrii* U *Persea palustris* U *Pityopsis aspera* U *Rhynchospora plumose* U *Vaccinium formosum* U *Xyris caroliniana* U *Gaylussacia dumosa* R	**Plot #10** ***Gaylussacia frondosa* D** ***Kalmia carolina* D** ***Lyonia mariana* D** ***Persea palustris* D** ***Pteridium aquilinum* D** ***Vaccinium crassifolium* D** *Andropogon glaucopsis* C *Andropogon virginicus* C *Ilex glabra* C *Leucothoe racemosa* C *Morella cerifera* C *Osmanthus americanus* C *Pinus* sp. C *Rhus copallinum* C *Acer rubrum* U *Eupatorium capillifolium* U *Liquidambar styraciflua* U *Morella caroliniensis* U *Quercus nigra* U *Rhexia mariana* U *Smilax bona-nox* U *Vaccinium formosum* U
Plot #12 ***Gaylussacia frondosa* D** ***Ilex glabra* D** ***Lyonia lucida* D** ***Morella caroliniensis* D** ***Persea palustris* D** ***Pteridium aquilinum* D** ***Woodwardia virginica* D** *Ilex coriacea* C *Smilax laurifolia* C *Vaccinium formosum* C *Andropogon glaucopsis* U *Gordonia lasianthus* U *Liquidambar styraciflua* U *Morella cerifera* U *Pinus serotina* U *Pinus* sp. U *Quercus nigra* U *Quercus phellos* U *Rhynchospora fascicularis* U *Smilax bona-nox* U *Utricularia juncea* U *Vitis rotundifolia* U	**Plot #14** ***Gordonia lasianthus* D** ***Lyonia lucida* D** ***Woodwardia virginica* D** *Acer rubrum* C *Gaylussacia frondosa* C *Ilex coriacea* C *Ilex glabra* C *Leucothoe racemosa* C *Morella cerifera* C *Pteridium aquilinum* C *Rhus copallinum* C *Rhynchospora fascicularis* C *Vaccinium crassifolium* C *Vaccinium fuscatum* C *Andropogon glaucopsis* U *Gelsemium sempervirens* U *Kalmia carolina* U *Liquidambar styraciflua* U *Lyonia mariana* U *Nyssa biflora* U *Osmanthus americanus* U *Persea palustris* U *Pinus serotina* U *Quercus nigra* U *Smilax laurifolia* U *Vaccinium tenellum* U *Vitis rotundifolia* U	**Plot #19** ***Ilex glabra* D** ***Lyonia lucida* D** ***Woodwardia virginica* D** *Acer rubrum* C *Andropogon glaucopsis* C *Andropogon glomeratus* C *Carex glaucescens* C *Liquidambar styraciflua* C *Pinus* sp. C *Quercus nigra* C *Rhynchospora cephalantha* C *Smilax glauca* C *Smilax laurifolia* C *Gelsemium sempervirens* U *Rhynchospora fascicularis* U *Quercus lyrata* U *Hypericum cistifolium* R *Hypericum hypericoides* R *Morella caroliniensis* R *Rhexia mariana* R *Rhynchospora inexpansa* R *Scirpus cyperinus* R

Plot #20	Plot #25
***Pteridium aquilinum* D**	***Euthamia caroliniana* D**
Andropogon virginicus C	*Acer rubrum* C
Clethra alnifolia C	*Carex glaucescens* C
Dichanthelium dichotomum C	*Clethra alnifolia* C
Gaultheria procumbens C	*Cyrilla racemiflora* C
Gaylussacia frondosa C	*Ilex glabra* C
Hamamelis virginiana C	*Liquidambar styraciflua* C
Lyonia ligustrina C	*Ludwigia linearis* C
Persea palustris C	*Pinus serotina* C
Pinus taeda C	*Rhexia mariana* C
Quercus laurifolia C	*Rhynchospora chalarocephala* C
Quercus nigra C	*Scirpus cyperinus* C
Rhus copallinum C	*Solidago fistulosa* C
Rubus argutus C	*Woodwardia virginica* C
Schizachyrium scoparium C	*Eriocaulon decangulare* U
Vaccinium crassifolium C	*Hypericum cistifolium* U
Vaccinium tenellum C	*Hypericum hypericoides* U
Vitis rotundifolia C	*Juncus canadensis* U
Arundinaria gigantea U	*Juncus repens* U
Ilex glabra U	*Ludwigia pilosa* U
Ilex opaca U	*Nyssa biflora* U
Kalmia carolina U	*Smilax glauca* U
Lyonia mariana U	
Morella caroliniensis U	
Smilax glauca U	

Zone 2

Plot #3 ***Pteridium aquilinum* D** ***Persea palustris* D** ***Gaylussacia frondosa* D** ***Andropogon glaucopsis* D** *Andropogon virginicus* C *Photinia pyrifolia* U *Ilex glabra* C *Lyonia lucida* C *Vaccinium crassifolium* C *Kalmia carolina* C *Gaultheria procumbens* C *Pinus* sp. U *Ilex coriacea* U *Quercus nigra* U *Leucothoe* racemosa U *Cyrilla racemiflora* U *Rhynchospora fascicularis* U *Morella cerifera* U *Gordonia lasianthus* C *Vaccinium formosum* C *Woodwardia virginica* U *Vitis rotundifolia* U *Liquidambar styraciflua* U	**Plot #4** ***Cyrilla racemiflora* D** ***Woodwardia virginica* D** *Xyris fimbriata* C *Pinus serotina* U *Ilex glabra* C *Persea palustris* D *Acer rubrum* U *Rhynchospora fascicularis* C *Andropogon glaucopsis* D *Rhynchospora cephalantha* C *Euthamia caroliniana* U *Quercus nigra* C *Lyonia lucida* D *Morella caroliniensis* C *Smilax laurifolia* C *Liquidambar styraciflua* C	**Plot #5** ***Gaylussacia frondosa* D** ***Morella caroliniensis* D** ***Persea palustris* D** *Andropogon glaucopsis* C *Cyrilla racemiflora* C *Ilex glabra* C *Lyonia lucida* C *Pinus* sp. C *Pteridium aquilinum* C *Smilax laurifolia* C *Vaccinium formosum* C *Gordonia lasianthus* U *Ilex coriacea* U *Liquidambar styraciflua* U *Quercus nigra* U *Rhus copallinum* U *Rhynchospora fascicularis* C *Morella cerifera* R
Plot #7 ***Carex striata* D** ***Ilex glabra* D** ***Liquidambar styraciflua* D** ***Lyonia lucida* D** ***Woodwardia virginica* D** *Andropogon glaucopsis* C *Morella caroliniensis* C *Morella cerifera* C *Persea palustris* C *Pinus* sp. C *Rhynchospora fascicularis* C *Saccharum giganteum* C *Smilax laurifolia* C *Xyris fimbriata* C *Andropogon glomeratus* U *Solidago fistulosa* U *Vaccinium formosum* U	**Plot #9** ***Gaylussacia frondosa* D** ***Persea palustris* D** ***Quercus nigra* D** *Andropogon glaucopsis* C *Gordonia lasianthus* C *Ilex glabra* C *Kalmia carolina* C *Lyonia lucida* C *Morella caroliniensis* C *Morella cerifera* C *Osmanthus americanus* C *Pinus taeda* C *Rhus copallinum* C *Smilax bona-nox* C *Smilax laurifolia* C *Woodwardia virginica* C *Acer rubrum* U *Ilex coriacea* U *Liquidambar styraciflua* U *Photinia pyrifolia* U *Pteridium aquilinum* U *Rhynchospora fascicularis* U *Vitis rotundifolia* U	**Plot #11** ***Andropogon virginicus* D** ***Lyonia ligustrina* D** ***Lyonia lucida* D** ***Lyonia mariana* D** ***Morella cerifera* D** ***Pteridium aquilinum* D** ***Vaccinium crassifolium* D** *Andropogon glaucopsis* C *Dichanthelium dichotomum* C *Gaylussacia dumosa* C *Gaylussacia frondosa* C *Ilex glabra* C *Kalmia carolina* C *Osmanthus americanus* C *Quercus nigra* C *Vitis rotundifolia* C *Vaccinium formosum* C *Cyrilla racemiflora* U *Liquidambar styraciflua* U *Pinus serotina* U

Plot #13	Plot #15	Plot #18
***Cyrilla racemiflora* D** ***Gaylussacia frondosa* D** ***Ilex glabra* D** ***Morella cerifera* D** ***Persea palustris* D** *Kalmia carolina* C *Leucothoe racemosa* C *Lyonia lucida* C *Photinia pyrifolia* C *Pinus taeda* C *Pteridium aquilinum* C *Rhynchospora fascicularis* C *Vaccinium crassifolium* C *Acer rubrum* U *Andropogon glaucopsis* U *Andropogon glomeratus* U *Andropogon virginicus* U *Osmanthus americanus* U *Quercus nigra* U *Rhus copallinum* U *Rhynchospora cephalantha* U *Smilax bona-nox* U *Vaccinium formosum* U *Vitis rotundifolia* U *Woodwardia virginica* U *Xyris fimbriata* U	***Andropogon glaucopsis* D** ***Rubus argutus* D** *Acer rubrum* C *Andropogon glomeratus* C *Cyrilla racemiflora* C *Euthamia caroliniana* C *Liquidambar styraciflua* C *Morella caroliniensis* C *Panicum verrucosum* C *Pinus* sp. C *Rhynchospora cephalantha* C *Rhynchospora gracilenta* C *Saccharum giganteum* C *Carex glaucescens* U *Gelsemium sempervirens* U *Hypericum cistifolium* U *Hypericum hypericoides* U *Ilex glabra* U *Lyonia lucida* U *Persea palustris* U *Photinia pyrifolia* U *Pteridium aquilinum* U *Quercus nigra* U *Rhus copallinum* U *Rhynchospora inexpansa* U *Rubus flagellaris* U *Symphyotrichum dumosum* U *Symplocos tinctoria* U *Vaccinium formosum* U *Woodwardia virginica* U	***Arundinaria gigantea* D** ***Gaylussacia frondosa* D** ***Pteridium aquilinum* D** ***Quercus nigra* D** *Gaultheria procumbens* C *Gaylussacia dumosa* C *Hamamelis virginiana* C *Ilex glabra* C *Kalmia carolina* C *Leucothoe racemosa* C *Lyonia ligustrina* C *Morella cerifera* C *Persea palustris* C *Quercus laurifolia* C *Rhus copallinum* C *Vaccinium tenellum* C *Andropogon glomeratus* U *Andropogon virginicus* U *Gelsemium sempervirens* U *Lyonia lucida* U *Pinus taeda* U *Smilax glauca* U *Solidago odora* U *Vaccinium crassifolium* U *Vaccinium fuscatum* U *Vitis rotundifolia* U

Zone 3

Plot #16	Plot #17	Plot #21
***Ilex glabra* D** ***Morella caroliniensis* D** *Andropogon glaucopsis* C *Andropogon glomeratus* C *Liquidambar styraciflua* C *Lyonia lucida* C *Persea palustris* C *Pinus* sp. C *Quercus laurifolia* C *Quercus nigra* C *Rhynchospora cephalantha* C *Rubus argutus* C *Symplocos tinctoria* C *Vaccinium formosum* C *Carex elliottii* U *Euthamia caroliniana* U *Gelsemium sempervirens* U *Ilex coriacea* U *Ilex opaca* U *Pinus taeda* U *Rhynchospora chalarocephala* U *Saccharum giganteum* U *Smilax glauca* U *Smilax laurifolia* U *Vitis rotundifolia* U	***Andropogon virginicus* D** ***Carex glaucescens* D** ***Cyrilla racemiflora* D** ***Liquidambar styraciflua* D** ***Quercus nigra* D** *Vitis rotundifolia* C *Morella caroliniensis* C *Woodwardia virginica* C *Rubus argutus* C *Saccharum giganteum* U *Pteridium aquilinum* C *Hypericum cistifolium* U *Rhynchospora microcephala* C *Rhynchospora gracilenta* U *Quercus phellos* U *Pinus taeda* U *Andropogon glaucopsis* C *Rhynchospora chalarocephala* C *Vaccinium formosum* U *Persea palustris* C *Ilex glabra* C *Lyonia lucida* C *Magnolia virginiana* U *Quercus michauxii* U *Smilax laurifolia* U *Juncus coriaceus* U *Rhus copallinum* C *Gaylussacia frondosa* R	***Liquidambar styraciflua* D** ***Rubus argutus* D** *Acer rubrum* C *Carex glaucescens* C *Dichanthelium dichotomum* C *Dichanthelium scabriusculum* C *Mikania scandens* C *Morella cerifera* C *Persea palustris* C *Rhexia mariana* C *Rhynchospora glomerata* C *Saccharum giganteum* C *Smilax glauca* C *Toxicodendron radicans* C *Woodwardia areolata* C *Xyris fimbriata* C *Andropogon glomeratus* U *Arundinaria gigantea* U *Erechtites hieraciifolia* U *Gelsemium sempervirens* U *Hypericum hypericoides* U *Leersia oryzoides* U *Ludwigia pilosa* U *Magnolia virginiana* U *Quercus michauxii* U *Quercus lyrata* U *Scirpus cyperinus* U *Smilax laurifolia* U *Vitis rotundifolia* U *Eupatorium capillifolium* R

Plot #22	**Plot #23**	**Plot #24**
***Andropogon glomeratus* D**	***Cyrilla racemiflora* D**	***Cyrilla racemiflora* D**
***Liquidambar styraciflua* D**	***Drosera intermedia* D**	*Clethra alnifolia* C
Acer rubrum C	***Xyris fimbriata* D**	*Eupatorium mohrii* C
Andropogon glaucopsis C	*Acer rubrum* C	*Euthamia caroliniana* C
Gaylussacia frondosa C	*Carex glaucescens* C	*Liquidambar styraciflua* C
Lyonia lucida C	*Clethra alnifolia* C	*Lyonia lucida* C
Morella caroliniensis C	*Eriocaulon decangulare* C	*Rhynchospora cephalantha* C
Persea palustris C	*Ilex glabra* C	*Rhynchospora microcephala* C
Pteridium aquilinum C	*Juncus canadensis* C	*Utricularia gibba* C
Quercus nigra C	*Liquidambar styraciflua* C	*Xyris fimbriata* C
Symplocos tinctoria C	*Morella caroliniensis* C	*Acer rubrum* U
Vitis rotundifolia C	*Morella cerifera* C	*Amphicarpum purshii* U
Cyrilla racemiflora U	*Rhexia mariana* C	*Andropogon glomeratus* U
Dichanthelium aciculare U	*Rhynchospora chalarocephala* C	*Arundinaria gigantea* U
Euthamia caroliniana U	*Woodwardia virginica* C	*Carex glaucescens* U
Hypericum crux-andreae U	*Eleocharis microcarpa* U	*Hypericum cistifolium* U
Ilex glabra U	*Euthamia caroliniana* U	*Hypericum crux-andreae* U
Kalmia carolina U	*Hypericum cistifolium* U	*Hypericum hypericoides* U
Magnolia virginiana U	*Ludwigia pilosa* U	*Juncus canadensis* U
Morella cerifera U	*Pinus serotina* U	*Ludwigia pilosa* U
Nyssa biflora U	*Quercus lyrata* U	*Morella caroliniensis* U
Photinia pyrifolia U	*Quercus michauxii* U	*Panicum verrucosum* U
Pinus sp. U	*Quercus nigra* U	*Persea palustris* U
Quercus lyrata U	*Quercus pagoda* U	*Photinia pyrifolia* U
Quercus phellos U	*Quercus phellos* U	*Pinus* sp. U
Rhexia mariana U	*Sabatia difformis* U	*Quercus michauxii* U
Rhynchospora chalarocephala U	*Saccharum giganteum* U	*Quercus nigra* U
Rubus argutus U	*Smilax glauca* U	*Quercus phellos* U
Smilax glauca U	*Smilax laurifolia* U	*Schizachyrium scoparium* U
Smilax laurifolia U	*Taxodium ascendens* U	*Smilax laurifolia* U
Woodwardia virginica U	*Utricularia purpurea* U	*Solidago fistulosa* U
		Symphyotrichum dumosum U
		Woodwardia virginica U
		Viola primulifolia U
		Xyris ambigua U

Zone 4

Plot # 1	**Plot #2**
***Juncus canadensis* D** ***Juncus effusus* D** ***Saccharum giganteum* D** ***Scirpus cyperinus* D** *Acer rubrum* C *Ludwigia linearis* C *Ludwigia pilosa* C *Polygonum hydropiperoides* C *Triadenum virginicum* C *Woodwardia virginica* C *Xyris fimbriata* C *Andropogon glomeratus* U *Carex glaucescens* U *Euthamia carolinianaU* *Liquidambar styraciflua* U *Rhynchospora cephalantha* U *Taxodium distichum* U	***Juncus canadensis* D** ***Juncus effusus* D** ***Scirpus cyperinus* D** *Acer rubrum* C *Carex glaucescens* C *Ludwigia linearis* C *Polygonum hydropiperoides* C *Rhynchospora microcephala* C *Saccharum giganteum* C *Taxodium distichum* C *Triadenum virginicum* C *Woodwardia virginica* C *Xyris fimbriata* C *Fraxinus pennsylvanica* U *Ludwigia pilosa* U *Pinus serotina* U *Toxicodendron radicans* U

Phase II

Zone 1

Plot #26	Plot #34	Plot #47
***Euthamia caroliniana* D**	***Juncus canadensis* D**	***Euthamia caroliniana* D**
Andropogon glaucopsis C	*Acer rubrum* C	***Rhynchospora inexpansa* D**
Arundinaria gigantea C	*Dichanthelium scabriusculum* C	***Solidago fistulosa* D**
Cyrilla racemiflora C	*Dichanthelium scoparium* C	*Andropogon glaucopsis* C
Eupatorium mohrii C	*Hypericum crux-andreae* C	*Carex glaucescens* C
Eupatorium pilosum C	*Hypericum hypericoides* C	*Cyrilla racemiflora* C
Lyonia lucida C	*Panicum verrucosum* C	*Dichanthelium aciculare* C
Pteridium aquilinum C	*Rhexia mariana* C	*Dichanthelium scoparium* C
Rhexia mariana C	*Rhynchospora chalarocephala* C	*Eupatorium mohrii* C
Rhynchospora inexpansa C	*Rubus argutus* C	*Eupatorium pilosum* C
Scleria triglomerata C	*Scirpus cyperinus* C	*Eupatorium* sp.C
Solidago arguta C	*Utricularia gibba* C	*Pinus taeda* C
Solidago fistulosa C	*Utricularia purpurea* C	*Pteridium aquilinum* C
Solidago odora C	*Xyris fimbriata* C	*Rhexia mariana* C
Andropogon virginicus U	*Andropogon glaucopsis* U	*Scleria triglomerata* C
Carex glaucescens U	*Andropogon glomeratus* U	*Acer rubrum* U
Dichanthelium scoparium U	*Carex glaucescens* U	*Andropogon virginicus* U
Eriocaulon decangulare U	*Cyrilla racemiflora* U	*Arundinaria gigantea* U
Eupatorium rotundifolium U	*Dichanthelium dichotomum* U	*Eragrostis spectabilis* U
Hypericum cistifolium U	*Drosera intermedia* U	*Eupatorium rotundifolium* U
Hypericum hypericoides U	*Eleocharis tuberculosa* U	*Eupatorium* sp. U
Pinus palustris U	*Erechtites hieraciifolia* U	*Hypericum crux-andreae* U
Pinus sp. U	*Eupatorium capillifolium* U	*Panicum verrucosum* U
Polygala cruciata U	*Euthamia caroliniana* U	*Pinus palustris* U
Polygala lutea U	*Gelsemium sempervirens* U	*Rhynchospora cephalantha* U
Rhynchospora sp. U	*Ilex glabra* U	*Rhynchospora globularis* U
Rubus argutus U	*Nyssa biflora* U	*Rhynchospora* sp. U
Rubus flagellaris U	*Persea palustris* U	*Rubus argutus* U
Saccharum giganteum U	*Pinus* sp. U	*Saccharum giganteum* U
Vitis rotundifolia U	*Proserpinaca intermedia* U	*Smilax bona-nox* U
	Smilax glauca U	*Smilax glauca* U
	Smilax laurifolia U	*Symphyotrichum dumosum* U
	Taxodium ascendens U	*Viola primulifolia* U
	Woodwardia areolata U	
	Woodwardia virginica U	
	Viola primulifolia U	

Zone 3

Plot #31	**Plot #33**	**Plot #45**
Acer rubrum **D**	***Carex glaucescens*** **D**	***Acer rubrum*** **D**
Carex glaucescens **D**	***Euthamia caroliniana*** **D**	***Carex glaucescens*** **D**
Dichanthelium scabriusculum **D**	***Lyonia lucida*** **D**	***Liquidambar styraciflua*** **D**
Solidago fistulosa **D**	***Pteridium aquilinum*** **D**	***Saccharum giganteum*** **D**
Clethra alnifolia C	*Andropogon glaucopsis* C	***Woodwardia virginica*** **D**
Dichanthelium dichotomum C	*Eupatorium capillifolium* C	*Andropogon glaucopsis* C
Euthamia caroliniana C	*Ilex coriacea* C	*Andropogon glomeratus* C
Ilex glabra C	*Liquidambar styraciflua* C	*Andropogon virginicus* C
Juncus canadensis C	*Morella caroliniensis* C	*Erechtites hieraciifolia C*
Morella caroliniensis C	*Osmunda cinnamomea* C	*Eupatorium capillifolium* C
Nyssa biflora C	*Panicum verrucosum* C	*Euthamia caroliniana* C
Persea palustris C	*Persea palustris* C	*Lyonia lucida* C
Proserpinaca intermedia C	*Saccharum giganteum* C	*Persea palustris* C
Rhexia mariana C	*Solidago fistulosa* C	*Rubus argutus* C
Rhynchospora cephalantha C	*Woodwardia virginica* C	*Scirpus cyperinus* C
Rhynchospora gracilenta C	*Andropogon glomeratus* U	*Solidago fistulosa* C
Rhynchospora microcephala C	*Eupatorium mohrii* U	*Toxicodendron radicans* C
Saccharum giganteum C	*Eupatorium rotundifolium* U	*Arundinaria gigantea* U
Scirpus cyperinus C	*Gelsemium sempervirens* U	*Baccharis halimifolia* U
Utricularia purpurea C	*Ilex glabra* U	*Hypericum hypericoides* U
Woodwardia virginica C	*Magnolia virginiana* U	*Ilex opaca* U
Xyris fimbriata C	*Pinus* sp. U	*Mikania scandens* U
Andropogon glomeratus U	*Quercus laurifolia* U	*Panicum verrucosum* U
Dichanthelium scoparium U	*Quercus nigra* U	*Pinus serotina* U
Photinia pyrifolia U	*Rhexia mariana* U	*Polygonum hydropiperoides* U
Pinus serotina U	*Rhynchospora chalarocephala* U	*Quercus lyrata* U
Quercus laurifolia U	*Rubus argutus* U	*Rhynchospora cephalantha* U
Quercus pagoda U	*Scirpus cyperinus* U	*Rhynchospora chalarocephala* U
Toxicodendron radicans U	*Smilax glauca* U	*Smilax bona-nox* U
Woodwardia areolata U	*Smilax laurifolia* U	*Smilax glauca* U
Xyris difformis U	*Woodwardia areolata* U	*Vaccinium formosum* U
Taxodium ascendens U	*Vaccinium formosum* U	*Viola primulifolia* U
Panicum anceps U	*Verbena scabra* U	*Woodwardia areolata* U
Ludwigia pilosa U	*Vitis rotundifolia* U	
Smilax laurifolia U		
Rubus argutus U		
Liquidambar styraciflua U		
Ludwigia linearis U		
Pinus sp. U		
Rhus copallinum U		

Plot #46

***Dichanthelium scabriusculum* D**
***Juncus canadensis* D**
***Rhynchospora chalarocephala* D**
***Utricularia gibba* D**
Acer rubrum C
Carex glaucescens C
Dichanthelium dichotomum C
Dichanthelium scoparium C
Erechtites hieraciifolia C
Euthamia caroliniana C
Nyssa biflora C
Panicum verrucosum C
Rhexia mariana C
Rhynchospora microcephala C
Scirpus cyperinus C
Solidago fistulosa C
Woodwardia virginica C
Xyris fimbriata C
Saccharum giganteum C
Eleocharis tuberculosa U
Eupatorium capillifolium U
Hypericum cistifolium U
Hypericum crux-andreae U
Ludwigia pilosa U
Ludwigia sp. U
Pinus sp. U
Proserpinaca intermedia U
Quercus lyrata U
Rubus flagellaris U
Rhynchospora gracilenta U
Smilax laurifolia U
Taxodium distichum U
Utricularia purpurea U
Ludwigia linearis R

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Zone 4

Plot #27	**Plot #28**	**Plot #29**
Euthamia caroliniana **D** ***Eupatorium capillifolium*** **D** ***Solidago fistulosa*** **D** *Andropogon glaucopsis* C *Carex glaucescens* C *Cyrilla racemiflora* C *Dichanthelium aciculare* C *Dichanthelium scoparium* C *Leucothoe racemosa* C *Persea palustris* C *Pinus taeda* C *Rhexia mariana* C *Rhynchospora glomerata* C *Saccharum giganteum* C *Andropogon virginicus* U *Andropogon* U *Fraxinus pennsylvanica* U *Juncus marginatus* U *Liquidambar styraciflua* U *Lyonia lucida* U *Morella caroliniensis* U *Pteridium aquilinum* U *Quercus nigra* U *Rhus copallinum* U *Rhynchospora cephalantha* U *Rubus argutus* U *Smilax bona-nox* U *Vitis rotundifolia* U *Vaccinium formosum* U *Woodwardia virginica* U	***Andropogon virginicus*** **D** ***Dichanthelium dichotomum*** **D** ***Dichanthelium scoparium*** **D** ***Euthamia caroliniana*** **D** ***Eupatorium capillifolium*** **D** *Andropogon glaucopsis* C *Andropogon glomeratus* C *Baccharis halimifolia* C *Callicarpa americana* C *Cuphea carthagenensis* C *Hypericum cistifolium* C *Hypericum hypericoides* C *Ilex glabra* C *Juncus canadensis* C *Juncus marginatus* C *Ludwigia alternifolia* C *Mikania scandens* C *Panicum verrucosum* C *Potentilla canadensis* C *Rhexia mariana* C *Rhynchospora chalarocephala* C *Rhynchospora inexpansa* C *Rubus argutus* C *Pinus* sp. C *Pluchea odorata* C *Saccharum giganteum* C *Scirpus cyperinus* C *Solanum carolinense* C *Solidago fistulosa* C *Viola primulifolia* C *Carex glaucescens* U *Clethra alnifolia* U *Eupatorium compositifolium* U *Eupatorium rotundifolium* U *Juncus effusus* U *Ludwigia linearis* U *Ludwigia pilosa* U *Morella caroliniensis* U *Packera anonyma* U *Persea palustris* U *Pluchea foetida* U *Polygonum hydropiperoides* U *Pycnanthemum muticum* U *Quercus nigra* U *Quercus pagoda* U *Rhus copallinum* U *Rhynchospora glomerata* U *Smilax glauca* U *Vitis rotundifolia* U *Xyris difformis* U *Xyris fimbriata* U	***Dichanthelium dichotomum*** **D** ***Dichanthelium scoparium*** **D** ***Eupatorium capillifolium*** **D** *Baccharis halimifolia* C *Callicarpa americana* C *Clethra alnifolia* C *Euthamia caroliniana* C *Juncus dichotomus* C *Juncus marginatus* C *Liquidambar styraciflua* C *Ludwigia alternifolia* C *Mikania scandens* C *Persea palustris* C *Polygonum hydropiperoides* C *Rhynchospora inexpansa* C *Rubus argutus* C *Saccharum giganteum* C *Sambucus nigra* C *Scirpus cyperinus* C *Solidago fistulosa* C *Andropogon virginicus* U *Carex lurida* U *Fraxinus pennsylvanica* U *Galium tinctorium* U *Gelsemium sempervirens* U *Hypericum hypericoides* U *Hypericum mutilum* U *Juncus canadensis* U *Juncus coriaceus* U *Juncus effusus* U *Morella cerifera* U *Osmunda regalis* U *Oxalis dillenii* U *Parthenocissus quinquefolia* U *Pinus* sp. U *Pluchea foetida* U *Potentilla canadensis* U *Pycnanthemum muticum* U *Quercus laurifolia* U *Quercus lyrata* U *Rhus copallinum* U *Rhynchospora chalarocephala* U *Rhynchospora glomerata* U *Sanicula canadensis* U *Scutellaria integrifolia* U *Solanum carolinense* U *Smilax glauca* U *Solidago canadensis* U *Solidago rugosa* U *Viola primulifolia* U *Verbascum thapsus* U *Taxodium distichum* R

Plot #30	**Plot #35**	**Plot #36**
***Andropogon virginicus* D**	***Dichanthelium dichotomum* D**	*Acer rubrum C*
***Eupatorium capillifolium* D**	***Rhynchospora inexpansa* D**	*Baccharis halimifolia C*
***Solidago fistulosa* D**	***Panicum verrucosum* D**	*Carex glaucescens C*
Andropogon glaucopsis C	***Saccharum giganteum* D**	*Dichanthelium dichotomum C*
Carex glaucescens U	***Scirpus cyperinus* D**	*Dichanthelium scabriusculum C*
Clethra alnifolia C	*Acer rubrum* C	*Dichanthelium scoparium C*
Dichanthelium dichotomum C	*Andropogon virginicus* C	*Erechtites hieraciifolia C*
Dichanthelium scoparium C	*Carex albolutescens* C	*Eupatorium capillifolium C*
Euthamia caroliniana C	*Dichanthelium scoparium* C	*Euthamia caroliniana C*
lex glabra C	*Eleocharis tuberculosa* C	*Juncus debilis C*
Liquidambar styraciflua C	*Erechtites hieraciifolia* C	*Ludwigia alternifolia C*
Pinus serotina C	*Eupatorium capillifolium* C	*Mikania scandens C*
Rhexia mariana C	*Euthamia caroliniana* C	*Panicum verrucosum C*
Rubus argutus C	*Juncus canadensis* C	*Polygonum hydropiperoides C*
Saccharum giganteum C	*Juncus dichotomus* C	*Rhexia mariana C*
Scirpus cyperinus C	*Juncus marginatus* C	*Rubus argutus C*
Smilax glauca C	*Ludwigia alternifolia* C	*Saccharum giganteum C*
Solidago rugosa C	*Mikania scandens* C	*Scirpus cyperinus C*
Antennaria plantaginifolia U	*Persea palustris* C	*Scutellaria integrifolia C*
Callicarpa americana U	*Rhexia mariana* C	*Typha latifolia C*
Erechtites hieraciifolia U	*Rhynchospora glomerata* C	*Agrostis hyemalis U*
Fraxinus pennsylvanica U	*Agrostis hyemalis* U	*Andropogon glomeratus U*
Lyonia lucida U	*Baccharis halimifolia* U	*Andropogon virginicus U*
Morella caroliniensis U	*Nyssa biflora* U	*Carex albolutescens U*
Nyssa biflora U	*Osmunda regalis* U	*Chasmanthium laxum U*
Panicum verrucosum U	*Pinus serotina* U	*Eleocharis microcarpa U*
Prunus serotina U	*Pinus* sp. U	*Fraxinus pennsylvanica U*
Quercus laurifolia U	*Pluchea foetida* U	*Galium tinctorium U*
Quercus lyrata U	*Polygonum hydropiperoides* U	*Hypericum hypericoides U*
Quercus nigra U	*Potentilla canadensis* U	*Ilex opaca U*
Rhynchospora glomerata U	*Quercus pagoda* U	*Juncus canadensis U*
Rhus copallinum U	*Rhynchospora caduca* U	*Juncus dichotomus U*
Smilax laurifolia U	*Rhynchospora elliottii* U	*Juncus effusus U*
Vaccinium formosum U	*Toxicodendron radicans* U	*Juncus marginatus U*
Vitis rotundifolia U	*Typha latifolia* U	*Ludwigia pilosa U*
Woodwardia virginica U	*Scutellaria integrifolia* R	*Morella cerifera U*
Quercus pagoda R		*Nyssa biflora U*
		Nyssa sylvatica U
		Pinus sp. U
		Parthenocissus quinquefolia U
		Potentilla canadensis U
		Rhynchospora inexpansa U
		Quercus laurifolia U
		Quercus lyrata U
		Quercus nigra U
		Quercus pagoda U
		Smilax glauca U
		Solidago fistulosa U
		Solidago rugosa U
		Solidago sp. U
		Vaccinium formosum U
		Viola primulifolia U
		Woodwardia virginica U
		Xyris caroliniana U
		Xyris difformis U
		Xyris sp. U
		Woodwardia areolata R

Plot #37	**Plot #38**	**Plot #39**
***Mikania scandens* D** ***Rubus argutus* D** ***Rubus flagellaris* D** ***Scirpus cyperinus* D** *Baccharis halimifolia* C *Carex albolutescens* C *Dichanthelium scoparium* C *Erechtites hieraciifolia* C *Eupatorium capillifolium* C *Juncus dichotomus* C *Lonicera japonica* C *Persea palustris* C *Polygonum hydropiperoides* C *Rhexia mariana* C *Rhynchospora glomerata* C *Saccharum giganteum* C *Smilax rotundifolia* C *Typha latifolia* C *Acer rubrum* U *Andropogon glaucopsis* U *Andropogon glomeratus* U *Berchemia scandens* U *Callicarpa americana* U *Carex glaucescens* U *Dichanthelium dichotomum* U *Euthamia caroliniana* U *Gelsemium sempervirens* U *Hypericum hypericoides* U *Ilex opaca* U *Juncus coriaceus* U *Juncus debilis* U *Juncus marginatus* U *Liquidambar styraciflua* U *Ludwigia alternifolia* U *Ludwigia pilosa* U *Pinus serotina* U *Pluchea odorata* U *Pycnanthemum muticum* U *Quercus laurifolia* U *Quercus nigra* U *Quercus pagoda* U *Quercus phellos* U *Rhynchospora caduca* U *Saccharum alopecuroidum* U *Solanum carolinense* U *Toxicodendron radicans* U	***Dichanthelium dichotomum* D** ***Rubus argutus* D** *Acer rubrum* C *Andropogon glaucopsis* C *Andropogon virginicus* C *Baccharis halimifolia* C *Carex albolutescens* C *Carex glaucescens* C *Dichanthelium scoparium* C *Erechtites hieraciifolia* C *Eupatorium capillifolium* C *Euthamia caroliniana* C *Juncus debilis* C *Juncus dichotomus* C *Ludwigia alternifolia* C *Ludwigia pilosa* C *Mikania scandens* C *Panicum verrucosum* C *Persea palustris* C *Rhexia mariana* C *Rhynchospora glomerata* C *Rhynchospora inexpansa* C *Saccharum giganteum* C *Scirpus cyperinus* C *Woodwardia virginica* C *Carex lurida* U *Dichanthelium scabriusculum* U *Gelsemium sempervirens* U *Juncus marginatus* U *Liquidambar styraciflua* U *Nyssa biflora* U *Panicum rigidulum* U *Pinus* sp. U *Pluchea odorata* U *Quercus laurifolia* U *Quercus lyrata* U *Rhynchospora caduca* U *Smilax auriculata* U *Smilax glauca* U *Solidago fistulosa* U *Woodwardia areolata* U *Viola primulifolia* U *Xyris fimbriata* U	***Scirpus cyperinus* D** *Acer rubrum* C *Carex glaucescens* C *Dichanthelium dichotomum* C *Euthamia caroliniana* C *Juncus canadensis* C *Ludwigia linearis* C *Ludwigia pilosa* C *Rhexia mariana* C *Rhynchospora cephalantha* C *Rhynchospora glomerata* C *Saccharum giganteum* C *Solidago fistulosa* C *Utricularia purpurea* C *Utricularia gibba* C *Woodwardia virginica* C *Xyris fimbriata* C *Baccharis halimifolia* U *Dichanthelium scabriusculum* U *Eupatorium capillifolium* U *Fraxinus pennsylvanica* U *Hypericum cistifolium* U *Ludwigia alternifolia* U *Mikania scandens* U *Persea palustris* U *Pinus* sp. U *Pluchea odorata* U *Quercus lyrata* U *Taxodium distichum* U *Toxicodendron radicans* U *Typha latifolia* U *Viola primulifolia* U *Smilax auriculata* R

Plot #40	Plot #41	Plot #42
***Juncus canadensis* D** ***Scirpus cyperinus* D** *Acer rubrum* C *Carex glaucescens* C *Dichanthelium scoparium* C *Ludwigia pilosa* C *Polygonum hydropiperoides* C *Rhynchospora glomerata* C *Rhynchospora microcephala* C *Saccharum giganteum* C *Utricularia gibba* C *Woodwardia virginica* C *Xyris fimbriata* C *Andropogon glaucopsis* U *Andropogon virginicus* U *Dichanthelium* sp. U *Eleocharis tuberculosa* U *Erechtites hieraciifolia* U *Eupatorium capillifolium* U *Euthamia caroliniana* U *Ludwigia linearis* U *Mikania scandens* U *Nyssa biflora* U *Panicum verrucosum* U *Persea palustris* U *Rhynchospora macrostachya* U *Rubus argutus* U *Solidago fistulosa* U *Vaccinium formosum* U	***Scirpus cyperinus* D** ***Acer rubrum* D** *Erechtites hieraciifolia* C *Eupatorium capillifolium* C *Ludwigia pilosa* C *Polygonum hydropiperoides* C *Rhexia mariana* C *Saccharum giganteum* C *Utricularia gibba* C *Woodwardia virginica* C *Xyris fimbriata* C *Andropogon glaucopsis* U *Liquidambar styraciflua* U *Ludwigia linearis* U *Ludwigia* sp. U *Mikania scandens* U *Panicum verrucosum* U *Persea palustris* U *Rhynchospora glomerata* U *Solidago fistulosa* U *Utricularia radiata* U	***Scirpus cyperinus* D** *Acer rubrum* C *Dichanthelium scoparium* C *Eleocharis tuberculosa* C *Juncus canadensis* C *Ludwigia linearis* C *Pinus serotina* *Polygonum hydropiperoides* C *Saccharum giganteum* C *Utricularia gibba* C *Xyris fimbriata* C *Carex glaucescens* U *Eupatorium capillifolium* U *Hypericum hypericoides* U *Juncus* sp.U *Ludwigia palustris* U *Mikania scandens* U *Rhynchospora cephalantha* U *Solidago fistulosa* C *Woodwardia virginica* U *Xyris* sp. U

Plot #43	Plot #44
***Carex glaucescens* D** ***Euthamia caroliniana* D** ***Solidago fistulosa* D** ***Woodwardia virginica* D** *Acer rubrum* C *Andropogon glaucopsis* C *Andropogon glomeratus* C *Erechtites hieraciifolia* C *Eupatorium capillifolium* C *Rhexia mariana* C *Rhynchospora cephalantha* C *Rhynchospora chalarocephala* C *Rhynchospora gracilenta* C *Rubus argutus* C *Saccharum giganteum* C *Dichanthelium dichotomum* U *Eleocharis tuberculosa* U *Fraxinus pennsylvanica* U *Gelsemium sempervirens* U *Hypericum hypericoides* U *Liquidambar styraciflua* U *Ludwigia pilosa* U *Lyonia lucida* U *Nyssa biflora* U *Panicum verrucosum* U *Persea palustris* U *Scirpus cyperinus* U *Toxicodendron radicans* U	***Euthamia caroliniana* D** ***Solidago fistulosa* D** *Acer rubrum* C *Andropogon glomeratus* C *Carex glaucescens* C *Cyrilla racemiflora* C *Erechtites hieraciifolia* C *Eupatorium capillifolium* C *Ilex glabra* C *Juncus canadensis* C *Juncus marginatus* C *Liquidambar styraciflua* C *Lyonia lucida* C *Mikania scandens* C *Morella caroliniensis* C *Panicum verrucosum* C *Persea palustris* C *Pinus serotina* C *Rhexia mariana* C *Rhynchospora cephalantha* C *Rhynchospora chalarocephala* C *Rhynchospora gracilenta* C *Rubus argutus* C *Saccharum giganteum* C *Scirpus cyperinus* C *Smilax laurifolia* C *Viola primulifolia* C *Woodwardia virginica* C *Xyris fimbriata* C *Andropogon glaucopsis* U *Dichanthelium scabriusculum* U *Dichanthelium scoparium* U *Gelsemium sempervirens* U *Hypericum cistifolium* U *Hypericum hypericoides* U *Ludwigia pilosa* U *Nyssa biflora* U *Quercus laurifolia* U *Quercus lyrata* U *Quercus nigra* U *Rhynchospora inexpansa* U *Smilax glauca* U

Zone 5

Plot #32	Plot #48
***Andropogon glaucopsis* D** ***Eupatorium capillifolium* D** *Acer rubrum* C *Carex glaucescens* C *Euthamia caroliniana* C *Gordonia lasianthus* C *Morella cerifera* C *Nyssa biflora* C *Panicum verrucosum* C *Persea palustris* C *Pinus* sp. C *Polygonum hydropiperoides* C *Rhexia mariana* C *Rubus argutus* C *Solidago fistulosa* C *Taxodium distichum* C *Toxicodendron radicans* C *Woodwardia virginica* C *Gelsemium sempervirens* U *Hypericum hypericoides* U *Ilex opaca* U *Lyonia lucida* U *Phragmites australis* U *Rubus flagellaris* U *Saccharum giganteum* U *Salix caroliniana* U *Scirpus cyperinus* U *Smilax laurifolia* U *Vitis rotundifolia* U *Woodwardia areolata* U *Xyris difformis* C	***Andropogon glomeratus* D** ***Eupatorium capillifolium* D** ***Ilex coriacea* D** ***Ilex glabra* D** ***Pteridium aquilinum* D** *Acer rubrum* C *Andropogon glaucopsis* C *Andropogon virginicus* C *Dichanthelium strigosum* C *Eupatorium pilosum* C *Euthamia caroliniana* C *Galactia* sp. C *Gaylussacia frondosa* C *Kalmia carolina* C *Liquidambar styraciflua* C *Persea palustris* C *Pinus palustris* C *Pinus* sp. C *Pinus taeda* C *Quercus nigra* C *Scleria triglomerata* C *Symphyotrichum dumosum* C *Vaccinium crassifolium* C *Aristida purpurascens* U *Baccharis halimifolia* U *Chasmanthium laxum* U *Clethra alnifolia* U *Dichanthelium scoparium* U *Dichanthelium* sp. U *Eupatorium rotundifolium* U *Gelsemium sempervirens* U *Ilex opaca* U *Lyonia ligustrina* U *Morella cerifera* U *Quercus lyrata* U *Quercus pagoda* U *Rhus copallinum* U *Rubus flagellaris* U *Saccharum giganteum* U *Solidago arguta* U *Smilax glauca* U *Vaccinium tenellum* U

LIST OF VASCULAR PLANT SPECIES ENCOUNTERED IN FORTY-EIGHT PLOTS DURING THE 2005 SAMPLING OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S CROATAN MITIGATION AREA

Common and scientific names follow those used in: Kartesz, J.T. 1999. A Synonymized Checklist and Atlas with Biological Attributes for the Vascular Flora of the United States, Canada, and Greenland. Synthesis of the North American Flora, Version 1.0. North Carolina Botanical Garden, Chapel Hill, NC.

Acer rubrum L. Red Maple
Agalinis purpurea (L.) Pennell Purple False Foxglove
Agrostis hyemalis (Walt.) B.S.P. Winter Bent
Amphicarpum purshii Kunth Blue Maiden-Cane
Andropogon glaucopsis Ell. Coastal Bluestem
Andropogon glomeratus (Walt.) B.S.P. Bushy Bluestem
Andropogon L. Bluestem
Andropogon virginicus L. Broom-Sedge
Antennaria plantaginifolia (L.) Richards. Woman's-Tobacco
Aristida stricta Michx. Pineland Three-Awn
Aristida purpurascens var. *virgata* (Trin.) Allred Arrow-Feather Three-awn
Arundinaria gigantea ssp. *tecta* (Walt.) McClure Giant Cane
Baccharis halimifolia L. Groundseltree
Berchemia scandens (Hill) K. Koch Alabama Supplejack
Callicarpa americana L. American Beauty-Berry
Carex albolutescens Schwein. Green-White Sedge
Carex elliottii Schwein. & Torr. Elliott's Sedge
Carex glaucescens Ell. Southern Waxy Sedge
Carex lurida Wahlenb. Sallow Sedge
Carex striata var. *brevis* Bailey Walter's Sedge
Chasmanthium laxum (L.) Yates Slender Wood-Oats
Clethra alnifolia L. Coastal Sweet-Pepperbush
Cuphea carthagenensis (Jacq.) J.F. Macbr. Colombian Waxweed
Cyrilla racemiflora L. Swamp Titi
Dichanthelium (A.S. Hitchc. & Chase) Gould Rosette Grass
Dichanthelium aciculare (Desv. Ex Poir.) Gould & C.A. Clark Needle-Leaf Rosette Grass
Dichanthelium dichotomum (L.) Gould Cypress Rosette Grass
Dichanthelium scabriusculum (Ell.) Gould & C.A. Clark Woolly Rosette Grass
Dichanthelium scoparium (Lam.) Gould Broom Rosette Grass
Dichanthelium strigosum (Muhl. Ex Ell.) Freckmann Rough-Hair Rosette Grass
Drosera intermedia Hayne Spoon-Leaf Sundew
Eleocharis microcarpa Torr. Small-Fruit Spike-Rush
Eleocharis tuberculosa (Michx.) Roemer & J.A. Schultes Cone-Cup Spike-Rush
Eragrostis spectabilis (Pursh) Steud. Petticoat-Climber
Erechtites hieraciifolia (L.) Raf. Ex DC. American Burnweed
Eriocaulon decangulare L. Ten-Angle Pipewort

Eupatorium capillifolium (Lam.) Small Dog-Fennel
Eupatorium compositifolium Walt. Yankeeweed
Eupatorium mohrii Greene Mohr's Thoroughwort
Eupatorium pilosum Walt. Rough Boneset
Eupatorium rotundifolium L. Round-Leaf Thoroughwort
Euthamia caroliniana (L.) Greene ex Porter & Britt. Slender Goldentop
Fraxinus pennsylvanica Marsh. Green Ash
Galactia P. Br. Milk-Pea
Galium tinctorium (L.) Scop. Stiff Marsh Bedstraw
Gaultheria procumbens L. Eastern Teaberry
Gaylussacia dumosa (Andr.) Torr. & Gray Dwarf Huckleberry
Gaylussacia frondosa (L.) Torr. & Gray ex Torr. Blue Huckleberry
Gelsemium sempervirens (L.) Ait. F. Evening Trumpet-Flower
Gordonia lasianthus (L.) Ellis Loblolly-Bay
Hamamelis virginiana L. American Witch-Hazel
Hypericum cistifolium Lam. Round-Pod St. John's-Wort
Hypericum crux-andreae (L.) Crantz St. Peter's-Wort
Hypericum hypericoides (L.) Crantz St. Andrew's-Cross
Hypericum mutilum L. Dwarf St. John's-Wort
Ilex coriacea (Pursh) Chapman Large Gallberry
Ilex glabra (L.) Gray Inkberry
Ilex opaca Ait. American Holly
Juncus canadensis J. Gay ex Laharpe Canadian Rush
Juncus coriaceus Mackenzie Leathery Rush
Juncus debilis Gray Weak Rush
Juncus dichotomus Ell. Forked Rush
Juncus effusus L. Lamp Rush
Juncus marginatus Rostk. Grass-Leaf Rush
Juncus repens Michx. Lesser Creeping Rush
Juncus scirpoides Lam. Needle-Pod Rush
Juncus L. Rush
Kalmia carolina Small Carolina-Laurel
Leersia oryzoides (L.) Sw. Rice Cut Grass
Leucothoe racemosa (L.) Gray Swamp Doghobble
Liquidambar styraciflua L. Sweet-Gum
Lonicera japonica Thunb. Japanese Honeysuckle
Ludwigia alternifolia L. Seedbox
Ludwigia linearis Walt. Narrow-Leaf Primrose-Willow
Ludwigia palustris (L.) Ell. Marsh Primrose-Willow
Ludwigia pilosa Walt. Hairy Primrose-Willow
Ludwigia L. Primrose-Willow .
Lyonia ligustrina (L.) DC. Maleberry
Lyonia lucida (Lam.) K. Koch Shinyleaf
Lyonia mariana (L.) D. Don Piedmont Staggerbush
Magnolia virginiana L. Sweet-Bay
Mikania scandens (L.) Willd. Climbing Hempvine

Morella caroliniensis (P. Mill.) Small Evergreen Bayberry
Morella cerifera (L.) Small Southern Bayberry
Nyssa biflora Walt. Swamp Tupelo
Nyssa sylvatica Marsh. Black Tupelo
Osmanthus americanus (L.) Benth. & Hook. F. ex Gray Devilwood
Osmunda cinnamomea L. Cinnamon Fern
Osmunda regalis var. *spectabilis* (Willd.) Gray Royal Fern
Oxalis dillenii Jacq. Slender Yellow Wood-Sorrel
Packera anonyma (Wood) W.A. Weber & A. Löve Small's Groundsel
Panicum anceps Michx. Beaked Panic Grass
Panicum rigidulum Bosc ex Nees Red-Top Panic Grass
Panicum verrucosum Muhl. Warty Panic Grass
Parthenocissus quinquefolia (L.) Planch. Virginia-Creeper
Persea palustris (Raf.) Sarg. Swamp Bay
Photinia pyrifolia (Lam.) Robertson & Phipps Red Chokeberry
Phragmites australis (Cav.) Trin. Ex Steud. Common Reed
Pinus palustris P. Mill. Long-Leaf Pine
Pinus serotina Michx. Pond Pine
Pinus L. Pine
Pinus taeda L. Loblolly Pine
Pityopsis aspera var. *adenolepis* (Fern.) Semple & Bowers Pineland Silk-Grass
Pluchea foetida (L.) DC. Stinking Camphorweed
Pluchea odorata (L.) Cass. Sweetscent
Polygala cruciata var. *aquilonia* Fern. & Schub. Drumheads
Polygala lutea L. Orange Milkwort
Polygonum hydropiperoides Michx. Swamp Smartweed
Potentilla canadensis L. Dwarf Cinquefoil
Proserpinaca intermedia Mackenzie Intermediate Mermaidweed
Prunus serotina Ehrh. Black Cherry
Pteridium aquilinum var. *pseudocaudatum* (Clute) Heller Northern Bracken Fern
Pycnanthemum muticum (Michx.) Pers. Clustered Mountain-Mint
Pyxidanthera barbulata Michx. Flowering Pixie-Moss
Quercus laurifolia Michx. Laurel Oak
Quercus lyrata Walt. Overcup Oak
Quercus michauxii Nutt. Swamp Chestnut Oak
Quercus nigra L. Water Oak
Quercus pagoda Raf. Cherry-Bark Oak
Quercus phellos L. Willow Oak
Rhexia mariana L. Maryland Meadow-Beauty
Rhus copallinum L. Winged Sumac
Rhynchospora cephalantha Gray Bunched Beak Sedge
Rhynchospora chalarocephala Fern. & Gale Loose-Head Beak Sedge
Rhynchospora caduca Ell. Angle-Stem Beak Sedge
Rhynchospora elliottii A. Dietr. Elliott's Beak Sedge
Rhynchospora fascicularis (Michx.) Vahl Fascicled Beak Sedge
Rhynchospora globularis (Chapman) Small Globe Beak Sedge

Rhynchospora glomerata (L.) Vahl Clustered Beak Sedge
Rhynchospora gracilenta Gray Slender Beak Sedge
Rhynchospora inexpansa (Michx.) Vahl Nodding Beak Sedge
Rhynchospora macrostachya Torr. Ex Gray Tall Horned Beak Sedge
Rhynchospora microcephala (Britt.) Britt. Small-Head Beak Sedge
Rhynchospora plumosa Ell. Plumed Beak Sedge
Rhynchospora Vahl Beak Sedge, Whitetop
Rubus argutus Link Saw-Tooth Blackberry
Rubus flagellaris Willd. Whiplash Dewberry
Sabatia difformis (L.) Druce Lance-Leaf Rose-Gentian
Saccharum alopecuroidum (L.) Nutt. Silver Plume Grass
Saccharum giganteum (Walt.) Pers. Giant Plume Grass
Salix caroliniana Michx. Carolina Willow
Sambucus nigra ssp. *canadensis* (L.) R. Bolli Black Elder
Sanicula canadensis L. Canadian Black-Snakeroot
Schizachyrium scoparium (Michx.) Nash Little False Bluestem
Scirpus cyperinus (L.) Kunth Cottongrass Bulrush
Scleria triglomerata Michx. Whip Nut-Rush
Scutellaria integrifolia L. Helmet-Flower
Smilax auriculata Walt. Ear-Leaf Greenbrier
Smilax bona-nox L. Fringed Greenbrier
Smilax glauca Walt. Sawbrier
Smilax laurifolia L. Laurel-Leaf Greenbrier
Smilax rotundifolia L. Horsebrier
Solanum carolinense L. Carolina Horse-Nettle
Solidago arguta Ait. Atlantic Goldenrod
Solidago canadensis L. Canadian Goldenrod
Solidago fistulosa P. Mill. Pine-Barren Goldenrod
Solidago L. Goldenrod
Solidago odora Ait. Anise-Scented Goldenrod
Solidago rugosa P. Mill. Wrinkle-Leaf Goldenrod
Symphyotrichum dumosum (L.) Nesom Rice Button American-Aster
Symplocos tinctoria (L.) L'Hér. Horsesugar
Taxodium ascendens Brongn. Pond-Cypress
Taxodium distichum (L.) L.C. Rich. Southern Bald-Cypress
Toxicodendron radicans (L.) Kuntze Eastern Poison-Ivy
Triadenum virginicum (L.) Raf. Virginia Marsh-St. John's-Wort
Typha latifolia L. Broad-Leaf Cat-Tail
Utricularia gibba L. Humped Bladderwort
Utricularia juncea Vahl Southern Bladderwort
Utricularia purpurea Walt. Eastern Purple Bladderwort
Utricularia radiata Small Little Floating Bladderwort
Vaccinium crassifolium Andr. Creeping Blueberry
Vaccinium formosum Andr. Southern Blueberry
Vaccinium fuscatum Ait. Black Blueberry
Vaccinium tenellum Ait. Small Black Blueberry

Verbascum thapsus L. Great Mullein
Verbena scabra Vahl Sandpaper Vervain
Viola primulifolia L. Primrose-leaf Violet
Vitis rotundifolia Michx. Muscadine
Woodwardia areolata (L.) T. Moore Netted Chain Fern
Woodwardia virginica (L.) Sm. Virginia Chain Fern
Xyris ambigua Bey. Ex Kunth Coastal-Plain Yellow-Eyed-Grass
Xyris caroliniana Walt. Carolina Yellow-Eyed-Grass
Xyris difformis Chapman Bog Yellow-Eyed-Grass
Xyris fimbriata Ell. Fringed Yellow-Eyed-Grass
Xyris L. Yellow-Eyed-Grass

Appendix C
Baseline Data 1999-2000
Gauge Data Summary 2002-2004

Table C1. Baseline Data 1999-2000 and Gauge Data Summary 2002-2005

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
1	13A	Ba	<5%	0	<5%	3	>12.5%	60	>12.5%	105	>12.5%	105	>12.5%	95 (105)
2	16	Mu	>12.5%	71	>12.5%	60	>12.5%	105	>12.5%	105	>12.5%	62	>12.5%	92
3	13B	Mu	<5%	<3	<5%	1	<5%	1	5-12.5%	15	<5%	8	5-12.5%	13
4	13B	Mu	<5%	12	<5%	7	5-12.5%	24	>12.5%	56	>12.5%	58	Incomplete[e]	Incomplete[e]
5	17	DA	<5%	0	<5%	0	<5%	0	>12.5%	105	>12.5%	105	>12.5%	105
6	17	DA	5-12.5%	24	>12.5%	54	>12.5%	37	>12.5%	105	>12.5%	105	>12.5%	105
7	16	CT	<5%	0	<5%	0	<5%	12	>12.5%	105	>12.5%	105	>12.5%	105
8	16	CT	<5%	0	<5%	<1	<5%	4	>12.5%	105	>12.5%	105	>12.5%	105
9	12B	Pa	<5%	0	<5%	2	<5%	0	>12.5%	105	>12.5%	66	>12.5%	98
10	12B	Pa	<5%	0	<5%	3	<5%	1	>12.5%	105	>12.5%	63	>12.5%	99
11	15	Pa	<5%	1	<5%	3	<5%	7	>12.5%	25	<5%	9	5-12.5%	25
12	14	Pa	<5%	12	<5%	5	>12.5%	47	>12.5%	97 (105)	>12.5%	105	>12.5%	(29) 105
13	14	Ba	<5%	5 (8)	<5%	4	>12.5%	56	>12.5%	105	>12.5%	105	>12.5%	105
14	13A	CT	>12.5%	46+	>12.5%	93	>12.5%	59	>12.5%	105	>12.5%	105	>12.5%	105
15	13A	Pa	<5%	<4	<5%	11	5-12.5%	25	>12.5%	105	>12.5%	40 (105)	>12.5%	105
16	12A	Pa	5-12.5%	21	>12.5%	58	>12.5%	71	>12.5%	105	>12.5%	97	>12.5%	29 (105)[d]
17	12A	Pa	>12.5%	67	>12.5%	57	>12.5%	55	>12.5%	77 (105)	>12.5%	73	>12.5%	51 (105)
18	12B	Pa	<5%	0	<5%	12	<5%	11	>12.5%	60	>12.5%	44	>12.5%	47
19	16	Pa	5-12.5%	10 (18)	5-12.5%	24	<5%	3	>12.5%	105	>12.5%	105	>12.5%	105
20	13A	Pa	<5%	7	5-12.5%	14	<5%	8	>12.5%	105	>12.5%	97	5-12.5%	30[d]
21	18	Pa	<5%	4	5-12.5%	15	>12.5%	63	>12.5%	105	>12.5%	44 (105)	>12.5%	73 (105)
22	14	Pa	<5%	0	<5%	2	>12.5%	46	>12.5%	97 (105)	>12.5%	105	>12.5%	105
23	14	Pa	>12.5%	34+	5-12.5%	15	>12.5%	55	>12.5%	105	>12.5%	105	>12.5%	105
24	13B	Mu	<5%	6 (12)	<5%	8	<5%	7	5-12.5%	25	<5%	9	5-12.5%	30
25	15	Pa	(<5%)?	incomplete	<5%	6	<5%	4	>12.5%	105	>12.5%	63	>12.5%	93
26	15	Mu	<5%	5	<5%	6	<5%	7	>12.5%	105	>12.5%	65	>12.5%	97
27*	15	Mu	>12.5	30 (96)	5-12.5%	16(53)	5-12.5%	24	>12.5%	105	>12.5%	105	>12.5%	105
28	16	DA	<5%	0	<5%	0	>12.5%	42	>12.5%	105	>12.5%	105	>12.5%	105

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
29	17	CT	<5%	0	<5%	0	>12.5%	40	>12.5%	105	>12.5%	105	>12.5%	105
30	17	DA	<5%	<1	<5%	2	5-12.5%	23	>12.5%	105	>12.5%	105	>12.5%	79 (105)
31	16	CT	<5%	0	<5%	7	>12.5%	38	>12.5%	105	>12.5%	105	>12.5%	105
32	17	Ba	<5%	0	<5%	3	>12.5%	35	>12.5%	105	>12.5%	105	>12.5%	105
33	17	Ba	<5%	<1	<5%	<1	<5%	1	>12.5%	105	>12.5%	73	>12.5%	105
34	18	Pa	<5%	0	<5%	3	>12.5%	42	>12.5%	105	>12.5%	79	>12.5%	105
35*	Offsite	To	>12.5%	83	>12.5%	104	N/A	N/A	N/A	N/A	N/A	N/A	N/A	removed
36	12B	Pa	>12.5%	66	>12.5%	62	>12.5%	43	>12.5%	105	>12.5%	80	>12.5%	105
37	12B	Pa	<5%	<1	<5%	7	<5%	2	>12.5%	105	>12.5%	63	>12.5%	95
38	12B	Mu	>12.5%	40+	>12.5%	(98)?	>12.5%	43	>12.5%	105	>12.5%	105	>12.5%	105
39*	Offsite	DO	>12.5%	104+	>12.5%	104	>12.5%	71	>12.5%	105	>12.5%	105	>12.5%	105
40	13A	CT	<5%	6 (<12)	5-12.5%	14	5-12.5%	26	>12.5%	2 (105)	>12.5%	105	>12.5%	105
41	9	Ba	5-12.5%	26	>12.5%	55	N/A	N/A	>12.5%	105	>12.5%	80	>12.5%	105
42	9	CT	<5%	4 (8)	<5%	9	N/A	N/A	>12.5%	105	>12.5%	77	>12.5%	105
43	9	CT	5-12.5%	15 (22)	5-12.5%	17	N/A	N/A	>12.5%	105	>12.5%	72	>12.5%	105
44	8	CT	<5%	<1	<5%	4	N/A	N/A	>12.5%	105	>12.5%	94	>12.5%	105
45	10A	CT	<5%	0	<5%	4	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
46	10A	CT	<5%	0	<5%	0	N/A	N/A	>12.5%	105	>12.5%	80	>12.5%	105
47	8	Ba	<5%	11	5-12.5%	13	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
48	10B	CT	<5%	0	<5%	0	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
49	10B	Ba	<5%	0	<5%	10	N/A	N/A	>12.5%	105	>12.5%	54 (105)	>12.5%	105
50	10B	Ba	<5%	0	NA	incomplete	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
51	8	Ba	>12.5%	30 (66)	5-12.5%	13	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	89 (105)
52	7	Ba	5-12.5%	28 (68)	5-12.5%	15	N/A	N/A	>12.5%	105	>12.5%	90	>12.5%	10 (105)[d]
53	4A	Ba	>12.5%	71	>12.5%	58	N/A	N/A	>12.5%	105	>12.5%	78	>12.5%	54 (105)
54	4B	Pa	>12.5%	77	>12.5%	63	N/A	N/A	>12.5%	105	>12.5%	79	>12.5%	105
55	4B	Ba	>12.5%	77	>12.5%	64(104)	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	10 (105)[d]

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
56	4B	CT	>12.5%	78	>12.5%	65(104)	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	10 (105)[d]
57	4B	CT	>12.5%	77	>12.5%	63	N/A	N/A	>12.5%	105	>12.5%	97	>12.5%	10 (105)[d]
58	4B	Ba	5-12.5%	28	5-12.5%	19	N/A	N/A	>12.5%	105	>12.5%	70	>12.5%	96
59	4B	Ba	<5%	4 (8)	<5%	8	N/A	N/A	>12.5%	105	>12.5%	78	>12.5%	105
60	10A	Ba	<5%	5	<5%	0	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
61	10A	CT	5-12.5%	12 (14)	<5%	7	N/A	N/A	>12.5%	105	>12.5%	79	>12.5%	105
62	10C	Ra	<5%	0	<5%	1	N/A	N/A	>12.5%	55	>12.5%	39 (44)	incomplete[d]	incomplete[d]
63	10C	Pa	5-12.5%	21 (23)	>12.5%	53	N/A	N/A	>12.5%	105	>12.5%	72	>12.5%	105
64	10C	Ra	<5%	<8	(<5%)?	incomplete	N/A	N/A	>12.5%	105	>12.5%	68	>12.5%	96
65	10B	Pa	<5%	11	5-12.5%	24	N/A	N/A	>12.5%	105	>12.5%	73	>12.5%	105
66	10B	Ra	5-12.5%	22 (24)	5-12.5%	20	N/A	N/A	>12.5%	83 (105)	>12.5%	72	>12.5%	105
67	10B	Pa	<5%	11	<5%	10	N/A	N/A	>12.5%	105	>12.5%	67	>12.5%	33 (98)
68	11	Ba	<5%	1	<5%	0	N/A	N/A	>12.5%	105	>12.5%	64	>12.5%	96
69	10B	Ba	<5%	11	<5%	8	N/A	N/A	>12.5%	105	>12.5%	71	>12.5%	105
70	10B	Ba	>12.5%	31	5-12.5%	16	N/A	N/A	>12.5%	105	>12.5%	71	>12.5%	105
71	7	Ba	<5%	10 (12)	<5%	8	N/A	N/A	>12.5%	42 (105)	>12.5%	72	>12.5%	96 (105)[e]
72	7	Ba	5-12.5%	25	5-12.5%	13	N/A	N/A	>12.5%	105	>12.5%	71	>12.5%	10 (105)[d]
73	7	Pa	<5%	10	<5%	9	N/A	N/A	>12.5%	105	>12.5%	69	>12.5%	105
74	6	Ba	<5%	0	(<5%)?	incomplete	N/A	N/A	>12.5%	105	5-12.5%	17	>12.5%	41[d]
75	6	Ba	<5%	<2	<5%	2	N/A	N/A	5-12.5%	18	<5%	5	<5%	6
76	6	Ba	<5%	0	<5%	1	N/A	N/A	>12.5%	24	<5%	7	5-12.5%	25
77	6	CT	5-12.5%	24	5-12.5%	16	N/A	N/A	>12.5%	57 (105)	>12.5%	105	>12.5%	105
78	6	MM	5-12.5%	13 (15)	5-12.5%	14	N/A	N/A	>12.5%	77 (105)	>12.5%	105	>12.5%	105
79	6	DO	<5%	8	<5%	10	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
80	6	DO	<5%	0	<5%	2	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
81	6	Ba	<5%	0	<5%	6	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
82	6	Pa	<5%	0	<5%	<1	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
83	1	Pa	>12.5%	37	>12.5%	64	N/A	N/A	>12.5%	105	>12.5%	83	>12.5%	10 (105)
84	5	Ra	<5%	0	<5%	1	N/A	N/A	>12.5%	105	>12.5%	52 (64)	>12.5%	55
85	5	Pa	<5%	3	<5%	6	N/A	N/A	>12.5%	55	>12.5%	37	>12.5%	34
86*	1	La	>12.5%	38 (68)	>12.5%	62	>12.5%	64	>12.5%	105	>12.5%	65	>12.5%	105
87	1	La	5-12.5%	27	5-12.5%	21	NA	NA	>12.5%	57	>12.5%	62	>12.5%	93
88*	1	Pa	>12.5%	38	>12.5%	56	>12.5%	47	>12.5%	105	>12.5%	68	>12.5%	41 (97)
89*	1	Ra	>12.5%	70	>12.5%	64	>12.5%	57	>12.5%	105	>12.5%	72	>12.5%	105
90*	Offsite	Pa	>12.5%	74	>12.5%	104	>12.5%	68	>12.5%	105	>12.5%	80	>12.5%	105
91*	2A	MM	>12.5%	79	>12.5%	104	>12.5%	87	>12.5%	105	>12.5%	105	>12.5%	105
92	2A	La	<5%	5	5-12.5%	14	N/A	N/A	>12.5%	38	5-12.5%	23	>12.5%	34
93	2A	La	<5%	3	<5%	5	N/A	N/A	>12.5%	40	<5%	9	5-12.5%	29
94	2B	Pa	<5%	9	<5%	11	N/A	N/A	>12.5%	57	>12.5%	64	incomplete[d]	incomplete[d]
95	5	La	<5%	1	<5%	4	N/A	N/A	>12.5%	55	>12.5%	44	incomplete[d]	incomplete[d]
96	2B	La	<5%	<1	<5%	7	N/A	N/A	>12.5%	38 (105)	>12.5%	72	>12.5%	102
97	7	Ba	>12.5%	38	>12.5%	56	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
98	3	Ba	<5%	7	<5%	11	N/A	N/A	>12.5%	105	>12.5%	66	>12.5%	95
99*	4A	Ba	>12.5%	73	>12.5%	(58)?	>12.5%	46	>12.5%	105	>12.5%	71	>12.5%	105
100	2B	La	<5%	5	<5%	9	N/A	N/A	>12.5%	105	>12.5%	69	>12.5%	45 (99)
101	3	Ba	<5%	3	<5%	6	N/A	N/A	>12.5%	105	>12.5%	67	>12.5%	69 (96)
102	2B	Ba	<5%	2	<5%	4	N/A	N/A	>12.5%	24	<5%	8	5-12.5%	25
103	8	CT	5-12.5%	28	>12.5%	57	N/A	N/A	>12.5%	105	>12.5%	71	>12.5%	105
104*	Offsite	DA	>12.5%	69	>12.5%	104	>12.5%	100	>12.5%	105	>12.5%	105	>12.5%	105
105*	Offsite	CT	>12.5%	81	>12.5%	(104)?	>12.5%	92	>12.5%	94 (105)	>12.5%	105	>12.5%	43 (105)
106	5	Ba	>12.5%	45	5-12.5%	21(62)	N/A	N/A	>12.5%	105	>12.5%	80	>12.5%	67 (105)
107	6	Ba	N/A	N/A	5-12.5%	16	N/A	N/A	>12.5%	57 (105)	>12.5%	105	>12.5%	9 (105)[e]
108	6	Ba	N/A	N/A	5-12.5%	14	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	9 (105)[e]
109	6	MM	N/A	N/A	<5%	4	N/A	N/A	>12.5%	57 (105)	>12.5%	105	>12.5%	105

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
110	7	Pa	N/A	N/A	<5%	6	N/A	N/A	>12.5%	105	>12.5%	70	>12.5%	105
111	7	Ba	N/A	N/A	>12.5%	55	N/A	N/A	>12.5%	105	>12.5%	57 (91)	>12.5%	105
112	4A	Ba	N/A	N/A	>12.5%	55	N/A	N/A	>12.5%	105	>12.5%	70	>12.5%	95
113	8	Ba	N/A	N/A	5-12.5%	16	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
114	8	CT	N/A	N/A	<5%	6	N/A	N/A	>12.5%	34 (105)	>12.5%	90	>12.5%	105
115	8	Pa	N/A	N/A	(5-12.5%)?	(12-13)?	N/A	N/A	>12.5%	105	>12.5%	78	>12.5%	105
116	8	Pa	N/A	N/A	>12.5%	55	N/A	N/A	>12.5%	60 (105)	>12.5%	96	>12.5%	105
117	8	CT	N/A	N/A	(>12.5%)?	(62)?	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
118	10A	Ba	N/A	N/A	<5%	<1	N/A	N/A	>12.5%	97 (105)	>12.5%	105	>12.5%	105
119	10A	CT	N/A	N/A	<5%	1	N/A	N/A	>12.5%	105	>12.5%	35 (72)	>12.5%	74[d]
120	10A	CT	N/A	N/A	<5%	2	N/A	N/A	>12.5%	105	>12.5%	81	incomplete[e]	incomplete[e]
121	10C	Pa	N/A	N/A	<5%	6	N/A	N/A	>12.5%	105	>12.5%	78	>12.5%	96 (105)
122	10B	Pa	N/A	N/A	<5%	2	N/A	N/A	>12.5%	60 (105)	>12.5%	68	incomplete[f]	incomplete[f]
123	10B	CT	N/A	N/A	5-12.5%	15	N/A	N/A	>12.5%	105	>12.5%	78	>12.5%	105
124	10B	Pa	N/A	N/A	<5%	7	N/A	N/A	>12.5%	105	>12.5%	63	>12.5%	105
125	13A	CT	N/A	N/A	<5%	3	>12.5%	38	>12.5%	105	>12.5%	105	>12.5%	105
126	13A	CT	N/A	N/A	>12.5%	59	>12.5%	37	>12.5%	105	>12.5%	105	>12.5%	105
127	13A	CT	N/A	N/A	5-12.5%	18	5-12.5%	23	>12.5%	105	>12.5%	105	>12.5%	105
128	16	CT	N/A	N/A	<5%	0	5-12.5%	13	>12.5%	105	>12.5%	105	>12.5%	105
129	16	CT	N/A	N/A	<5%	0	5-12.5%	27	>12.5%	105	>12.5%	105	>12.5%	105
130	16	Pa	N/A	N/A	<5%	<1	<5%	0	>12.5%	105	>12.5%	105	>12.5%	105
131	16	Mu	N/A	N/A	>12.5%	54	>12.5%	37	>12.5%	105	>12.5%	105	>12.5%	105
132	17	CT	N/A	N/A	<5%	8	<5%	0	>12.5%	105	>12.5%	70	>12.5%	97
133	18	CT	N/A	N/A	5-12.5%	(<25)?	>12.5%	35	>12.5%	61	>12.5%	59	>12.5%	89
134	12B	Pa	N/A	N/A	5-12.5%	16	<5%	0	>12.5%	105	>12.5%	64	>12.5%	98
135	12B	Pa	N/A	N/A	<5%	7	<5%	11	>12.5%	105	>12.5%	43	>12.5%	40
136	12A	Mu	N/A	N/A	5-12.5%	16	<5%	8	>12.5%	105	>12.5%	67	>12.5%	102
137	12A	Mu	N/A	N/A	(<5%)?	incomplete	<5%	0	>12.5%	43	<5%	9	5-12.5%	13
138	15	Pa	N/A	N/A	<5%	1	5-12.5%	26	>12.5%	105	>12.5%	105	>12.5%	105

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
139	13B	Ba	N/A	N/A	(>5%)	incomplete	>12.5%	40	>12.5%	70 (105)	>12.5%	105	>12.5%	105
140	13B	Pa	N/A	N/A	(>5%)	incomplete	>12.5%	71	>12.5%	105	>12.5%	105	>12.5%	55 (105)
141	13B	Pa	N/A	N/A	(<5%)?	incomplete	<5%	3	>12.5%	105	5-12.5%	23	>12.5%	41
142	13A	Pa	N/A	N/A	(<5%)?	incomplete	<5%	3	>12.5%	77 (105)	>12.5%	65	>12.5%	94
143	10C	Pa	N/A	N/A	(5-12.5%)?	incomplete	N/A	N/A	>12.5%	105	>12.5%	72	incomplete[e]	incomplete[e]
144	11	Pa	N/A	N/A	(<5%)?	incomplete	N/A	N/A	>12.5%	105	>12.5%	49	<5%	9
145	11	Ba	N/A	N/A	(<5%)?	incomplete	N/A	N/A	>12.5%	57	>12.5%	66	incomplete[d]	incomplete[d]
146	6	La	N/A	N/A	(<5%)?	incomplete	N/A	N/A	>12.5%	105	>12.5%	65	>12.5%	90
147	6	Ba	N/A	N/A	(>5%)	incomplete	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
148	6	MM	N/A	N/A	(5-12.5%)?	incomplete	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
149	5	Pa	N/A	N/A	(<5%)?	incomplete	N/A	N/A	>12.5%	19	<5%	6	<5%	7
150	2B	La	N/A	N/A	(<5%)?	incomplete	N/A	N/A	>12.5%	54	>12.5%	44	>12.5%	40
151	3	La	N/A	N/A	(<5%)?	incomplete	N/A	N/A	>12.5%	105	>12.5%	65	>12.5%	95
152	2B	Ba	N/A	N/A	(<5%)?	incomplete	N/A	N/A	>12.5%	105	>12.5%	70	>12.5%	98
153	2B	Ba	N/A	N/A	(<5%)?	incomplete	N/A	N/A	>12.5%	105	>12.5%	79	>12.5%	87 (105)
154	3	Ba	N/A	N/A	(5-12.5%)?	incomplete	N/A	N/A	>12.5%	105	>12.5%	71	incomplete[d]	incomplete[d]
155	7	Ba	N/A	N/A	(<5%)?	incomplete	N/A	N/A	>12.5%	102 (105)	>12.5%	66	Incomplete[f]	incomplete
156	7	Ba	N/A	N/A	(5-12.5%)?	incomplete	N/A	N/A	>12.5%	70 (105)	>12.5%	78	>12.5%	54 (105)
157	12B	CT	>12.5%	45	N/A	N/A	>12.5%	45	>12.5%	105	>12.5%	105	>12.5%	105
158	18	CT	>12.5%	45	N/A	N/A	>12.5%	45	>12.5%	105	>12.5%	105	>12.5%	105
159	18	CT	>12.5%	45	N/A	N/A	>12.5%	43	>12.5%	105	>12.5%	72	incomplete[d]	incomplete[d]
160	17	Ba	>12.5%	45	N/A	N/A	>12.5%	43	>12.5%	105	>12.5%	105	>12.5%	105
161	17	CT	>12.5%	45	N/A	N/A	<5%	0	>12.5%	105	>12.5%	105	>12.5%	105
162	16	CT	>12.5%	45	N/A	N/A	>12.5%	44	>12.5%	105	>12.5%	105	>12.5%	105
163	17	CT	>12.5%	45	N/A	N/A	>12.5%	44	>12.5%	105	>12.5%	105	>12.5%	105
164	16	CT	>12.5%	45	N/A	N/A	>12.5%	37	>12.5%	105	>12.5%	105	>12.5%	105
165	16	CT	>12.5%	45	N/A	N/A	>12.5%	35	>12.5%	105	>12.5%	105	>12.5%	105
166	16	DA	>12.5%	45	N/A	N/A	>12.5%	43	>12.5%	105	>12.5%	105	>12.5%	55 (105)
167	15	CT	>12.5%	45	N/A	N/A	>12.5%	35	>12.5%	105	>12.5%	53 (105)	>12.5%	105

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
168	16	CT	>12.5%	45	N/A	N/A	>12.5%	83	>12.5%	0 (105)	>12.5%	105	>12.5%	105
169	16	Pa	>12.5%	45	N/A	N/A	>12.5%	66	>12.5%	105	>12.5%	105	>12.5%	105
170	15	CT	>12.5%	45	N/A	N/A	>12.5%	63	>12.5%	70	>12.5%	105	>12.5%	105
171	15	Ba	>12.5%	45	N/A	N/A	<5%	8	>12.5%	56 (105)	>12.5%	105	>12.5%	94
172	13B	Ba	>12.5%	45	N/A	N/A	5-12.5%	18	>12.5%	105	>12.5%	66	>12.5%	70 (100)
173	13B	Ba	>12.5%	45	N/A	N/A	>12.5%	43	>12.5%	105	>12.5%	105	>12.5%	53 (105)
174	13A	Ba	>12.5%	45	N/A	N/A	>12.5%	47	>12.5%	105	>12.5%	105	>12.5%	105
175	14	Ba	>12.5%	45	N/A	N/A	>12.5%	36	>12.5%	105	>12.5%	10 (105)	>12.5%	105
176	13A	Ba	>12.5%	45	N/A	N/A	>12.5%	43	>12.5%	105	>12.5%	105	>12.5%	105
177	14	Pa	>12.5%	45	N/A	N/A	>12.5%	42	>12.5%	105	>12.5%	105	>12.5%	105
178	13A	Mu	>12.5%	45	N/A	N/A	5-12.5%	20	>12.5%	92 (105)	>12.5%	78	>12.5%	105
179	12A	Pa	>12.5%	45	N/A	N/A	5-12.5%	24	>12.5%	105	>12.5%	105	>12.5%	105
180	12A	Ba	>12.5%	45	N/A	N/A	<5%	1	>12.5%	105	>12.5%	58 (66)	5-12.5%	30[e]
181	16	Mu	>12.5%	45	N/A	N/A	5-12.5%	20	>12.5%	58	>12.5%	60	>12.5%	90
182	12B	Mu	>12.5%	45	N/A	N/A	<5%	1	>12.5%	25	<5%	10	<5%	10
183	12B	Mu	>12.5%	45	N/A	N/A	<5%	2	5-12.5%	24	<5%	9	5-12.5%	13
184	18	Ln	>12.5%	45	N/A	N/A	5-12.5%	26	>12.5%	61	>12.5%	59	>12.5%	39[e]
185	15	CT	>12.5%	45	N/A	N/A	>12.5%	38	>12.5%	105	>12.5%	105	>12.5%	105
186	14	Pa	>12.5%	45	N/A	N/A	>12.5%	60	>12.5%	97 (105)	>12.5%	105	>12.5%	105
187	15	Ba	>12.5%	45	N/A	N/A	>12.5%	42	>12.5%	105	>12.5%	105	>12.5%	105
188	12B	Pa	>12.5%	45	N/A	N/A	5-12.5%	21	>12.5%	105	>12.5%	59	>12.5%	90
189	15	Pa	>12.5%	45	N/A	N/A	<5%	0	>12.5%	105	>12.5%	80	>12.5%	98
190	14	Pa	>12.5%	45	N/A	N/A	>12.5%	46	>12.5%	105	>12.5%	87 (105)	>12.5%	105
191	18	Pa	>12.5%	45	N/A	N/A	<5%	0	>12.5%	53	5-12.5%	23	5-12.5%	30
192	16	Mu	>12.5%	45	N/A	N/A	5-12.5%	21	>12.5%	105	>12.5%	65	>12.5%	97
193	16	Mu	>12.5%	45	N/A	N/A	>12.5%	45	>12.5%	105	>12.5%	68	>12.5%	99
194	13B	Mu	>12.5%	45	N/A	N/A	5-12.5%	25	>12.5%	57	>12.5%	59	>12.5%	51 (88)
195	16	Ln	>12.5%	45	N/A	N/A	<5%	2	>12.5%	39	<5%	6	<5%	11[d]
196	17	Pa	>12.5%	45	N/A	N/A	>12.5%	66	>12.5%	28 (105)	N/A	N/A	N/A	removed

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
197	12B	Pa	>12.5%	45	N/A	N/A	>12.5%	35	>12.5%	105	>12.5%	72	>12.5%	105
198	13B	Ln	>12.5%	45	N/A	N/A	>12.5%	39	>12.5%	105	>12.5%	62	>12.5%	92
199*	15	Mu	>12.5%	45	N/A	N/A	5-12.5%	20	>12.5%	105	>12.5%	97	>12.5%	105
200*	15	Mu	>12.5%	45	N/A	N/A	<5%	5	>12.5%	105	>12.5%	105	>12.5%	105
201*	Offsite	DO	>12.5%	45	N/A	N/A	>12.5%	86	>12.5%	105	>12.5%	105	>12.5%	105
202*	Offsite	DO	N/A	N/A	N/A	N/A	>12.5%	87	>12.5%	105	>12.5%	105	>12.5%	105
203*	4A	Ba	N/A	N/A	N/A	N/A	>12.5%	71	>12.5%	105	>12.5%	42	>12.5%	105
204*	4A	Ba	N/A	N/A	N/A	N/A	>12.5%	64	>12.5%	105	>12.5%	42 (90)	>12.5%	105
205*	4A	Pa	N/A	N/A	N/A	N/A	>12.5%	42	>12.5%	105	>12.5%	78	>12.5%	105
206*	4B	CT	N/A	N/A	N/A	N/A	>12.5%	63	>12.5%	105	>12.5%	97 (105)	>12.5%	105
207*	Offsite	CT	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	52 (105)	>12.5%	34 (70)	>12.5%	46
208*	Offsite	DA	N/A	N/A	N/A	N/A	>12.5%	72	>12.5%	105	>12.5%	105	>12.5%	79 (105)
209*	Offsite	DA	N/A	N/A	N/A	N/A	>12.5%	84	>12.5%	105	>12.5%	105	>12.5%	105
210*	Offsite	Ln	N/A	N/A	N/A	N/A	5-12.5%	23	>12.5%	40	<5%	12	>12.5%	39
211*	Offsite	Ln	N/A	N/A	N/A	N/A	5-12.5%	22	>12.5%	40	<5%	11	>12.5%	38
212*	Offsite	Ln	N/A	N/A	N/A	N/A	5-12.5%	19	>12.5%	40	<5%	11	>12.5%	38
213*	2A	MM	N/A	N/A	N/A	N/A	>12.5%	85	>12.5%	105	>12.5%	105	>12.5%	105
214*	2A	MM	N/A	N/A	N/A	N/A	>12.5%	86	>12.5%	105	>12.5%	105	>12.5%	105
215*	1	Ra	N/A	N/A	N/A	N/A	>12.5%	46	>12.5%	56	>12.5%	65	>12.5%	96
216*	1	La	N/A	N/A	N/A	N/A	>12.5%	31	>12.5%	56	>12.5%	62	>12.5%	96
217*	1	La	N/A	N/A	N/A	N/A	>12.5%	36	>12.5%	105	>12.5%	34 (68)	>12.5%	99
218*	1	La	N/A	N/A	N/A	N/A	>12.5%	56	>12.5%	105	>12.5%	63 (68)	>12.5%	41 (97)
219	1	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	83 (105)	>12.5%	69	>12.5%	104
220	1	La	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	69	incomplete[d]	incomplete[d]
221	5	La	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	104 (105)	>12.5%	68	incomplete[d]	incomplete[d]
222	5	La	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	56	>12.5%	57	>12.5%	86 (91)
223	1	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
224	5	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	80	>12.5%	105
225	5	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	36 (77)	>12.5%	79 (105)

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
226	6	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	9 (105)[e]
227	6	MM	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	63	Incomplete[f]	Incomplete[f]
228	6	MM	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	45 (105)	>12.5%	105	>12.5%	78 (105)
229	6	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	0 (105)[e]
230	6	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	77 (105)	>12.5%	105	>12.5%	84 (105)
231	6	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
232	11	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	61	>12.5%	68 (105)
233	6	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	37	>12.5%	91
234	6	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	34 (73)	Incomplete[e]	Incomplete[f]
235	5	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
236	5	MM	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	70	>12.5%	83 (95)
237	5	MM	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
238	5	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	55	>12.5%	33	incomplete[d]	incomplete[d]
239	5	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	54	5-12.5%	13	>12.5%	33
240	6	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	103	>12.5%	105	>12.5%	28 (105)
241	5	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
242	5	La	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	49 (105)
243	2A	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	66	incomplete[d]	incomplete[d]
244	2A	La	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	65	incomplete[d]	incomplete[d]
245	2B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
246	2B	La	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	58	>12.5%	66	incomplete[d]	incomplete[d]
247	2B	La	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	54	>12.5%	44	incomplete[d]	incomplete[d]
248	2B	La	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	31 (65)	incomplete[d]	incomplete[d]
249	2B	La	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	72	>12.5%	99
250	3	La	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	66	5-12.5%	30[e]
251	2B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	80	>12.5%	105
252	2B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	72	>12.5%	100[e]
253	2B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	70	>12.5%	98
254	2B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	79	>12.5%	105

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
255	3	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	62 (67)	>12.5%	105
256	3	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	56	>12.5%	22 (57)	incomplete[d]	incomplete[d]
257	3	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	92	>12.5%	96 (105)
258	3	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	60	5-12.5%	23	>12.5%	42[e]
259	3	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	61	<5%	12	5-12.5%	29[e]
260	4A	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	58	5-12.5%	27	>12.5%	42
261	2B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	71	incomplete[d]	incomplete[d]
262	2B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	incomplete[d]	incomplete[d]
263	2B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	70	incomplete[d]	incomplete[d]
264	7	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	9 (105)[d]
265	7	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	43 (105)	>12.5%	105	>12.5%	105
266	8	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	10 (105)
267	7	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	100 (105)	>12.5%	30 (78)	>12.5%	95 (105)[d]
268	7	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	28 (105)	>12.5%	91	>12.5%	105
269	8	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
270	7	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	83 (105)	>12.5%	105	>12.5%	105
271	10B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	83 (105)	>12.5%	105	>12.5%	105
272	10B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	83 (105)	>12.5%	105	>12.5%	9 (105)[d]
273	10B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	68	>12.5%	40[e]
274	10B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	73	incomplete[f]	incomplete[f]
275	11	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	65 (75)	>12.5%	105
276	11	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	49	incomplete[d]	incomplete[d]
277	10B	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	58	<5%	11	>12.5%	40
278	11	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
279	11	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
280	12A	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	30 (105)[d]
281	12A	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	22 (105)	>12.5%	72	>12.5%	41 (96)
282	10C	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	96	>12.5%	29 (105)[f]
283	10C	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	95	>12.5%	29 (105)[f]

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
284	10C	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	65 (105)	>12.5%	105	>12.5%	29 (105)[f]
285	10C	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	91 (105)	>12.5%	29 (105)[f]
286	10C	Ra	N/A	N/A	N/A	N/A	N/A	N/A	5-12.5%	18	<5%	9	5-12.5%	25
287	10C	Ra	N/A	N/A	N/A	N/A	N/A	N/A	5-12.5%	12	<5%	5	<5%	6
288	12A	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	60	>12.5%	41 (92)
289	10C	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	100 (105)	>12.5%	62	incomplete[d]	incomplete[d]
290	10C	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	70	>12.5%	74
291	10C	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	57	>12.5%	58	incomplete[e]	incomplete[e]
292	13A	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	67	Incomplete[d]	Incomplete[d]
293	10C	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
294	10C	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	28 (105)[f]
295	13A	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	28 (105)[d]
296	10A	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	74 (105)
297	13A	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
298	10A	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	55 (105)
299	10A	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	74 (105)	>12.5%	10 (105)
300	10A	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	95 (105)
301	9	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	96	>12.5%	59 (105)
302	10A	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	10 (105)[f]
303	9	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	81	>12.5%	54 (105)
304	10A	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	92	>12.5%	105
305	9	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	83	>12.5%	105
306	9	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	78	>12.5%	105
307	8	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	50 (105)	>12.5%	92	>12.5%	105
308	10A	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
309	8	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
310	10B	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	71	>12.5%	105	incomplete[f]	incomplete[f]
311	8	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	57 (92)	>12.5%	105
312	8	CT	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	61 (96)	>12.5%	105

Table C1 continues.

Table C1 continued.

Gauge Site	Management Unit	Soil Type[a]	1999 Status[b]	Days <12" 3/18-6/30[c]	2000 Status[b]	Days <12" 3/18-6/30[c]	2002 Status	Days <12" 3/18-6/30	2003 Status	Days <12" 3/18-6/30[b]	2004 Status	Days <12" 3/18-6/30[b]	2005 Status	Days <12" 3/18-6/30[b]
313	9	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	53 (92)	>12.5%	80 (105)
314	8	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	77	>12.5%	105
315	8	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	79	>12.5%	105
316*	1	Ra	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	55	>12.5%	59	>12.5%	38
317	4B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	80	>12.5%	105
318	4B	Ba	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	65 (78)	>12.5%	105
319*	12A	Pa	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	22 (63)	>12.5%	94
320*	15	Mu	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	105	>12.5%	105	>12.5%	105
321	5	Pa	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>12.5%	56	>12.5%	105

[*] Hydrology ReferenceGauge

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; DA - Dare muck; DO - Dorovan muck; La - Leaf silt loam; Ln - Leon sand; MM - Masontown/Muckalee; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam; To - Torhunta fine sandy loam

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Second number shown in parentheses is for duration excluding brief minor drop (typically <1") below 12" threshold.

[d] Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data.

[e] Gauge malfunctioned during the critical 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

[f] Data incomplete, gauge not installed as of August 2005.

Appendix D

Hydrologic Success by Year

2005 Reference Ranges (Success Criteria 2)

Success Criteria by Management Unit (2005)

Table D1. Hydrologic Success by Year

Gauge	Management Unit	Soil Type[a]	Hydrologic Success Met				
			2002	2003	2004	2005	2006
1	13A	Ba	**Y**	**Y**	**Y**	**Y**	
2	16	Mu	**Y**	**Y**	**Y**	**N**	
3	13B	Mu	**N**	**N**	**N**	**N**	
4	13B	Mu	**Y**	**N**	**Y**	**N**	
5	17	DA	**N**	**Y**	**Y**	**Y**	
6	17	DA	**N**	**Y**	**Y**	**Y**	
7	16	CT	**N**	**Y**	**Y**	**Y**	
8	16	CT	**N**	**Y**	**Y**	**Y**	
9	12B	Pa	**N**	**Y**	**Y**	**Y**	
10	12B	Pa	**N**	**Y**	**Y**	**Y**	
11	15	Pa	**Y**	**N**	**Y**	**N**	
12	14	Pa	**Y**	**Y**	**Y**	**Y**	
13	14	Ba	**Y**	**Y**	**Y**	**Y**	
14	13A	CT	**Y**	**Y**	**Y**	**Y**	
15	13A	Pa	**Y**	**Y**	**Y**	**Y**	
16	12A	Pa	**Y**	**Y**	**Y**	**Y**	
17	12A	Pa	**Y**	**Y**	**Y**	**Y**	
18	12B	Pa	**N**	**N**	**Y**	**N**	
19	16	Pa	**N**	**Y**	**Y**	**Y**	
20	13A	Pa	**Y**	**Y**	**Y**	**Y**	
21	18	Pa	**Y**	**Y**	**Y**	**Y**	
22	14	Pa	**Y**	**Y**	**Y**	**Y**	
23	14	Pa	**Y**	**Y**	**Y**	**Y**	
24	13B	Mu	**N**	**N**	**N**	**N**	
25	15	Pa	**Y**	**Y**	**Y**	**Y**	
26	15	Mu	**Y**	**Y**	**Y**	**N**	
27*	15	Mu	**REF**	**REF**	**REF**	**REF**	
28	16	DA	**N**	**Y**	**Y**	**Y**	
29	17	CT	**N**	**Y**	**Y**	**Y**	
30	17	DA	**N**	**Y**	**Y**	**Y**	
31	16	CT	**N**	**Y**	**Y**	**Y**	
32	17	Ba	**Y**	**Y**	**Y**	**Y**	
33	17	Ba	**N**	**Y**	**Y**	**Y**	
34	18	Pa	**Y**	**Y**	**Y**	**Y**	
35*	Offsite	To	**N/A**	**N/A**	**N/A**	**N/A**	
36	12B	Pa	**Y**	**Y**	**Y**	**Y**	

Table D1 continues.

Table D1 continued.

Gauge	Management Unit	Soil Type[a]	Hydrologic Success Met				
			2002	2003	2004	2005	2006
37	12B	Pa	**N**	**Y**	**Y**	**Y**	
38	12B	Mu	**Y**	**Y**	**Y**	**Y**	
39*	Offsite	DO	**REF**	**REF**	**REF**	**REF**	
40	13A	CT	**N**	**Y**	**Y**	**Y**	
41	9	Ba	**N/A**	**Y**	**Y**	**Y**	
42	9	CT	**N/A**	**Y**	**Y**	**Y**	
43	9	CT	**N/A**	**Y**	**Y**	**Y**	
44	8	CT	**N/A**	**Y**	**Y**	**Y**	
45	10A	CT	**N/A**	**Y**	**Y**	**Y**	
46	10A	CT	**N/A**	**Y**	**Y**	**Y**	
47	8	Ba	**N/A**	**Y**	**Y**	**Y**	
48	10B	CT	**N/A**	**Y**	**Y**	**Y**	
49	10B	Ba	**N/A**	**Y**	**Y**	**Y**	
50	10B	Ba	**N/A**	**Y**	**Y**	**Y**	
51	8	Ba	**N/A**	**Y**	**Y**	**Y**	
52	7	Ba	**N/A**	**Y**	**Y**	**Y**	
53	4A	Ba	**N/A**	**Y**	**Y**	**Y**	
54	4B	Pa	**N/A**	**Y**	**Y**	**Y**	
55	4B	Ba	**N/A**	**Y**	**Y**	**Y**	
56	4B	CT	**N/A**	**Y**	**Y**	**Y**	
57	4B	CT	**N/A**	**Y**	**Y**	**Y**	
58	4B	Ba	**N/A**	**Y**	**Y**	**Y**	
59	4B	Ba	**N/A**	**Y**	**Y**	**Y**	
60	10A	Ba	**N/A**	**Y**	**Y**	**Y**	
61	10A	CT	**N/A**	**Y**	**Y**	**Y**	
62	10C	Ra	**N/A**	**Y**	**Y**	**Y**	
63	10C	Pa	**N/A**	**Y**	**Y**	**Y**	
64	10C	Ra	**N/A**	**Y**	**Y**	**Y**	
65	10B	Pa	**N/A**	**Y**	**Y**	**Y**	
66	10B	Ra	**N/A**	**Y**	**Y**	**Y**	
67	10B	Pa	**N/A**	**Y**	**Y**	**Y**	
68	11	Ba	**N/A**	**Y**	**Y**	**Y**	
69	10B	Ba	**N/A**	**Y**	**Y**	**Y**	
70	10B	Ba	**N/A**	**Y**	**Y**	**Y**	
71	7	Ba	**N/A**	**Y**	**Y**	**Y**	

Table D1 continues.

Table D1 continued.

Gauge	Management Unit	Soil Type[a]	Hydrologic Success Met				
			2002	2003	2004	2005	2006
72	7	Ba	**N/A**	**Y**	**Y**	**Y**	
73	7	Pa	**N/A**	**Y**	**Y**	**Y**	
74	6	Ba	**N/A**	**Y**	**Y**	**N**	
75	6	Ba	**N/A**	**N**	**N**	**N**	
76	6	Ba	**N/A**	**N**	**Y**	**N**	
77	6	CT	**N/A**	**Y**	**Y**	**Y**	
78	6	MM	**N/A**	**Y**	**Y**	**Y**	
79	6	DO	**N/A**	**Y**	**Y**	**Y**	
80	6	DO	**N/A**	**Y**	**Y**	**Y**	
81	6	Ba	**N/A**	**Y**	**Y**	**Y**	
82	6	Pa	**N/A**	**Y**	**Y**	**Y**	
83	1	Pa	**N/A**	**Y**	**Y**	**Y**	
84	5	Ra	**N/A**	**Y**	**Y**	**Y**	
85	5	Pa	**N/A**	**N**	**Y**	**Y**	
86*	1	La	**REF**	**REF**	**REF**	**REF**	
87	1	La	**N/A**	**Y**	**Y**	**Y**	
88*	1	Pa	**REF**	**REF**	**REF**	**REF**	
89*	1	Ra	**REF**	**REF**	**REF**	**REF**	
90*	Offsite	Pa	**REF**	**REF**	**REF**	**REF**	
91*	2A	MM	**REF**	**REF**	**REF**	**REF**	
92	2A	La	**N/A**	**Y**	**N**	**N**	
93	2A	La	**N/A**	**Y**	**N**	**N**	
94	2B	Pa	**N/A**	**Y**	**Y**	**Y**	
95	5	La	**N/A**	**Y**	**Y**	**N**	
96	2B	La	**N/A**	**Y**	**Y**	**Y**	
97	7	Ba	**N/A**	**Y**	**Y**	**Y**	
98	3	Ba	**N/A**	**Y**	**Y**	**Y**	
99*	4A	Ba	**REF**	**REF**	**REF**	**REF**	
100	2B	La	**N/A**	**Y**	**Y**	**Y**	
101	3	Ba	**N/A**	**Y**	**Y**	**Y**	
102	2B	Ba	**N/A**	**N**	**N**	**N**	
103	8	CT	**N/A**	**Y**	**Y**	**Y**	
104*	Offsite	DA	**REF**	**REF**	**REF**	**REF**	
105*	Offsite	CT	**REF**	**REF**	**REF**	**REF**	
106	5	Ba	**N/A**	**Y**	**Y**	**Y**	
107	6	Ba	**N/A**	**Y**	**Y**	**Y**	

Table D1 continues.

Table D1 continued.

Gauge	Management Unit	Soil Type	Hydrologic Success Met				
			2002	2003	2004	2005	2006
108	6	Ba	**N/A**	**Y**	**Y**	**Y**	
109	6	MM	**N/A**	**Y**	**Y**	**Y**	
110	7	Pa	**N/A**	**Y**	**Y**	**Y**	
111	7	Ba	**N/A**	**Y**	**Y**	**Y**	
112	4A	Ba	**N/A**	**Y**	**Y**	**Y**	
113	8	Ba	**N/A**	**Y**	**Y**	**Y**	
114	8	CT	**N/A**	**Y**	**Y**	**Y**	
115	8	Pa	**N/A**	**Y**	**Y**	**Y**	
116	8	Pa	**N/A**	**Y**	**Y**	**Y**	
117	8	CT	**N/A**	**Y**	**Y**	**Y**	
118	10A	Ba	**N/A**	**Y**	**Y**	**Y**	
119	10A	CT	**N/A**	**Y**	**Y**	**Y**	
120	10A	CT	**N/A**	**Y**	**Y**	**Y**	
121	10C	Pa	**N/A**	**Y**	**Y**	**Y**	
122	10B	Pa	**N/A**	**Y**	**Y**	**Y**	
123	10B	CT	**N/A**	**Y**	**Y**	**Y**	
124	10B	Pa	**N/A**	**Y**	**Y**	**Y**	
125	13A	CT	**Y**	**Y**	**Y**	**Y**	
126	13A	CT	**N**	**Y**	**Y**	**Y**	
127	13A	CT	**N**	**Y**	**Y**	**Y**	
128	16	CT	**N**	**Y**	**Y**	**Y**	
129	16	CT	**N**	**Y**	**Y**	**Y**	
130	16	Pa	**N**	**Y**	**Y**	**Y**	
131	16	Mu	**Y**	**Y**	**Y**	**Y**	
132	17	CT	**N**	**Y**	**Y**	**Y**	
133	18	CT	**N**	**N**	**Y**	**Y**	
134	12B	Pa	**N**	**Y**	**Y**	**Y**	
135	12B	Pa	**N**	**Y**	**Y**	**N**	
136	12A	Mu	**N**	**Y**	**Y**	**N**	
137	12A	Mu	**N**	**N**	**N**	**N**	
138	15	Pa	**Y**	**Y**	**Y**	**Y**	
139	13B	Ba	**Y**	**Y**	**Y**	**Y**	
140	13B	Pa	**Y**	**Y**	**Y**	**Y**	
141	13B	Pa	**Y**	**Y**	**Y**	**N**	
142	13A	Pa	**N**	**Y**	**Y**	**Y**	
143	10C	Pa	**N/A**	**Y**	**Y**	**Y**	

Table D1 continues.

Table D1 continued.

Gauge	Management Unit	Soil Type	Hydrologic Success Met				
			2002	**2003**	**2004**	**2005**	**2006**
144	11	Pa	**N/A**	**Y**	**Y**	**N**	
145	11	Ba	**N/A**	**Y**	**Y**	**Y**	
146	6	La	**N/A**	**Y**	**Y**	**Y**	
147	6	Ba	**N/A**	**Y**	**Y**	**Y**	
148	6	MM	**N/A**	**Y**	**Y**	**Y**	
149	5	Pa	**N/A**	**N**	**N**	**N**	
150	2B	La	**N/A**	**Y**	**Y**	**N**	
151	3	La	**N/A**	**Y**	**Y**	**Y**	
152	2B	Ba	**N/A**	**Y**	**Y**	**Y**	
153	2B	Ba	**N/A**	**Y**	**Y**	**Y**	
154	3	Ba	**N/A**	**Y**	**Y**	**N**	
155	7	Ba	**N/A**	**Y**	**Y**	**Y**	
156	7	Ba	**N/A**	**Y**	**Y**	**Y**	
157	12B	CT	**N**	**Y**	**Y**	**Y**	
158	18	CT	**N**	**Y**	**Y**	**Y**	
159	18	CT	**N**	**Y**	**Y**	**N**	
160	17	Ba	**Y**	**Y**	**Y**	**Y**	
161	17	CT	**N**	**Y**	**Y**	**Y**	
162	16	CT	**N**	**Y**	**Y**	**Y**	
163	17	CT	**N**	**Y**	**Y**	**Y**	
164	16	CT	**N**	**Y**	**Y**	**Y**	
165	16	CT	**N**	**Y**	**Y**	**Y**	
166	16	DA	**N**	**Y**	**Y**	**Y**	
167	15	CT	**N**	**Y**	**Y**	**Y**	
168	16	CT	**Y**	**Y**	**Y**	**Y**	
169	16	Pa	**Y**	**Y**	**Y**	**Y**	
170	15	CT	**Y**	**Y**	**Y**	**Y**	
171	15	Ba	**Y**	**Y**	**Y**	**N**	
172	13B	Ba	**Y**	**Y**	**Y**	**N**	
173	13B	Ba	**Y**	**Y**	**Y**	**Y**	
174	13A	Ba	**Y**	**Y**	**Y**	**Y**	
175	14	Ba	**Y**	**Y**	**Y**	**Y**	
176	13A	Ba	**Y**	**Y**	**Y**	**Y**	
177	14	Pa	**Y**	**Y**	**Y**	**Y**	
178	13A	Mu	**Y**	**Y**	**Y**	**Y**	
179	12A	Pa	**Y**	**Y**	**Y**	**Y**	

Table D1 continues.

Table D1 continued.

Gauge	Management Unit	Soil Type	Hydrologic Success Met				
			2002	**2003**	**2004**	**2005**	**2006**
180	12A	Ba	**N**	**Y**	**Y**	**Y**	
181	16	Mu	**Y**	**N**	**Y**	**N**	
182	12B	Mu	**N**	**Y**	**N**	**N**	
183	12B	Mu	**N**	**N**	**N**	**N**	
184	18	Ln	**N**	**Y**	**Y**	**Y**	
185	15	CT	**Y**	**Y**	**Y**	**Y**	
186	14	Pa	**Y**	**Y**	**Y**	**Y**	
187	15	Ba	**Y**	**Y**	**Y**	**Y**	
188	12B	Pa	**N**	**Y**	**Y**	**Y**	
189	15	Pa	**Y**	**Y**	**Y**	**Y**	
190	14	Pa	**Y**	**Y**	**Y**	**Y**	
191	18	Pa	**N**	**N**	**Y**	**N**	
192	16	Mu	**Y**	**Y**	**Y**	**N**	
193	16	Mu	**Y**	**Y**	**Y**	**N**	
194	13B	Mu	**Y**	**N**	**Y**	**N**	
195	16	Ln	**N**	**Y**	**Y**	**Y**	
196	17	Pa	**Y**	**Y**	**N/A**	**N/A**	
197	12B	Pa	**Y**	**Y**	**Y**	**Y**	
198	13B	Ln	**Y**	**Y**	**Y**	**Y**	
199*	15	Mu	**REF**	**REF**	**REF**	**REF**	
200*	15	Mu	**REF**	**REF**	**REF**	**REF**	
201*	Offsite	DO	**REF**	**REF**	**REF**	**REF**	
202*	Offsite	DO	**REF**	**REF**	**REF**	**REF**	
203*	4A	Ba	**REF**	**REF**	**REF**	**REF**	
204*	4A	Ba	**REF**	**REF**	**REF**	**REF**	
205*	4A	Pa	**REF**	**REF**	**REF**	**REF**	
206*	4B	CT	**REF**	**REF**	**REF**	**REF**	
207*	Offsite	CT	**REF**	**REF**	**REF**	**REF**	
208*	Offsite	DA	**REF**	**REF**	**REF**	**REF**	
209*	Offsite	DA	**REF**	**REF**	**REF**	**REF**	
210*	Offsite	Ln	**REF**	**REF**	**REF**	**REF**	
211*	Offsite	Ln	**REF**	**REF**	**REF**	**REF**	
212*	Offsite	Ln	**REF**	**REF**	**REF**	**REF**	
213*	2A	MM	**REF**	**REF**	**REF**	**REF**	
214*	2A	MM	**REF**	**REF**	**REF**	**REF**	
215*	1	Ra	**REF**	**REF**	**REF**	**REF**	

Table D1 continues.

Table D1 continued.

Gauge	Management Unit	Soil Type	Hydrologic Success Met				
			2002	**2003**	**2004**	**2005**	**2006**
216*	1	La	**REF**	**REF**	**REF**	**REF**	
217*	1	La	**REF**	**REF**	**REF**	**REF**	
218*	1	La	**REF**	**REF**	**REF**	**REF**	
219	1	Ra	**N/A**	**Y**	**Y**	**Y**	
220	1	La	**N/A**	**Y**	**Y**	**Y**	
221	5	La	**N/A**	**Y**	**Y**	**Y**	
222	5	La	**N/A**	**Y**	**Y**	**Y**	
223	1	Pa	**N/A**	**Y**	**Y**	**Y**	
224	5	Pa	**N/A**	**Y**	**Y**	**Y**	
225	5	Pa	**N/A**	**Y**	**Y**	**Y**	
226	6	Pa	**N/A**	**Y**	**Y**	**Y**	
227	6	MM	**N/A**	**Y**	**N**	**N**	
228	6	MM	**N/A**	**Y**	**Y**	**Y**	
229	6	CT	**N/A**	**Y**	**Y**	**Y**	
230	6	Ba	**N/A**	**Y**	**Y**	**Y**	
231	6	CT	**N/A**	**Y**	**Y**	**Y**	
232	11	Ra	**N/A**	**Y**	**Y**	**Y**	
233	6	Ra	**N/A**	**Y**	**Y**	**Y**	
234	6	Ba	**N/A**	**Y**	**Y**	**Y**	
235	5	Ba	**N/A**	**Y**	**Y**	**Y**	
236	5	MM	**N/A**	**Y**	**N**	**Y**	
237	5	MM	**N/A**	**Y**	**Y**	**Y**	
238	5	Ra	**N/A**	**Y**	**Y**	**Y**	
239	5	Ra	**N/A**	**Y**	**N**	**Y**	
240	6	CT	**N/A**	**Y**	**Y**	**Y**	
241	5	Ra	**N/A**	**Y**	**Y**	**Y**	
242	5	La	**N/A**	**Y**	**Y**	**Y**	
243	2A	Ba	**N/A**	**Y**	**Y**	**N**	
244	2A	La	**N/A**	**Y**	**Y**	**Y**	
245	2B	Ba	**N/A**	**Y**	**Y**	**Y**	
246	2B	La	**N/A**	**Y**	**Y**	**Y**	
247	2B	La	**N/A**	**Y**	**N**	**N**	
248	2B	La	**N/A**	**Y**	**Y**	**Y**	
249	2B	La	**N/A**	**Y**	**Y**	**Y**	
250	3	La	**N/A**	**Y**	**Y**	**Y**	
251	2B	Ba	**N/A**	**Y**	**Y**	**Y**	

Table D1 continues.

Table D1 continued.

Gauge	Management Unit	Soil Type	Hydrologic Success Met				
			2002	2003	2004	2005	2006
252	2B	Ba	**N/A**	**Y**	**Y**	**Y**	
253	2B	Ba	**N/A**	**Y**	**Y**	**Y**	
254	2B	Ba	**N/A**	**Y**	**Y**	**Y**	
255	3	Ba	**N/A**	**Y**	**Y**	**Y**	
256	3	Ba	**N/A**	**N**	**Y**	**N**	
257	3	Ba	**N/A**	**Y**	**Y**	**Y**	
258	3	Ba	**N/A**	**N**	**Y**	**N**	
259	3	Ba	**N/A**	**N**	**Y**	**N**	
260	4A	Ba	**N/A**	**N**	**Y**	**N**	
261	2B	Ba	**N/A**	**Y**	**Y**	**N**	
262	2B	Ba	**N/A**	**Y**	**Y**	**Y**	
263	2B	Ba	**N/A**	**Y**	**Y**	**N**	
264	7	Ba	**N/A**	**Y**	**Y**	**Y**	
265	7	Ba	**N/A**	**Y**	**Y**	**Y**	
266	8	Ba	**N/A**	**Y**	**Y**	**Y**	
267	7	Ba	**N/A**	**Y**	**Y**	**Y**	
268	7	Ba	**N/A**	**Y**	**Y**	**Y**	
269	8	Ba	**N/A**	**Y**	**Y**	**Y**	
270	7	Ba	**N/A**	**Y**	**Y**	**Y**	
271	10B	Ba	**N/A**	**Y**	**Y**	**Y**	
272	10B	Ba	**N/A**	**Y**	**Y**	**Y**	
273	10B	Ba	**N/A**	**Y**	**Y**	**Y**	
274	10B	Ba	**N/A**	**Y**	**Y**	**Y**	
275	11	Ba	**N/A**	**Y**	**Y**	**Y**	
276	11	Ra	**N/A**	**Y**	**Y**	**Y**	
277	10B	Ra	**N/A**	**Y**	**Y**	**Y**	
278	11	CT	**N/A**	**Y**	**Y**	**Y**	
279	11	CT	**N/A**	**Y**	**Y**	**Y**	
280	12A	Pa	**N/A**	**Y**	**Y**	**Y**	
281	12A	Ra	**N/A**	**Y**	**Y**	**Y**	
282	10C	Pa	**N/A**	**Y**	**Y**	**Y**	
283	10C	Pa	**N/A**	**Y**	**Y**	**Y**	
284	10C	CT	**N/A**	**Y**	**Y**	**Y**	
285	10C	CT	**N/A**	**Y**	**Y**	**Y**	
286	10C	Ra	**N/A**	**N**	**N**	**N**	
287	10C	Ra	**N/A**	**N**	**N**	**N**	

Table D1 continues.

Table D1 continued.

Gauge	Management Unit	Soil Type	Hydrologic Success Met				
			2002	2003	2004	2005	2006
288	12A	Ra	**N/A**	**Y**	**Y**	**Y**	
289	10C	Pa	**N/A**	**Y**	**Y**	**Y**	
290	10C	Pa	**N/A**	**Y**	**Y**	**Y**	
291	10C	Pa	**N/A**	**N**	**Y**	**Y**	
292	13A	Pa	**N/A**	**Y**	**Y**	**Y**	
293	10C	CT	**N/A**	**Y**	**Y**	**Y**	
294	10C	CT	**N/A**	**Y**	**Y**	**Y**	
295	13A	Pa	**N/A**	**Y**	**Y**	**Y**	
296	10A	CT	**N/A**	**Y**	**Y**	**Y**	
297	13A	CT	**N/A**	**Y**	**Y**	**Y**	
298	10A	Ba	**N/A**	**Y**	**Y**	**Y**	
299	10A	Ba	**N/A**	**Y**	**Y**	**Y**	
300	10A	Ba	**N/A**	**Y**	**Y**	**Y**	
301	9	Ba	**N/A**	**Y**	**Y**	**Y**	
302	10A	Ba	**N/A**	**Y**	**Y**	**Y**	
303	9	Ba	**N/A**	**Y**	**Y**	**Y**	
304	10A	CT	**N/A**	**Y**	**Y**	**Y**	
305	9	CT	**N/A**	**Y**	**Y**	**Y**	
306	9	CT	**N/A**	**Y**	**Y**	**Y**	
307	8	CT	**N/A**	**Y**	**Y**	**Y**	
308	10A	CT	**N/A**	**Y**	**Y**	**Y**	
309	8	CT	**N/A**	**Y**	**Y**	**Y**	
310	10B	CT	**N/A**	**Y**	**Y**	**Y**	
311	8	Ba	**N/A**	**Y**	**Y**	**Y**	
312	8	CT	**N/A**	**Y**	**Y**	**Y**	
313	9	Ba	**N/A**	**Y**	**Y**	**Y**	
314	8	Ba	**N/A**	**Y**	**Y**	**Y**	
315	8	Ba	**N/A**	**Y**	**Y**	**Y**	
316*	1	Ra	**N/A**	**REF**	**REF**	**REF**	
317	4B	Ba	**N/A**	**Y**	**Y**	**Y**	
318	4B	Ba	**N/A**	**Y**	**Y**	**Y**	
319*	12A	Pa	**N/A**	**REF**	**REF**	**REF**	
320*	15	Mu	**N/A**	**REF**	**REF**	**REF**	
321	5	Pa	**N/A**	**N/A**	**Y**	**Y**	

* Hydrology Reference Gauge
[a] Soil Types: Ba-Bayboro mucky loam: CT-Croatan muck; DA-Dare muck; DO- Dorovan muck; La-Leaf silt loam; Ln-Leon sand; MM-Masontown/Muckalee; Mu-Murville mucky loam; Pa-Pantego fine sandy loam; Ra-Rains fine sandy loam; To-Torhunta fine sandy loam.

Table D2. 2005 Reference Ranges (Success Criteria 2)

March 18-November 14				
Soil Mapping Unit	Success Criteria 2			
	50% of Reference Range		20% of Reference Range	
	Days	%	Days	%
Bayboro (Ba)	84-242	34.7-100	134-242	55.4-100
Croatan (CT)	36-242	14.9-100	58-242	24.0-100
Dare (DA)	121-242	50-100	194-242	80.2-100
Dorovan (DO)	121-242	50-100	194-242	80.2-100
Leaf (La)	48-242	19.8-100	77-208	31.8-86
Leon (Ln)	19-59	7.9-24.4	30-47	12.4-19.4
Masontown/Muckalee (MM)	88-242	36.2-100	140-242	57.9-100
Murville (Mu)	88-242	36.2-100	140-242	57.9-100
Pantego (Pa)	34-242	14.1-100	54-242	22.3-100
Rains (Ra)	32-242	13.2-100	50-210	20.7-86.8

March 18-June 30				
Soil Mapping Unit	Success Criteria 2			
	50% of Reference Range		20% of Reference Range	
	Days	%	Days	%
Bayboro (Ba)	52-105	21.5-43.4	84-105	34.7-43.4
Croatan (CT)	23-105	9.5-43.4	36-105	14.9-43.4
Dare (DA)	52-105	21.5-43.4	84-105	34.7-43.4
Dorovan (DO)	52-105	21.5-43.4	84-105	34.7-43.4
Leaf (La)	48-105	19.8-43.4	76-105	31.4-43.4
Leon (Ln)	19-59	7.9-24.4	30-46	12.4-19.0
Masontown/Muckalee (MM)	52-105	21.5-43.4	84-105	34.7-43.4
Murville (Mu)	52-105	21.5-43.4	84-105	34.7-43.4
Pantego (Pa)	38-105	15.9-43.4	77-105	31.8-43.4
Rains (Ra)	19-105	7.9-43.4	30-105	12.4-43.4

Table D3. Success Criteria by Management Unit (2005)

MU 1

March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2	
					50% (years 1-3)	20% (years 4-5)
83	Pa/NP	127 (242)	100	Y	Y	Y
86*	La/NP	173	71.5	N/A	N/A	N/A
87	La/NE	93	38.4	Y	Y	Y
88*	Pa/NP	68	28.1	N/A	N/A	N/A
89*	Ra/NP	175	72.3	N/A	N/A	N/A
215*	Ra/NP	96	39.7	N/A	N/A	N/A
216*	La/NP	96	39.7	N/A	N/A	N/A
217*	La/NP	99	40.9	N/A	N/A	N/A
218*	La/NP	116 (172)	71.1	N/A	N/A	N/A
219	Ra/NE	103	42.6	Y	Y	Y
220	La/NE	72[d]	29.8	Y	Y	Y
223	Pa/NE	242	100	Y	Y	Y
316*	Ra/NP	63	26.0	N/A	N/A	N/A

* Hydrology Reference Gauge

[a] Soil Types: La - Leaf silt loam; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Enhancement – NE, Non-riverine Preservation – NP

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

[d] Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

March 18-June 30						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2	
					50% (years 1-3)	20% (years 4-5)
83	Pa/NP	10 (105)	43.4	Y	Y	Y
86*	La/NP	105	43.4	N/A	N/A	N/A
87	La/NE	93	38.4	Y	Y	Y
88*	Pa/NP	41 (97)	40.1	N/A	N/A	N/A
89*	Ra/NP	105	43.4	N/A	N/A	N/A
215*	Ra/NP	96	39.7	N/A	N/A	N/A
216*	La/NP	96	39.7	N/A	N/A	N/A
217*	La/NP	99	40.9	N/A	N/A	N/A
218*	La/NP	41 (97)	40.1	N/A	N/A	N/A
219	Ra/NE	104	43.0	Y	Y	Y
220	La/NE	INC[d]	INC	INC	INC	INC
223	Pa/NE	105	43.4	Y	Y	Y
316*	Ra/NP	38	15.7	N/A	N/A	N/A

* Hydrology Reference Gauge

[a] Soil Types: La - Leaf silt loam; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Enhancement – NE, Non-riverine Preservation – NP

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 2A

March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2	
					50% (years 1-3)	20% (years 4-5)
91*	MM/RP	242	100.0	N/A	N/A	N/A
92	La/NE	35	14.5	Y	N	N
93	La/NR	31	12.8	Y	N	N
213*	MM/RP	145 (242)	100.0	N/A	N/A	N/A
214*	MM/RP	175	72.3	N/A	N/A	N/A
243	Ba/RE	54 [d]	22.3	N	N	N
244	La/NE	54 [d]	22.3	Y	Y	N

* Hydrology Reference Gauge

[a] Soil Types: Ba - Bayboro mucky loam; La - Leaf silt loam; MM - Masontown/Muckalee

Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Enhancement – RE, Riverine Preservation - RP

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

[d] Gauges were not available for installation. Gauge was not installed for a portion of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

March 18-June 30						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30	% of Growing Season[b]	Success Criterion 1	Success Criterion 2	
					50% (years 1-3)	20% (years 4-5)
91*	MM/RP	105	43.4	N/A	N/A	N/A
92	La/NE	34	14.1	Y	N	N
93	La/NR	29	12.0	Y	N	N
213*	MM/RP	105	43.4	N/A	N/A	N/A
214*	MM/RP	105	43.4	N/A	N/A	N/A
243	Ba/RE	INC[c]	INC	INC	INC	INC
244	La/NE	INC[d]	INC	INC	INC	INC

* Hydrology Reference Gauge

[a] Soil Types: Ba - Bayboro mucky loam; La - Leaf silt loam; MM - Masontown/Muckalee

Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Enhancement – RE, Riverine Preservation - RP

[b] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[C] INC – Data incomplete, gauge not installed as of August 2005.

[d] INC – Gauges were not available for installation. Gauge was not installed for a portion of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 2B

March 18-November 14

Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
94	Pa/NR	39[d]	16.1	Y	Y	N
96	La/NR	102	42.2	Y	Y	Y
100	La/NR	61 (99)	40.9	Y	Y	Y
102	Ba/RR	25	10.3	N	N	N
150	La/NR	40	16.5	Y	N	N
152	Ba/NR	98 (138)	57.0	Y	Y	Y
153	Ba/NR	75 (171)	70.7	Y	Y	Y
245	Ba/RE	242	100	Y	Y	Y
246	La/RE	63[d]	26.0	Y	Y	N
247	La/NR	35[d]	14.5	Y	N	N
248	La/NR	51[d]	21.1	Y	Y	N
249	La/NR	99	40.9	Y	Y	Y
251	Ba/NR	170	70.3	Y	Y	Y
252	Ba/NR	100	41.3	Y	Y	N
253	Ba/NR	98	40.5	Y	Y	N
254	Ba/NR	157	64.9	Y	Y	Y
261	Ba/NR	74[d]	30.6	Y	N	N
262	Ba/NR	68 (179)	74.0	Y	Y	Y
263	Ba/NR	62[d]	25.6	Y	N	N

[a] Soil Types: Ba - Bayboro mucky loam; La - Leaf silt loam; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR; Riverine Enhancement – RE; Riverine Restoration – RR
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data
[d] Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 2B						
March 18-June 30						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
94	Pa/NR	INC[d]	INC	INC	INC	INC
96	La/NR	102	42.2	Y	Y	Y
100	La/NR	45 (99)	40.9	Y	Y	Y
102	Ba/RR	25	10.3	N	N	N
150	La/NR	40	16.5	Y	N	N
152	Ba/NR	98	40.5	Y	Y	Y
153	Ba/NR	87(105)	43.4	Y	Y	Y
245	Ba/RE	105	43.4	Y	Y	Y
246	La/RE	INC[d]	INC	INC	INC	INC
247	La/NR	INC[d]	INC	INC	INC	INC
248	La/NR	INC[d]	INC	INC	INC	INC
249	La/NR	99	40.9	Y	Y	Y
251	Ba/NR	105	43.4	Y	Y	Y
252	Ba/NR	100[e]	41.3 [e]	Y	Y	Y
253	Ba/NR	98	40.5	Y	Y	Y
254	Ba/NR	105	43.4	Y	Y	Y
261	Ba/NR	INC[d]	INC	INC	INC	INC
262	Ba/NR	INC[e]	INC	INC	INC	INC
263	Ba/NR	INC[d]	INC	INC	INC	INC

[a] Soil Types: Ba - Bayboro mucky loam; La - Leaf silt loam; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR; Riverine Enhancement – RE; Riverine Restoration – RR

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

[e] Gauge malfunction, minimum number of consecutive days. Hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 3

March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2	
					50% (years 1-3)	20% (years 4-5)
98	Ba/NR	95	39.3	Y	Y	N
101	Ba/NR	69 (96)	39.7	Y	Y	N
151	La/NR	95	39.3	Y	Y	N
154	Ba/NE	61[d]	25.2	Y	N	N
250	La/NR	52 (155)	21.5	Y	Y	N
255	Ba/NR	146 (157)	64.9	Y	Y	Y
256	Ba/RR	66[d]	27.3	Y	N	N
257	Ba/RE	96 (242)	100	Y	Y	Y
258	Ba/NR	42[d]	17.4	Y	N	N
259	Ba/NR	39[e]	16.1	Y	N	N

[a] Soil Types: Ba - Bayboro mucky loam; La - Leaf silt loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Restoration – RR, Riverine Enhancement – RE
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data
[d] Gauges were not available for installation. Gauge was not installed for a portion of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.
[e] Gauge malfunction, minimum number of consecutive days. Hydrograph is too flashy to extrapolate missing data with any certainty.

March 18-June 30						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2	
					50% (years 1-3)	20% (years 4-5)
98	Ba/NR	95	39.3	Y	Y	Y
101	Ba/NR	69 (96)	39.7	Y	Y	Y
151	La/NR	95	39.3	Y	Y	Y
154	Ba/NE	INC[d]	INC	INC	INC	INC
250	La/NR	30[e]	12.4	Y	INC	INC
255	Ba/NR	105	43.4	Y	Y	Y
256	Ba/RR	INC[d]	INC	INC	INC	INC
257	Ba/RE	96 (105)	43.4	Y	Y	Y
258	Ba/NR	42[e]	17.4	Y	INC	INC
259	Ba/NR	29[e]	12.0[e]	Y	INC	INC

[a] Soil Types: Ba - Bayboro mucky loam; La - Leaf silt loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Restoration – RR, Riverine Enhancement – RE
[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data
[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%
[d] INC – Gauges were not available for installation. Gauge was not installed for a portion of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.
[e] Gauge malfunction, minimum number of consecutive days. Hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 4A

March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
53	Ba/NE	68 (164)	67.8	Y	Y	Y
99*	Ba/RP	167	69.0	N/A	N/A	N/A
112	Ba/NE	95	39.3	Y	Y	N
203*	Ba/RP	242	100	N/A	N/A	N/A
204*	Ba/RP	124 (242)	100	N/A	N/A	N/A
205*	Pa/NP	166	68.6	N/A	N/A	N/A
260	Ba/NR	36 (42)	17.4	Y	N	N

* Hydrology Reference Gauge
[a] Soil Types: Ba - Bayboro mucky loam; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Non-riverine Preservation – NP, Riverine Preservation - RP
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

March 18-June 30						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
53	Ba/NE	54 (105)	43.4	Y	Y	Y
99*	Ba/RP	105	43.4	N/A	N/A	N/A
112	Ba/NE	95	39.3	Y	Y	Y
203*	Ba/RP	105	43.4	N/A	N/A	N/A
204*	Ba/RP	105	43.4	N/A	N/A	N/A
205*	Pa/NP	105	43.4	N/A	N/A	N/A
260	Ba/NR	42	17.4	Y	N	N

* Hydrology Reference Gauge
[a] Soil Types: Ba - Bayboro mucky loam; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Non-riverine Preservation – NP, Riverine Preservation - RP
[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data
[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

Success Criteria by Management Unit (2005)

MU 4B

March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
54	Pa/NP	166	68.6	Y	Y	Y
55	Ba/NE	147 (242)	100	Y	Y	Y
56	CT/NP	147 (242)	100	Y	Y	Y
57	CT/NE	80 (176)	72.7	Y	Y	Y
58	Ba/NE	96	39.7	Y	Y	N
59	Ba/NR	167	69.0	Y	Y	Y
206*	CT/NP	176	72.7	N/A	N/A	N/A
317	Ba/NR	167	69.0	Y	Y	Y
318	Ba/NR	158	65.3	Y	Y	Y

* Hydrology Reference Gauge
[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Non-riverine Preservation – NP
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

March 18-June 30						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
54	Pa/NP	105	43.4	Y	Y	Y
55	Ba/NE	10 (105)[d]	43.4	Y	Y	Y
56	CT/NP	10 (105)[d]	43.4	Y	Y	Y
57	CT/NE	10 (105)[d]	43.4	Y	Y	Y
58	Ba/NE	96	39.7	Y	Y	Y
59	Ba/NR	105	43.4	Y	Y	Y
206*	CT/NP	105	43.4	N/A	N/A	N/A
317	Ba/NR	105	43.4	Y	Y	Y
318	Ba/NR	105	43.4	Y	Y	Y

* Hydrology Reference Gauge
[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Non-riverine Preservation – NP
[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data
[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%
[d] Gauge was not installed for much of the 2005 draw-down period, status shown in parentheses is projected based on incomplete data.

Success Criteria by Management Unit (2005)

MU 5						
March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
84	Ra/NR	67	27.7	Y	Y	Y
85	Pa/NR	34	14.1	Y	Y	N
95	La/NR	32[d]	13.2	Y	N	N
106	Ba/NE	67 (172)	71.1	Y	Y	Y
149	Pa/NR	13	5.4	N	N	N
221	La/NR	73[d]	30.2	Y	Y	N
222	La/NR	86 (91)	37.6	Y	Y	Y
224	Pa/NR	242	100	Y	Y	Y
225	Pa/NR	119 (242)	100	Y	Y	Y
235	Ba/NR	172	71.1	Y	Y	Y
236	MM/RR	83 (95)	39.3	Y	Y	N
237	MM/RE	242	100	Y	Y	Y
238	Ra/NR	35[d]	14.5	Y	Y	N
239	Ra/NR	33	13.6	Y	Y	N
241	Ra/NE	242	100	Y	Y	Y
242	La/NR	112 (168)	69.4	Y	Y	Y
321	Pa/NR	242	100	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; La - Leaf silt loam; MM - Masontown/Muckalee; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Restoration – RR, Riverine Enhancement – RE

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

[d]Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data wit h any certainty.

Success Criteria by Management Unit (2005)

MU 5						
March 18-June 30						
Gauge	Soil & Mit.	No. Days <12"	% of	Success	Success Criterion 2	
Site	Type[a]	March 18-June 30[b]	Growing Season[c]	Criterion 1	50% (years 1-3)[d]	20% (years 4-5)
84	Ra/NR	55	22.7	Y	Y	Y
85	Pa/NR	34	14.1	Y	N	N
95	La/NR	INC[d]	INC	INC	INC	INC
106	Ba/NE	67 (105)	43.4	Y	Y	Y
149	Pa/NR	7	2.9	N	N	N
221	La/NR	INC[e]	INC	INC	INC	INC
222	La/NR	86 (91)	37.6	Y	Y	Y
224	Pa/NR	105	43.4	Y	Y	Y
225	Pa/NR	79 (105)	43.4	Y	Y	Y
235	Ba/NR	105	43.4	Y	Y	Y
236	MM/RR	83 (95)	39.3	Y	Y	Y
237	MM/RE	105	43.4	Y	Y	Y
238	Ra/NR	INC[e]	INC	INC	INC	INC
239	Ra/NR	33	13.6	Y	Y	Y
241	Ra/NE	105	43.4	Y	Y	Y
242	La/NR	49 (105)	43.4	Y	Y	Y
321	Pa/NR	105	43.4	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; La - Leaf silt loam; MM - Masontown/Muckalee; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Restoration – RR, Riverine Enhancement – RE

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] INC – Data incomplete, gauge not installed as of August 2005.

[e] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 6						
March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2	
					50% (years 1-3)	20% (years 4-5)
74	Ba/NR	41	16.9	Y	N	N
75	Ba/NR	6	2.5	N	N	N
76	Ba/NR	25	10.3	N	N	N
77	CT/RE	242	100	Y	Y	Y
78	MM/RR	127 (242)	100	Y	Y	Y
79	DO/RR	242	100	Y	Y	Y
80	DO/RR	216 (242)	100	Y	Y	Y
81	Ba/RR	242	100	Y	Y	Y
82	Pa/NR	242	100	Y	Y	Y
107	Ba/NR	79 (175)	72.3	Y	Y	Y
108	Ba/NR	77 (173)	71.5	Y	Y	Y
109	MM/RR	242	100	Y	Y	Y
146	La/NR	90	37.2	Y	Y	Y
147	Ba/NE	185 (242)	100	Y	Y	Y
148	MM/RE	242	100	Y	Y	Y
226	Pa/NR	146 (242)	100	Y	Y	Y
227	MM/RR	43[d]	17.8	N	N	N
228	MM/RE	215 (242)	100	Y	Y	Y
229	CT/RE	130 (242)	100	Y	Y	Y
230	Ba/RR	130 (242)	100	Y	Y	Y
231	CT/RR	242	100	Y	Y	Y
233	Ra/NR	91	37.6	Y	Y	Y
234	Ba/NR	54 (175)	72.3	Y	Y	Y
240	CT/NR	165 (242)	100	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; DO - Dorovan muck; La - Leaf silt loam; MM - Masontown/Muckalee; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam

Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Restoration – RR, Riverine Enhancement – RE

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

Success Criteria by Management Unit (2005)

MU 6						
March 18-June 30						
Gauge Site	**Soil & Mit. Type[a]**	**No. Days <12" March 18-June 30[b]**	**% of Growing Season[c]**	**Success Criterion 1**	**Success Criterion 2 50% (years 1-3)**	**20% (years 4-5)**
74	Ba/NR	41[d]	16.9	Y	INC	INC
75	Ba/NR	6	2.5	N	N	N
76	Ba/NR	25	10.3	N	N	N
77	CT/RE	105	43.4	Y	Y	Y
78	MM/RR	105	43.4	Y	Y	Y
79	DO/RR	105	43.4	Y	Y	Y
80	DO/RR	105	43.4	Y	Y	Y
81	Ba/RR	105	43.4	Y	Y	Y
82	Pa/NR	105	43.4	Y	Y	Y
107	Ba/NR	9 (105)[e]	43.4	Y	Y	Y
108	Ba/NR	9 (105)[e]	43.4	Y	Y	Y
109	MM/RR	105	43.4	Y	Y	Y
146	La/NR	90	37.2	Y	Y	Y
147	Ba/NE	105	43.4	Y	Y	Y
148	MM/RE	105	43.4	Y	Y	Y
226	Pa/NR	9 (105)[e]	43.4	Y	Y	Y
227	MM/RR	INC[f]	INC[f]	INC	INC	INC
228	MM/RE	78 (105)	43.4	Y	Y	Y
229	CT/RE	0 (105)[e]	43.4	Y	Y	Y
230	Ba/RR	84 (105)	43.4	Y	Y	Y
231	CT/RR	105	43.4	Y	Y	Y
233	Ra/NR	91	37.6	Y	Y	N
234	Ba/NR	INC[e]	INC[f]	INC	INC	INC
240	CT/NR	28 (105)	43.4	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; DO - Dorovan muck; La - Leaf silt loam; MM - Masontown/Muckalee; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Riverine Restoration – RR, Riverine Enhancement – RE

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] Gauge malfunction and hydrograph is too flashy to extrapolate missing data with any certainty.

[e] Gauge was not installed for much of the 2005 draw-down period, status shown in parentheses is projected based on incomplete data.

[f] INC – Data incomplete, gauge not installed as of August 2005.

Success Criteria by Management Unit (2005)

MU 7						
March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
52	Ba/NE	78 (178)	73.6	Y	Y	Y
71	Ba/NR	96 (172)	71.1	Y	Y	Y
72	Ba/NR	78 (173)	71.5	Y	Y	Y
73	Pa/NR	170	70.3	Y	Y	Y
97	Ba/NR	172	71.1	Y	Y	Y
110	Pa/NR	172	71.1	Y	Y	Y
111	Ba/NE	116 (242)	100	Y	Y	Y
155	Ba/NR	61 (98)	40.5	Y	Y	Y
156	Ba/NR	63 (172)	71.1	Y	Y	Y
264	Ba/NR	75 (171)	70.7	Y	Y	Y
265	Ba/NR	94 (178)	73.6	Y	Y	Y
267	Ba/NE	171	70.7	Y	Y	Y
268	Ba/NR	175	72.3	Y	Y	Y
270	Ba/NR	242	100	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

Success Criteria by Management Unit (2005)

MU 7

March 18-June 30

Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
52	Ba/NE	10 (105)[d]	43.4	Y	Y	Y
71	Ba/NR	96 (105)[e]	43.4	Y	Y	Y
72	Ba/NR	10 (105) [d]	43.4	Y	Y	Y
73	Pa/NR	105	43.4	Y	Y	Y
97	Ba/NR	105	43.4	Y	Y	Y
110	Pa/NR	105	43.4	Y	Y	Y
111	Ba/NE	105	43.4	Y	Y	Y
155	Ba/NR	INC[f]	INC	INC	INC	INC
156	Ba/NR	54 (105)	43.4	Y	Y	Y
264	Ba/NR	9 (105)[d]	43.4	Y	Y	Y
265	Ba/NR	105	43.4	Y	Y	Y
267	Ba/NE	95 (105)	43.4	Y	Y	Y
268	Ba/NR	105	43.4	Y	Y	Y
270	Ba/NR	105	43.4	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data
[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%
[d] Gauge was not installed for much of the 2005 draw-down period, status shown in parentheses is projected based on incomplete data.
[e] Gauge malfunctioned for much of the 2005 draw-down period, status shown in parentheses is projected based on incomplete data.
[f] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 8						
March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[c]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	20% (years 4-5)
44	CT/NR	170	70.3	Y	Y	Y
47	Ba/NR	177	73.1	Y	Y	Y
51	Ba/NE	89 (242)	100	Y	Y	Y
103	CT/NE	160 (242)	100	Y	Y	Y
113	Ba/NE	146 (242)	100	Y	Y	Y
114	CT/NR	151	70.7	Y	Y	Y
115	Pa/NR	146	60.3	Y	Y	Y
116	Pa/NE	173	71.5	Y	Y	Y
117	CT/NE	242	100	Y	Y	Y
266	Ba/NR	147 (242)	100	Y	Y	Y
269	Ba/NE	242	100	Y	Y	Y
307	CT/NR	114 (170)	70.3	Y	Y	Y
309	CT/NR	176	72.7	Y	Y	Y
311	Ba/NR	171	70.7	Y	Y	Y
312	CT/NR	171	70.7	Y	Y	Y
314	Ba/NR	158	65.3	Y	Y	Y
315	Ba/NR	167	69.0	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

Success Criteria by Management Unit (2005)

MU 8						
March 18-June 30						
Gauge Site	**Soil & Mit. Type[a]**	**No. Days <12" March 18-June 30[b]**	**% of Growing Season[c]**	**Success Criterion 1**	**Success Criterion 2**	
					50% (years 1-3)	**20% (years 4-5)**
44	CT/NR	105	43.4	Y	Y	Y
47	Ba/NR	105	43.4	Y	Y	Y
51	Ba/NE	89 (105)	43.4	Y	Y	Y
103	CT/NE	105	43.4	Y	Y	Y
113	Ba/NE	105	43.4	Y	Y	Y
114	CT/NR	105	43.4	Y	Y	Y
115	Pa/NR	105	43.4	Y	Y	Y
116	Pa/NE	105	43.4	Y	Y	Y
117	CT/NE	105	43.4	Y	Y	Y
266	Ba/NR	10 (105)[d]	43.4	Y	Y	Y
269	Ba/NE	105	43.4	Y	Y	Y
307	CT/NR	105	43.4	Y	Y	Y
309	CT/NR	105	43.4	Y	Y	Y
311	Ba/NR	105	43.4	Y	Y	Y
312	CT/NR	105	43.4	Y	Y	Y
314	Ba/NR	105	43.4	Y	Y	Y
315	Ba/NR	105	43.4	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] Gauge was not installed for much of the 2005 draw-down period, status shown in parentheses is projected based on incomplete data.

Success Criteria by Management Unit (2005)

MU 9

March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[c]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2	
					50% (years 1-3)	20% (years 4-5)
41	Ba/NE	170	70.3	Y	Y	Y
42	CT/NE	167	69.0	Y	Y	Y
43	CT/NE	158	65.3	Y	Y	Y
301	Ba/NR	59 (242)	100	Y	Y	Y
303	Ba/NR	76 (169)	69.8	Y	Y	Y
305	CT/NR	167	69.0	Y	Y	Y
306	CT/NE	176	72.7	Y	Y	Y
313	Ba/NE	146 (171)	70.7	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

March 18-June 30						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2	
					50% (years 1-3)	20% (years 4-5)
41	Ba/NE	105	43.4	Y	Y	Y
42	CT/NE	105	43.4	Y	Y	Y
43	CT/NE	105	43.4	Y	Y	Y
301	Ba/NR	59 (105)	43.4	Y	Y	Y
303	Ba/NR	54 (105)	43.4	Y	Y	Y
305	CT/NR	105	43.4	Y	Y	Y
306	CT/NE	105	43.4	Y	Y	Y
313	Ba/NE	80 (105)	43.4	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data
[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

Success Criteria by Management Unit (2005)

MU 10A						
March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[c]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
45	CT/NR	148 (242)	100	Y	Y	Y
46	CT/NR	143 (170)	70.3	Y	Y	Y
60	Ba/NR	242	100	Y	Y	Y
61	CT/NR	167	69.0	Y	Y	Y
118	Ba/NR	174	71.9	Y	Y	Y
119	CT/NR	74 (158)	65.3	Y	Y	Y
120	CT/NR	63 (158)	65.3	Y	Y	Y
296	CT/NR	74 (169)	69.8	Y	Y	Y
298	Ba/NR	146 (242)	100	Y	Y	Y
299	Ba/NR	147 (242)	100	Y	Y	Y
300	Ba/NR	95 (242)	100	Y	Y	Y
302	Ba/NR	147 (242)	100	Y	Y	Y
304	CT/NR	170	70.3	Y	Y	Y
308	CT/NR	235 (242)	100	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck
Mitigation Type: Non-riverine Restoration – NR
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentages may include extrapolated data

March 18-June 30						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
45	CT/NR	105	43.4	Y	Y	Y
46	CT/NR	105	43.4	Y	Y	Y
60	Ba/NR	105	43.4	Y	Y	Y
61	CT/NR	105	43.4	Y	Y	Y
118	Ba/NR	105	43.4	Y	Y	Y
119	CT/NR	74[d]	30.6	Y	Y	Y
120	CT/NR	INC[e]	INC[e]	INC	INC	INC
296	CT/NR	74 (105)	43.4	Y	Y	Y
298	Ba/NR	55 (105)	43.4	Y	Y	Y
299	Ba/NR	10 (105)	43.4	Y	Y	Y
300	Ba/NR	95 (105)	43.4	Y	Y	Y
302	Ba/NR	10 (105)[f]	43.4	Y	Y	Y
304	CT/NR	105	43.4	Y	Y	Y
308	CT/NR	105	43.4	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck
Mitigation Type: Non-riverine Restoration – NR
[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data
[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%
[d] Gauge malfunction, minimum number of consecutive days. Hydrograph is too flashy to extrapolate missing data with any certainty.
[e] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.
[f] Gauge was not installed for much of the 2005 draw-down period, status shown in parentheses is projected based on incomplete data.

Success Criteria by Management Unit (2005)

MU 10B						
March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	20% (years 4-5)
48	CT/NR	242	100	Y	Y	Y
49	Ba/NR	177	73.1	Y	Y	Y
50	Ba/NR	242	100	Y	Y	Y
65	Pa/NE	168	69.4	Y	Y	Y
66	Ra/NE	127 (242)	100	Y	Y	Y
67	Pa/NR	64 (99)	40.9	Y	Y	Y
69	Ba/NR	170	70.3	Y	Y	Y
70	Ba/NE	170	70.3	Y	Y	Y
122	Pa/NR	64 (92)	38.0	Y	Y	Y
123	CT/NE	169	69.8	Y	Y	Y
124	Pa/NR	92	38.0	Y	Y	Y
271	Ba/NR	242	100	Y	Y	Y
272	Ba/NR	146 (242)	100	Y	Y	Y
273	Ba/NR	54 (172)	71.1	Y	Y	Y
274	Ba/NR	77 (172)	71.1	Y	Y	Y
277	Ra/NR	40	16.5	Y	Y	Y
310	CT/NR	81 (177)	73.1	Y	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

Success Criteria by Management Unit (2005)

MU 10B						
March 18-June 30						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
48	CT/NR	105	43.4	Y	Y	Y
49	Ba/NR	105	43.4	Y	Y	Y
50	Ba/NR	105	43.4	Y	Y	Y
65	Pa/NE	105	43.4	Y	Y	Y
66	Ra/NE	105	43.4	Y	Y	Y
67	Pa/NR	33 (98)	40.5	Y	Y	Y
69	Ba/NR	105	43.4	Y	Y	Y
70	Ba/NE	105	43.4	Y	Y	Y
122	Pa/NR	INC[f]	INC[f]	INC	INC	INC
123	CT/NE	105	43.4	Y	Y	Y
124	Pa/NR	105	43.4	Y	Y	Y
271	Ba/NR	105	43.4	Y	Y	Y
272	Ba/NR	9 (105)[d]	43.4	Y	Y	Y
273	Ba/NR	40[e]	16.5[e]	Y	INC	INC
274	Ba/NR	INC[f]	INC[f]	INC	INC	INC
277	Ra/NR	40	16.5	Y	N	N
310	CT/NR	INC[f]	INC[f]	INC	INC	INC

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] Gauge was not installed for much of the 2005 draw-down period, status shown in parentheses is projected based on incomplete data.

[e] Gauge malfunction, minimum number of consecutive days. Hydrograph is too flashy to extrapolate missing data with any certainty.

[f] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 10C						
March 18-November 14						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2	
					50% (years 1-3)	20% (years 4-5)
62	Ra/NR	35[d]	14.5	Y	Y	N
63	Pa/NR	112 (159)	65.7	Y	Y	N
64	Ra/NR	96	39.7	Y	Y	Y
121	Pa/NR	175	72.3	Y	Y	Y
143	Pa/NR	61 (99)	40.9	Y	Y	Y
282	Pa/NR	56 (171)	70.7	Y	Y	Y
283	Pa/NR	95 (171)	70.7	Y	Y	Y
284	CT/NR	94 (170)	70.3	Y	Y	Y
285	CT/NR	101 (177)	73.1	Y	Y	Y
286	Ra/NR	25	10.3	N	N	N
287	Ra/NR	9	3.7	N	N	N
289	Pa/NR	40[e]	16.5	Y	Y	N
290	Pa/NR	74 (99)	40.9	Y	Y	Y
291	Pa/NR	39[d]	16.1	Y	Y	N
293	CT/NR	242	100	Y	Y	Y
294	CT/NR	165 (242)	100	Y	Y	Y

[a] Soil Types: CT - Croatan muck; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Type: Non-riverine Restoration – NR

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

[d] Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

[e] Gauge malfunctioned for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 10C						
March 18-June 30						
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
62	Ra/NR	INC[d]	INC [d]	INC	INC	INC
63	Pa/NR	105	43.4	Y	Y	Y
64	Ra/NR	96	39.7	Y	Y	Y
121	Pa/NR	95 (105)	43.4	Y	Y	Y
143	Pa/NR	INC[e]	INC[e]	INC	INC	INC
282	Pa/NR	29 (105)[f]	43.4	Y	Y	Y
283	Pa/NR	29 (105) [f]	43.4	Y	Y	Y
284	CT/NR	29 (105) [f]	43.4	Y	Y	Y
285	CT/NR	29 (105) [f]	43.4	Y	Y	Y
286	Ra/NR	25	10.3	N	N	N
287	Ra/NR	6	2.5	N	N	N
289	Pa/NR	INC[d]	INC [d]	INC	INC	INC
290	Pa/NR	74	30.6	Y	Y	N
291	Pa/NR	INC[e]	INC[e]	INC	INC	INC
293	CT/NR	105	43.4	Y	Y	Y
294	CT/NR	28 (105) [f]	43.4	Y	Y	Y

[a] Soil Types: CT - Croatan muck; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Type: Non-riverine Restoration – NR

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] INC – Gauge malfunctioned for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

[e] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

[f] Gauge was not installed for much of the 2005 draw-down period, status shown in parentheses is projected based on incomplete data.

Success Criteria by Management Unit (2005)

MU 11

March 18-November 14					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
68	Ba/NR	96	39.7	Y	Y
144	Pa/NR	9	3.7	N	N
145	Ba/NR	70 (170)	70.3	Y	Y
232	Ra/NR	41 (94)	38.8	Y	Y
275	Ba/NR	171	70.7	Y	Y
276	Ra/NR	40 (91)	37.6	Y	Y
278	CT/NE	242	100	Y	Y
279	CT/NR	242	100	Y	Y

[a] Soil Types: Ba – Bayboro mucky loam; CT - Croatan muck; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

March 18-June 30					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
68	Ba/NR	96	39.7	Y	Y
144	Pa/NR	9	3.7	N	N
145	Ba/NR	INC[d]	INC[d]	INC	INC
232	Ra/NR	68 (105)	43.4	Y	Y
275	Ba/NR	105	43.4	Y	Y
276	Ra/NR	INC[d]	INC[d]	INC	INC
278	CT/NE	105	43.4	Y	Y
279	CT/NR	105	43.4	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data
[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%
[d] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 12A					
March 18-November 14					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
16	Pa/NE	99 (175)	72.3	Y	Y
17	Pa/NP	115 (169)	69.8	Y	Y
136	Mu/NE	102	42.2	Y	N
137	Mu/NR	26	10.7	N	N
179	Pa/NR	168	69.4	Y	Y
180	Ba/NE	68 (143)	59.1	Y	Y
280	Pa/NE	166 (242)	100	Y	Y
281	Ra/NE	61 (95)	39.3	Y	Y
288	Ra/NR	41 (91)	37.6	Y	Y
319*	Pa/NP			N/A	N/A

* Hydrology Reference Gauge

[a] Soil Types: Ba - Bayboro mucky loam; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Non-riverine Preservation – NP

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%. percentage may include extrapolated data

March 18-June 30					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
16	Pa/NE	29 (105)[d]	43.4	Y	Y
17	Pa/NP	51 (105)	43.4	Y	Y
136	Mu/NE	102	42.2	Y	Y
137	Mu/NR	13	5.4	N	N
179	Pa/NR	105	43.4	Y	Y
180	Ba/NE	30[e]	12.3[e]	Y	INC
280	Pa/NE	30 (105)[d]	43.4	Y	Y
281	Ra/NE	41 (96)	39.7	Y	Y
288	Ra/NR	41 (92)	38.0	Y	Y
319*	Pa/NP	94	38.9	N/A	N/A

* Hydrology Reference Gauge

[a] Soil Types: Ba - Bayboro mucky loam; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam; Ra - Rains fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE, Non-riverine Preservation – NP

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] Gauge was not installed for much of the 2005 draw-down period, status shown in parentheses is projected based on incomplete data.

[e] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 12B

March 18-November 14					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
9	Pa/NR	98	40.5	Y	Y
10	Pa/NR	99	40.9	Y	Y
18	Pa/NR	47	19.4	Y	N
36	Pa/NE	170	70.3	Y	Y
37	Pa/NR	95	39.3	Y	Y
38	Mu/NE	173	71.5	Y	Y
134	Pa/NE	98	40.5	Y	Y
135	Pa/NR	40	16.5	Y	N
157	CT/NR	174	71.9	Y	Y
182	Mu/NR	12	5.0	N	N
183	Mu/NR	13	5.4	N	N
188	Pa/NR	90	37.2	Y	Y
197	Pa/NE	157	64.9	Y	Y

[a] Soil Types: CT - Croatan muck; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

March 18-June 30					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
9	Pa/NR	98	40.5	Y	Y
10	Pa/NR	99	40.9	Y	Y
18	Pa/NR	47	19.4	Y	N
36	Pa/NE	105	43.4	Y	Y
37	Pa/NR	95	39.3	Y	Y
38	Mu/NE	105	43.4	Y	Y
134	Pa/NE	98	40.5	Y	Y
135	Pa/NR	40	16.5	Y	N
157	CT/NR	105	43.4	Y	Y
182	Mu/NR	10	4.1	N	N
183	Mu/NR	13	5.4	N	N
188	Pa/NR	90	37.2	Y	Y
197	Pa/NE	105	43.4	Y	Y

[a] Soil Types: CT - Croatan muck; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data
[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

Success Criteria by Management Unit (2005)

MU 13A					
March 18-November 14					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
1	Ba/NR	102 (242)	100	Y	Y
14	CT/NE	242	100	Y	Y
15	Pa/NR	171	70.7	Y	Y
20	Pa/NE	94 (169)	69.8	Y	Y
40	CT/NE	177	73.1	Y	Y
125	CT/NR	242	100	Y	Y
126	CT/NE	242	100	Y	Y
127	CT/NE	176	72.7	Y	Y
142	Pa/NR	94	38.8	Y	Y
174	Ba/NR	242	100	Y	Y
176	Ba/NR	105 (242)	100	Y	Y
178	Mu/NR	157	64.9	Y	Y
292	Pa/NE	61 (99)	40.9	Y	Y
295	Pa/NR	165 (242)	100	Y	Y
297	CT/NR	177	73.1	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

Success Criteria by Management Unit (2005)

MU 13A					
March 18-June 30					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
1	Ba/NR	95 (105)	43.4	Y	Y
14	CT/NE	105	43.4	Y	Y
15	Pa/NR	105	43.4	Y	Y
20	Pa/NE	30[d]	12.4 [d]	Y	INC
40	CT/NE	105	43.4	Y	Y
125	CT/NR	105	43.4	Y	Y
126	CT/NE	105	43.4	Y	Y
127	CT/NE	105	43.4	Y	Y
142	Pa/NR	94	38.8	Y	Y
174	Ba/NR	105	43.4	Y	Y
176	Ba/NR	105	43.4	Y	Y
178	Mu/NR	105	43.4	Y	Y
292	Pa/NE	INC[d]	INC[d]	INC	INC
295	Pa/NR	28 (105)[e]	43.4 [e]	Y	Y
297	CT/NR	105	43.4	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

[e] Gauge was not installed for much of the 2005 draw-down period, status shown in parentheses is projected based on incomplete data.

Success Criteria by Management Unit (2005)

MU 13B					
March 18-November 14					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
3	Mu/NR	13	5.4	N	N
4	Mu/NR	35 [d]	14.5	Y	N
24	Mu/NR	30	12.4	N	N
139	Ba/NE	176	72.7	Y	Y
140	Pa/NE	79 (154)	63.6	Y	Y
141	Pa/NE	41	16.9	Y	N
172	Ba/NR	70 (100)	41.3	Y	N
173	Ba/NE	99 (176)	72.7	Y	Y
194	Mu/NE	51 (88)	36.4	Y	N
198	Ln/NE	92 [d]	38.0	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; Ln - Leon sand; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam

Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

[d] Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

March 18-June 30					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5) [d]
3	Mu/NR	13	5.4	N	N
4	Mu/NR	INC [e]	INC [e]	INC	INC
24	Mu/NR	30	12.4	Y	N
139	Ba/NE	105	43.4	Y	Y
140	Pa/NE	55 (105)	43.4	Y	Y
141	Pa/NE	41	16.9	Y	N
172	Ba/NR	70 (100)	41.3	Y	Y
173	Ba/NE	53 (105)	43.4	Y	Y
194	Mu/NE	51 (88)	36.4	Y	Y
198	Ln/NE	92	38.0	Y	E

[a] Soil Types: Ba - Bayboro mucky loam; Ln -Leon sand; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam

Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] E - Exceeded upper limits of Reference Range

[e] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 14

March 18-November 14					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
12	Pa/NR	166 (242)	100	Y	Y
13	Ba/NR	132 (242)	100	Y	Y
22	Pa/NR	242	100	Y	Y
23	Pa/NE	242	100	Y	Y
175	Ba/NR	175	72.3	Y	Y
177	Pa/NR	242	100	Y	Y
186	Pa/NR	110 (242)	100	Y	Y
190	Pa/NR	242	100	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

March 18-June 30					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
12	Pa/NR	(29) 105	43.4	Y	Y
13	Ba/NR	105	43.4	Y	Y
22	Pa/NR	105	43.4	Y	Y
23	Pa/NE	105	43.4	Y	Y
175	Ba/NR	105	43.4	Y	Y
177	Pa/NR	105	43.4	Y	Y
186	Pa/NR	105	43.4	Y	Y
190	Pa/NR	105	43.4	Y	Y

[a] Soil Types: Ba - Bayboro mucky loam; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data
[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

Success Criteria by Management Unit (2005)

MU 15					
March 18-November 14					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
11	Pa/NR	32	13.2	Y	N
25	Pa/NR	93	38.4	Y	Y
26	Mu/NR	97	40.1	Y	N
27*	Mu/NP	242	100	N/A	N/A
138	Pa/NR	158	65.3	Y	Y
167	CT/NE	242	100	Y	Y
170	CT/NE	242	100	Y	Y
171	Ba/NR	94	38.8	Y	N
185	CT/NR	174	71.9	Y	Y
187	Ba/NR	170 (242)	100	Y	Y
189	Pa/NR	98	40.5	Y	Y
199*	Mu/NP	175	72.3	N/A	N/A
200*	Mu/NP	177	73.1	N/A	N/A
320*	Mu/NP	178	73.6	N/A	N/A

* Hydrology Reference Gauge

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

Success Criteria by Management Unit (2005)

MU 15					
March 18-June 30					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
11	Pa/NR	25	10.3	N	N
25	Pa/NR	93	38.4	Y	Y
26	Mu/NR	97	40.1	Y	N
27*	Mu/NP	105	43.4	N/A	N/A
138	Pa/NR	105	43.4	Y	Y
167	CT/NE	105	43.4	Y	Y
170	CT/NE	105	43.4	Y	Y
171	Ba/NR	94	38.8	Y	Y
185	CT/NR	105	43.4	Y	Y
187	Ba/NR	105	43.4	Y	Y
189	Pa/NR	98	40.5	Y	Y
199*	Mu/NP	105	43.4	N/A	N/A
200*	Mu/NP	105	43.4	N/A	N/A
320*	Mu/NP	105	43.4	N/A	N/A

* Hydrology Reference Gauge

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

Success Criteria by Management Unit (2005)

MU 16					
March 18-November 14					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
2	Mu/NE	92	38.0	Y	N
7	CT/NR	242	100	Y	Y
8	CT/NR	242	100	Y	Y
19	Pa/NE	242	100	Y	Y
28	DA/NR	242	100	Y	Y
31	CT/NR	242	100	Y	Y
128	CT/NR	242	100	Y	Y
129	CT/NR	242	100	Y	Y
130	Pa/NR	242	100	Y	Y
131	Mu/NE	242	100	Y	Y
162	CT/NR	186 (242)	100	Y	Y
164	CT/NR	242	100	Y	Y
165	CT/NR	242	100	Y	Y
166	DA/NR	167 (242)	100	Y	Y
168	CT/NR	242	100	Y	Y
169	Pa/NR	189 (242)	100	Y	Y
181	Mu/NR	90	37.2	Y	N
192	Mu/NR	97	40.1	Y	N
193	Mu/NR	99	40.9	Y	N
195	Ln/NR	31 [d]	12.8	Y	Y

[a] Soil Types: CT - Croatan muck; DA - Dare muck; Ln - Leon sand; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

Success Criteria by Management Unit (2005)

MU 16					
March 18-June 30					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
2	Mu/NE	92	38.0	Y	Y
7	CT/NR	105	43.4	Y	Y
8	CT/NR	105	43.4	Y	Y
19	Pa/NE	105	43.4	Y	Y
28	DA/NR	105	43.4	Y	Y
31	CT/NR	105	43.4	Y	Y
128	CT/NR	105	43.4	Y	Y
129	CT/NR	105	43.4	Y	Y
130	Pa/NR	105	43.4	Y	Y
131	Mu/NE	105	43.4	Y	Y
162	CT/NR	105	43.4	Y	Y
164	CT/NR	105	43.4	Y	Y
165	CT/NR	105	43.4	Y	Y
166	DA/NR	55 (105)	43.4	Y	Y
168	CT/NR	105	43.4	Y	Y
169	Pa/NR	105	43.4	Y	Y
181	Mu/NR	90	37.2	Y	Y
192	Mu/NR	97	40.1	Y	Y
193	Mu/NR	99	40.9	Y	Y
195	Ln/NR	11[d]	4.5 [d]	N	N

[a] Soil Types: CT - Croatan muck; DA - Dare muck; Ln - Leon sand; Mu - Murville mucky loamy sand; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

[d] Gauge malfunctioned during the critical 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

MU 17					
March 18-November 14					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
5	DA/NR	242	100	Y	Y
6	DA/NE	242	100	Y	Y
29	CT/NR	242	100	Y	Y
30	DA/NR	216 (242)	100	Y	Y
32	Ba/NR	242	100	Y	Y
33	Ba/NR	157	64.9	Y	Y
132	CT/NE	97	40.1	Y	Y
160	Ba/NR	174	71.9	Y	Y
161	CT/NR	242	100	Y	Y
163	CT/NR	167 (242)	100	Y	Y
196	Pa/NE	Removed	N/A	N/A	N/A

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; DA - Dare muck; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

March 18-June 30					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30	% of Growing Season[b]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
5	DA/NR	105	43.4	Y	Y
6	DA/NE	105	43.4	Y	Y
29	CT/NR	105	43.4	Y	Y
30	DA/NR	79 (105)	43.4	Y	Y
32	Ba/NR	105	43.4	Y	Y
33	Ba/NR	105	43.4	Y	Y
132	CT/NE	97	40.1	Y	Y
160	Ba/NR	105	43.4	Y	Y
161	CT/NR	105	43.4	Y	Y
163	CT/NR	105	43.4	Y	Y
196	Pa/NE	Removed	N/A	N/A	N/A

[a] Soil Types: Ba - Bayboro mucky loam; CT - Croatan muck; DA - Dare muck; Pa - Pantego fine sandy loam
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

Success Criteria by Management Unit (2005)

MU 18

March 18-November 14					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5)
21	Pa/NE	215 (242)	100	Y	Y
34	Pa/NR	169	69.8	Y	Y
133	CT/NE	89	36.8	Y	Y
158	CT/NR	172	71.1	Y	Y
159	CT/NR	54[d]	22.3	N	N
184	Ln/NE	39[e]	16.1	Y	Y
191	Pa/NE	30	12.4	N	N

[a] Soil Types: CT - Croatan muck; Pa - Pantego fine sandy loam; Ln - Leon sand
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges
[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data
[d] Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.
[e] Gauge malfunctioned during the critical 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

March 18-June 30					
Gauge Site	Soil & Mit. Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 20% (years 4-5) [d]
21	Pa/NE	78 (105)	43.4	Y	Y
34	Pa/NR	105	43.4	Y	Y
133	CT/NE	89	36.8	Y	Y
158	CT/NR	105	43.4	Y	Y
159	CT/NR	INC[d]	INC	INC	INC
184	Ln/NE	39[e]	16.1[e]	Y	Y
191	Pa/NE	30	12.4	Y	N

[a] Soil Types: CT - Croatan muck; Pa - Pantego fine sandy loam; Ln – Leon sand
Mitigation Types: Non-riverine Restoration – NR, Non-riverine Enhancement – NE
[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data
[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%
[d] INC – Gauges were not available for installation. Gauge was not installed for much of the 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.
[e] Gauge malfunctioned during the critical 2005 draw-down period and hydrograph is too flashy to extrapolate missing data with any certainty.

Success Criteria by Management Unit (2005)

Offsite Reference Gauges

March 18-November 14						
Gauge Site	Soil Type[a]	No. Days <12" March 18-November 14[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
35*	To	Removed	N/A	N/A	N/A	N/A
39*	DO	242	100	N/A	N/A	N/A
90*	Pa	242	100	N/A	N/A	N/A
104*	DA	242	100	N/A	N/A	N/A
105*	CT	147 (242)	100	N/A	N/A	N/A
201*	DO	242	100	N/A	N/A	N/A
202*	DO	242	100	N/A	N/A	N/A
207*	CT	72	29.8	N/A	N/A	N/A
208*	DA	121 (242)	100	N/A	N/A	N/A
209*	DA	242	100	N/A	N/A	N/A
210*	Ln	39	16.1	N/A	N/A	N/A
211*	Ln	38	15.7	N/A	N/A	N/A
212*	Ln	38	15.7	N/A	N/A	N/A

* Hydrology Reference Gauge

[a] Soil Types: CT - Croatan muck; DA - Dare muck; DO - Dorovan muck; Ln – Leon sand; To - Torhunta fine sandy loam

[b] Missing data: status shown in parenthesis was extrapolated from comparable gauges

[c] Growing season is based on 242 days, a maximum of 100%, percentage may include extrapolated data

March 18-June 30						
Gauge Site	Soil Type[a]	No. Days <12" March 18-June 30[b]	% of Growing Season[c]	Success Criterion 1	Success Criterion 2 50% (years 1-3)	Success Criterion 2 20% (years 4-5)
35*	To	Removed	N/A	N/A	N/A	N/A
39*	DO	105	43.4	N/A	N/A	N/A
90*	Pa	105	43.4	N/A	N/A	N/A
104*	DA	105	43.4	N/A	N/A	N/A
105*	CT	43 (105)	43.4	N/A	N/A	N/A
201*	DO	105	43.4	N/A	N/A	N/A
202*	DO	105	43.4	N/A	N/A	N/A
207*	CT	46	19.0	N/A	N/A	N/A
208*	DA	79 (105)	43.4	N/A	N/A	N/A
209*	DA	105	43.4	N/A	N/A	N/A
210*	Ln	39	16.1	N/A	N/A	N/A
211*	Ln	38	15.7	N/A	N/A	N/A
212*	Ln	38	15.7	N/A	N/A	N/A

* Hydrology Reference Gauge

[a] Soil Types: CT - Croatan muck; DA - Dare muck; DO - Dorovan muck; Ln – Leon sand; To - Torhunta fine sandy loam

[b] Based on critical defining jurisdictional hydroperiod; status shown in parentheses is projected based on incomplete data

[c] Percent of growing season is based on 105 days (between March 18 and June 30), a maximum of 43.4%

Figure 5a. Hydrologic Monitoring Results (March-June), Phase II

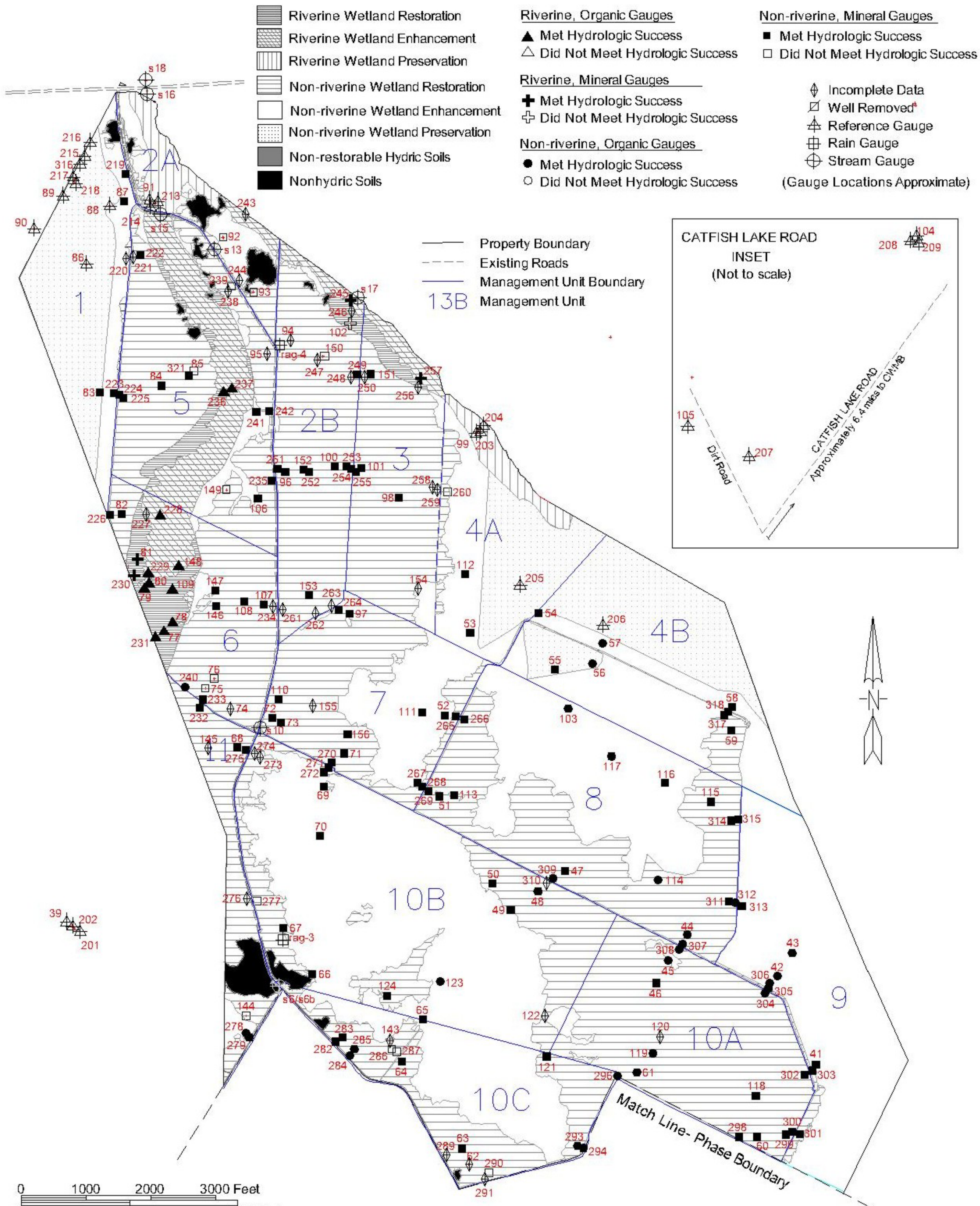
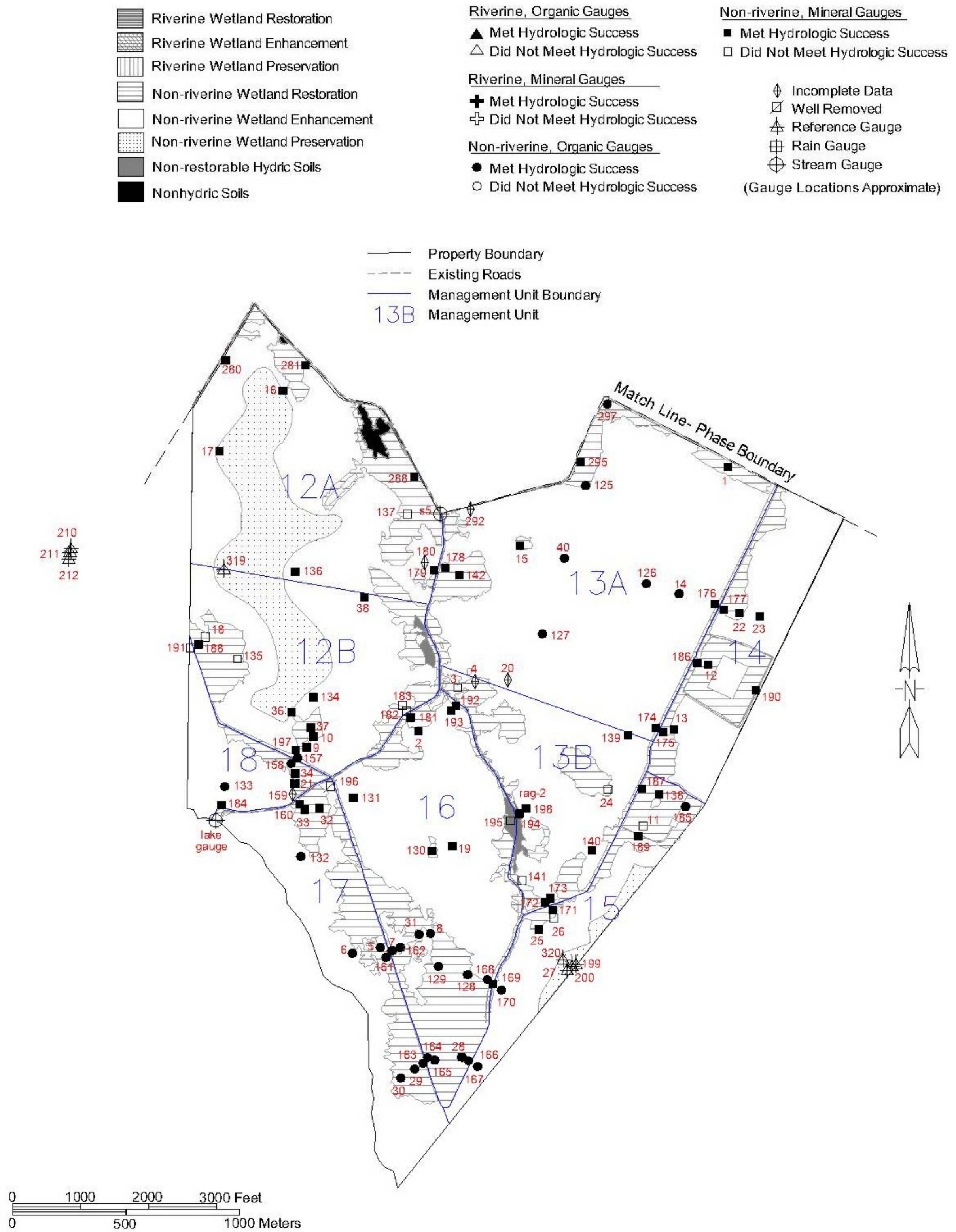


Figure 5b. Hydrologic Monitoring Results (March-June), Phase I



Appendix E
Gauge Removal Recommendations 2005

Table E1. Gauge Removal Recommendations 2005		
MU	**# for Removal**	**Gauge #s**
1	2	83, 223
2A	0	-
2B	0	-
3	0	-
4A	0	-
4B	3	54, 55, 56
5	2	224, 225
6	0	-
7	4	52, 111, 155, 265
8	7	47, 103, 113, 114, 117, 266, 309
9	3	41, 301, 303
10A	5	119, 120, 299, 300, 302
10B	5	48, 49, 50, 122, 310
10C	3	121, 293, 294
11	0	-
12A	0	-
12B	0	-
13A	7	14, 125, 126, 127, 174, 176, 295
13B	0	-
14	8	12, 13, 22, 23, 175, 177, 186, 190
15	2	167, 170
16	15	7, 8, 19, 28, 31, 128, 129, 130, 131, 162, 164, 165, 166, 168, 169
17	7	5, 6, 29, 30, 132, 161, 163
18	0	-

Figure 6a. 2005 Gauges Recommended For Removal, Phase II

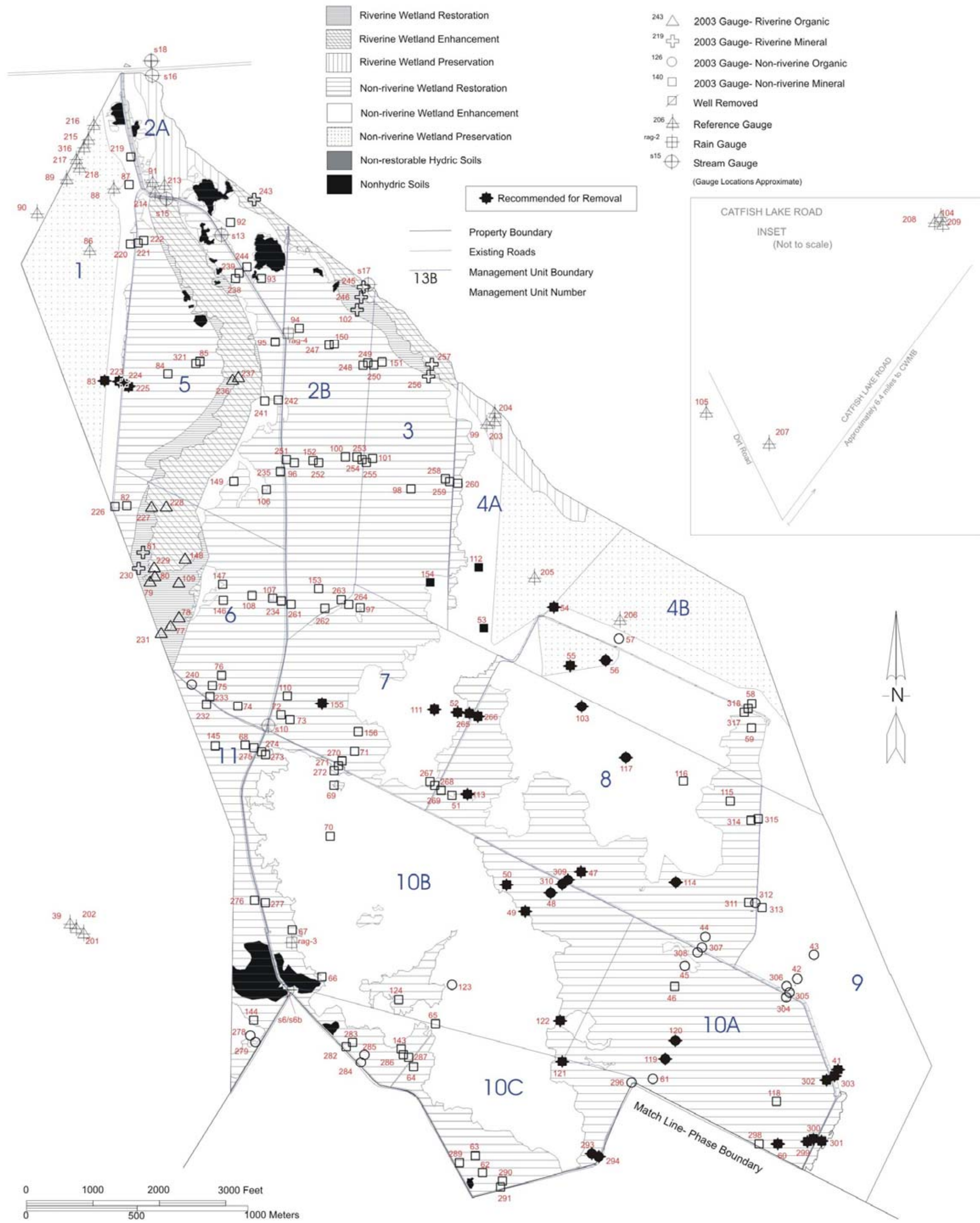


Figure 6b. 2005 Gauges Recommended For Removal, Phase I

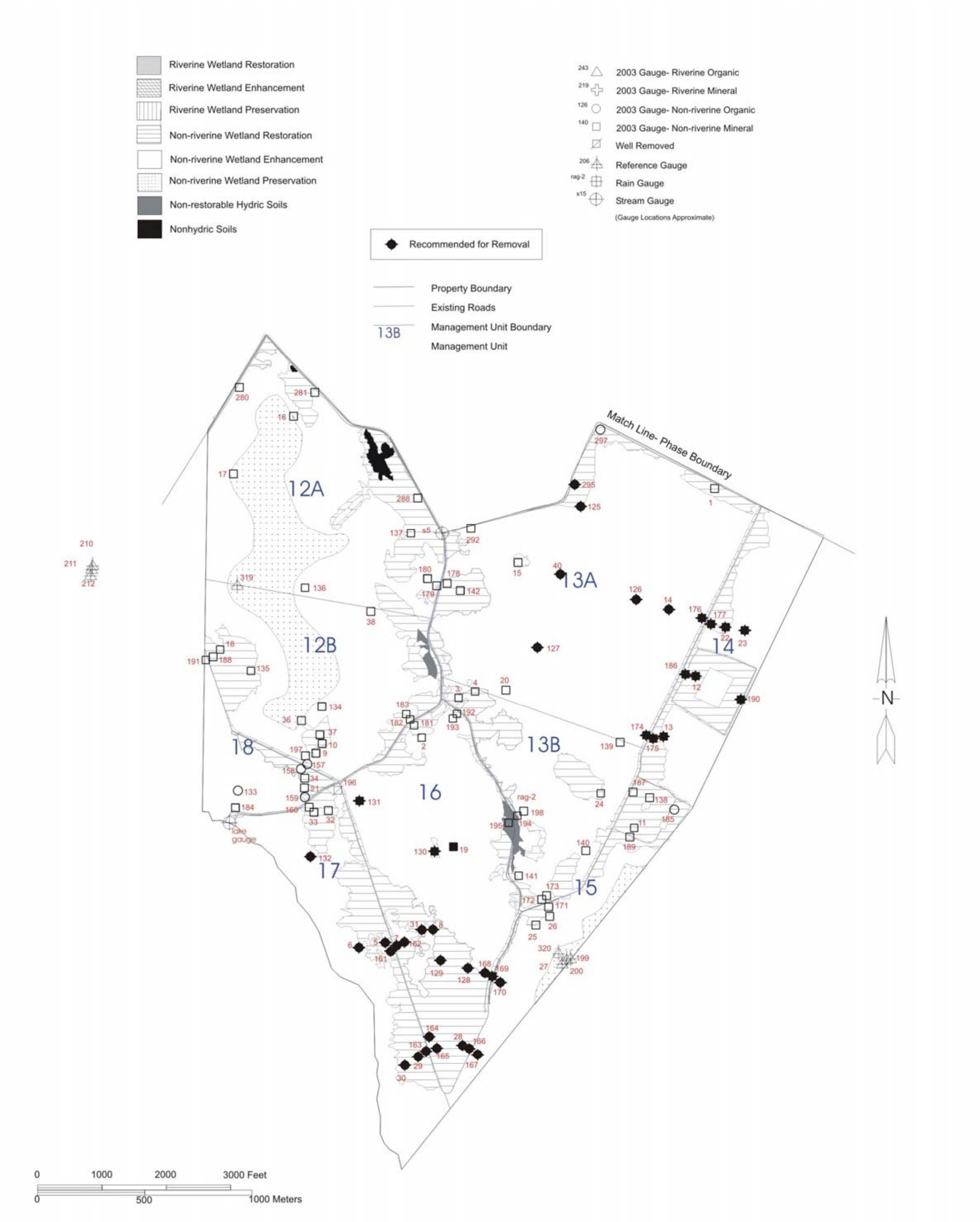


Figure 7a. 2006 Monitoring Gauges, Phase II

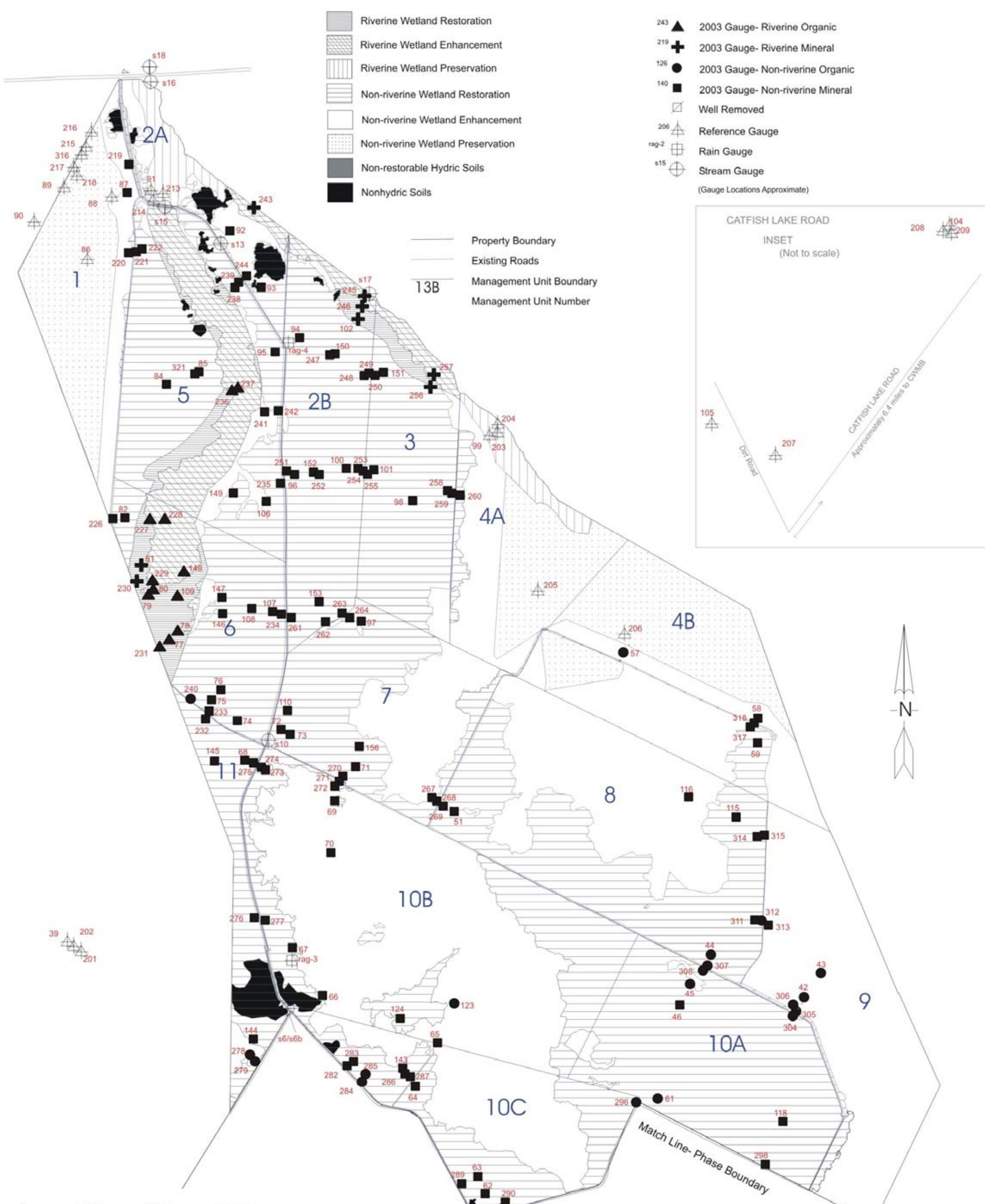


Figure 7b. 2006 Monitoring Gauges, Phase I