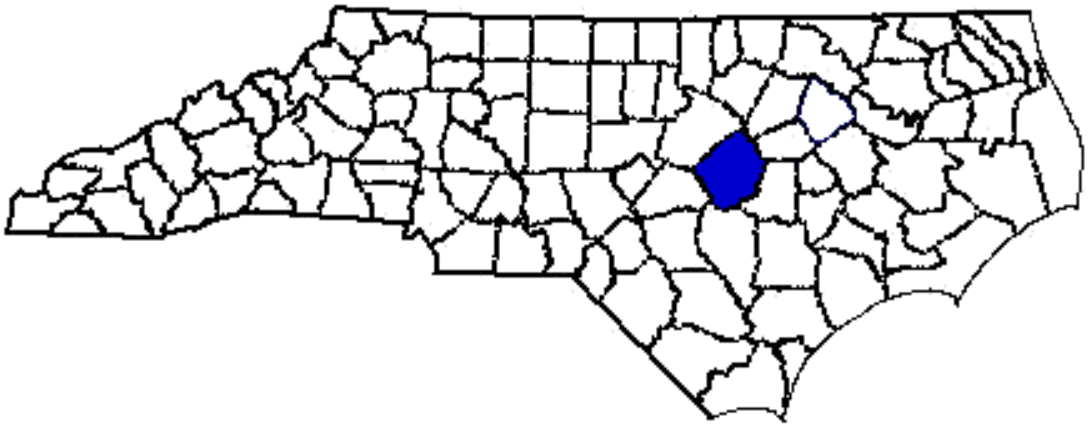
ANNUAL REPORT FOR 2003



White Oak Creek
Johnston County
Project No. 6.408014T
TIP No. R-2000 WM

Prepared By:
Office of Natural Environment & Roadside Environmental Unit
North Carolina Department of Transportation
December 2003

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SUMMARY

The following report summarizes the monitoring activities that have occurred in the past year on the White Oak Creek Mitigation Site. Site construction began in January 2002 and was completed in March 2002. The site was planted in late March 2002. In December 2002, the site was replanted; therefore, vegetation monitoring was restarted for year 1. Hydrology monitoring in 2003 represents the second year of monitoring at the site. The site must demonstrate both hydrologic and vegetation success for a minimum of five consecutive years or until the site is deemed successful. The site is monitored with thirty-eight groundwater monitoring gauges and eight vegetation plots.

The 2003-year represents the second year for hydrology monitoring. Overall, twenty-three of the thirty-six (non-reference) monitoring gauges indicate saturation within 12" of the surface for greater than 12.5% of the growing season. The two reference gauges, REF-37 and REF-38, also met the saturation criteria. Thirteen of the thirty-six gauges did not meet the jurisdictional success criteria for the 2003-monitoring year.

The 2003 vegetation monitoring of the site revealed an average density of 532 trees per acre. This average is well above the minimum success criteria of 320 trees per acre.

Based on the monitoring results from the 2003-growing season, NCDOT recommends that both hydrologic and vegetation monitoring continue at the White Oak Creek Mitigation Site.

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The White Oak Creek Site is located adjacent to the west bank of White Oak Creek, immediately south of Winston Road (SR 1550) and north of Austin Pond, approximately 2.5 miles west of Clayton, NC in Johnston County.

The site, totaling 50.69 acres in size, was mostly in open pastureland that was used to support horses in the past. Currently, the site has been returned to its natural condition. Construction started in January 2002 and was completed in March 2002. Planting was completed in March 2002.

1.2 PURPOSE

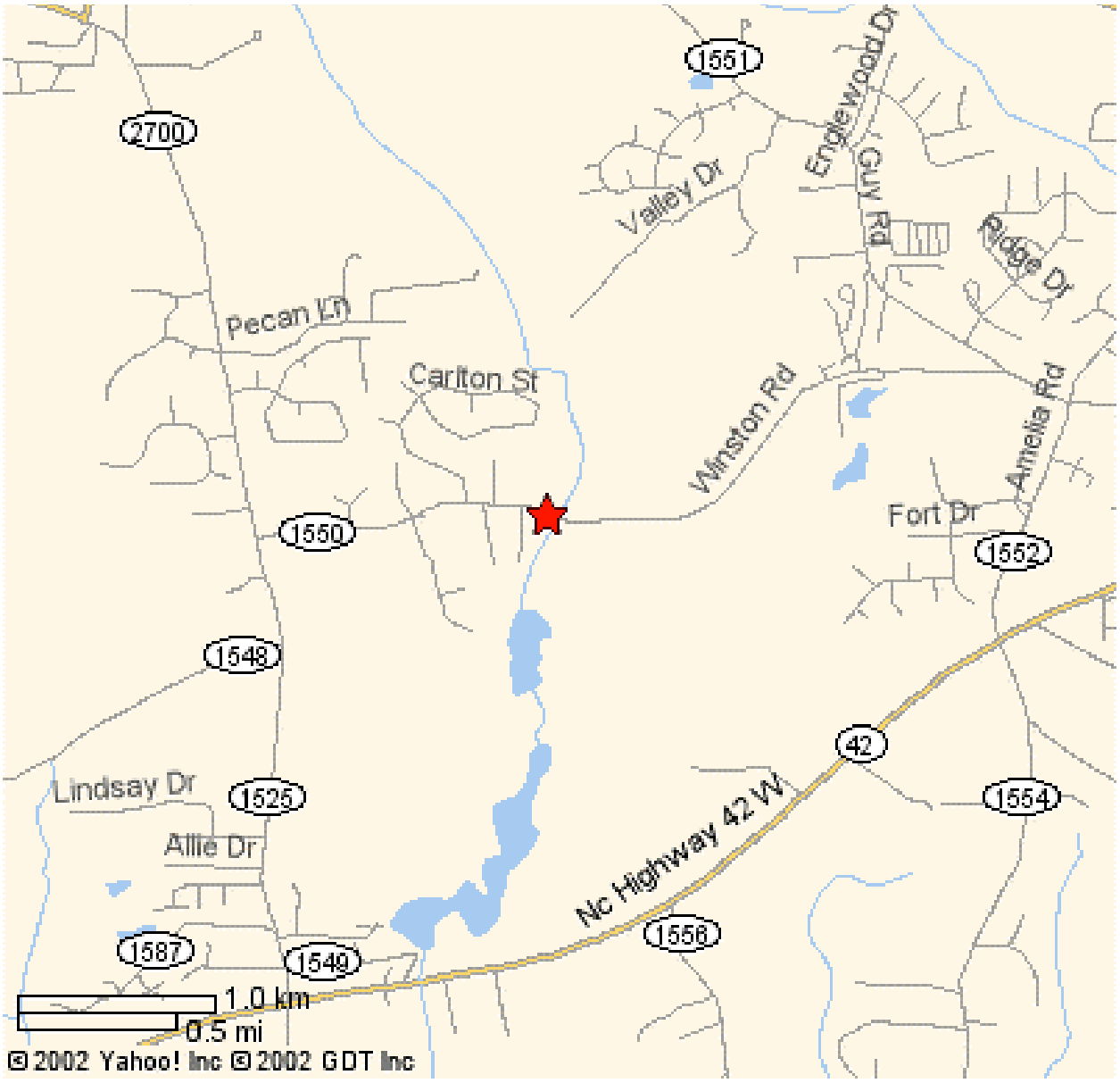
In order to demonstrate successful mitigation, hydrologic and vegetative monitoring must be conducted for a minimum of five consecutive years. Success criteria are based on federal guidelines for wetland mitigation. These guidelines stipulate criteria for both hydrologic conditions and vegetation survival. The following report details the results of hydrologic and vegetative monitoring during the 2003-growing season at the White Oak Creek Mitigation Site.

Activities in 2003 reflect the second year of hydrology monitoring and the restart first year for vegetation monitoring, following the restoration efforts. 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

January 2002- March 2002	Site Construction
March 2002	Site Planted
August 2002	Vegetation Monitoring (1 yr.)
March – November 2002	Hydrologic Monitoring (1 yr.)
December 2002	Site Replanted
June 2003	Vegetation Monitoring (Restart Year 1)
March – November 2003	Hydrologic Monitoring (Restart Year 1)

Figure 1: Vicinity Map



1.4 DEBIT LEDGER

The White Oak Creek Mitigation Site was constructed as an "up-front" effort for use by the Department for compensatory mitigation requirements involving roadway impacts to wetlands in the Neuse River Basin. Currently, no credits have been debited from this mitigation site. Certain portions of the site are available for credit. Regulatory agencies have stipulated that no credits shall be released until success is shown in certain restoration and creation areas.

2.0 HYDROLOGY

2.1 SUCCESS CRITERIA

In accordance with federal guidelines for wetland mitigation, the success criteria for hydrology states that the area must be inundated or saturated (within 12" of the surface) by surface or groundwater for at least a consecutive 12.5% of the growing season during a normal precipitation year. Areas inundated for less than 5% of the growing season are always classified as non-wetlands.
A site may be found to meet the hydrology performance criteria on the basis of comparison of monitoring data taken from the site with monitoring data taken from an established reference site approved by the Corps. The Corps retains the discretion to find that the hydrology criteria are met if such monitoring data from the mitigation site and the reference site are similar.

The growing season in Johnston County begins March 26 and ends November 10. These dates correspond to a 50% probability that temperatures will not drop to 28°F or lower after March 26 and before November 10.[1] The growing season is 229 days; therefore, optimum hydrology requires 12.5% of this season, or at least 29 consecutive days. Local climate must also represent average conditions for the area.

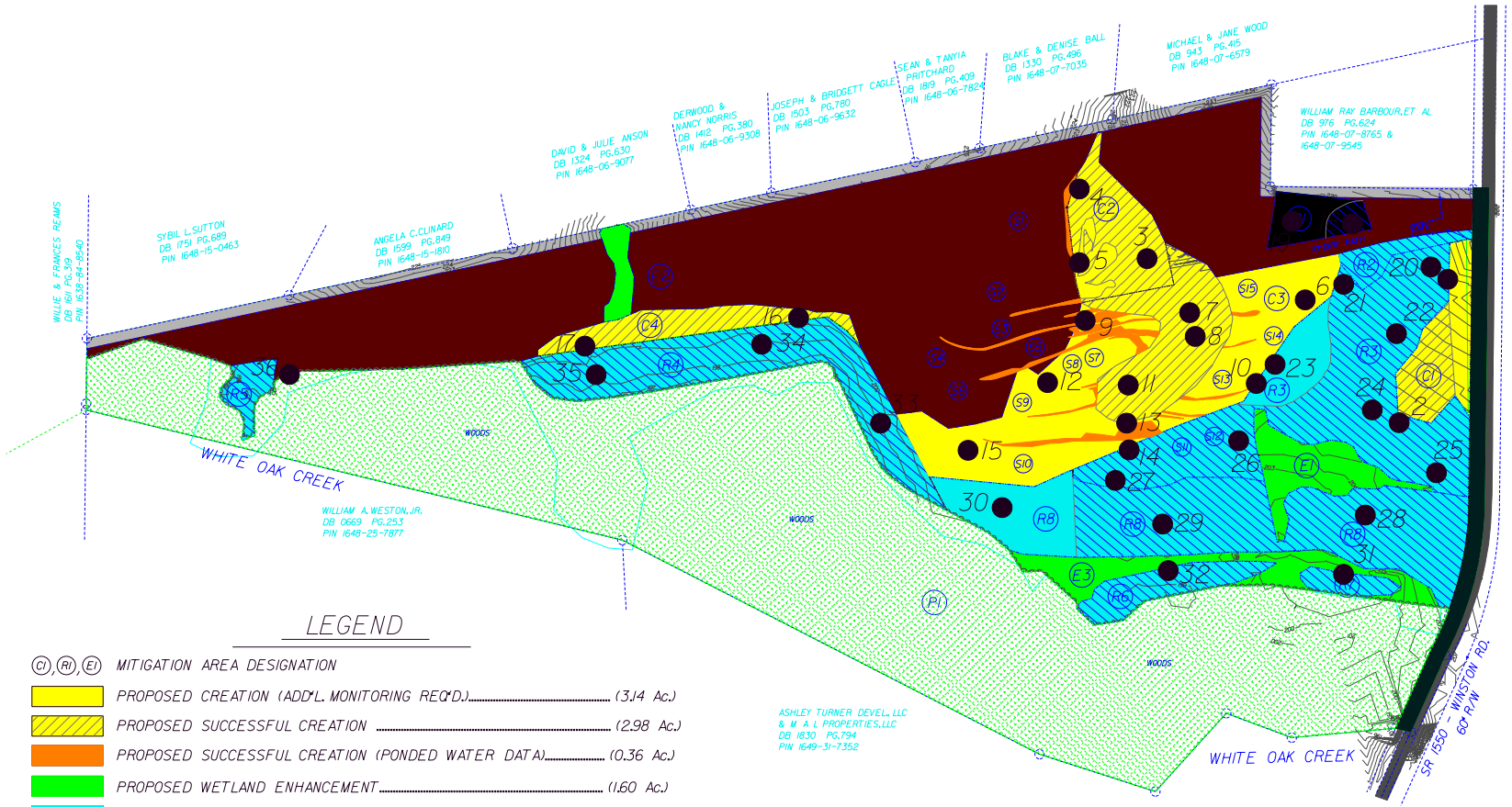
2.2 HYDROLOGIC DESCRIPTION

In March of 2002, thirty-eight monitoring gauges were installed across the site (Figure 2). The automatic monitoring gauges record daily readings of groundwater depth. This represents the second full growing season that the monitoring gauges have been in place.

The White Oak Creek Site was designed to receive hydrologic input from rainfall and surface water accessing the floodplain. The hydrologic monitoring should show the reaction of the groundwater level to specific rainfall events.

[1] Natural Resources Conservation Service, Soil Survey of Wake County, North Carolina, p. 79.

Figure 2. Gauge Location Map



LEGEND

(C1),(R1),(E1)	MITIGATION AREA DESIGNATION
	PROPOSED CREATION (ADD'L. MONITORING REQ'D.) ..... (3.14 Ac.)
	PROPOSED SUCCESSFUL CREATION ..... (2.98 Ac.)
	PROPOSED SUCCESSFUL CREATION (PONDED WATER DATA) ..... (0.36 Ac.)
	PROPOSED WETLAND ENHANCEMENT ..... (1.60 Ac.)
	PROPOSED RESTORATION (ADD'L. MONITORING REQ'D.) ..... (1.40 Ac.)
	PROPOSED SUCCESSFUL RESTORATION ..... (8.68 Ac.)
	PROPOSED WETLAND PRESERVATION (P1) ..... (18.62 Ac.)
	UTILITY EASEMENT (TOTAL ESMT.= 1.37Ac.) EXCLUDING (E2) AND (R1) OVERLAP= ..... (1.33 Ac.)
	SR 1550 RIGHT-OF-WAY = ... (0.75Ac.)
	PROPOSED UPLAND BUFFER RESTORATION ..... (11.83 Ac.)

TOTAL AREA (50.69 Ac.)

2.3 RESULTS OF HYDROLOGIC MONITORING

2.3.1 Site Data

The maximum number of consecutive days that the groundwater was within twelve inches of the surface was determined for each well. This number was converted into a percentage of the 229-day growing season (March 26 – November 10). The results are presented in Table 1.

Appendix A contains a plot of the groundwater depth for each monitoring well. If the gauge shows saturation for greater than 12.5% of the growing season, the maximum number of consecutive days is noted on each graph. The individual precipitation events are shown on the monitoring well graphs as bars.

Figure 3 provides a graphical representation of the hydrologic results. Gauges highlighted in blue indicate wetland hydrology for more than 12.5% of the growing season. Gauges highlighted in red show hydrology between 8% and 12.5% of the growing season, while those in green indicate hydrology between 5% and 8%. Gauges highlighted in black indicate no wetland hydrology (less than 5% of the growing season).

Table 1. 2003 White Oak Creek Hydrologic Monitoring Results

Monitoring Well	<5%	5-8%	8-12.5%	>12.5%	Actual %	Dates Meeting Success
GW-1*	×				4.8	
GW-2*				×	16.1	March 26-May 1
GW-3		×			5.2	
GW-4+				×	100	March 26-Nov 10
GW-5+				×	17.4	March 26-May 24
GW-6*	×				4.8	
GW-7*			×		8.3	
GW-8*		×			6.1	
GW-9*+				×	60.9	March 26-Aug 12
GW-10*+				×	31.3	March 26-May 24 May 19-July 29
GW-11+				×	100	March 26-Nov 10
GW-12*	×				4.8	
GW-13*			×		9.1	
GW-14*+				×	20.4	March 26-May 11 May 16-June 27 June 29-Aug 12
GW-15	×				0	
GW-16+				×	100	March 26-Nov 10
GW-17+				×	100	March 26-Nov 10
GW-18+				×	46.1	March 26-May 4 May 19-Sept 1
GW-19			×		8.7	
GW-20*+				×	53.9	March 26-July 27
GW-21*			×		10	
GW-22*				×	17	March 26-May 3
GW-23*+				×	25.2	March 26-April 28 June 16-Aug 12

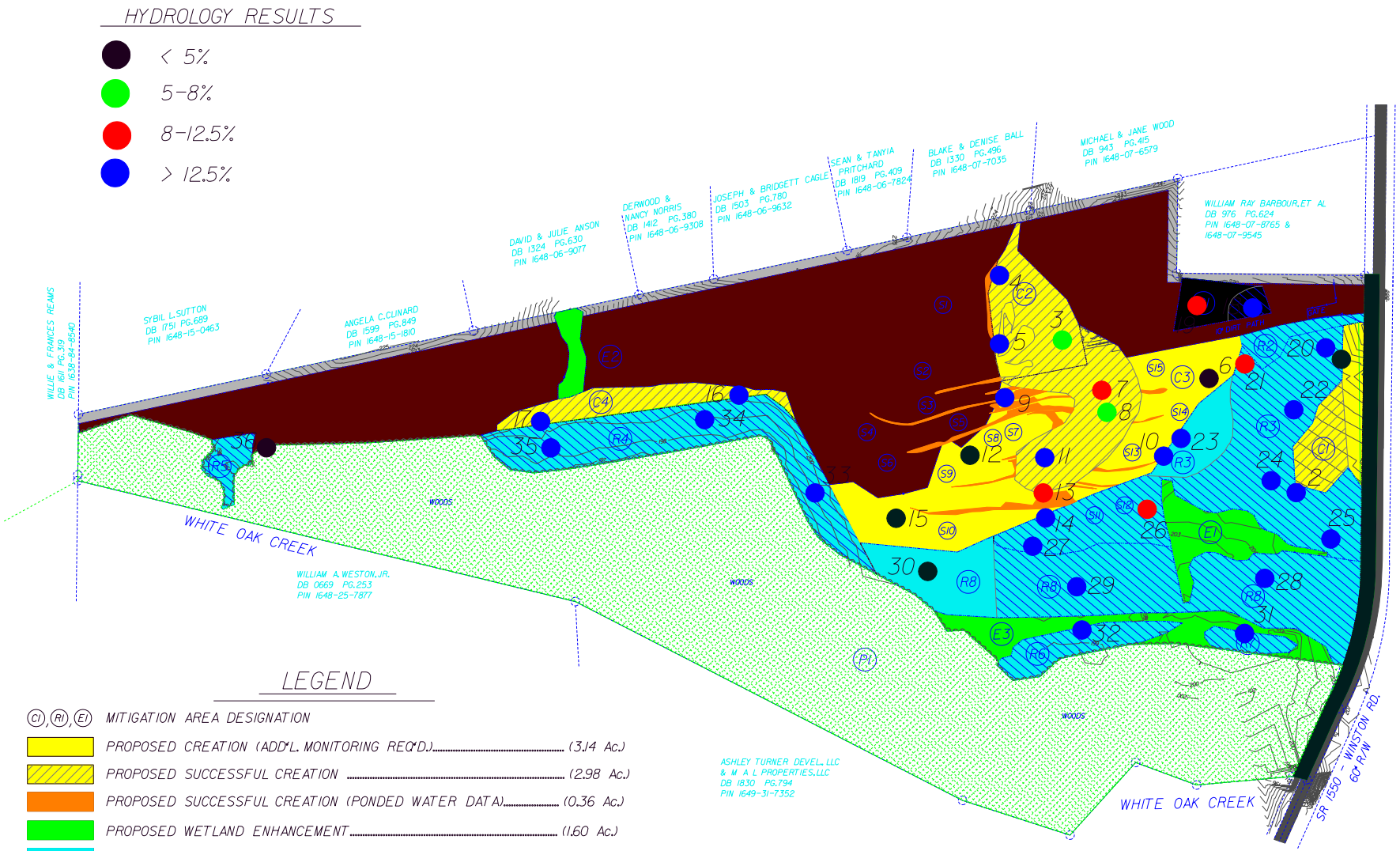
Monitoring Well	<5%	5-8%	8-12.5%	>12.5%	Actual %	Dates Meeting Success
GW-24*				✕	16.5	March 26-May 2
GW-25*+				✕	24.8	March 26-May 13 May 16-July 11
GW-26*			✕		9.1	
GW-27*+				✕	60.9	March 26-Aug 12
GW-28*+				✕	60.9	March 26-Aug 12
GW-29*+				✕	60.9	March 26-Aug 12
GW-30	✕				2.2	
GW-31+				✕	87.8	March 26-Oct 13
GW-32+				✕	43	March 26-July 2
GW-33+				✕	100	March 26-Nov 10
GW-34+				✕	53.9	May 16-June 25 July 10-Nov 10
GW-35+				✕	92.6	May 16-Oct 24
GW-36*	✕				0	
REF-37*+				✕	20.4	March 26-May 11
REF-38*+				✕	47	March 26-July 11

* Gauge was not downloaded at the end of the growing season and may affect the results (saturation percentage).
+Gauge met the success criterion during an average rainfall month (May, June, September, and October).

Specific Gauge Problems:

- Gauges GW-13, GW-15 and G-26 either experienced malfunctions or were not downloaded throughout the growing season.
- The onsite rain gauge experienced a malfunction during the growing season. Rainfall data from the State Climate Office Clayton Station was used for the following dates: January 1 - May 4 and July 9 - November 26.

Figure 3. Hydrologic Monitoring Gauge Results



LEGEND

(C1), (R1), (E1)	MITIGATION AREA DESIGNATION
	PROPOSED CREATION (ADD'L. MONITORING REQ'D.) ..... (3.14 Ac.)
	PROPOSED SUCCESSFUL CREATION ..... (2.98 Ac.)
	PROPOSED SUCCESSFUL CREATION (PONDED WATER DATA) ..... (0.36 Ac.)
	PROPOSED WETLAND ENHANCEMENT ..... (1.60 Ac.)
	PROPOSED RESTORATION (ADD'L. MONITORING REQ'D.) ..... (1.40 Ac.)
	PROPOSED SUCCESSFUL RESTORATION ..... (8.68 Ac.)
	PROPOSED WETLAND PRESERVATION (P1) ..... (18.62 Ac.)
	UTILITY EASEMENT (TOTAL ESMT.= 1.37Ac.) EXCLUDING (E2) AND (R1) OVERLAP= ..... (1.33 Ac.)
	SR 1550 RIGHT-OF-WAY = ... (0.75Ac.)
	PROPOSED UPLAND BUFFER RESTORATION ..... (11.83 Ac.)

TOTAL AREA (50.69 Ac.)

2.3.2 Climatic Data

Figure 4 represents an evaluation of the local climate in comparison with historical data in order to determine whether 2003 was "average" in terms of rainfall. The two lines represent the 30th and 70th percentiles of monthly precipitation for Clayton. The bars are the monthly rainfall totals for parts of 2002 and 2003. The onsite rain gauge experienced a gauge malfunction, therefore the rain gauge from the Clayton weather station was used for the following dates: January 1 - May 4 and July 9 - November 26. The State Climate Office collected the historical and monthly rainfall data.

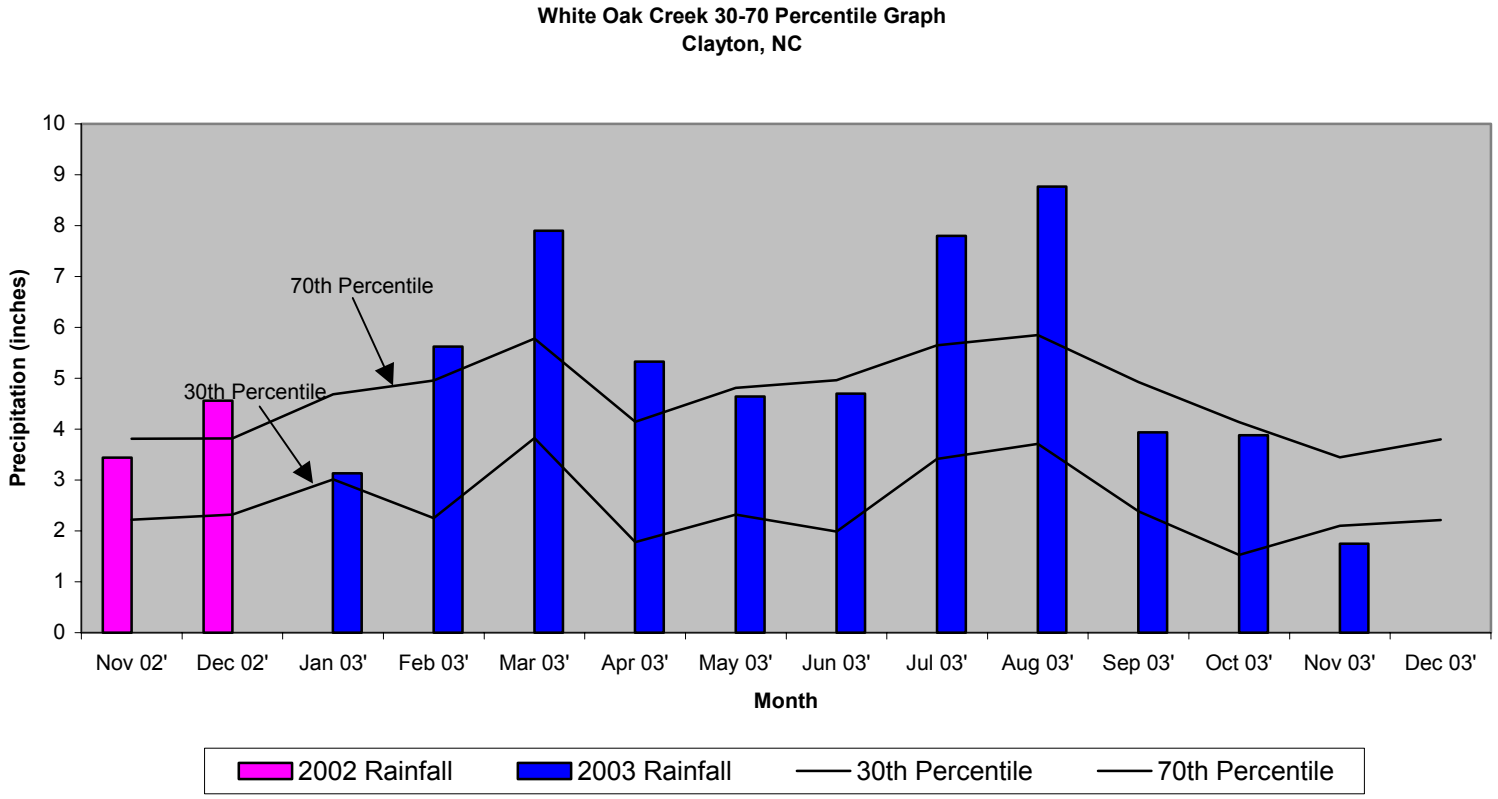
For the 2003-year, the month of November recorded below average rainfall. The months of November (02'), January, May, June, September, and October all recorded average rainfall for the site. December (02'), February, March, April, July, and August all recorded above average rainfall. Overall, 2003 experienced average to above average rainfall.

2.4 CONCLUSIONS

Twenty-three of the thirty-six (non-reference) monitoring gauges indicated saturation within 12" of the surface for greater than 12.5% of the growing season. Five gauges resulted in saturation between 8% and 12.5% and two gauges showed saturation levels between 5% and 8%. Six of the thirty-six gauges had saturation levels less than 5% of the growing season. Both reference gauges (REF-37 and REF-38) met the jurisdiction criteria in 2003.

NCDOT will continue to monitor the White Oak Creek Mitigation Site for hydrology.

Figure 4: 30-70 Percentile Graph



3.0 VEGETATION: WHITE OAK CREEK MITIGATION SITE (YEAR 1 MONITORING)

3.1 SUCCESS CRITERIA

Success criteria state that at least 320 stems per acre must survive after the completion of the third growing season. The required survival criterion will decrease by 10% per year after the third year of vegetation monitoring (i.e., for an expected 290 stems per acre for year 4 and 260 stems per acre for year 5.)

3.2 DESCRIPTION OF SPECIES

The following tree species were planted in the Wetland Areas:

Zone 1: Wetland Restoration Area (10.03 acres)

Quercus lyrata, Overcup Oak

Quercus michauxii, Swamp Chestnut Oak

Quercus phellos, Willow Oak

Quercus nigra, Water Oak

Nyssa sylvatica var. *biflora*, Swamp Blackgum

Fraxinus pennsylvanica, Green Ash

Cornus amomum, Silky Dogwood

Sambucus canadensis, Elderberry

Cephalanthus occidentalis, Buttonbush

Zone 2: Wetland Enhancement Area (1.58 acres)

Quercus lyrata, Overcup Oak

Quercus michauxii, Swamp Chestnut Oak

Quercus phellos, Willow Oak

Quercus nigra, Water Oak

Nyssa sylvatica var. *biflora*, Swamp Blackgum

Fraxinus pennsylvanica, Green Ash

Cornus amomum, Silky Dogwood

Sambucus canadensis, Elderberry

Cephalanthus occidentalis, Buttonbush

Zone 3: Wetland Creation Area (6.59 acres)

Quercus lyrata, Overcup Oak

Quercus michauxii, Swamp Chestnut Oak

Quercus phellos, Willow Oak

Quercus nigra, Water Oak

Nyssa sylvatica var. *biflora*, Swamp Blackgum

Fraxinus pennsylvanica, Green Ash

3.3 RESULTS OF VEGETATION MONITORING

Table 2. Vegetation Monitoring Statistics

Plot #	Overcup Oak	Swamp Chestnut Oak	Willow Oak	Water Oak	Swamp Blackgum	Green Ash	Silky Dogwood	Elderberry	Buttonbush	Total (1 year)	Total (at planting)	Density (Trees/Acre)
1		8	3	1	1	6	9	1	1	30	40	510
2	3	7	2	2	2	7	3		2	28	38	501
3	2	5	1	2	6	7	7	3	7	40	45	604
4		2			3	5	2	2	3	17	24	482
5		8			1	8	6	4	4	31	37	570
6	3	5	1		1	9	1	1		21	31	461
7	3	13	2	3		8	3	2	5	39	40	663
8	4	2	1	1	5	3	2	1	3	22	32	468
					Total Density Average							532

Site Notes: Other species noted: ragweed, broomsedge, *Scirpus* sp., black willow, *Juncus* sp., trumpet creeper, briars, bitter sneezeweed, fennel, smartweed, and various grasses.

3.4 CONCLUSIONS

Of the 50.7 acres on this site, approximately 18.2 acres involved tree planting. Supplemental tree planting was completed in December 2002. An upland buffer area that consisted of 12.04 acres was also planted. There were eight vegetation-monitoring plots established throughout the planting areas. The 2003 vegetation monitoring of the site revealed an average density of 532 trees per acre. This average is well above the minimum success criteria of 320 trees per acre.

NCDOT will continue vegetation monitoring at the White Oak Creek Mitigation Site.

4.0 OVERALL CONCLUSIONS/RECOMMENDATIONS

The second year for hydrologic monitoring resulted in twenty-three of the thirty-six (non-reference) monitoring gauges showing saturation within 12" of the surface for greater than 12.5% of the growing season. The two reference gauges, REF-37 and REF-38, also exceeded the optimum saturation period. Thirteen of the thirty-six gauges did not meet the jurisdictional success criteria for the 2003-monitoring year.

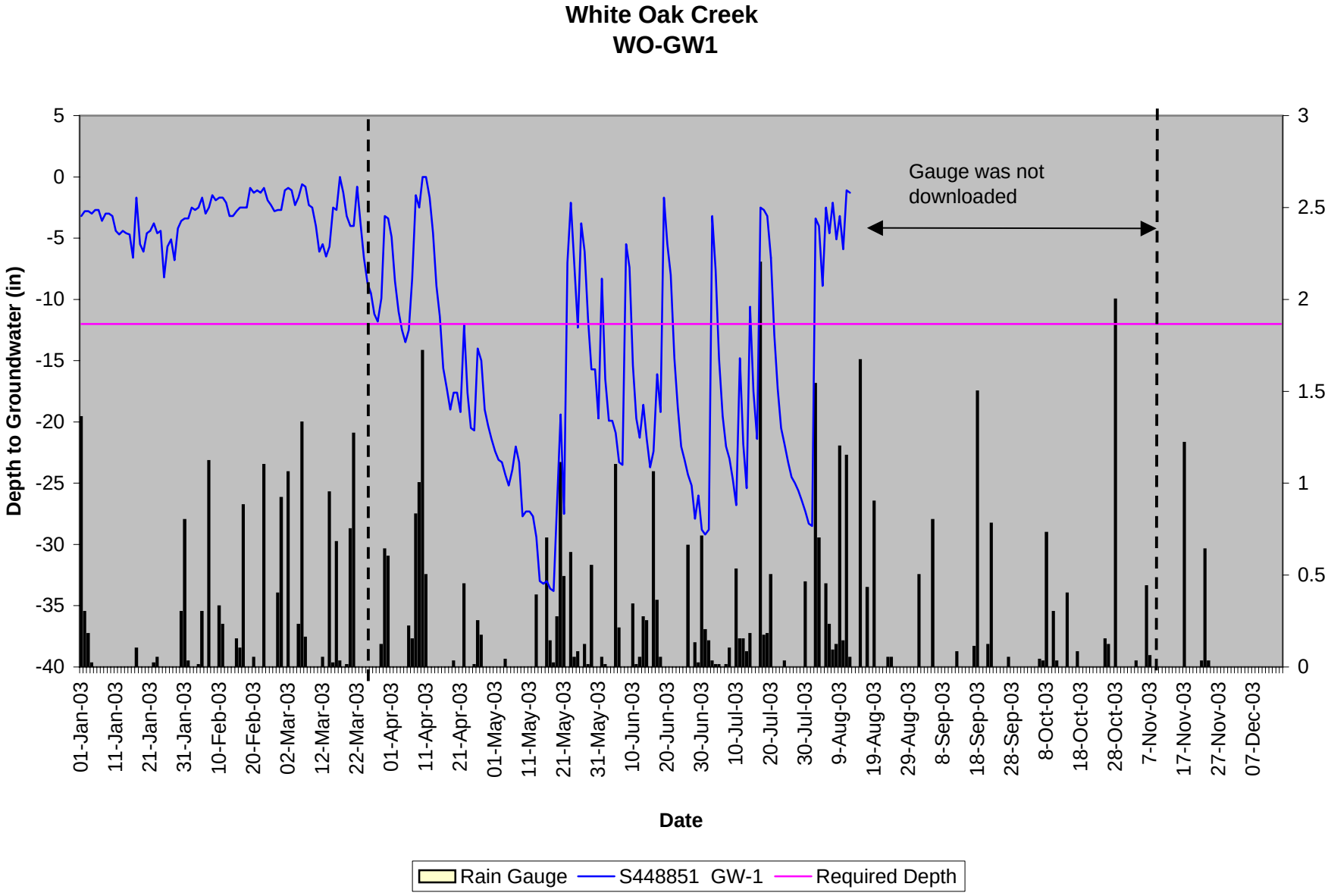
Due to the low stem counts after year one, the site was replanted in December 2002. The site has improved with an average density of 532 trees per acre, which is above the minimum success of 320 trees pre acre.

NCDOT proposes to continue both hydrologic and vegetation monitoring at the White Oak Creek Mitigation Site.

APPENDIX A

GAUGE DATA GRAPHS

GROUNDWATER GAUGE GRAPHS


White Oak Creek
WO-GW1
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
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11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
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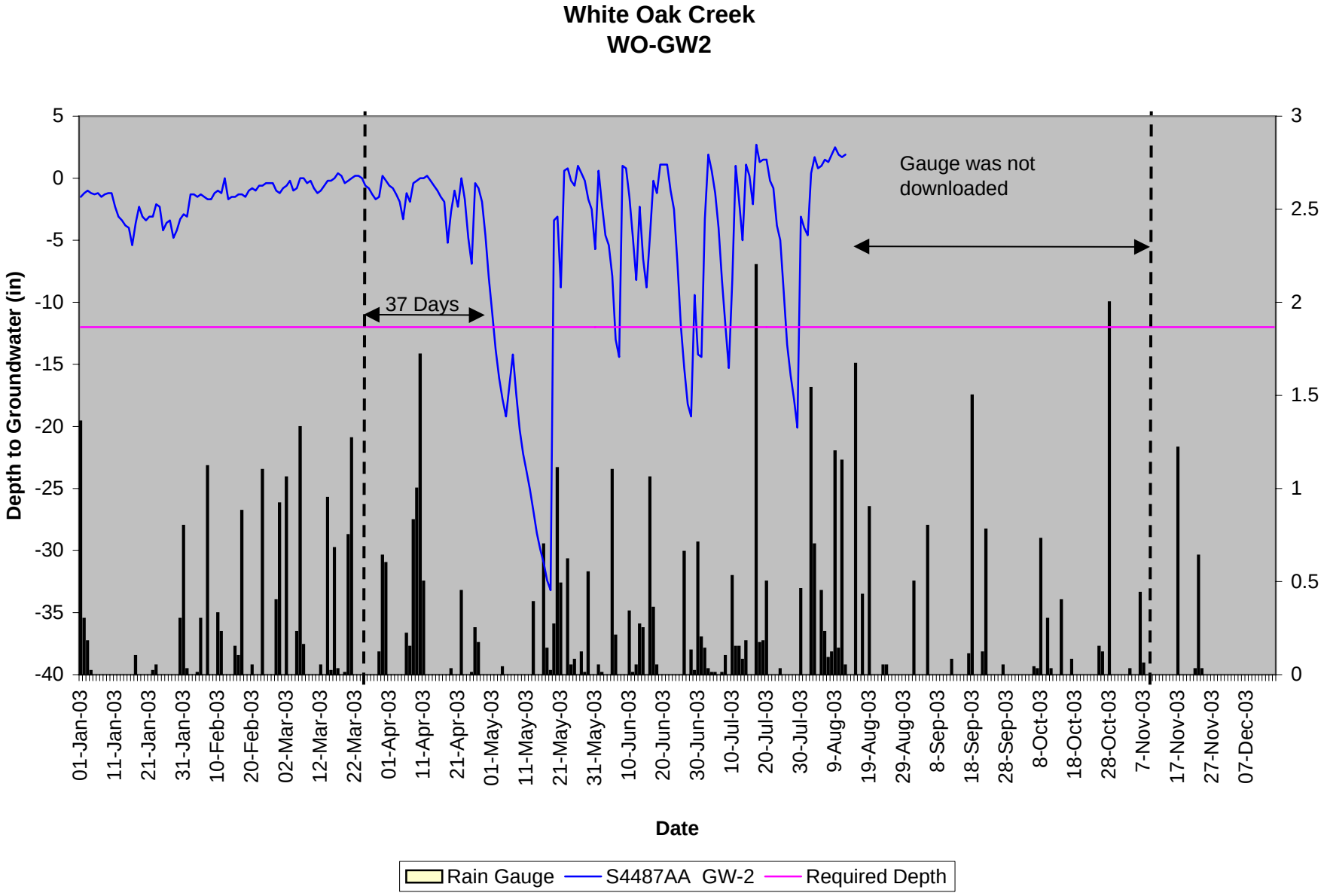
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S448851 GW-1
Required Depth


White Oak Creek
WO-GW2
Depth to Groundwater (in)
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0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
37 Days
Gauge was not downloaded
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10-Feb-03
20-Feb-03
02-Mar-03
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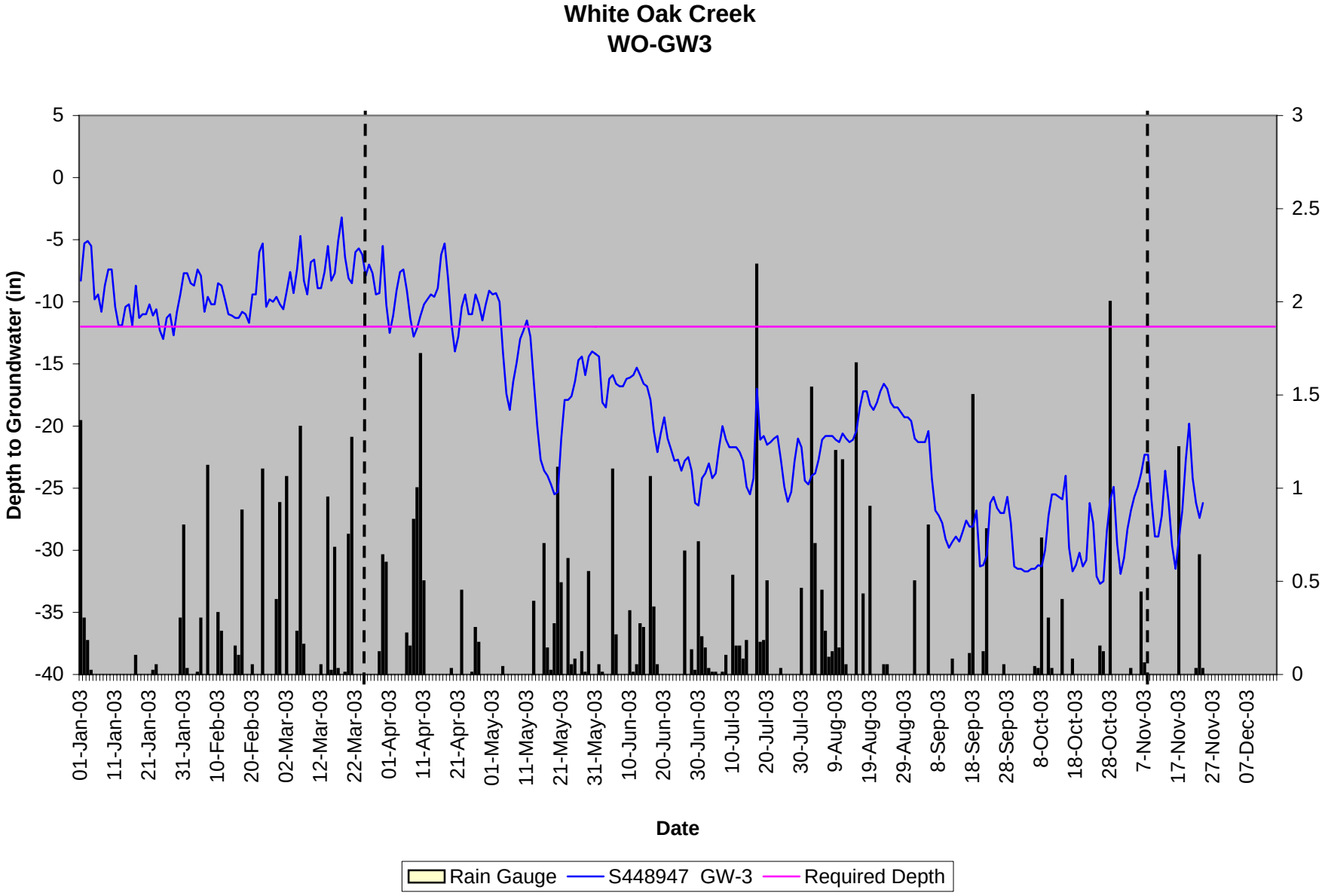
Rain Gauge
S4487AA GW-2
Required Depth


White Oak Creek
WO-GW3
Depth to Groundwater (in)
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-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
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18-Sep-03
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8-Oct-03
18-Oct-03
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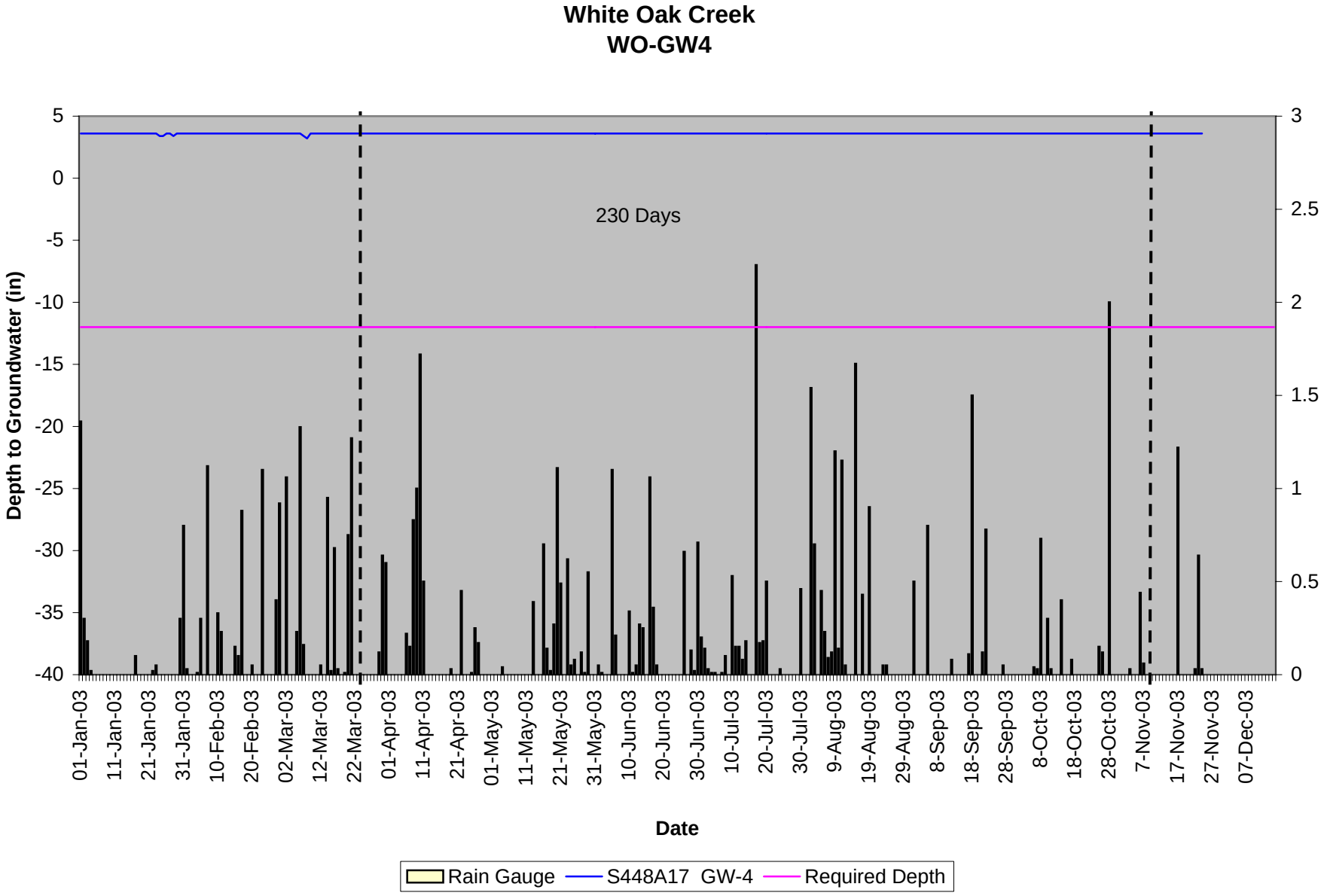
Date
Rain Gauge
S448947 GW-3
Required Depth


White Oak Creek
WO-GW4
230 Days
Depth to Groundwater (in)
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0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
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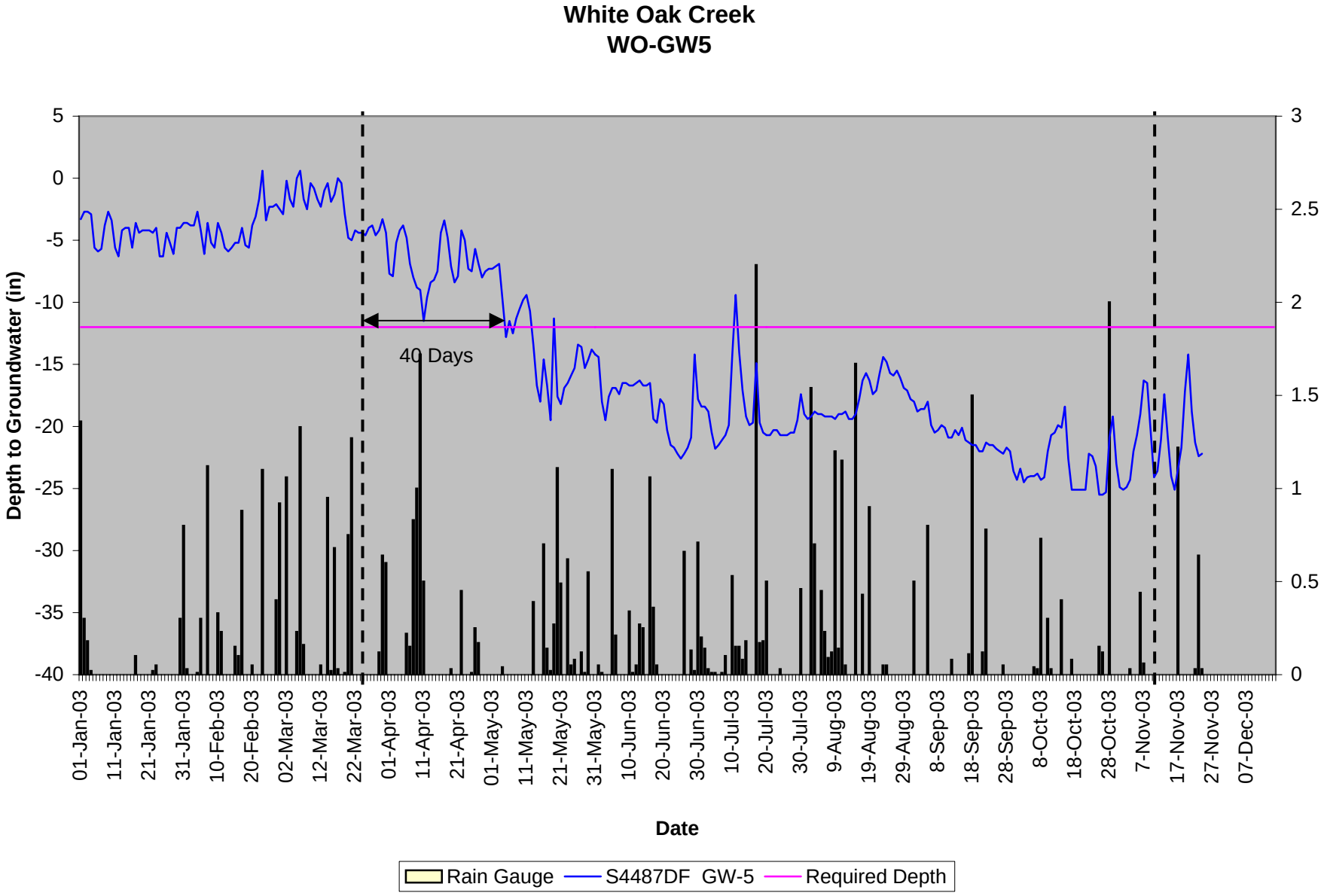
Date
Rain Gauge
S448A17 GW-4
Required Depth


White Oak Creek
WO-GW5
Depth to Groundwater (in)
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-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
40 Days
01-Jan-03
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31-Jan-03
10-Feb-03
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02-Mar-03
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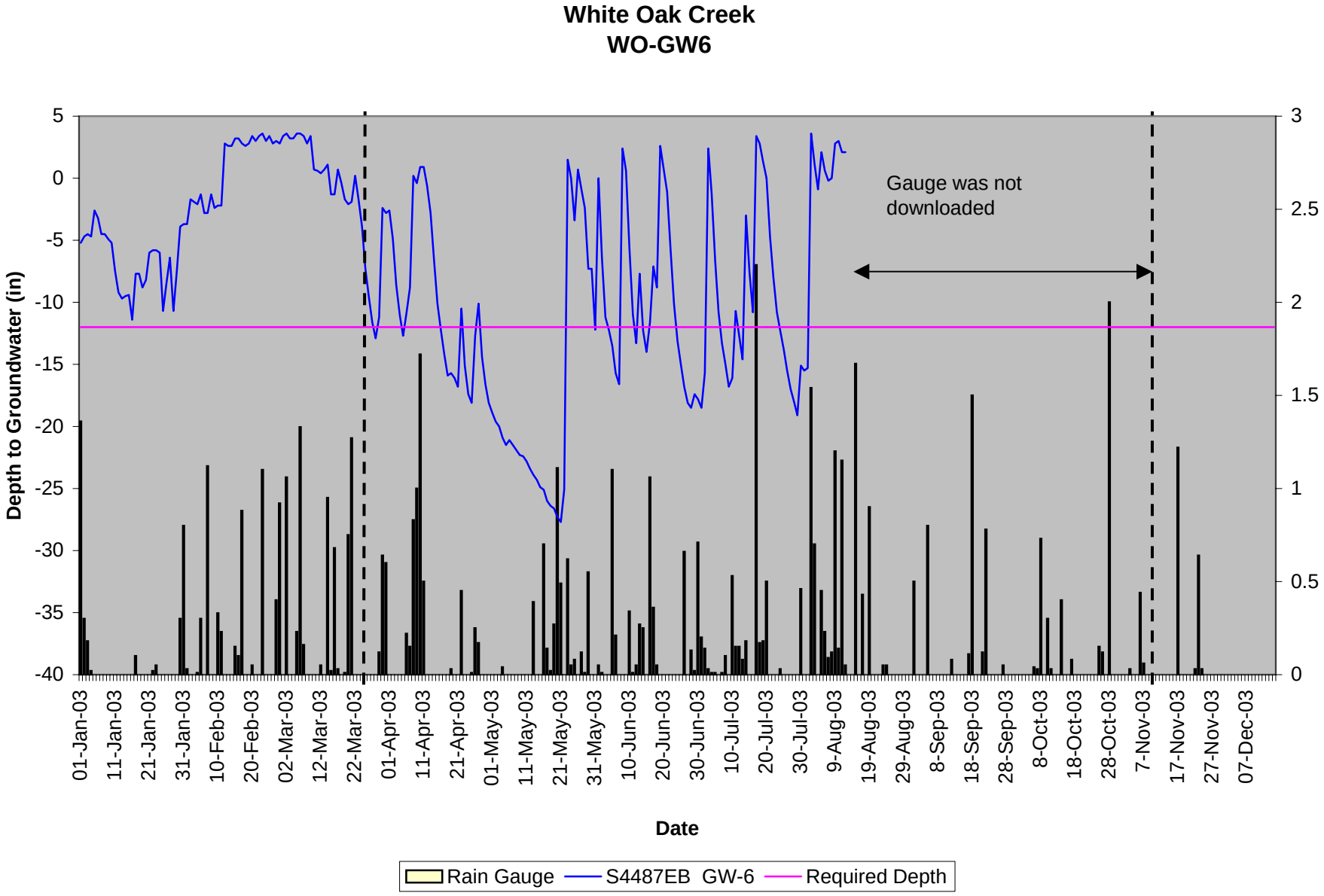
S4487DF GW-5
Required Depth


White Oak Creek
WO-GW6
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
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1.5
1
0.5
0
Gauge was not downloaded
01-Jan-03
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21-Jan-03
31-Jan-03
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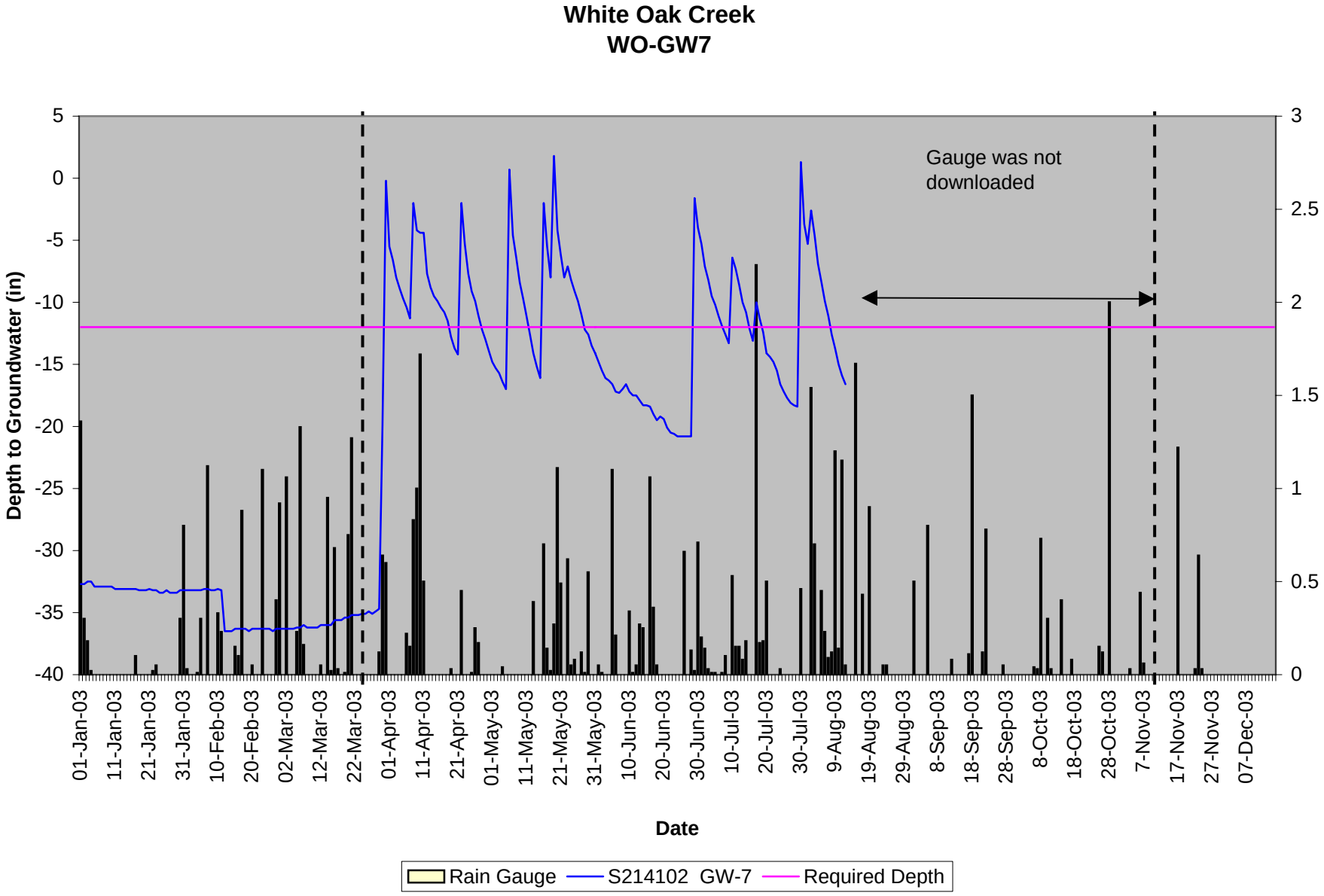
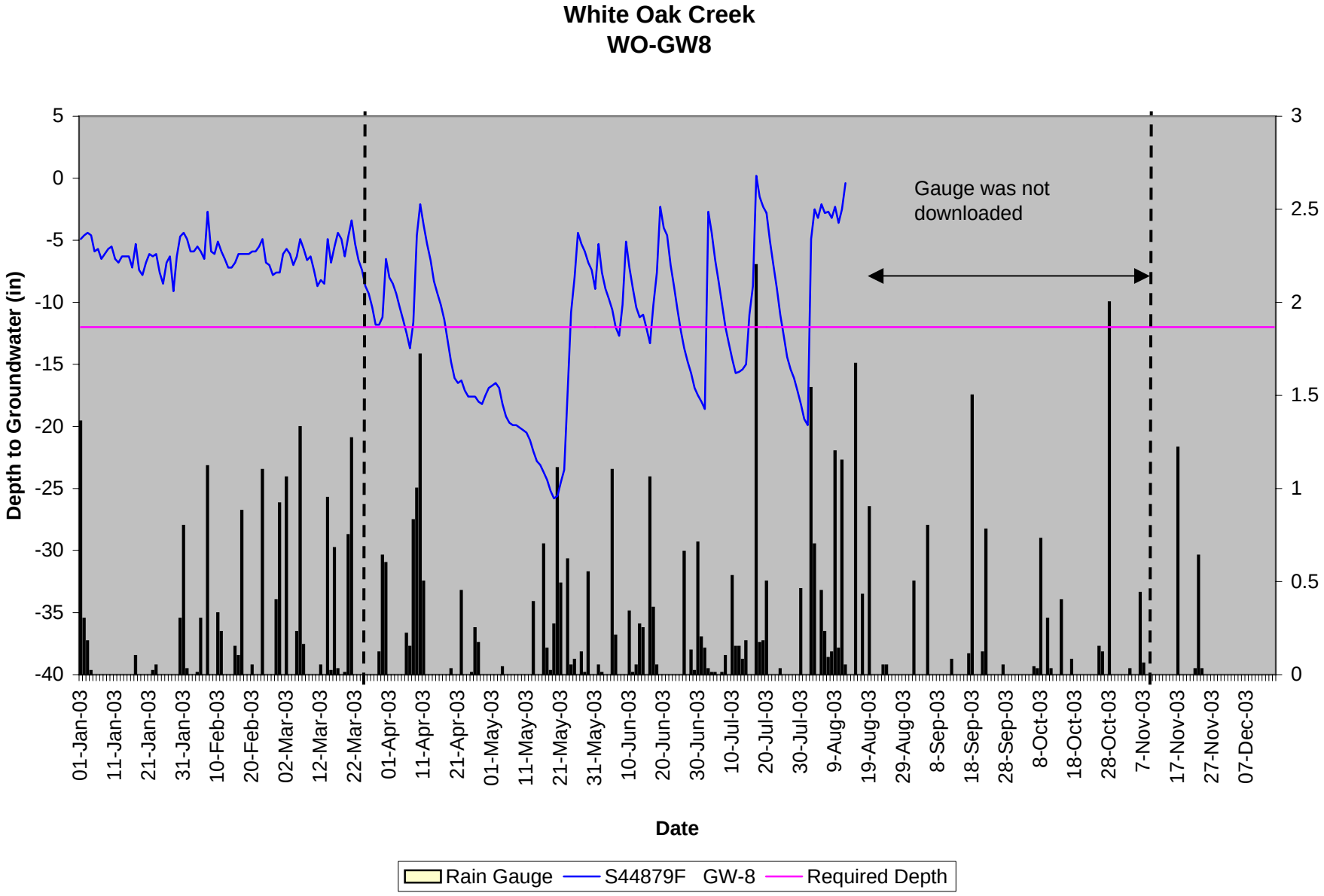
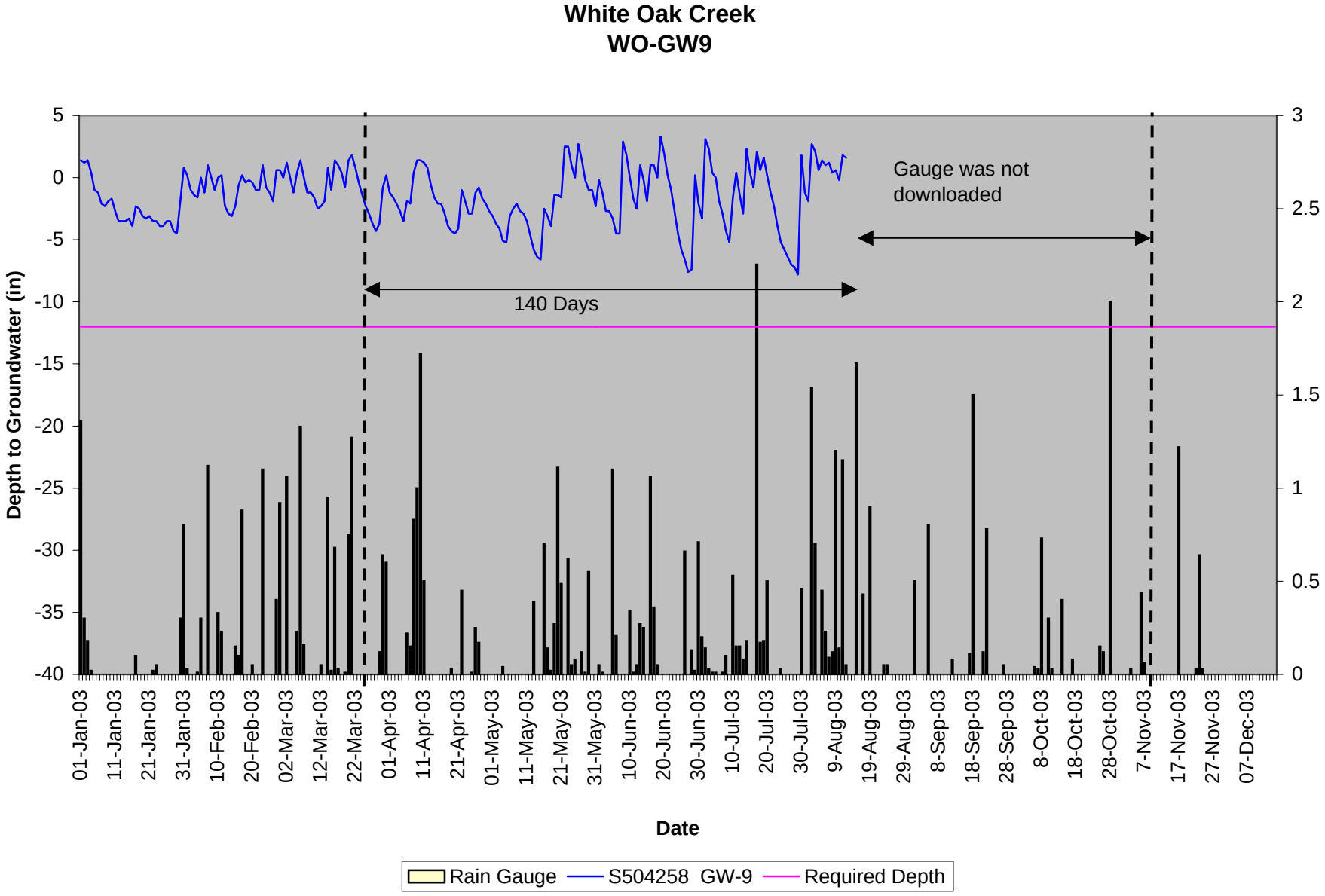
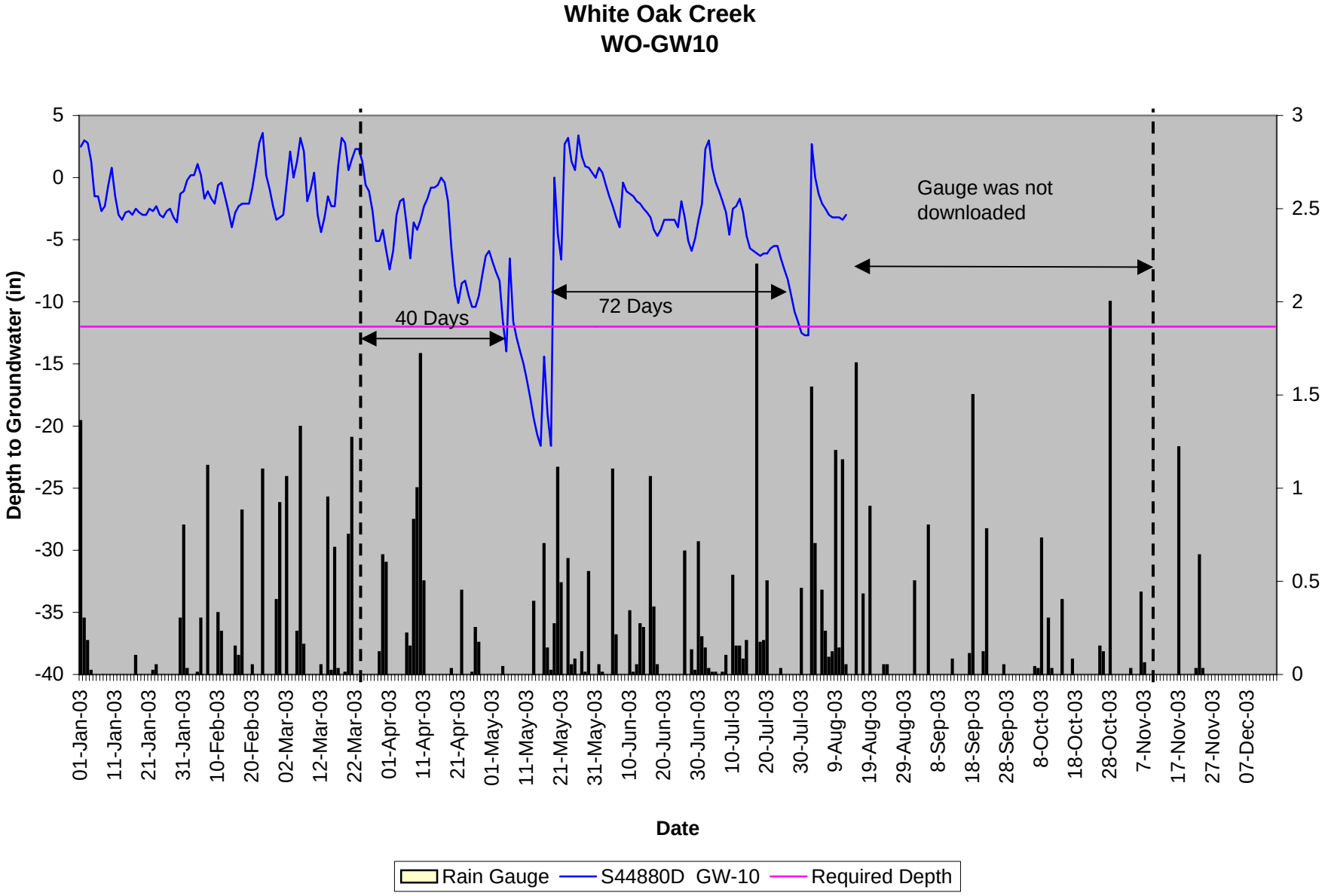
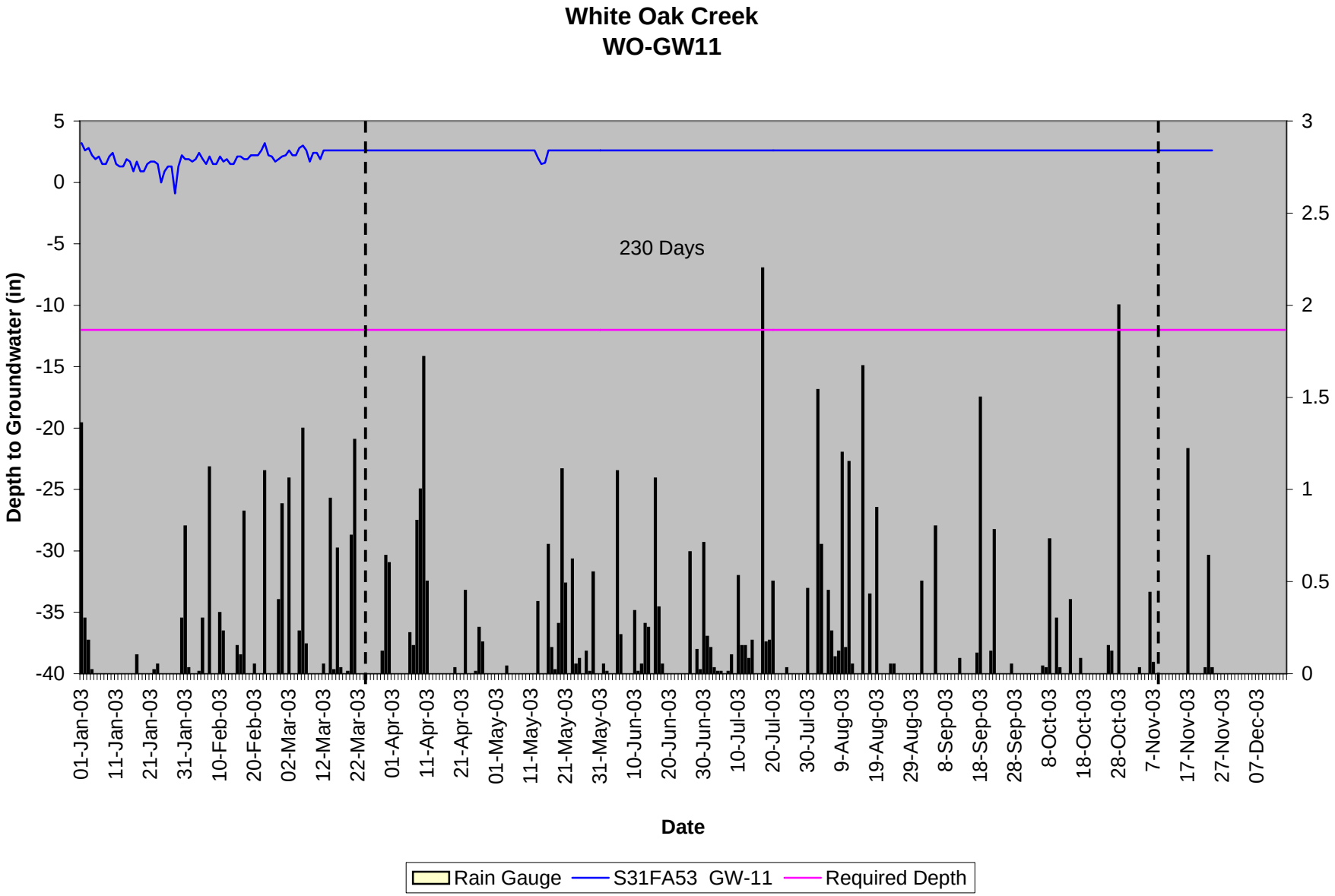
Date
Rain Gauge
S4487EB GW-6
Required Depth

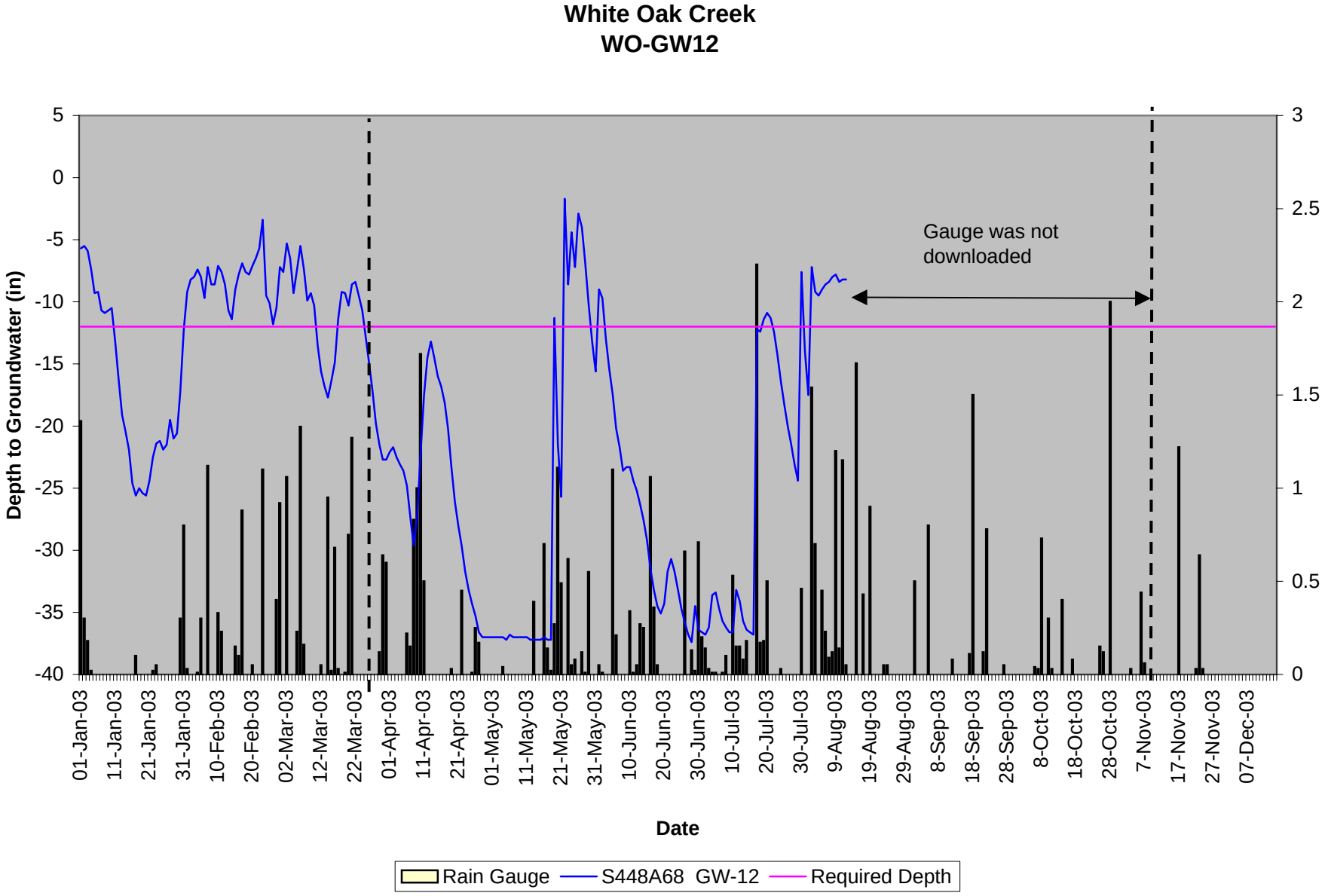

White Oak Creek
WO-GW7
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S214102 GW-7
Required Depth

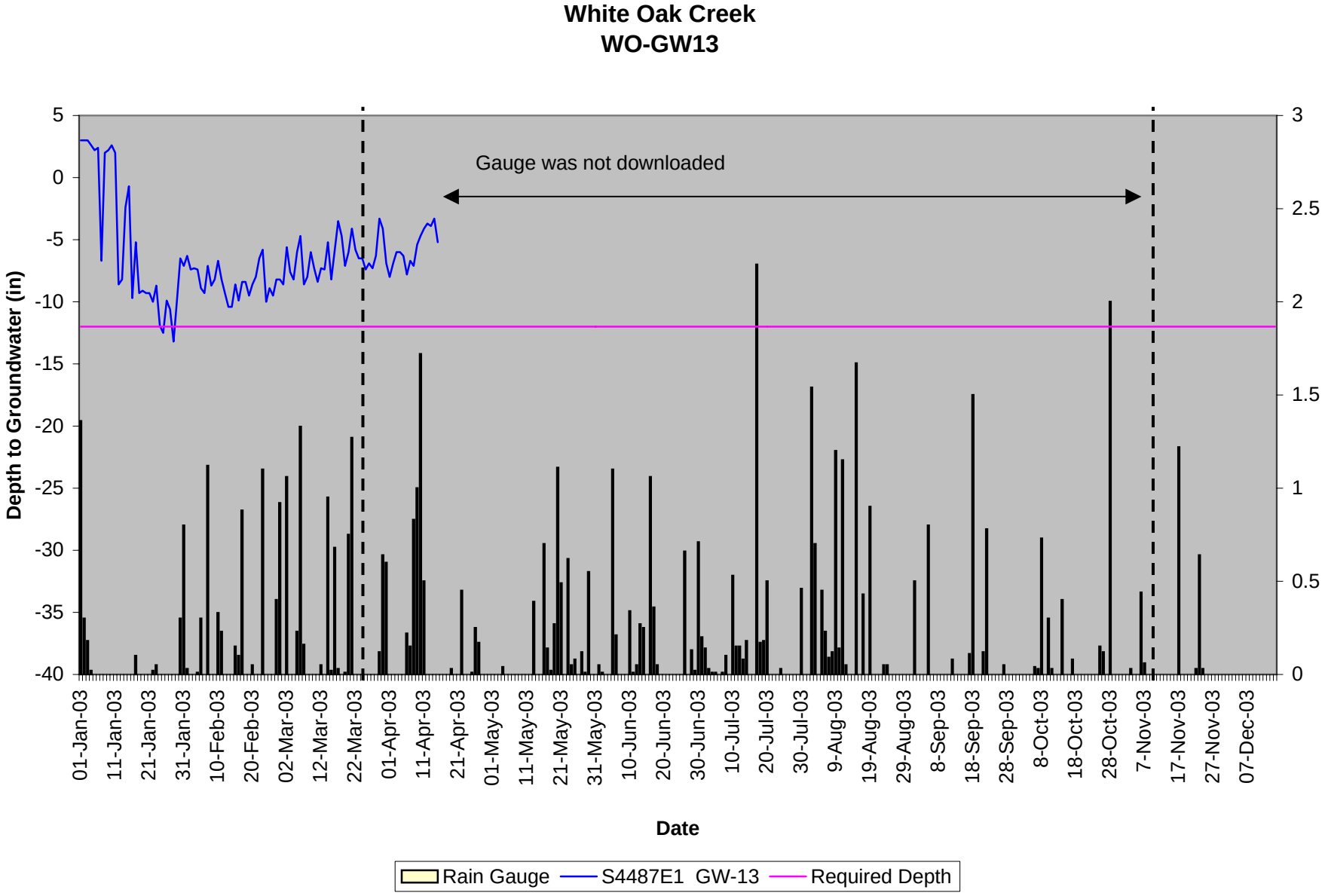

White Oak Creek
WO-GW8
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S44879F GW-8
Required Depth

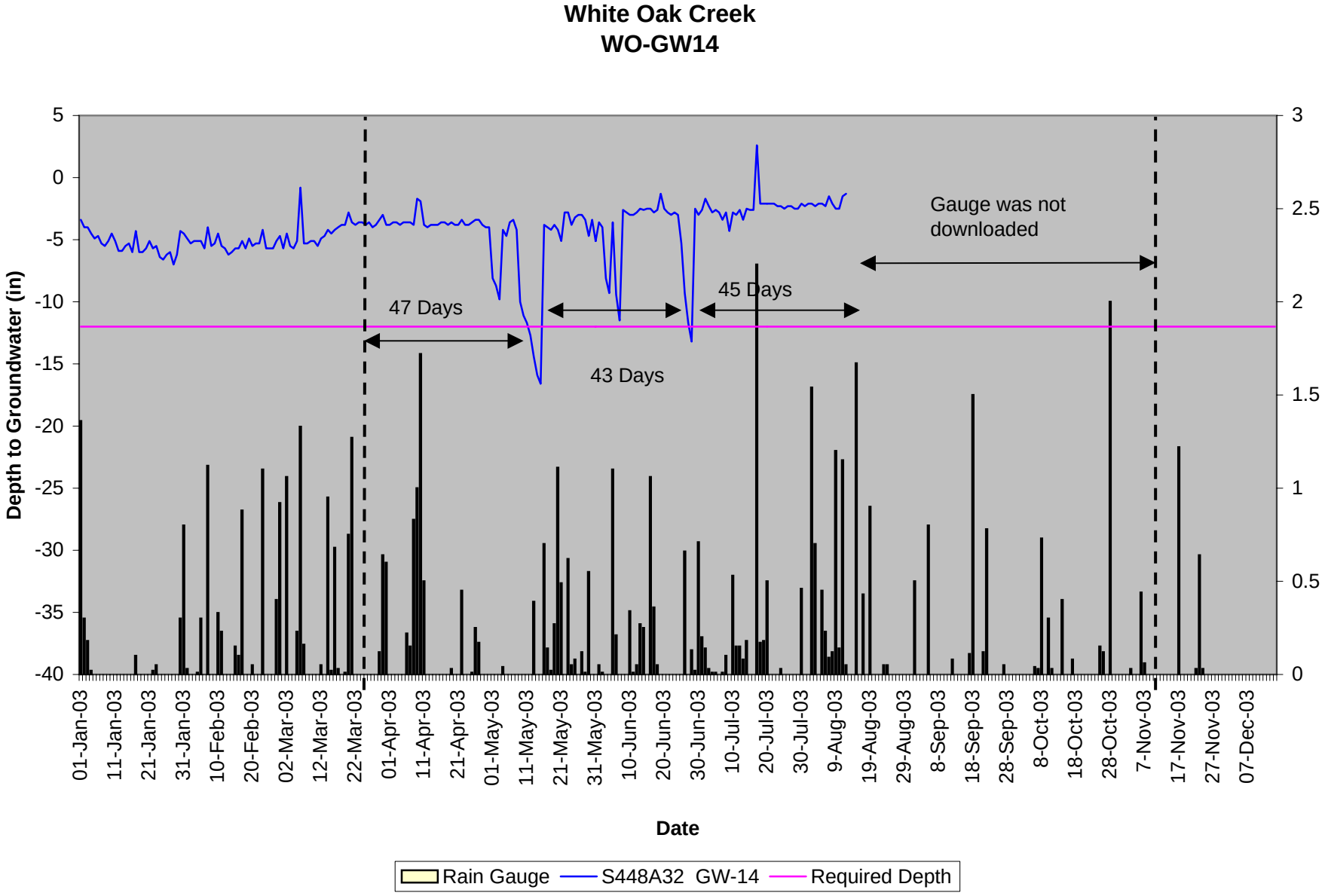

White Oak Creek
WO-GW9
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
140 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S504258 GW-9
Required Depth

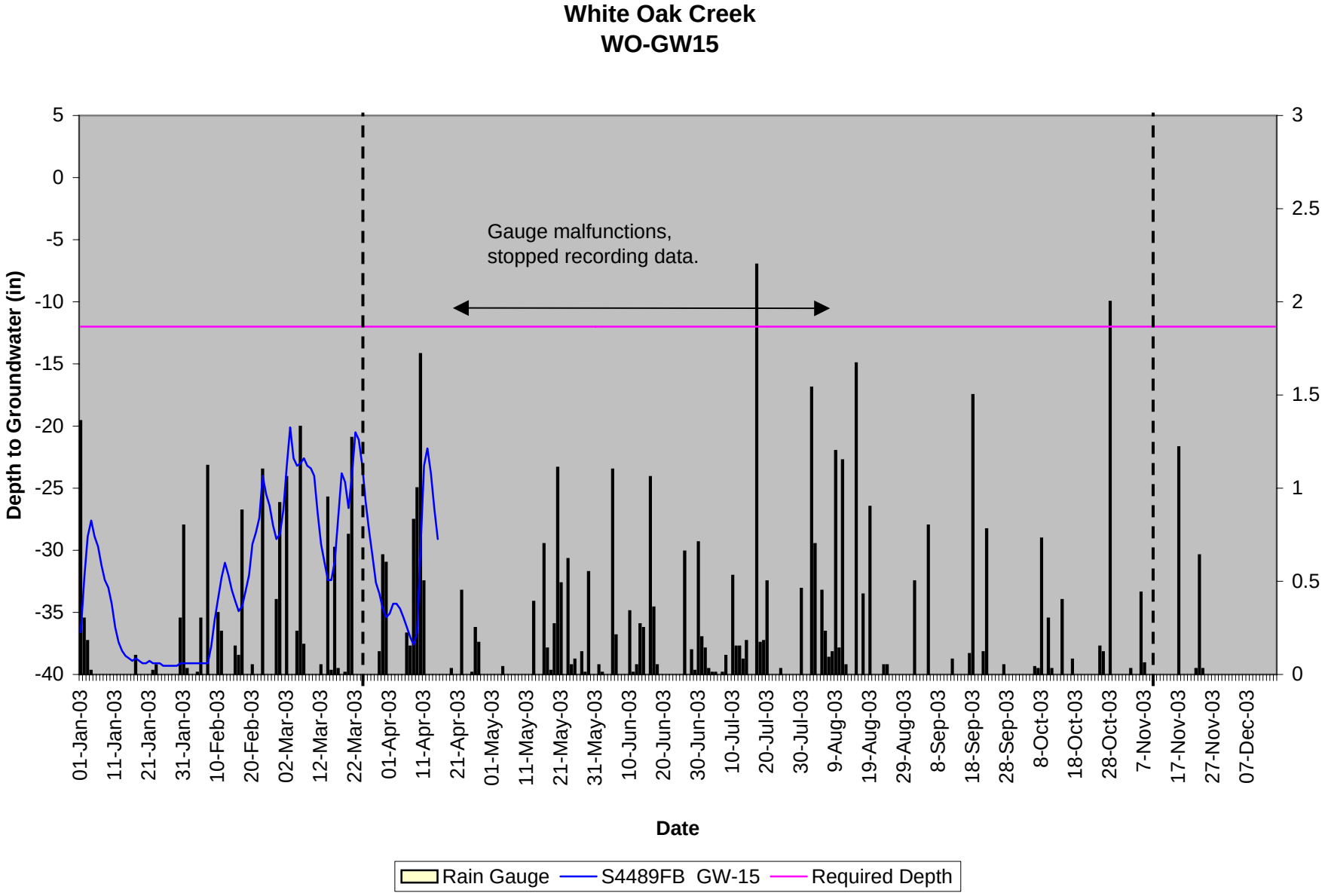

White Oak Creek
WO-GW10
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
40 Days
72 Days
Gauge was not downloaded
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S44880D GW-10
Required Depth

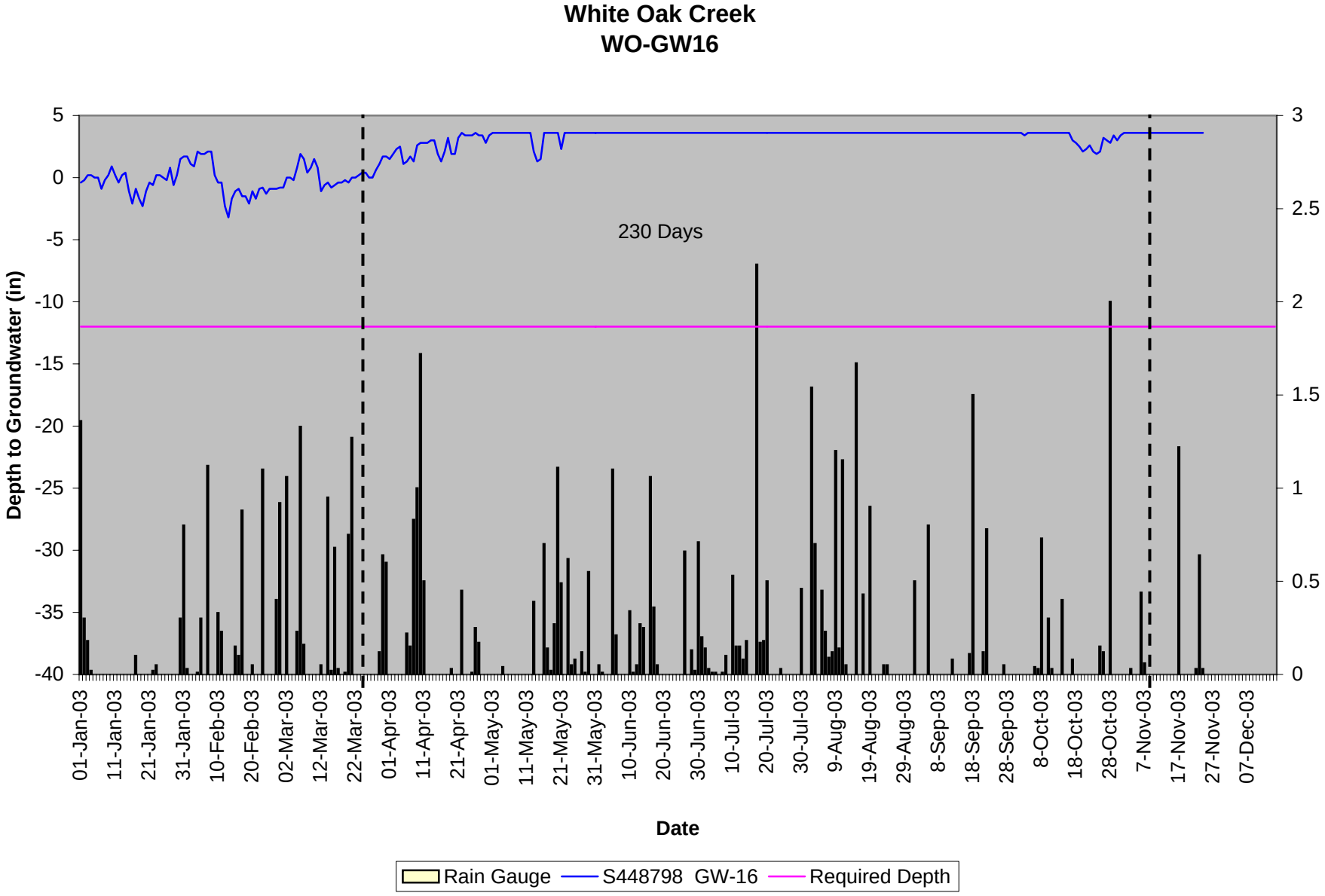

White Oak Creek
WO-GW11
230 Days
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S31FA53 GW-11
Required Depth

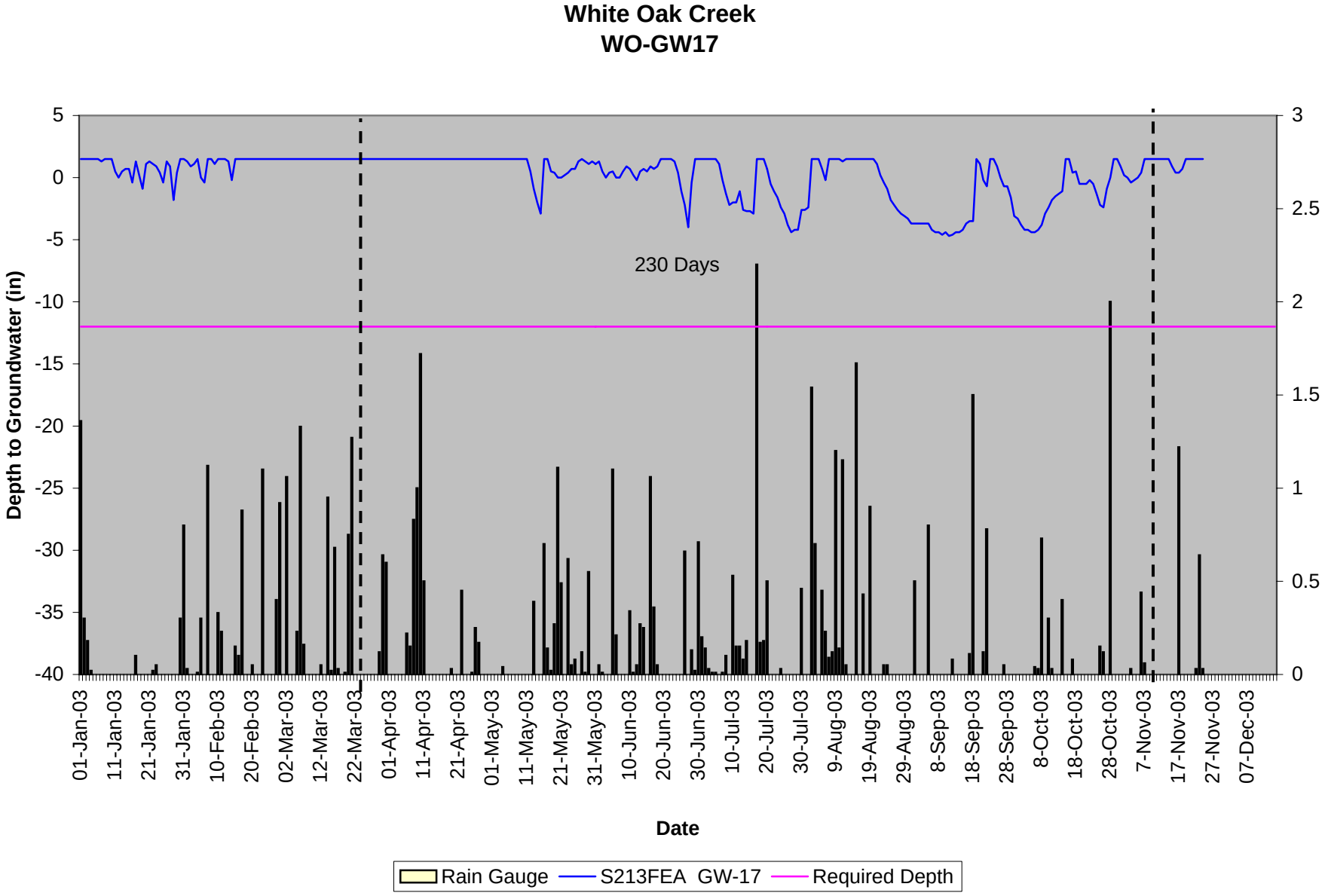

White Oak Creek
WO-GW12
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S448A68 GW-12
Required Depth

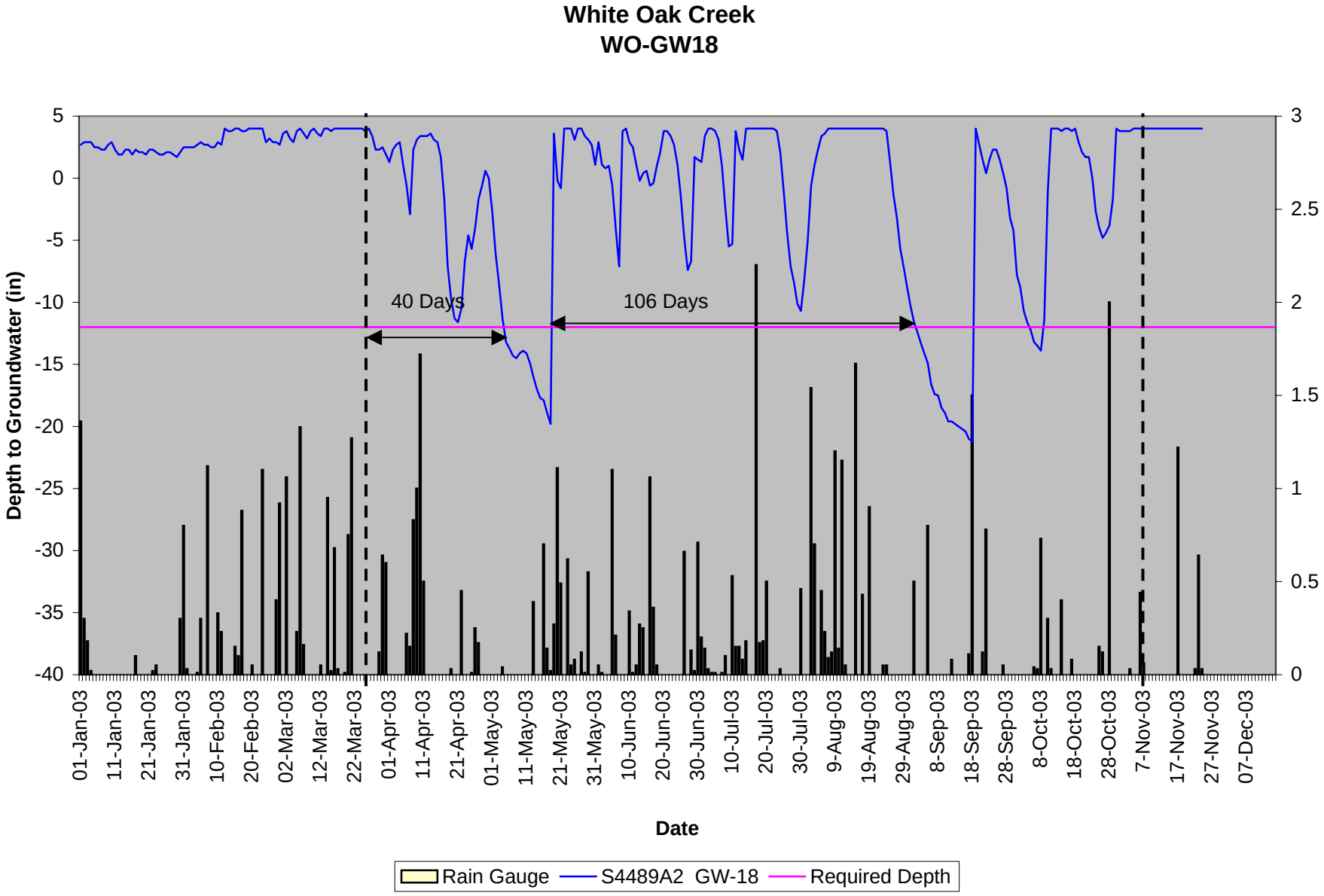

White Oak Creek
WO-GW13
Gauge was not downloaded
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S4487E1 GW-13
Required Depth

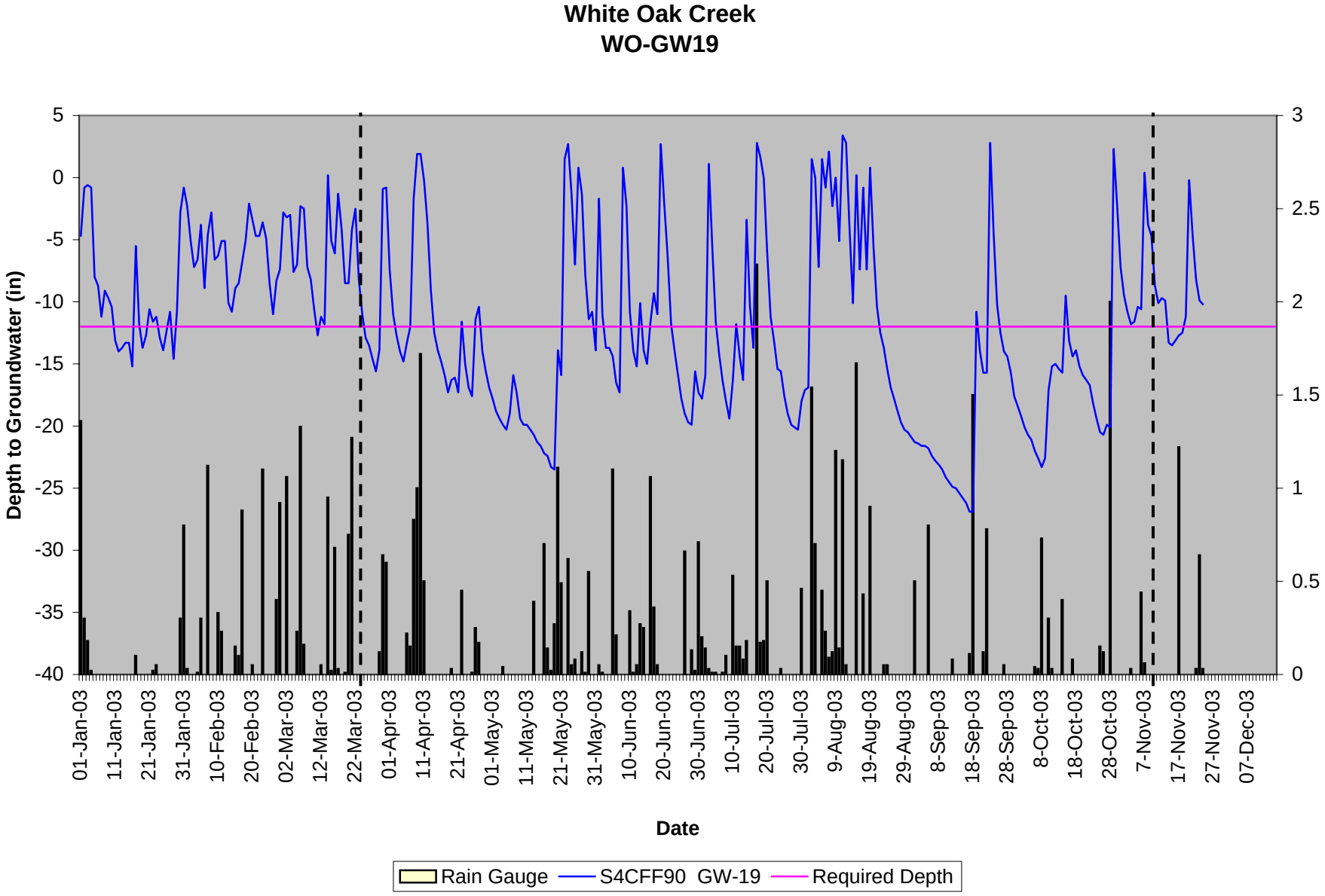

White Oak Creek
WO-GW14
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
47 Days
45 Days
43 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S448A32 GW-14
Required Depth

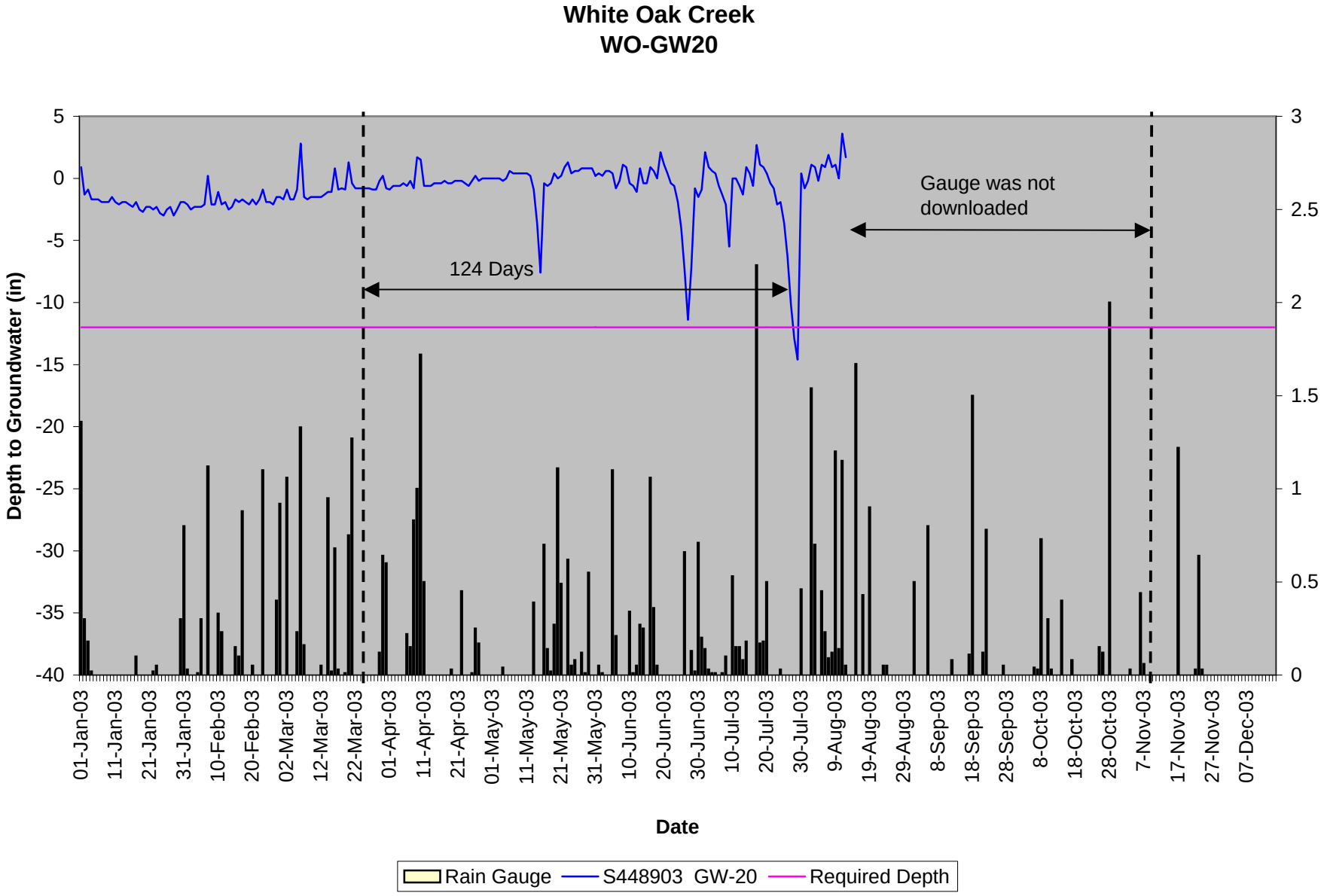

White Oak Creek
WO-GW15
Gauge malfunctions,
stopped recording data.
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S4489FB GW-15
Required Depth

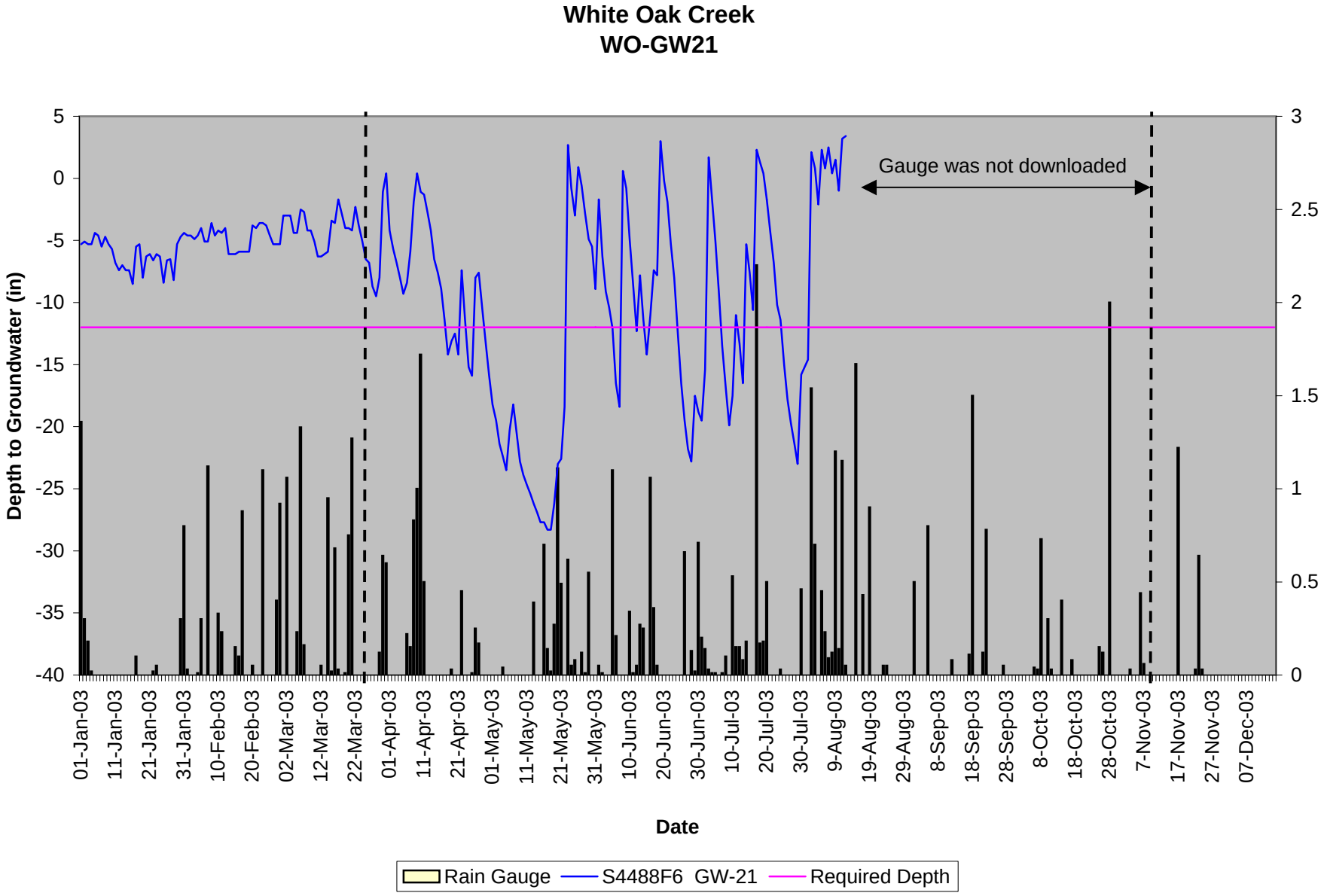

White Oak Creek
WO-GW16
230 Days
Depth to Groundwater (in)
Date
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Rain Gauge
S448798 GW-16
Required Depth

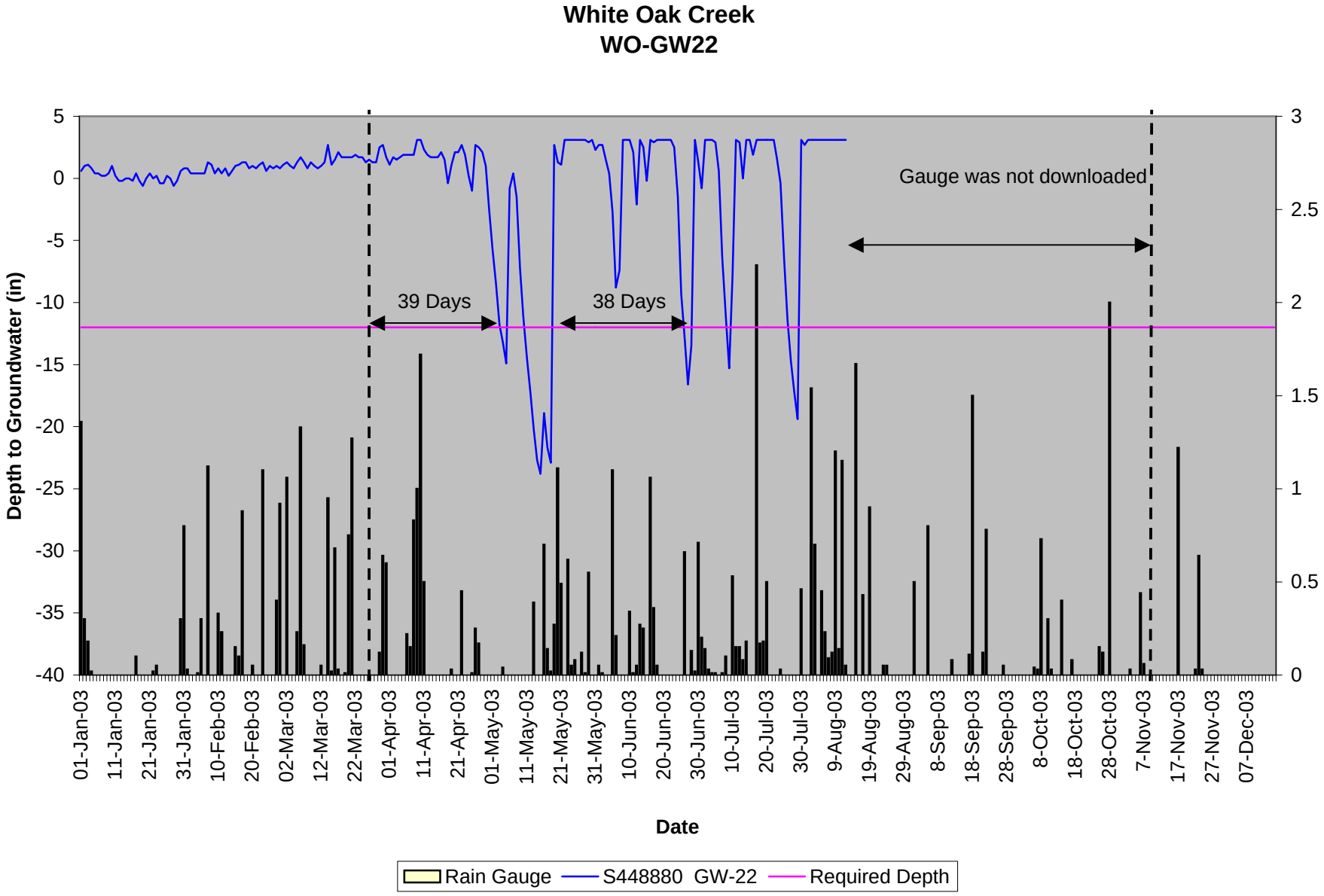

White Oak Creek
WO-GW17
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
230 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S213FEA GW-17
Required Depth

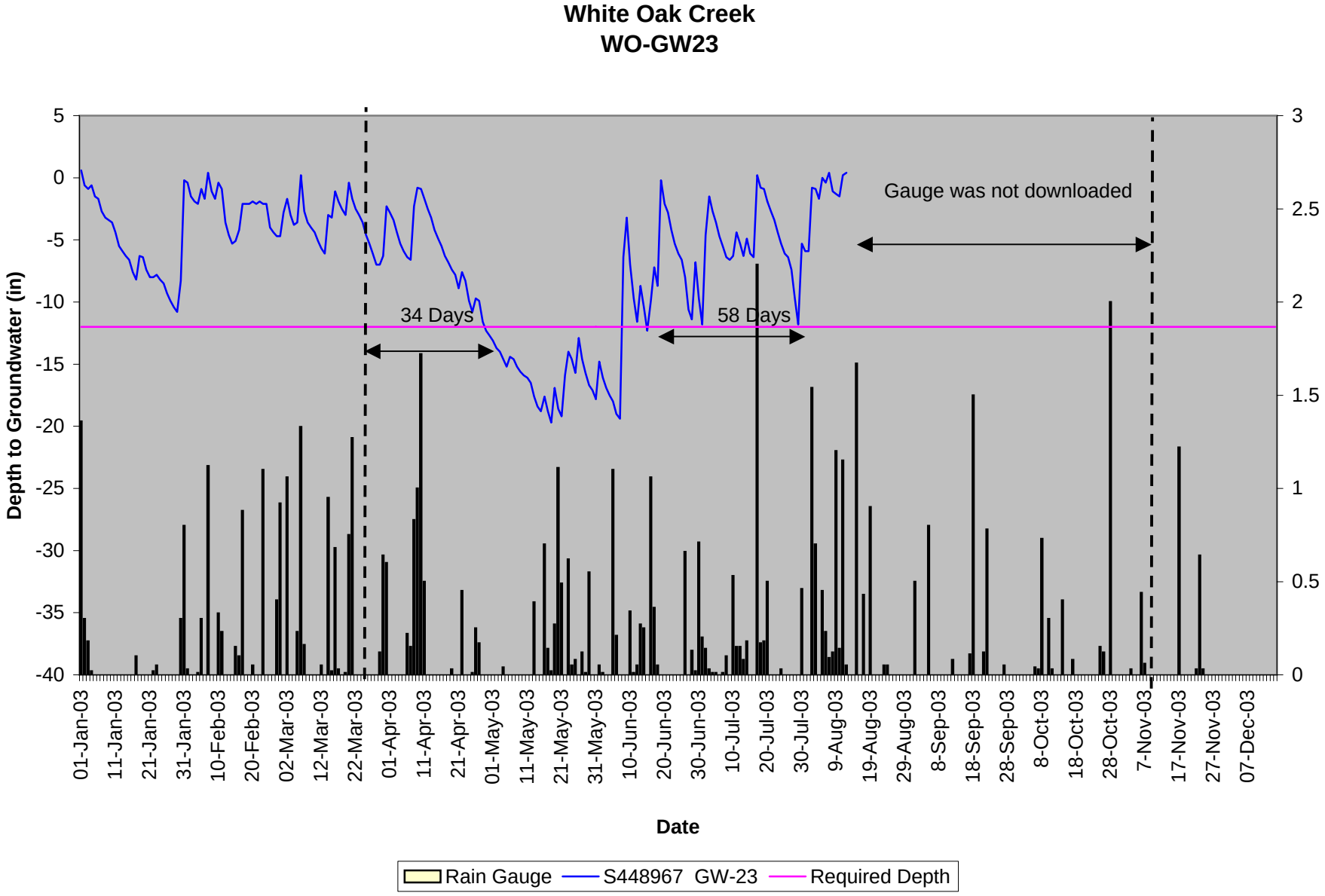

White Oak Creek
WO-GW18
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
40 Days
106 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S4489A2 GW-18
Required Depth

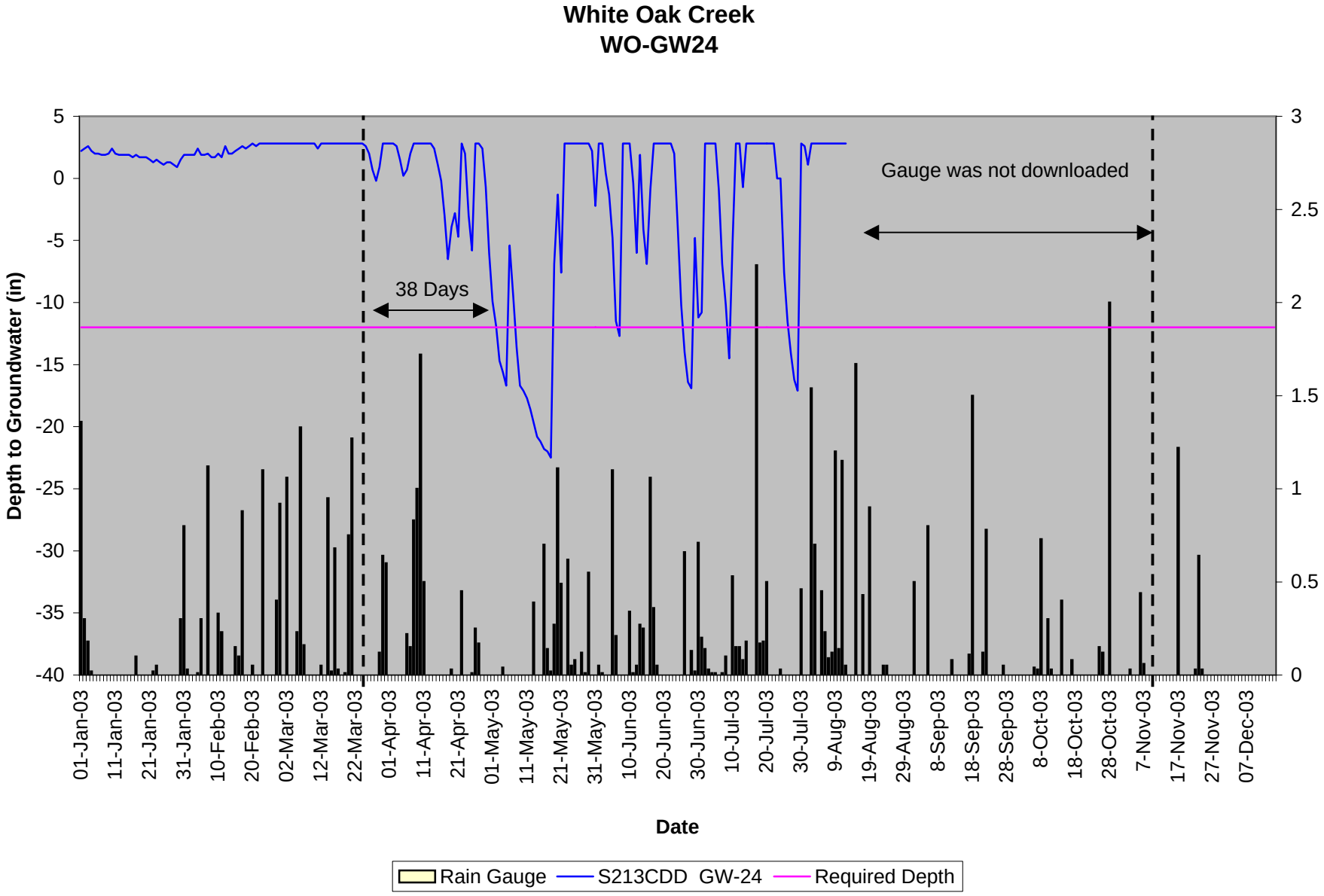

White Oak Creek
WO-GW19
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S4CFF90 GW-19
Required Depth

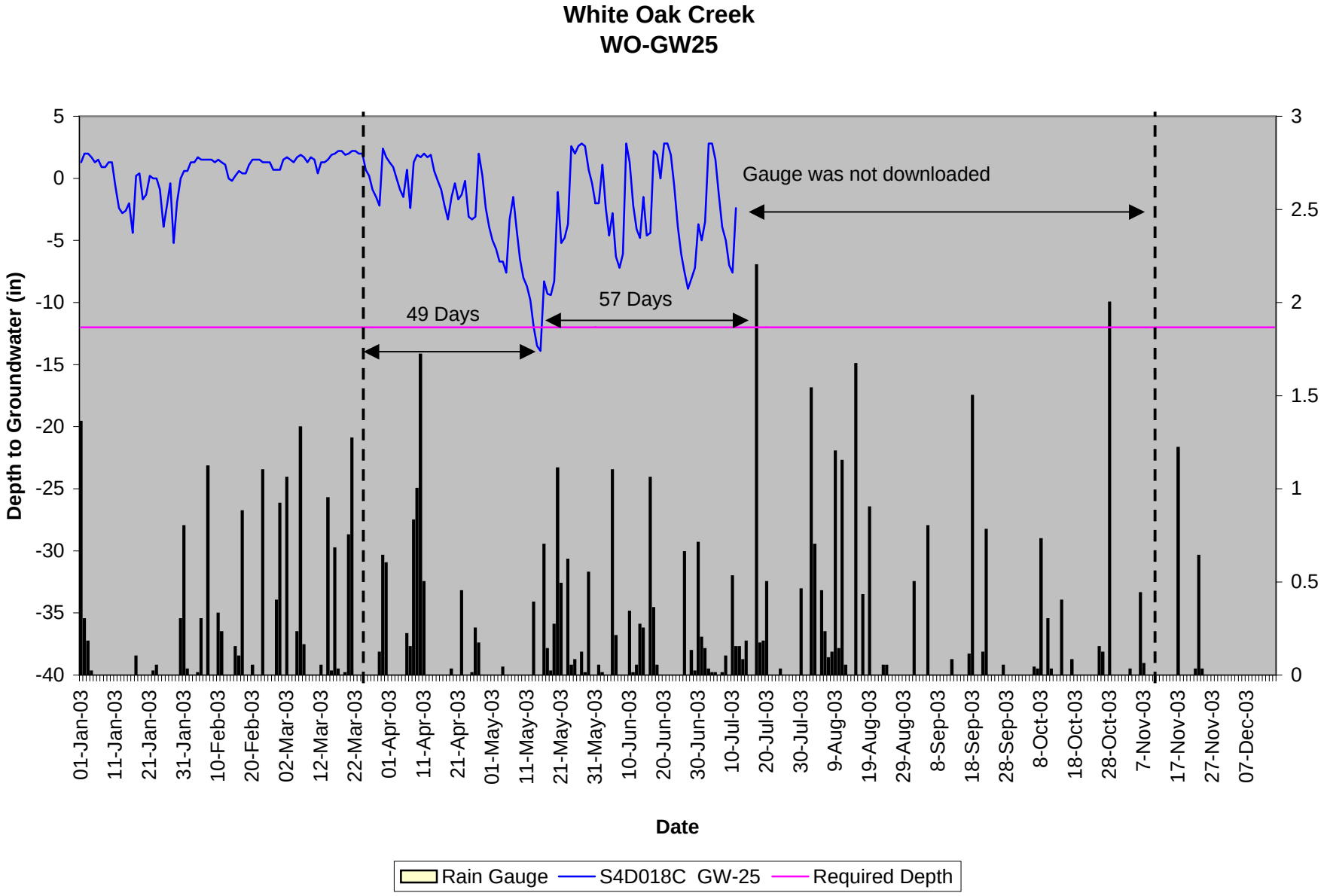

White Oak Creek
WO-GW20
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
124 Days
Gauge was not downloaded
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S448903 GW-20
Required Depth

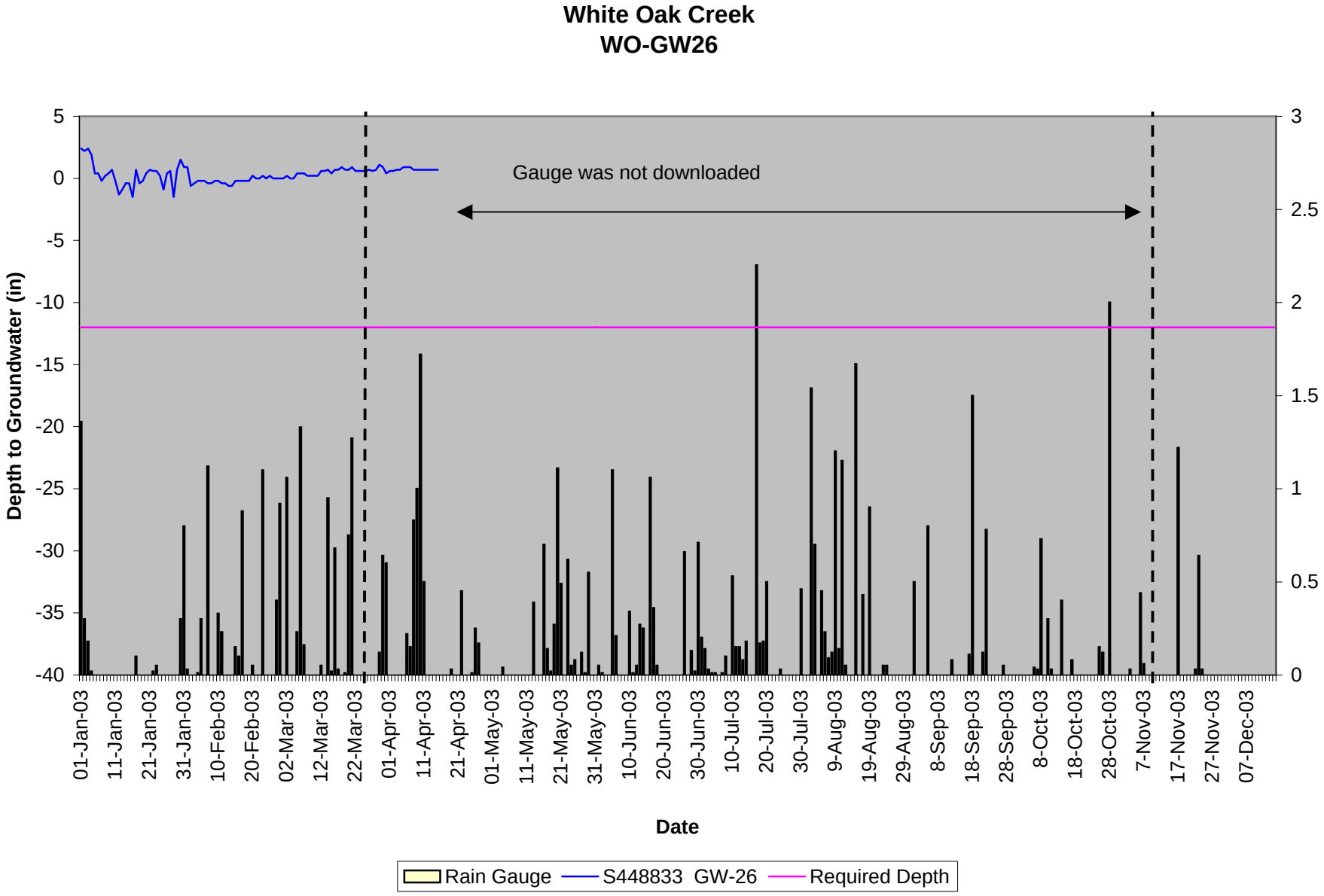

White Oak Creek
WO-GW21
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S4488F6 GW-21
Required Depth

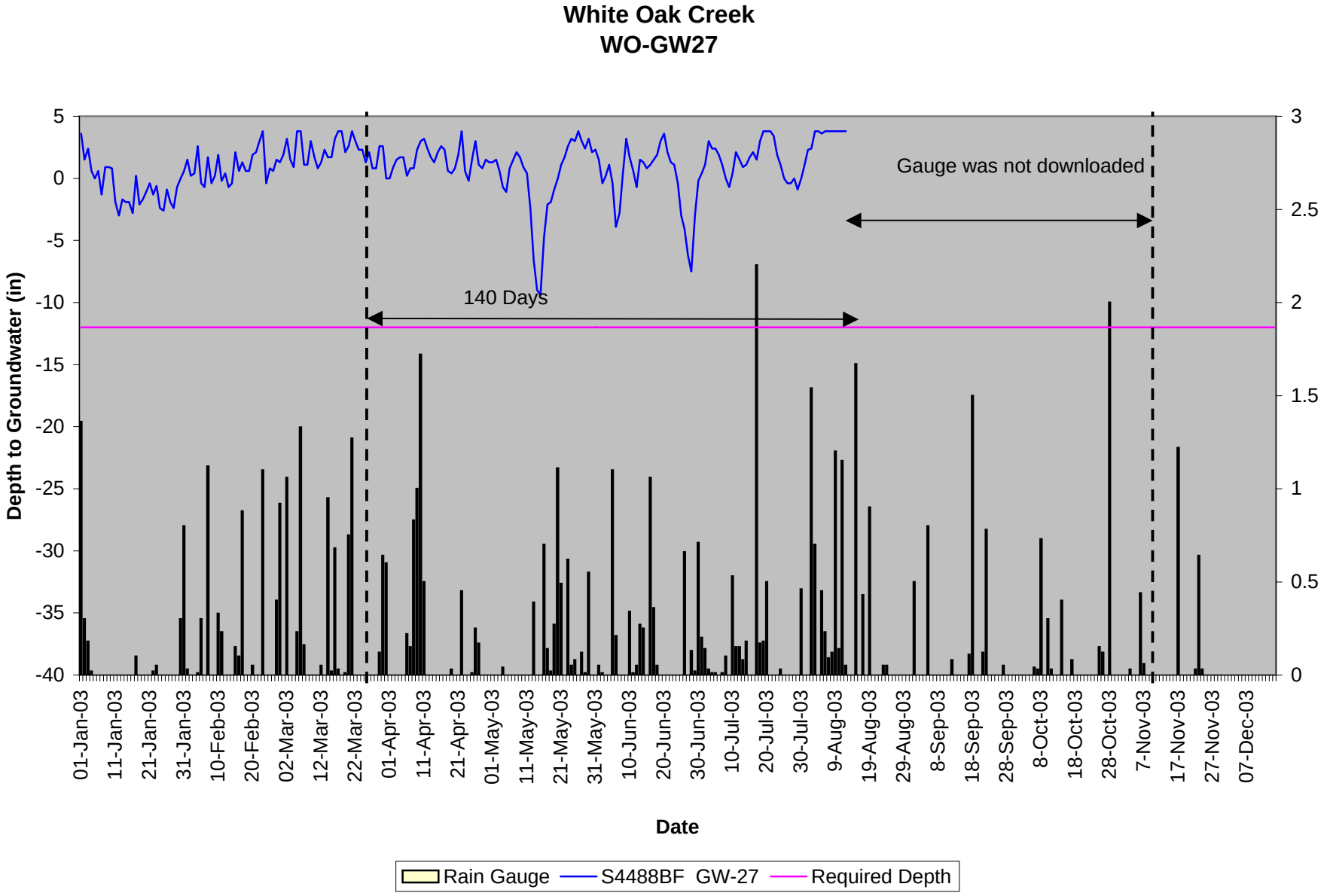

White Oak Creek
WO-GW22
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
39 Days
38 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S448880 GW-22
Required Depth

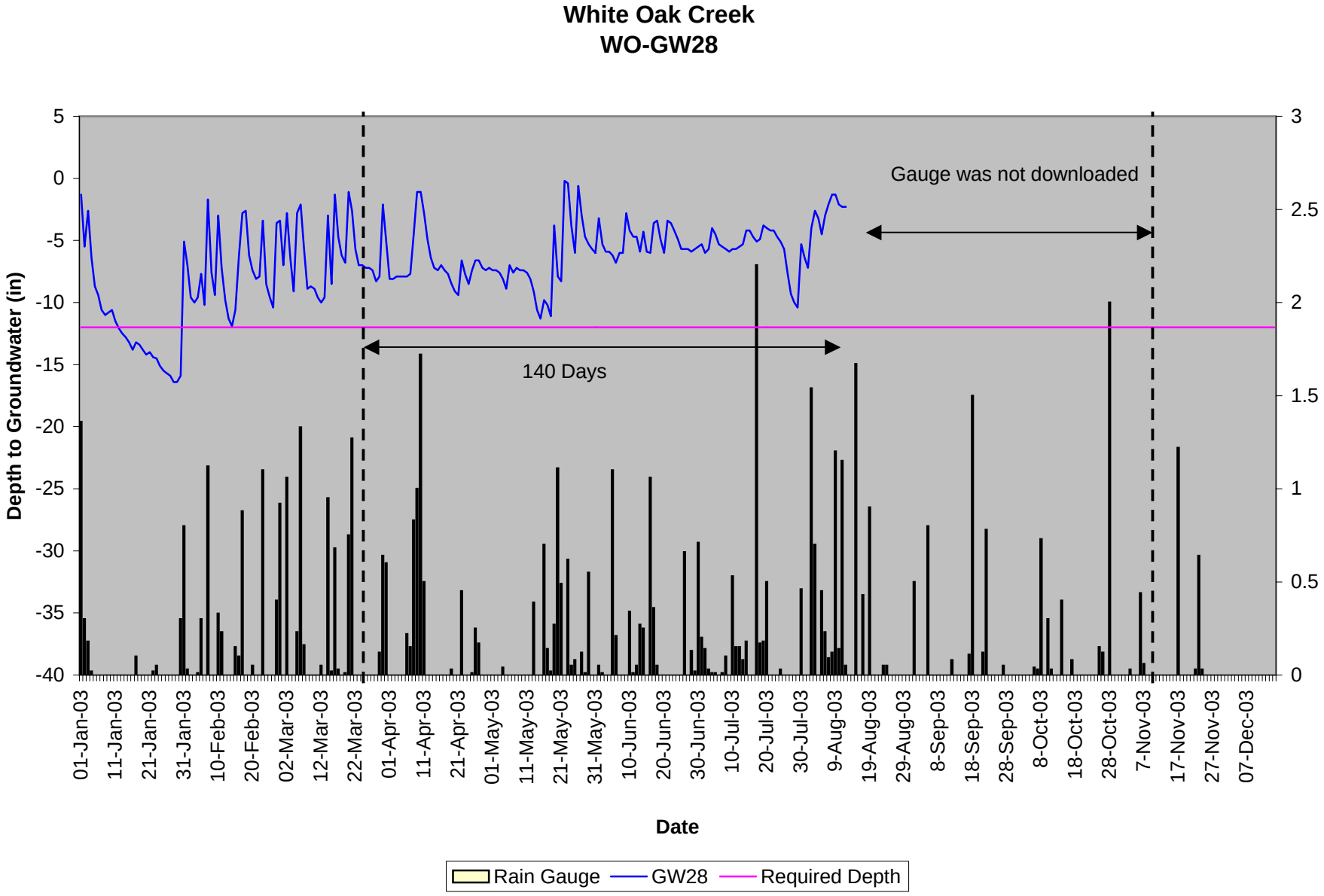

White Oak Creek
WO-GW23
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
34 Days
58 Days
Gauge was not downloaded
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S448967 GW-23
Required Depth

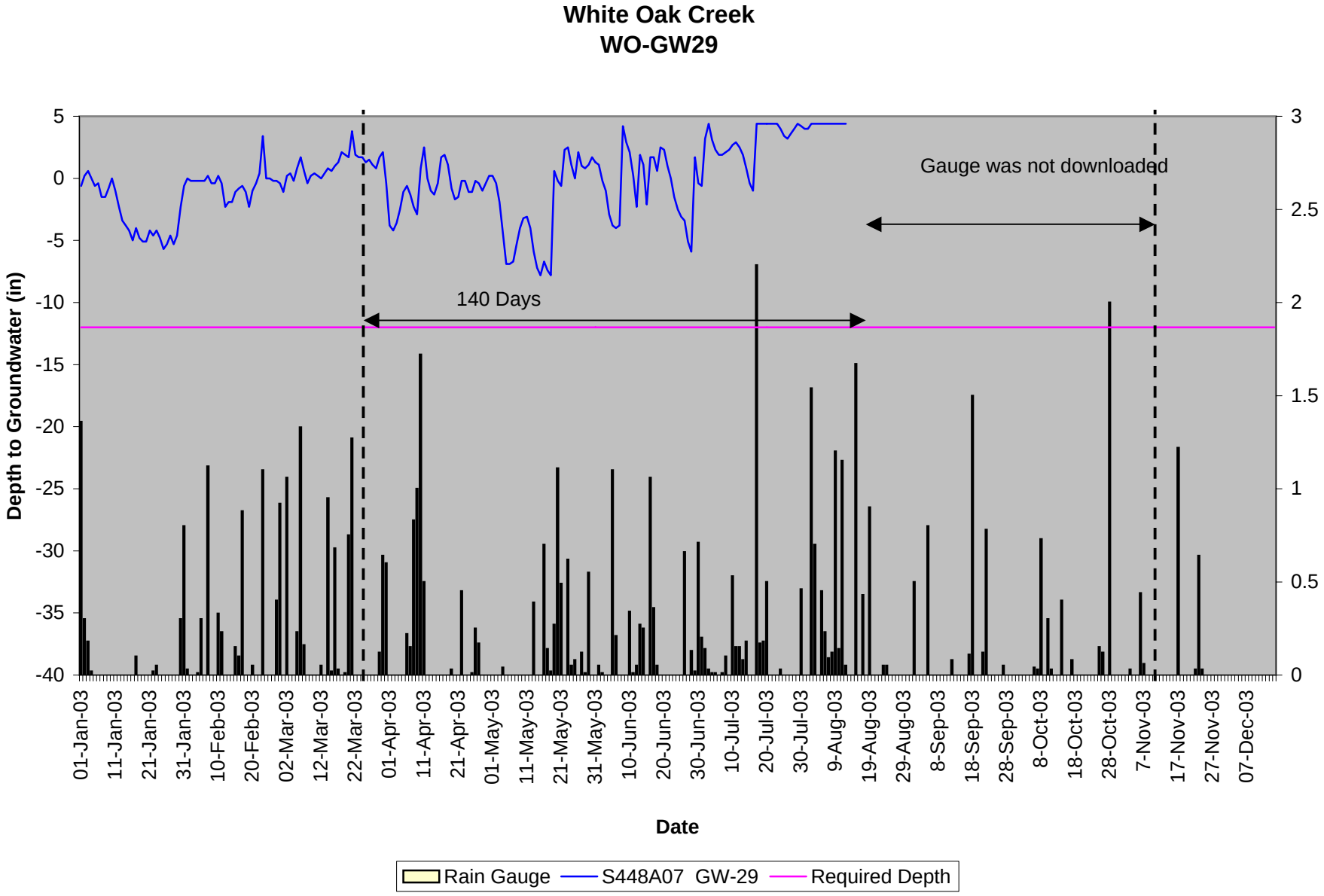

White Oak Creek
WO-GW24
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
38 Days
Gauge was not downloaded
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S213CDD GW-24
Required Depth

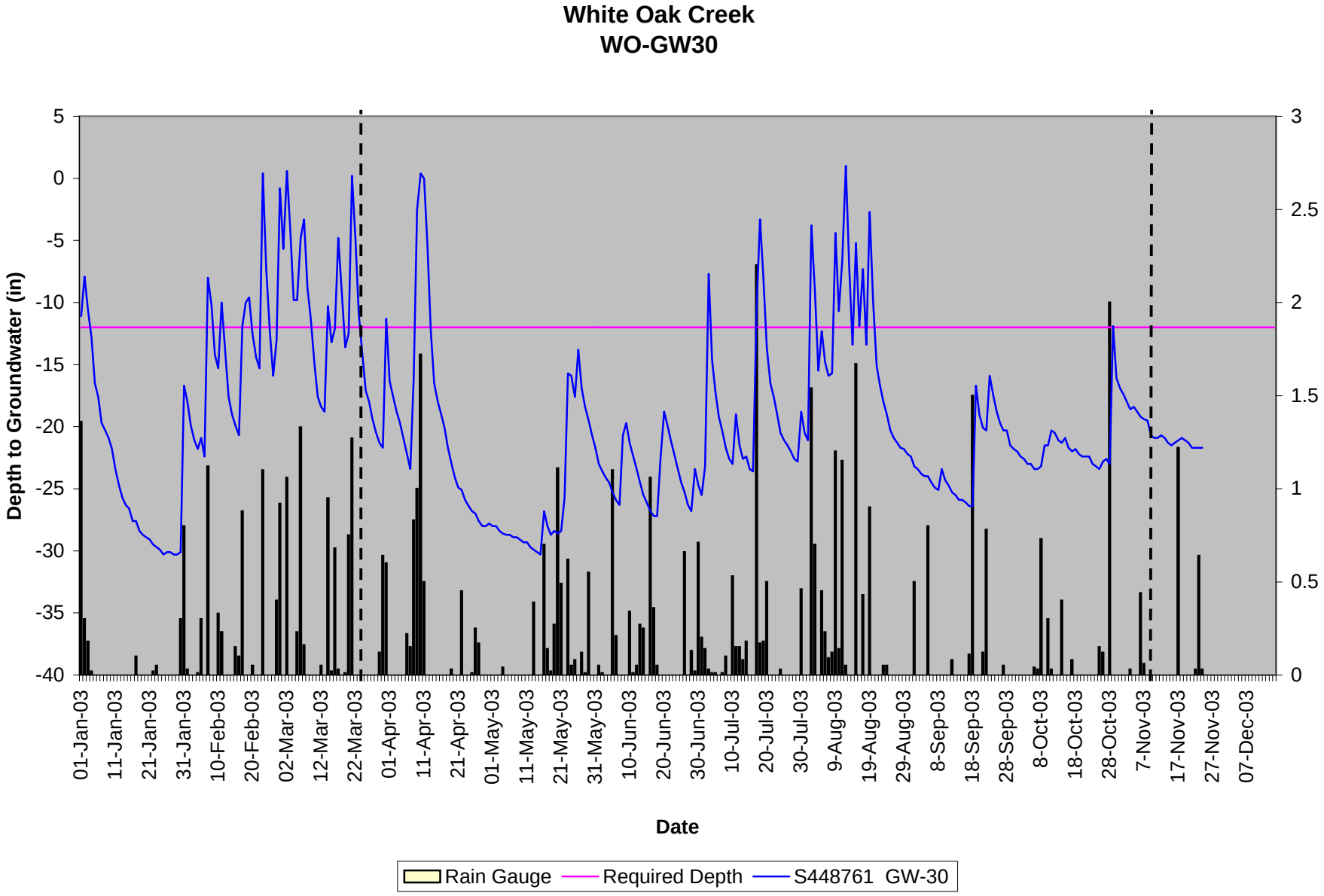

White Oak Creek
WO-GW25
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
49 Days
57 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S4D018C GW-25
Required Depth

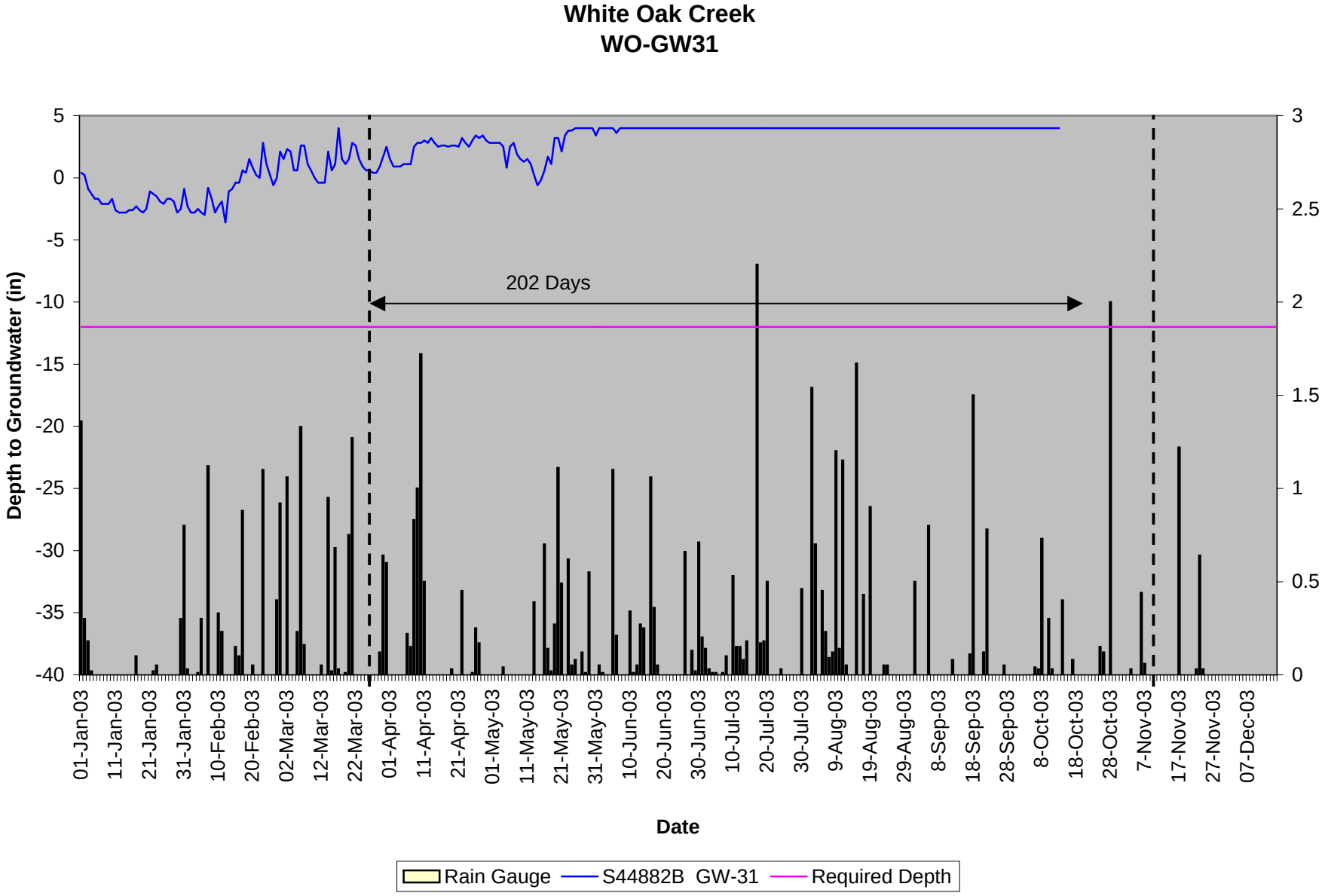

White Oak Creek
WO-GW26
Gauge was not downloaded
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S448833 GW-26
Required Depth

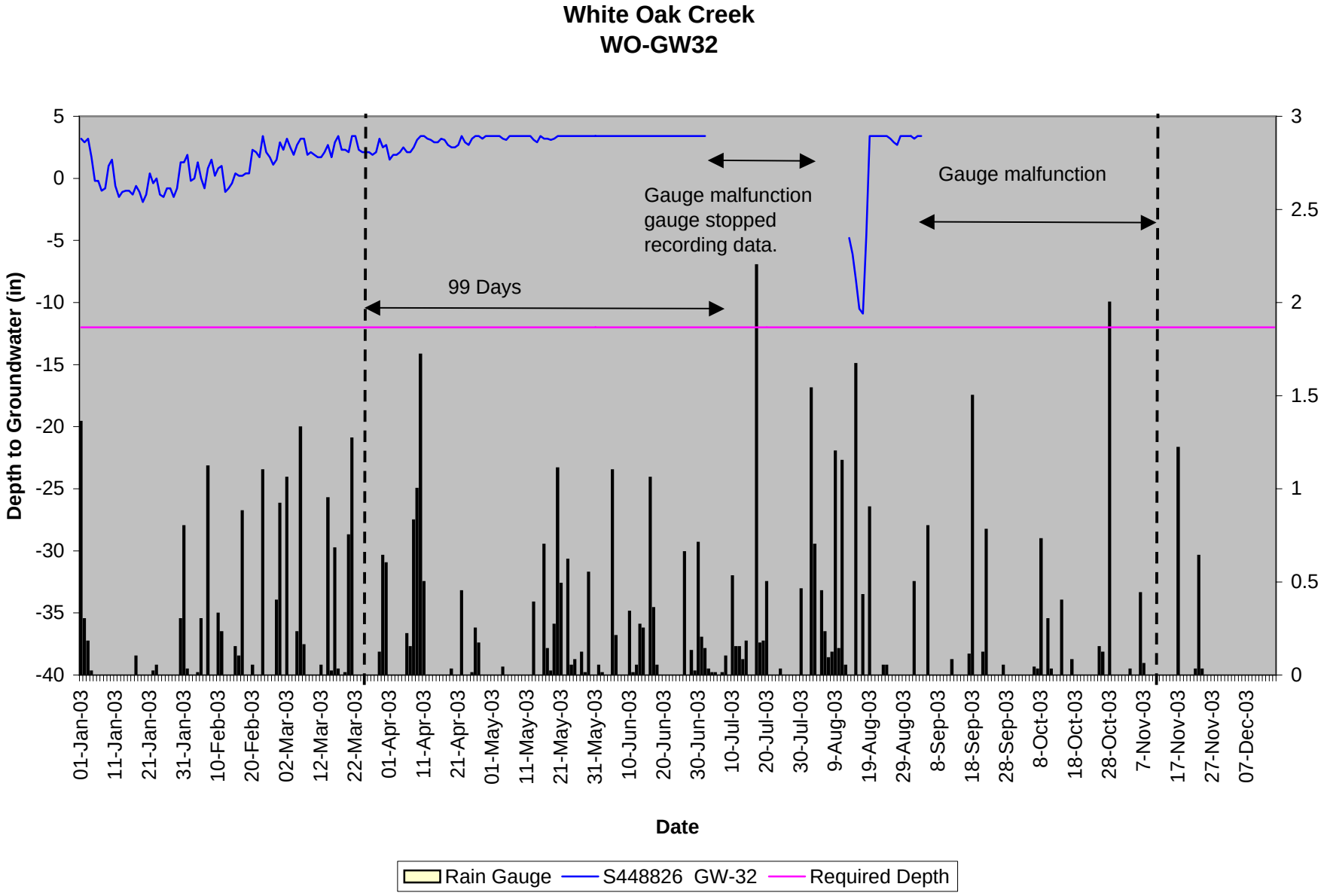

White Oak Creek
WO-GW27
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
140 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S4488BF GW-27
Required Depth

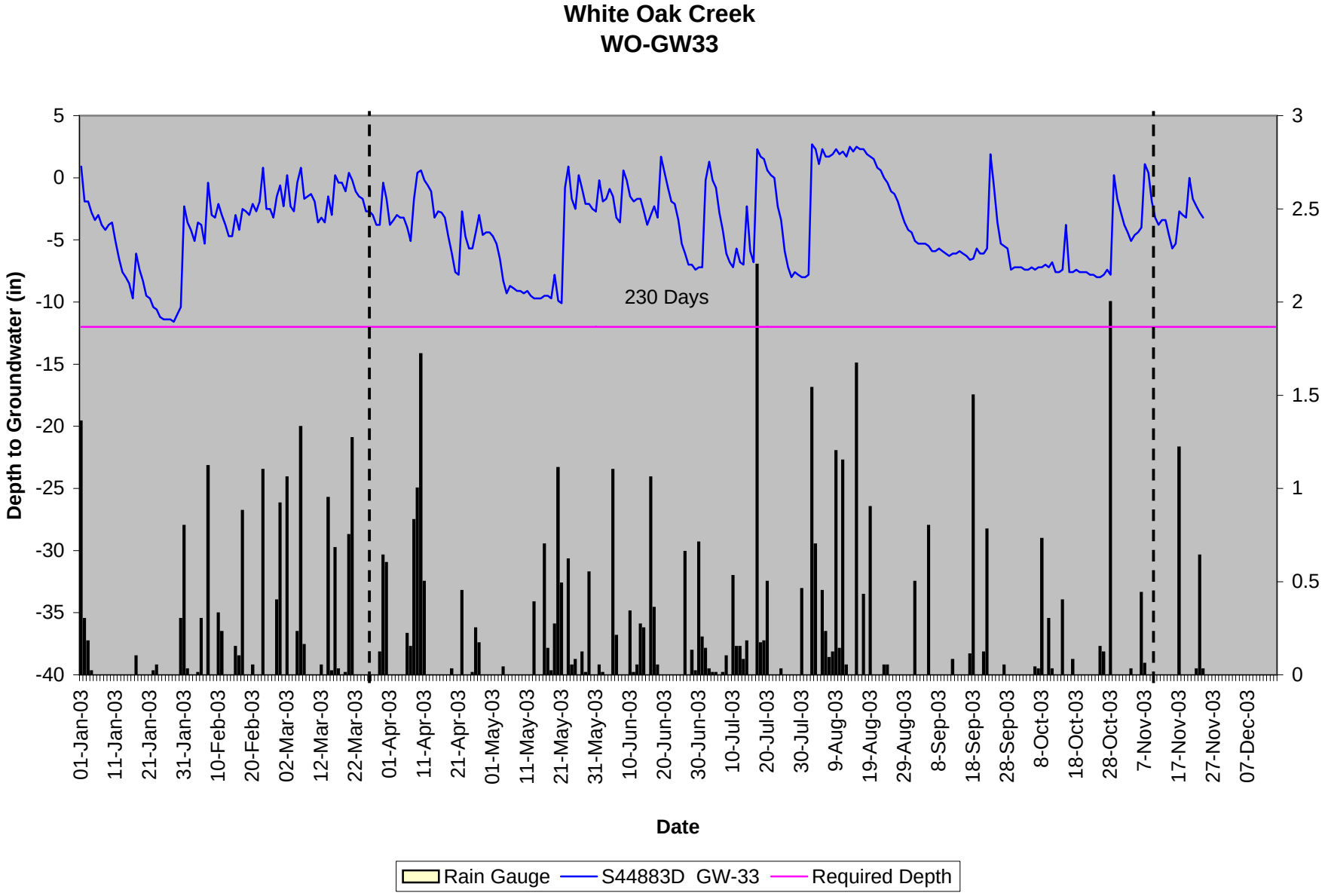

White Oak Creek
WO-GW28
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
140 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
GW28
Required Depth

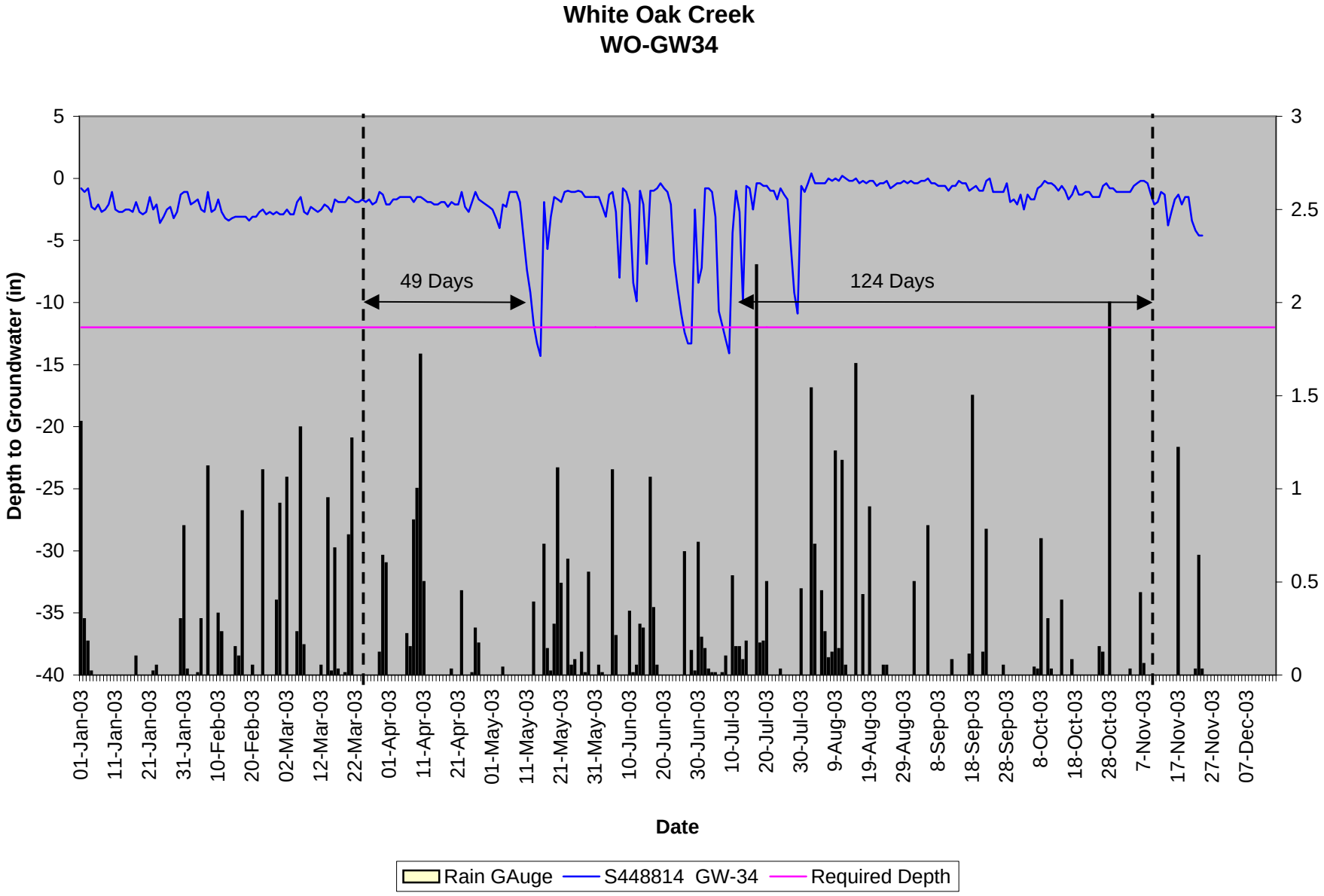

White Oak Creek
WO-GW29
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
140 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S448A07 GW-29
Required Depth

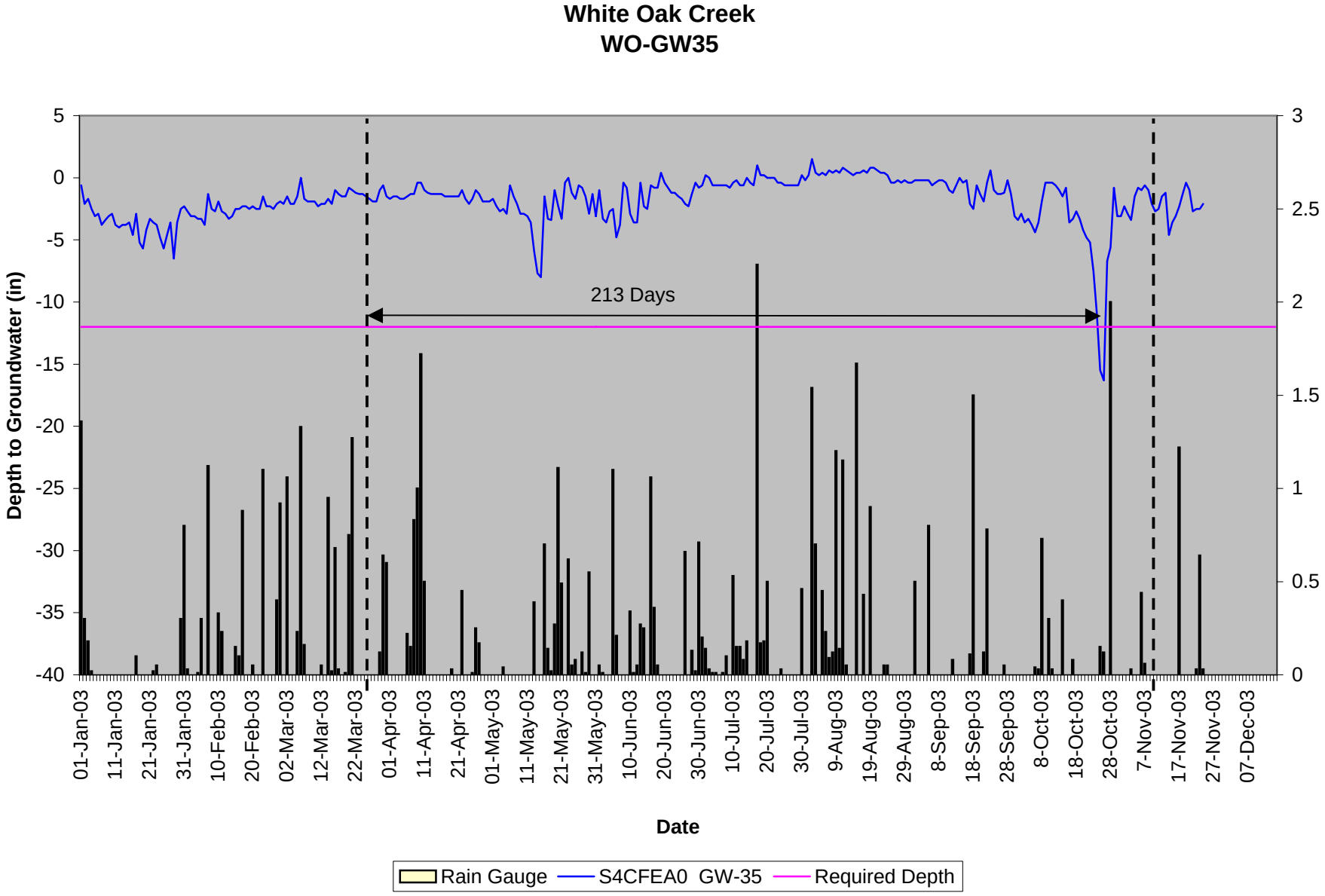

White Oak Creek
WO-GW30
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
Required Depth
S448761 GW-30

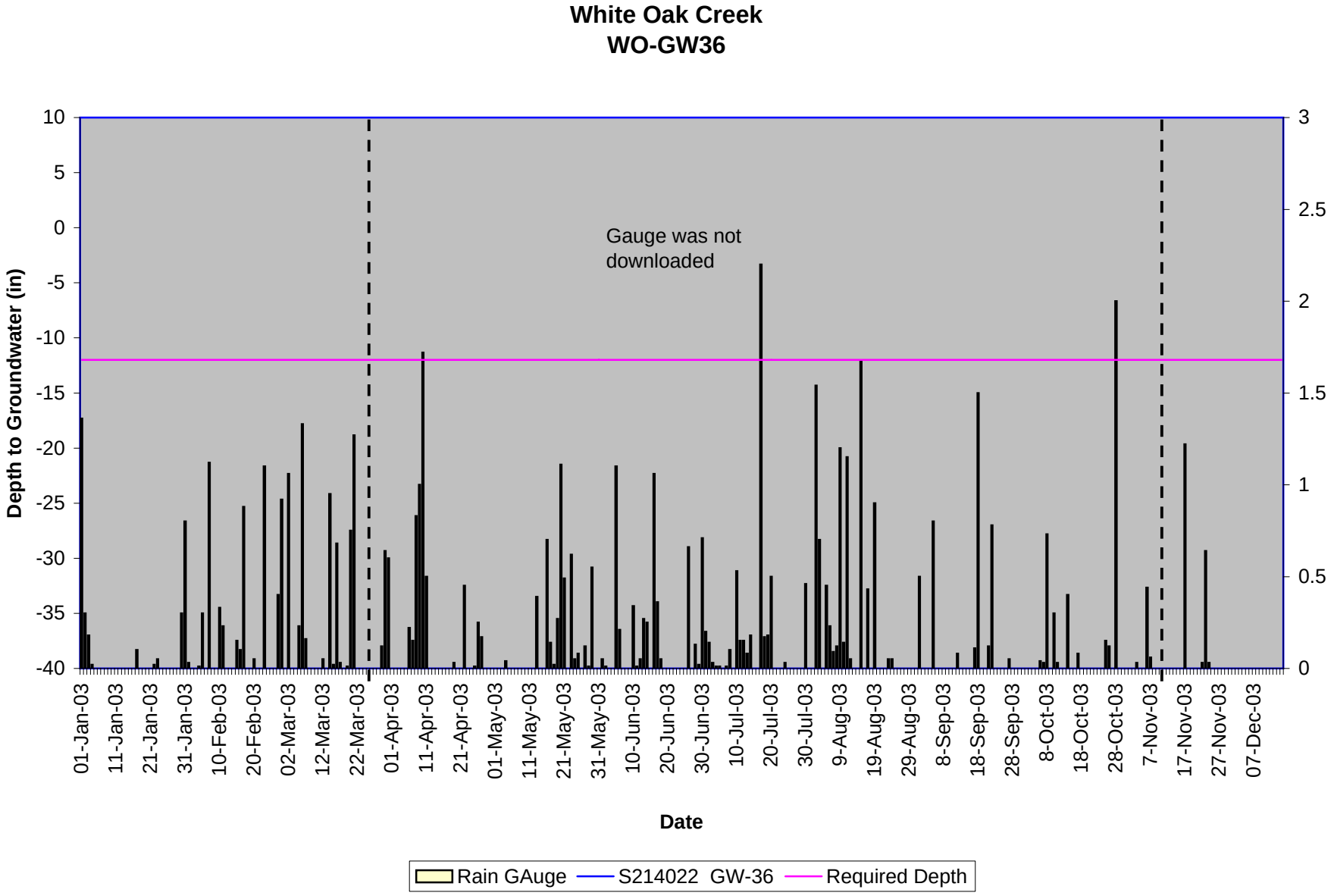

White Oak Creek
WO-GW31
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
202 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S44882B GW-31
Required Depth

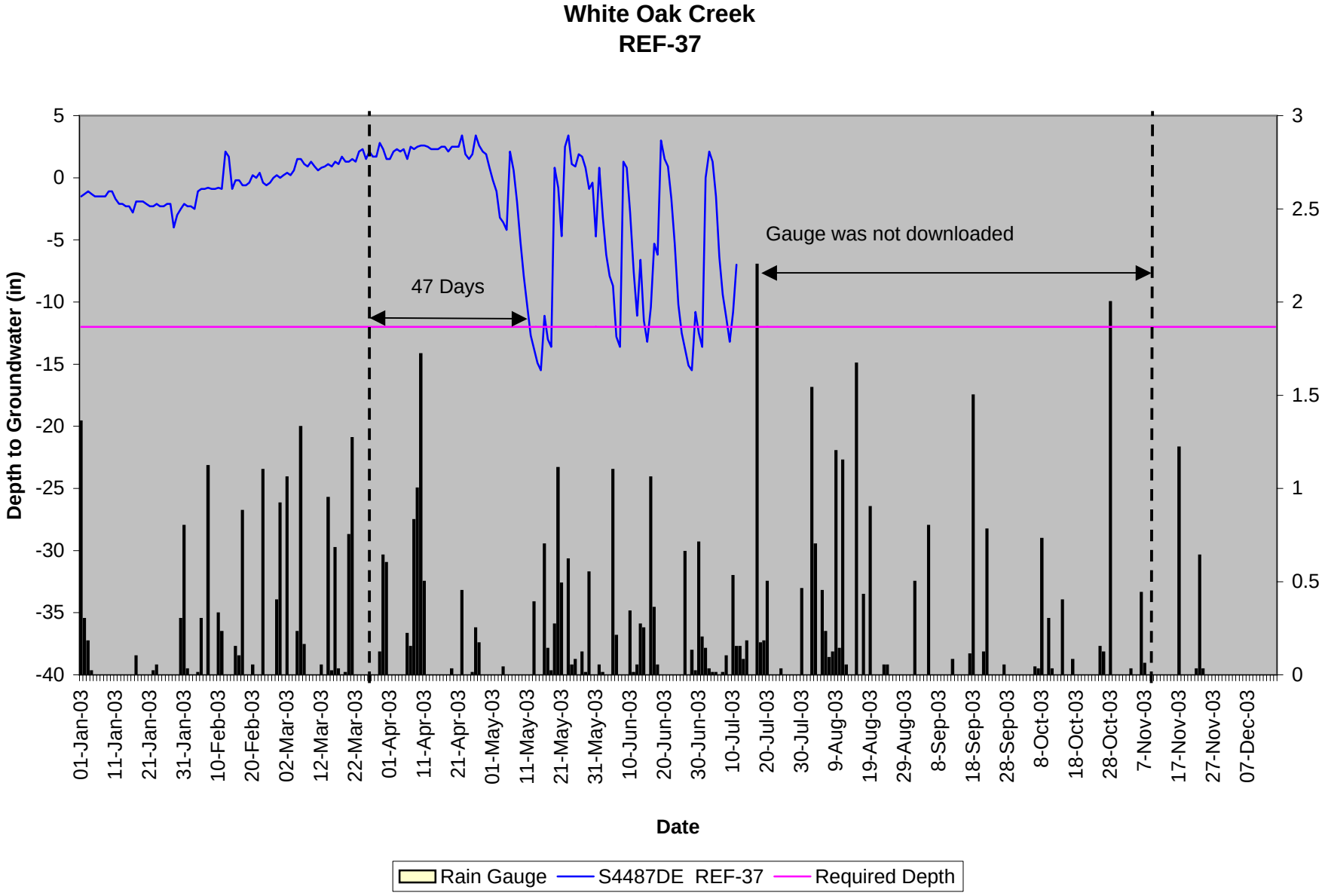

White Oak Creek
WO-GW32
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge malfunction
gauge stopped
recording data.
Gauge malfunction
99 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S448826 GW-32
Required Depth

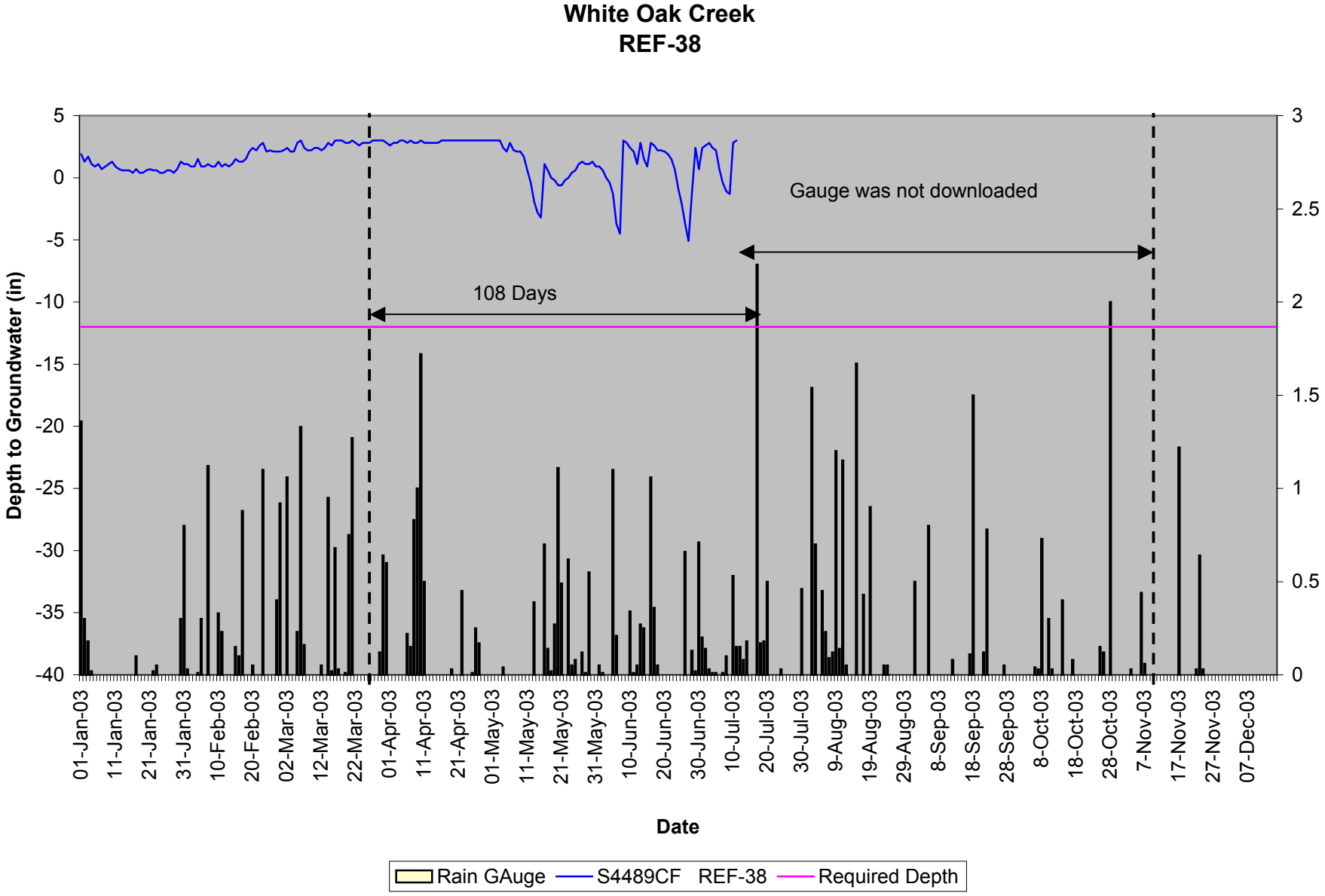

White Oak Creek
WO-GW33
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
230 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S44883D GW-33
Required Depth


White Oak Creek
WO-GW34
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
49 Days
124 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain GAuge
S448814 GW-34
Required Depth


White Oak Creek
WO-GW35
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
213 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S4CFEA0 GW-35
Required Depth


White Oak Creek
WO-GW36
Gauge was not downloaded
Depth to Groundwater (in)
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain GAuge
S214022 GW-36
Required Depth


White Oak Creek
REF-37
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
47 Days
Gauge was not downloaded
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain Gauge
S4487DE REF-37
Required Depth


White Oak Creek
REF-38
Depth to Groundwater (in)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
3
2.5
2
1.5
1
0.5
0
Gauge was not downloaded
108 Days
01-Jan-03
11-Jan-03
21-Jan-03
31-Jan-03
10-Feb-03
20-Feb-03
02-Mar-03
12-Mar-03
22-Mar-03
01-Apr-03
11-Apr-03
21-Apr-03
01-May-03
11-May-03
21-May-03
31-May-03
10-Jun-03
20-Jun-03
30-Jun-03
10-Jul-03
20-Jul-03
30-Jul-03
9-Aug-03
19-Aug-03
29-Aug-03
8-Sep-03
18-Sep-03
28-Sep-03
8-Oct-03
18-Oct-03
28-Oct-03
7-Nov-03
17-Nov-03
27-Nov-03
07-Dec-03
Date
Rain GAuge
S4489CF REF-38
Required Depth

APPENDIX B

SITE PHOTOS & PLANTING PLAN

White Oak Creek

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

2003

WHITE OAK CREEK MITIGATION SITE

PLANTING PLAN, PHOTO LOCATIONS, AND VEGETATION PLOTS