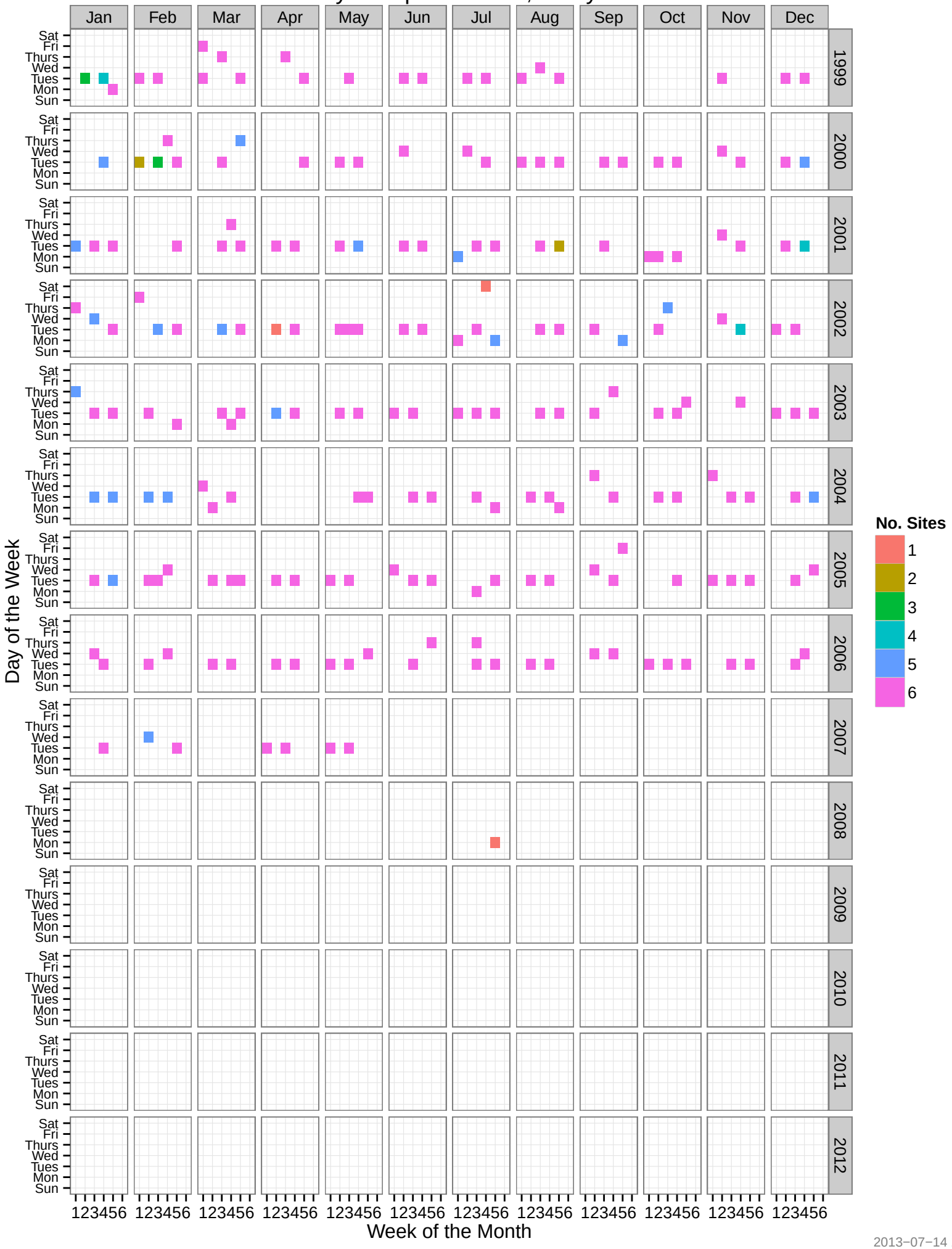
Appendix A: Calendar Plots of Study Codes

Summary: Plots showing the dates when samples were collected in a calendar format. Each plot shows the sampling dates for one study code. The plots are grouped by study group (see Table X). The symbols are colored by the number of stations sampled on a given day.

These plots are useful for understanding the frequency and period of record for each study.


Study Group: Unknown, Study:
Jan
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Week of the Month
No. Sites
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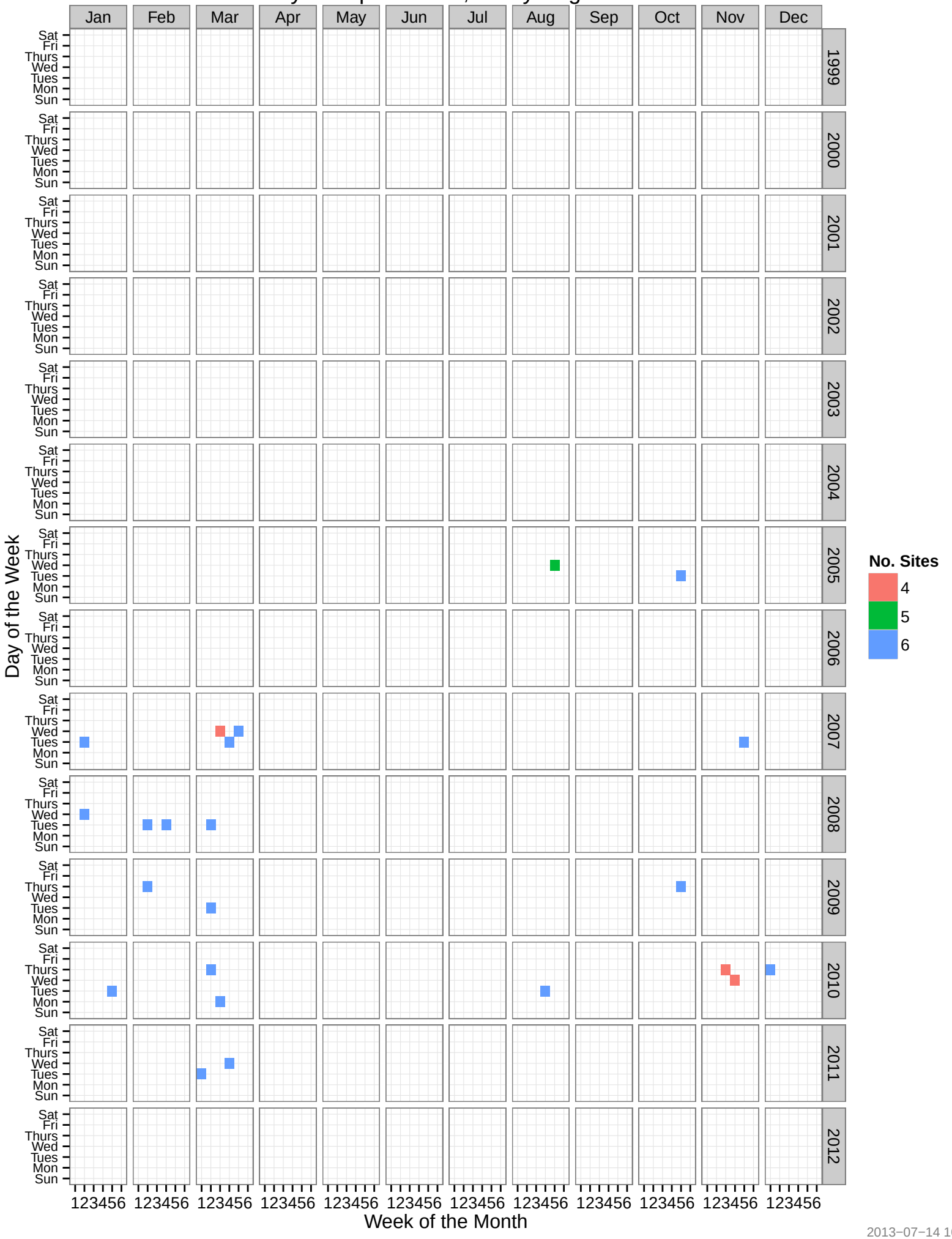
Study Group: Routine, Study: High Flow
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123456
Week of the Month
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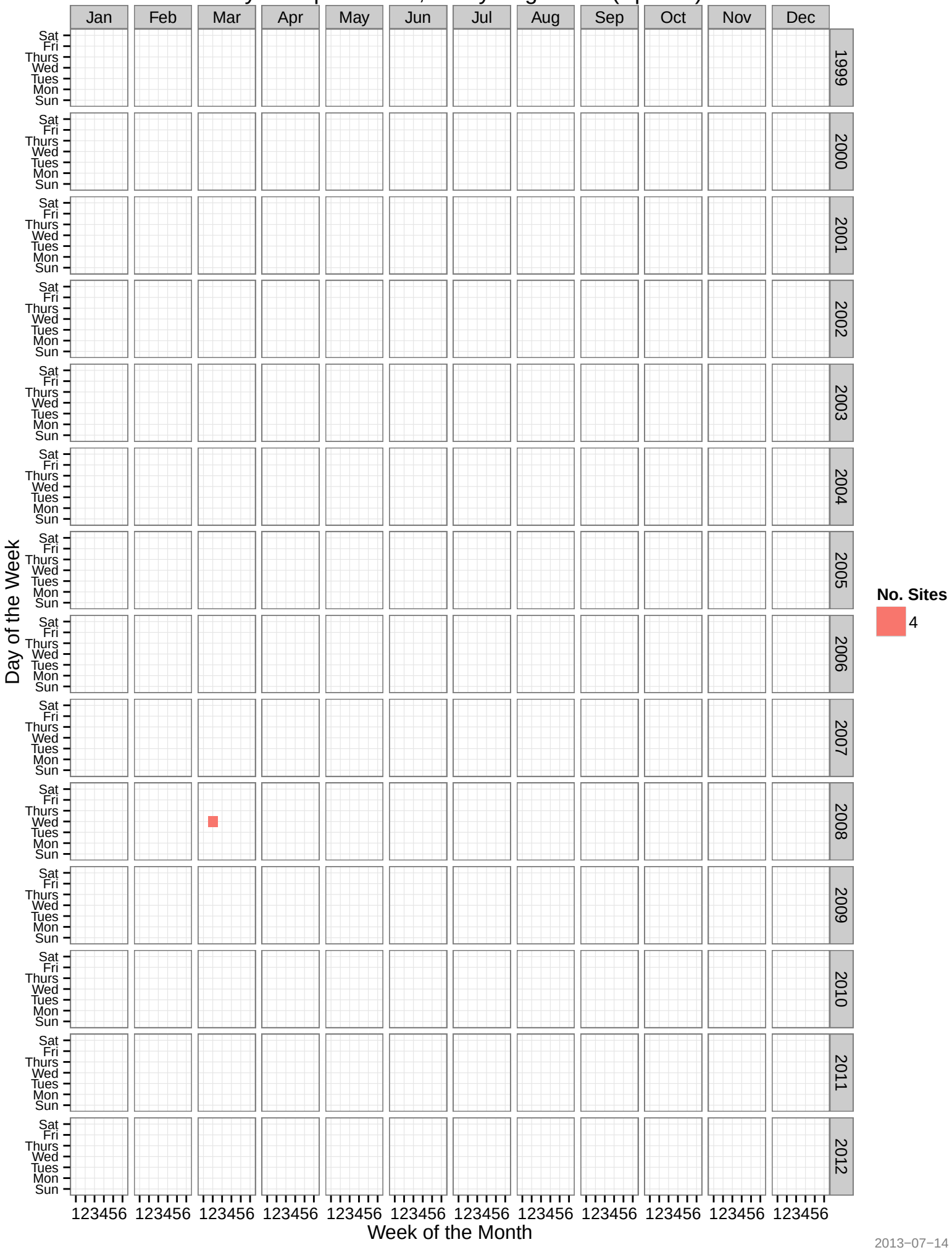
2013−07−14 10:47



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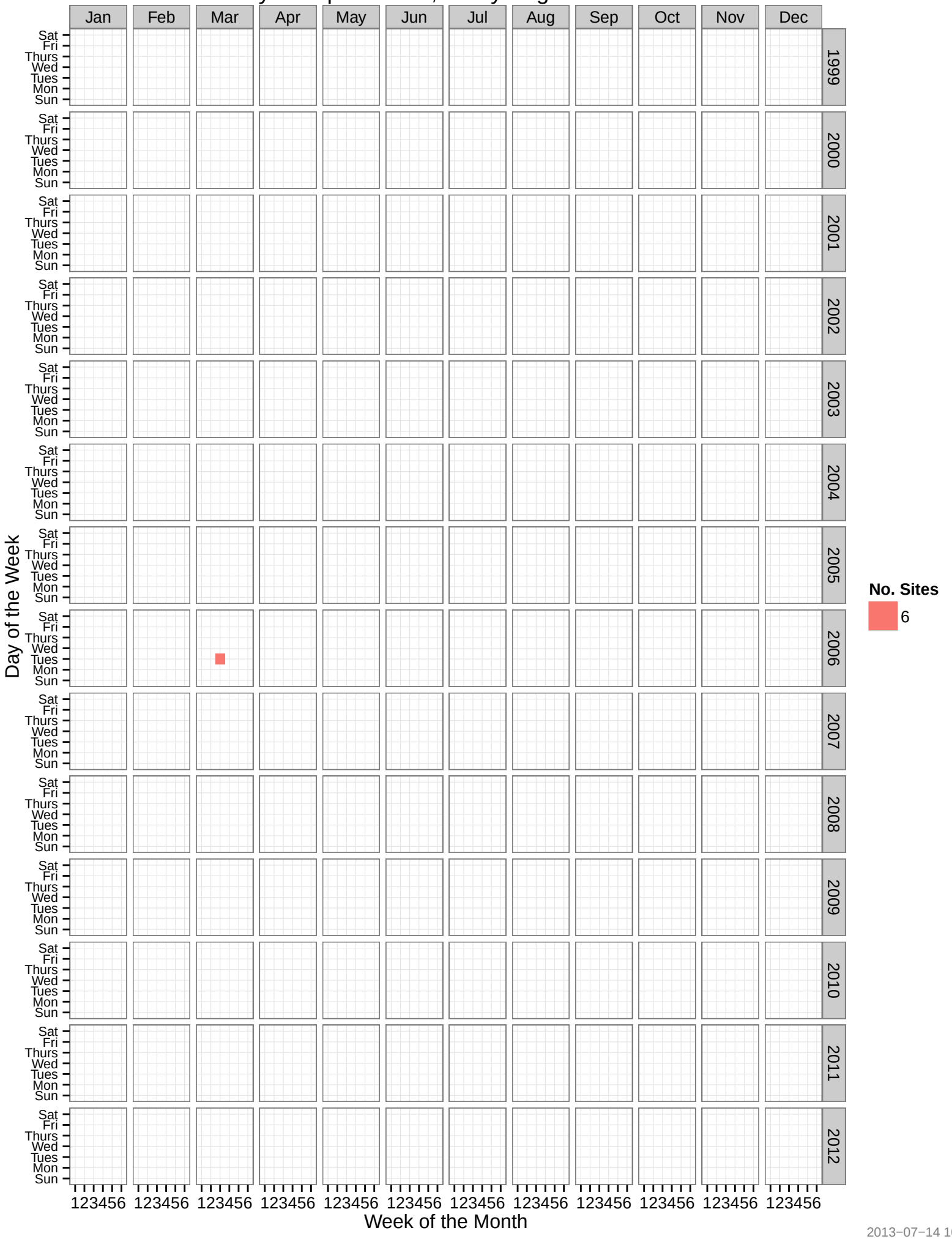
Study Group: Routine, Study: High Flow Event
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Day of the Week
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Week of the Month
No. Sites
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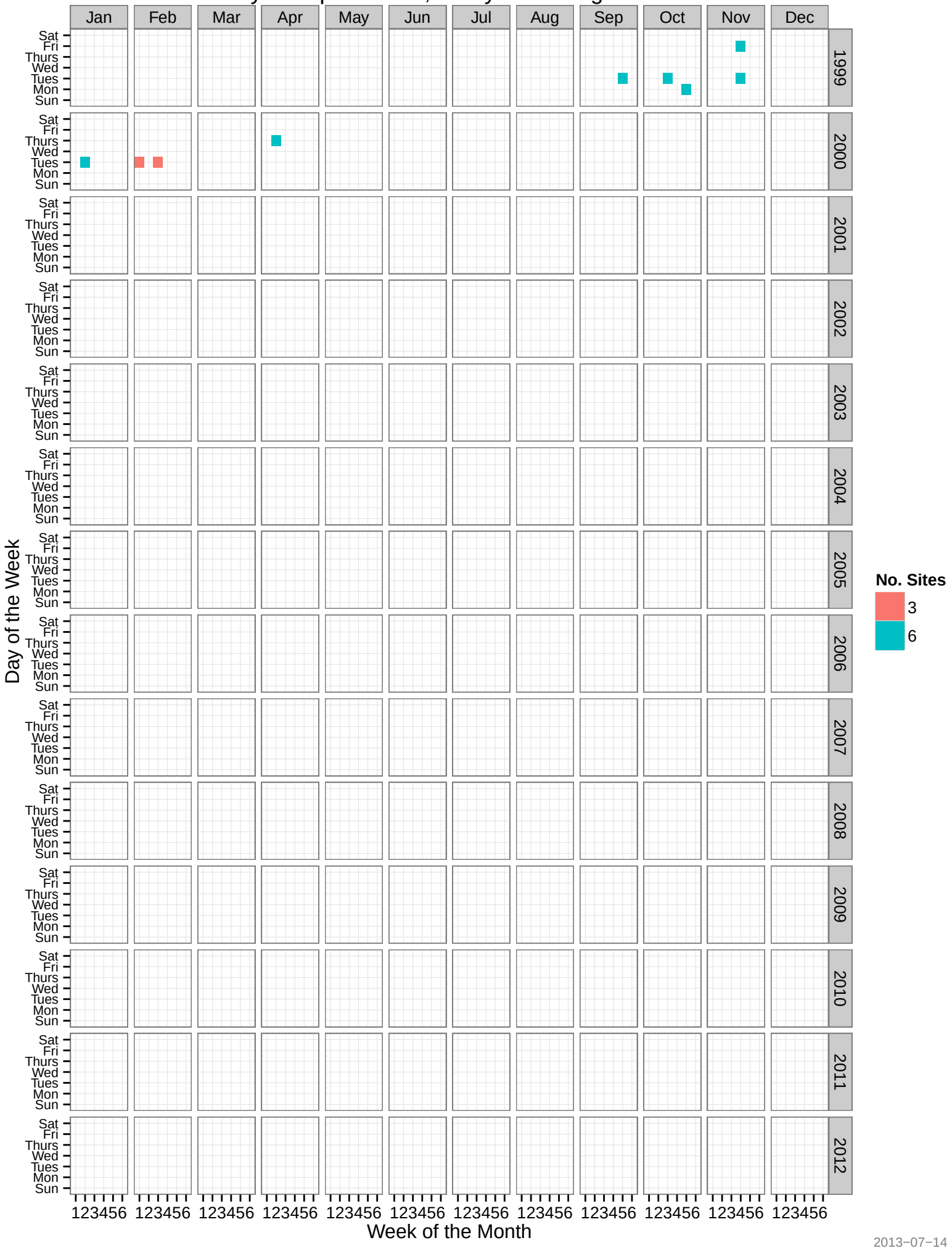
Study Group: Routine, Study: Onondaga Creeks
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Day of the Week
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Week of the Month
No. Sites
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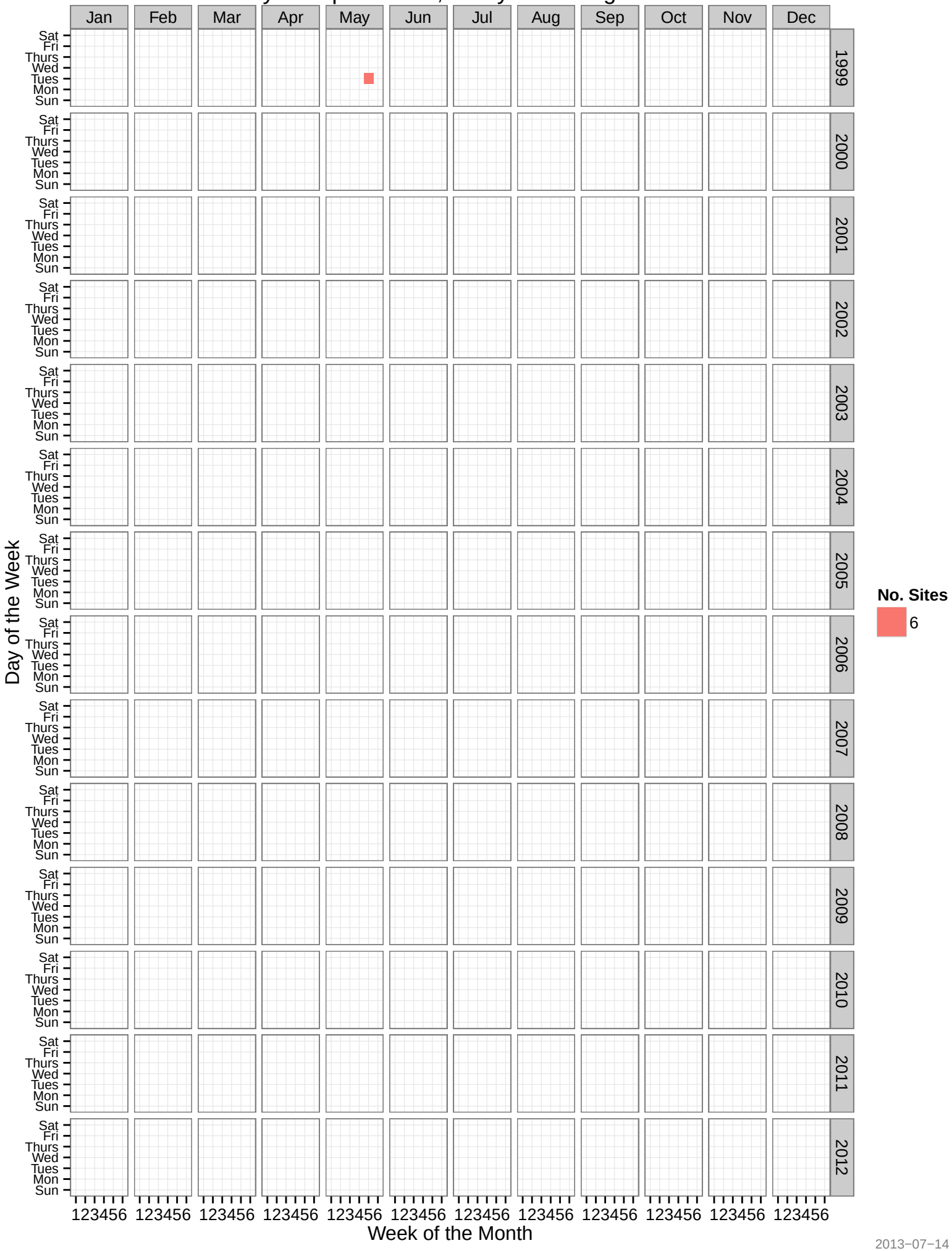
2013−07−14 10:47


Study Group: Routine, Study: Onondaga Lake
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Week of the Month
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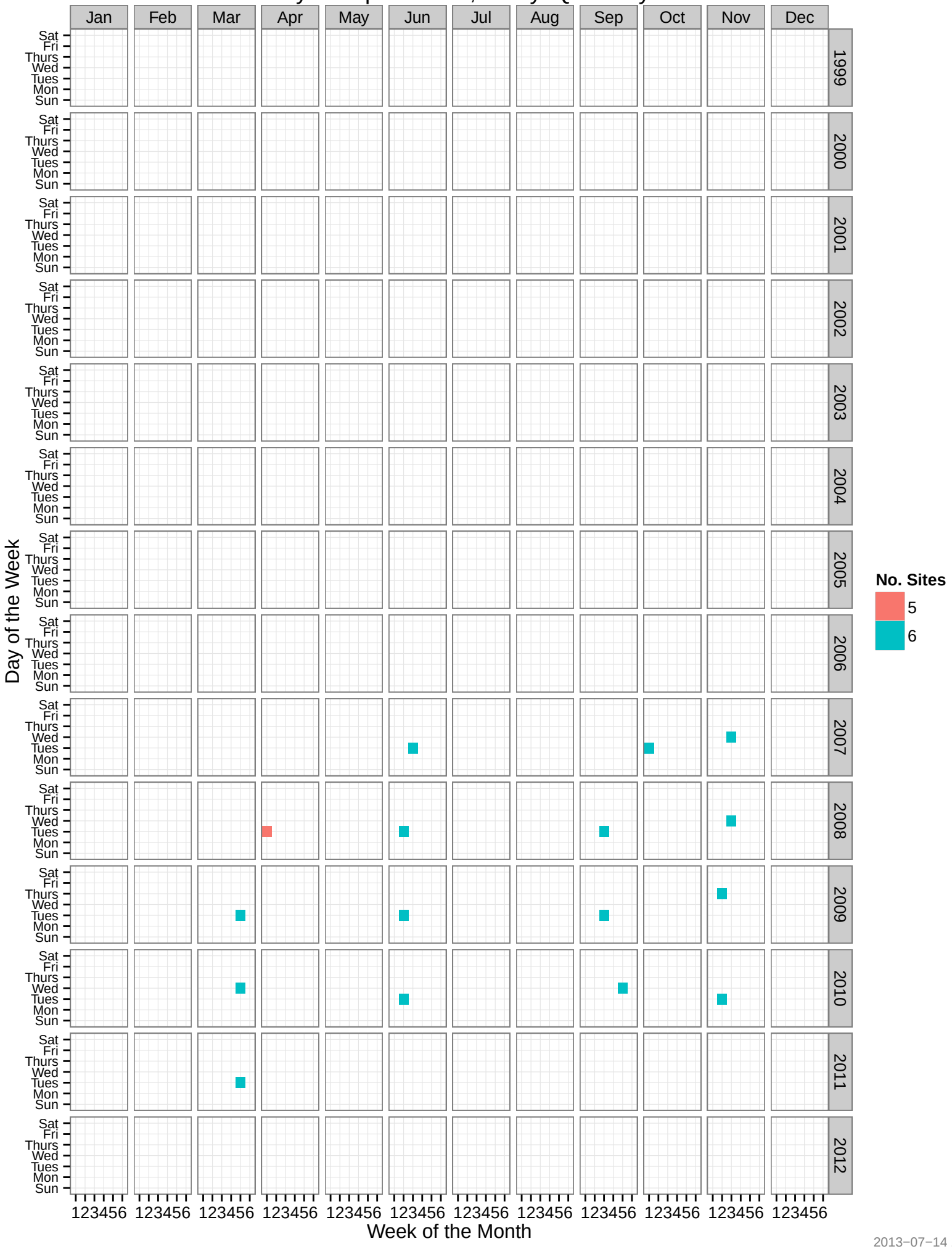
Study Group: Routine, Study: Quarterly
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Week of the Month
No. Sites
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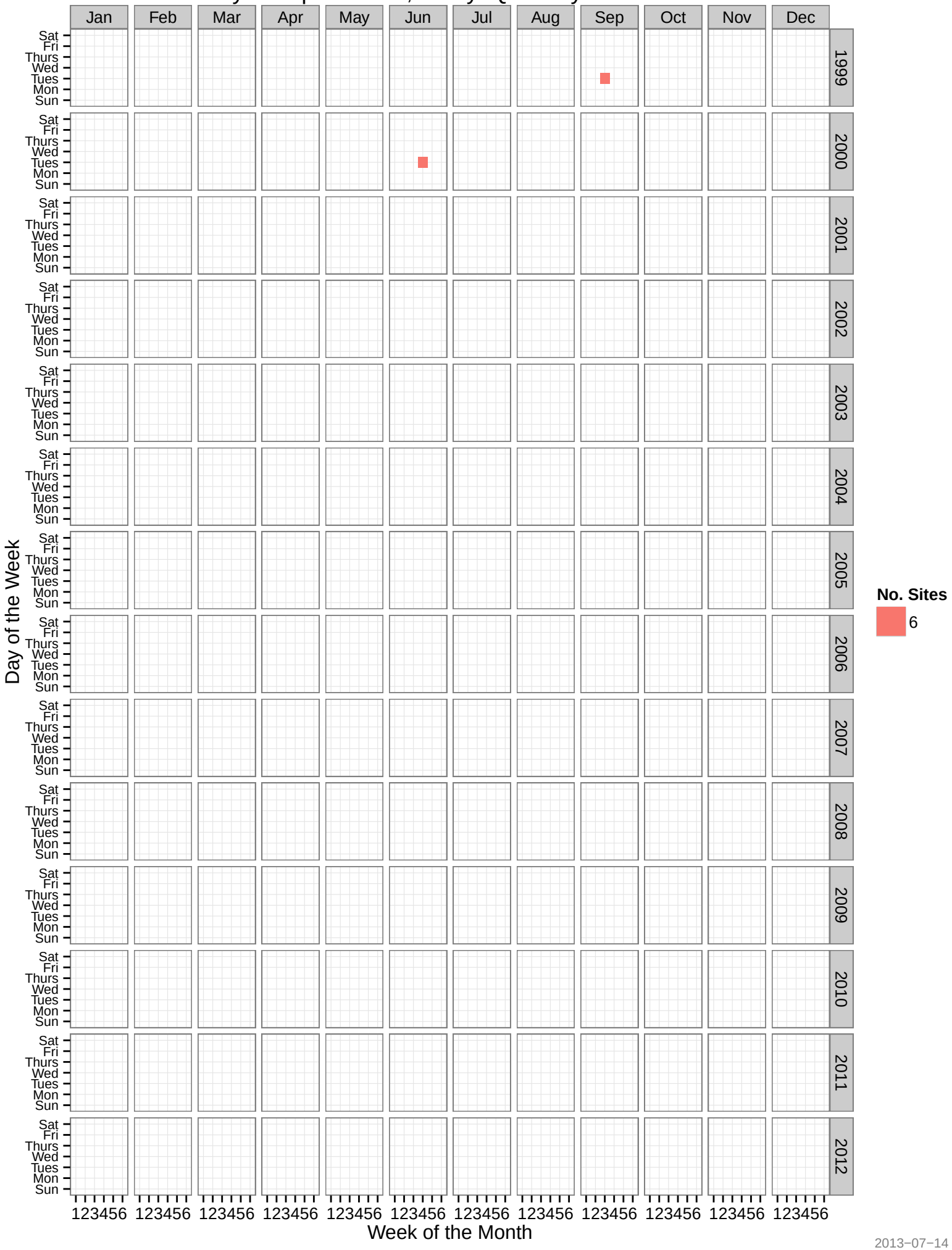
Study Group: Routine, Study: Quartery Creek Event
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Week of the Month
No. Sites
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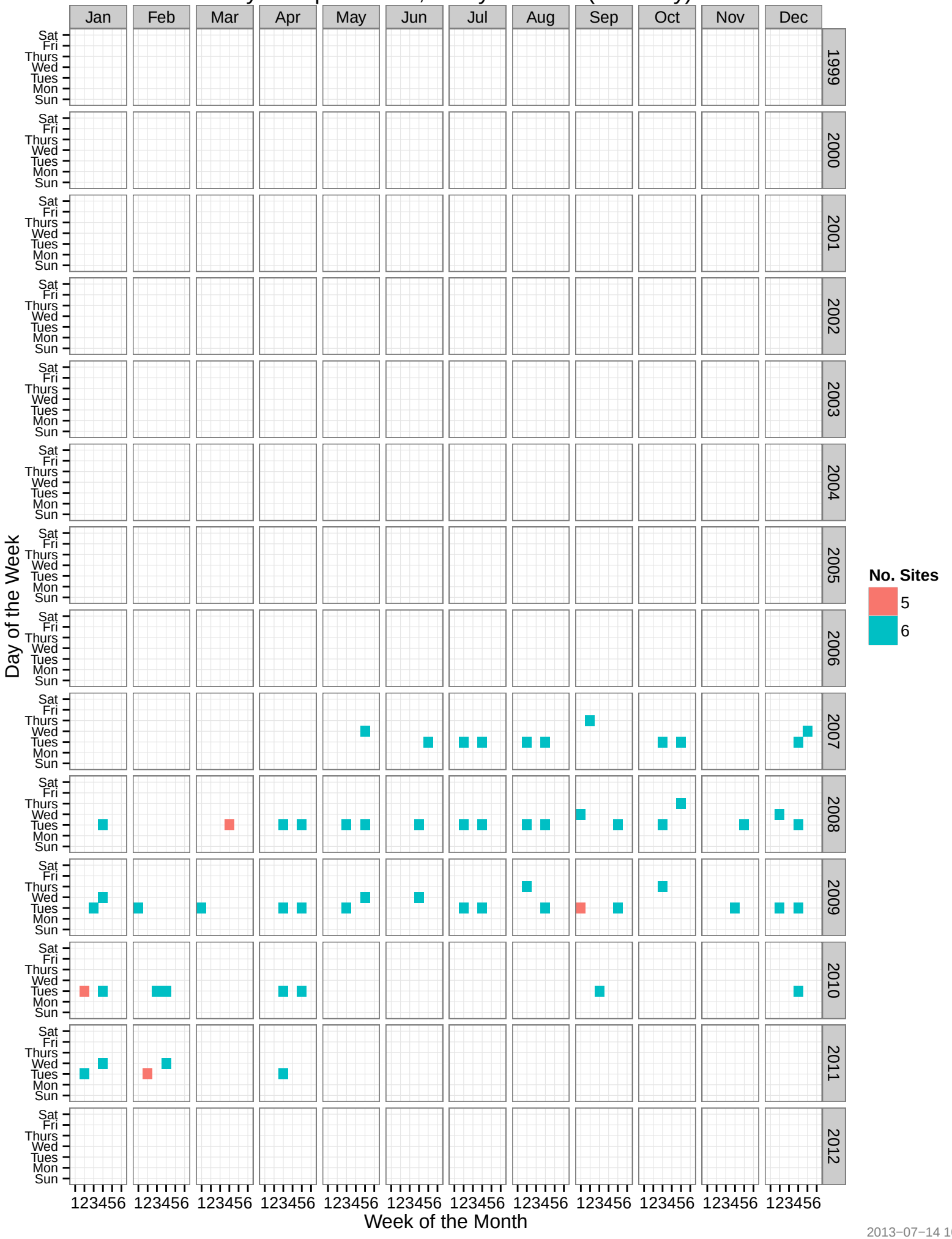
Study Group: Routine, Study: Routine (Biweekly)
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Week of the Month
No. Sites
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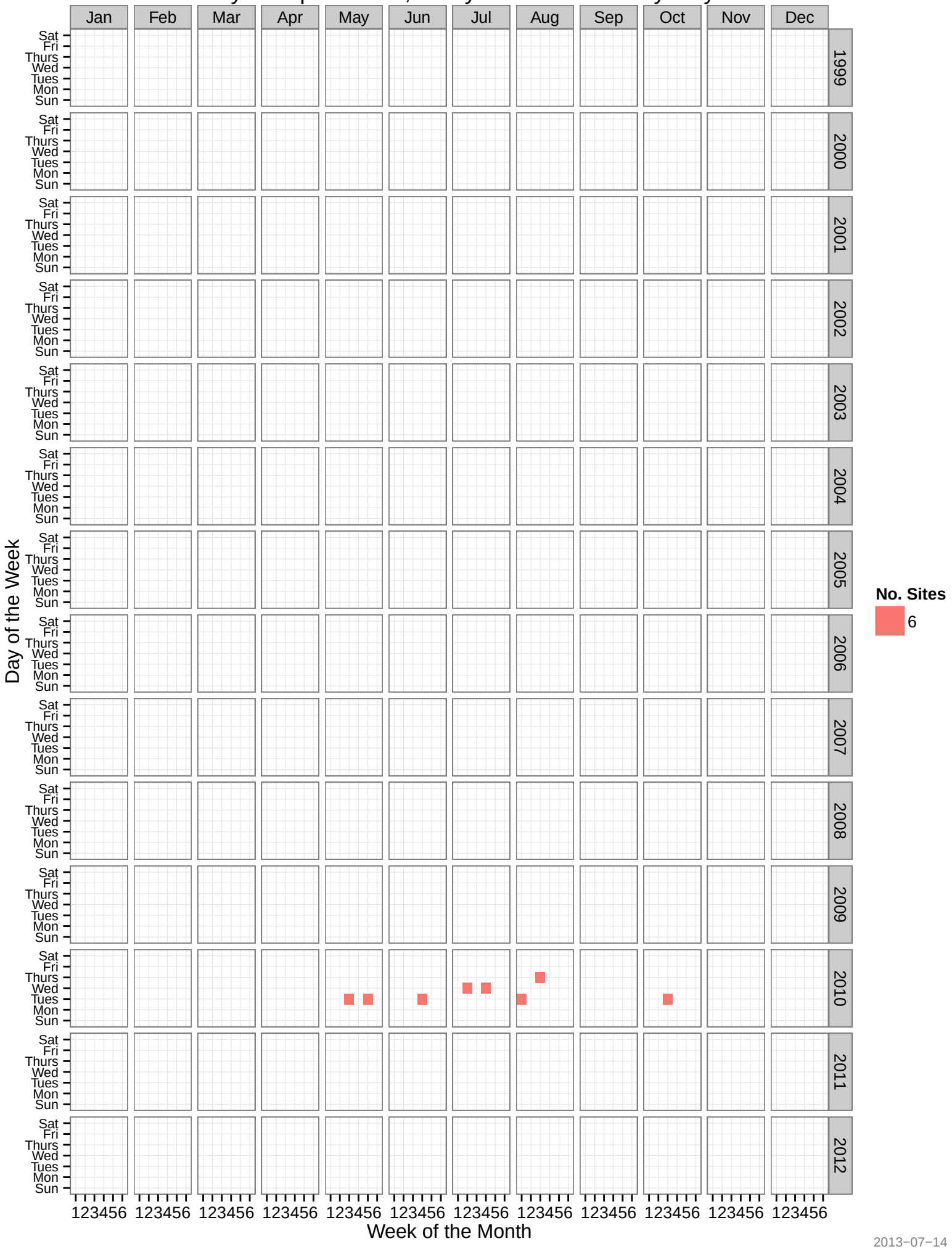
2013−07−14 10:48


Study Group: Routine, Study: Routine Biweekly−Dry
Jan
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Week of the Month
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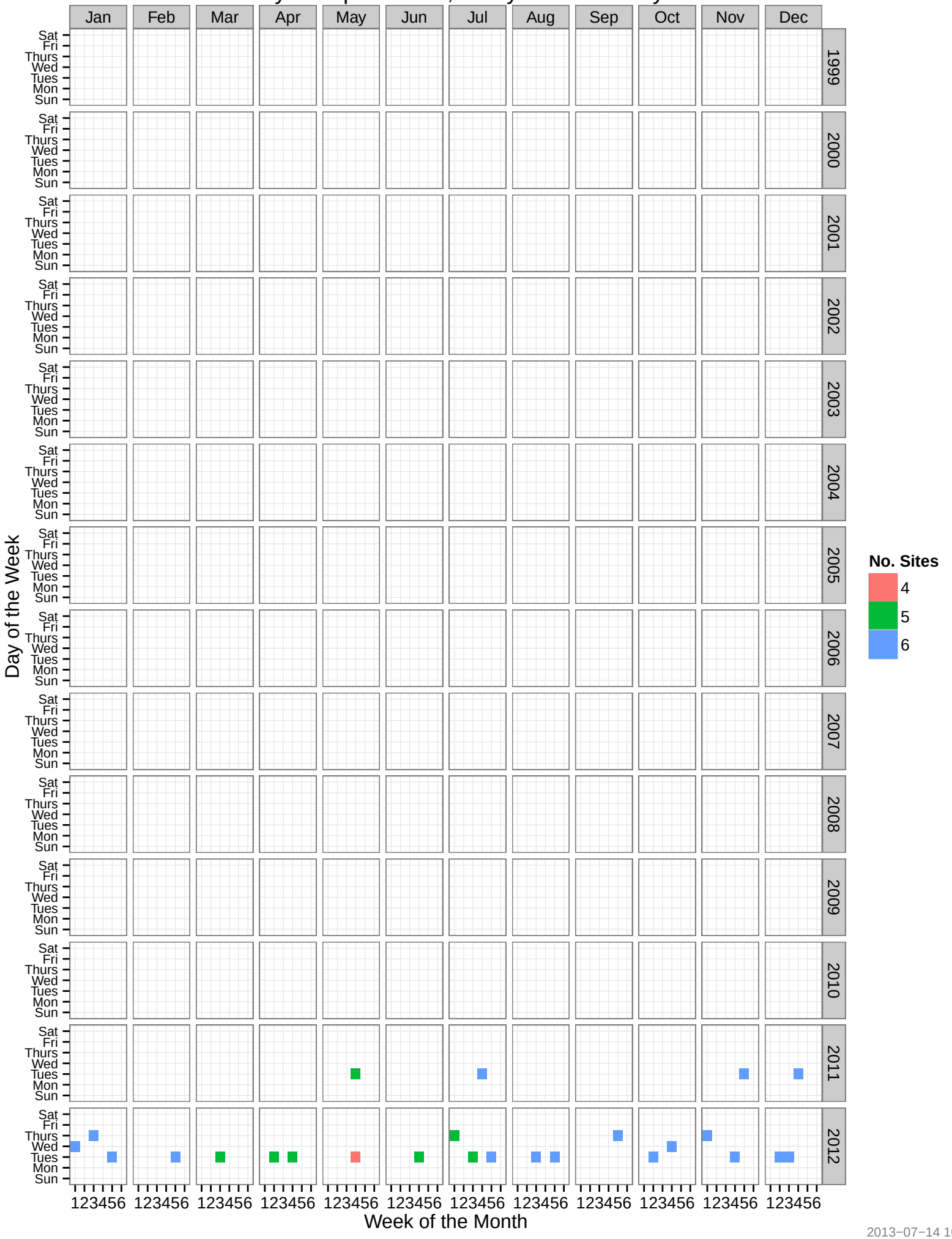
6
2013−07−14 10:48


Study Group: Routine, Study: Trib Biweekly
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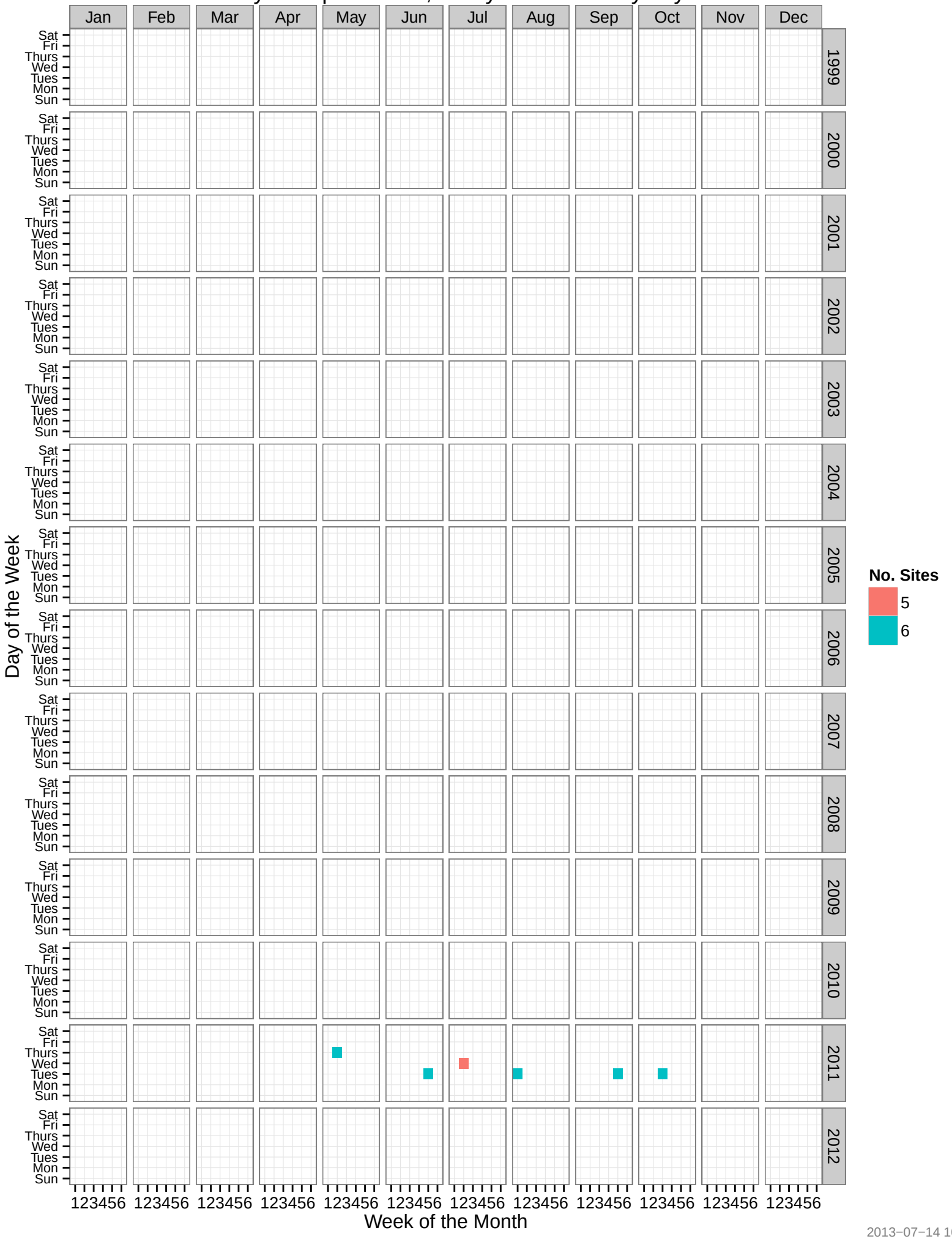
2013−07−14 10:48


Study Group: Routine, Study: Trib Biweekly Dry
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No. Sites
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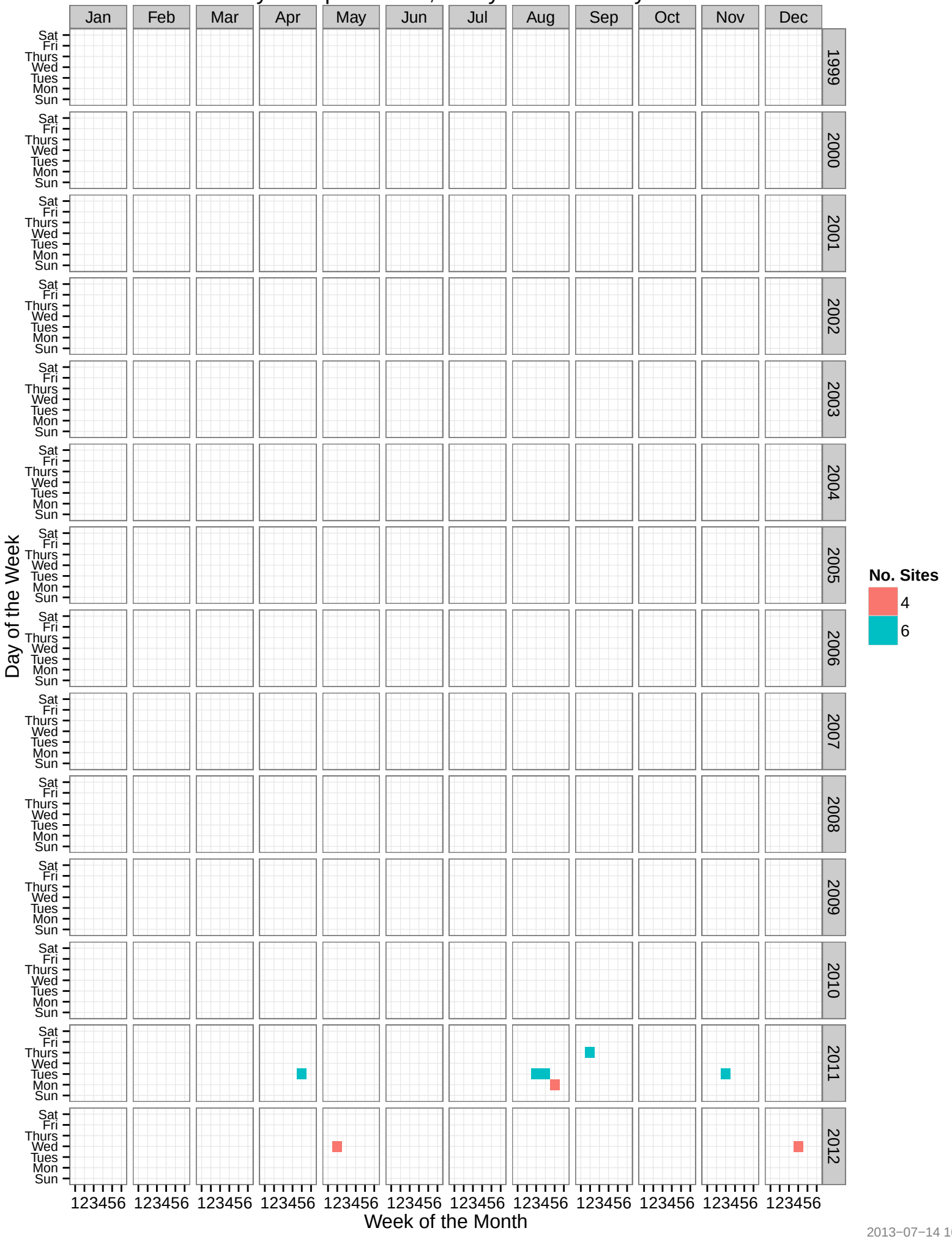
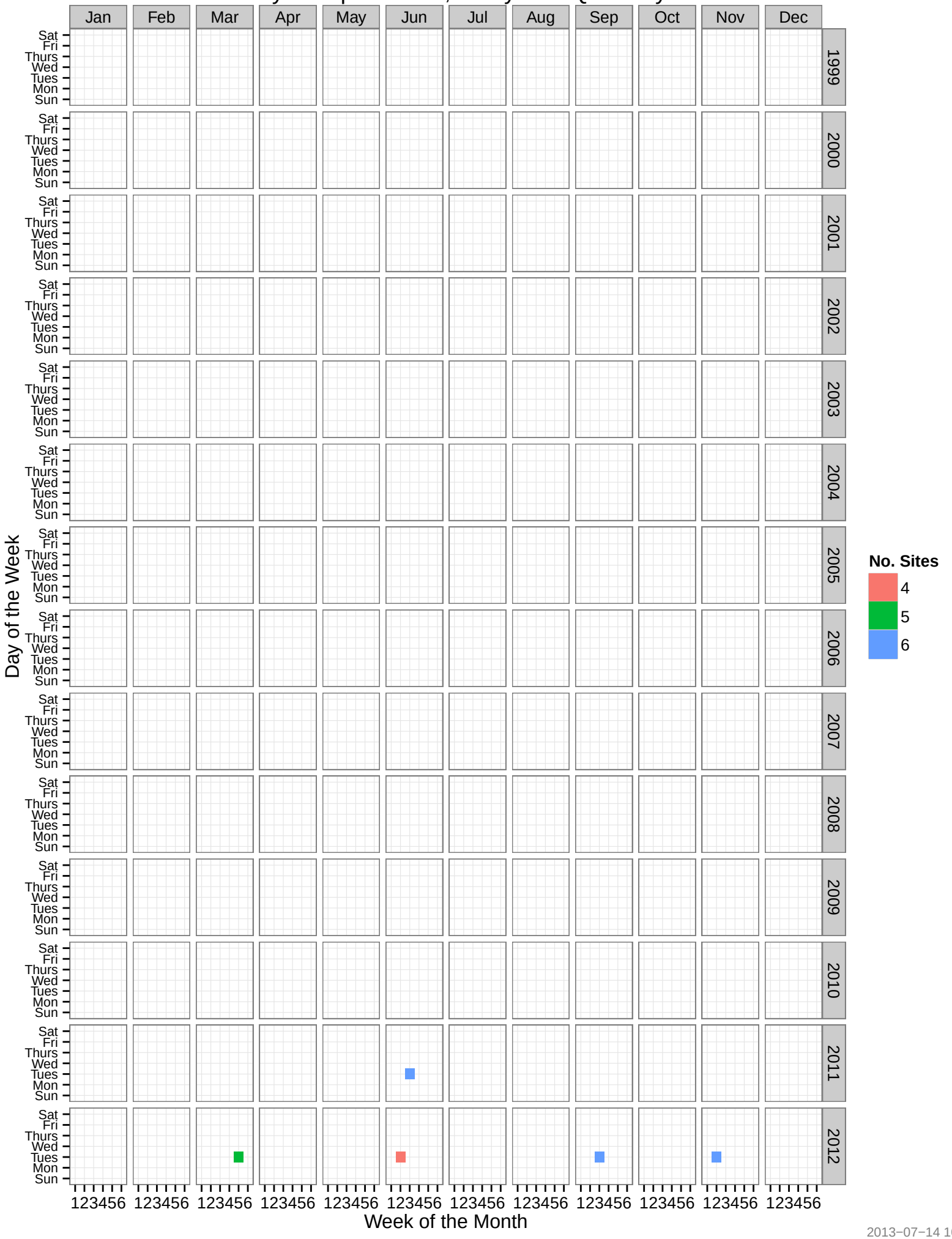
2013−07−14 10:48



2013−07−14 10:48


Study Group: Routine, Study: Trib Quarterly
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No. Sites
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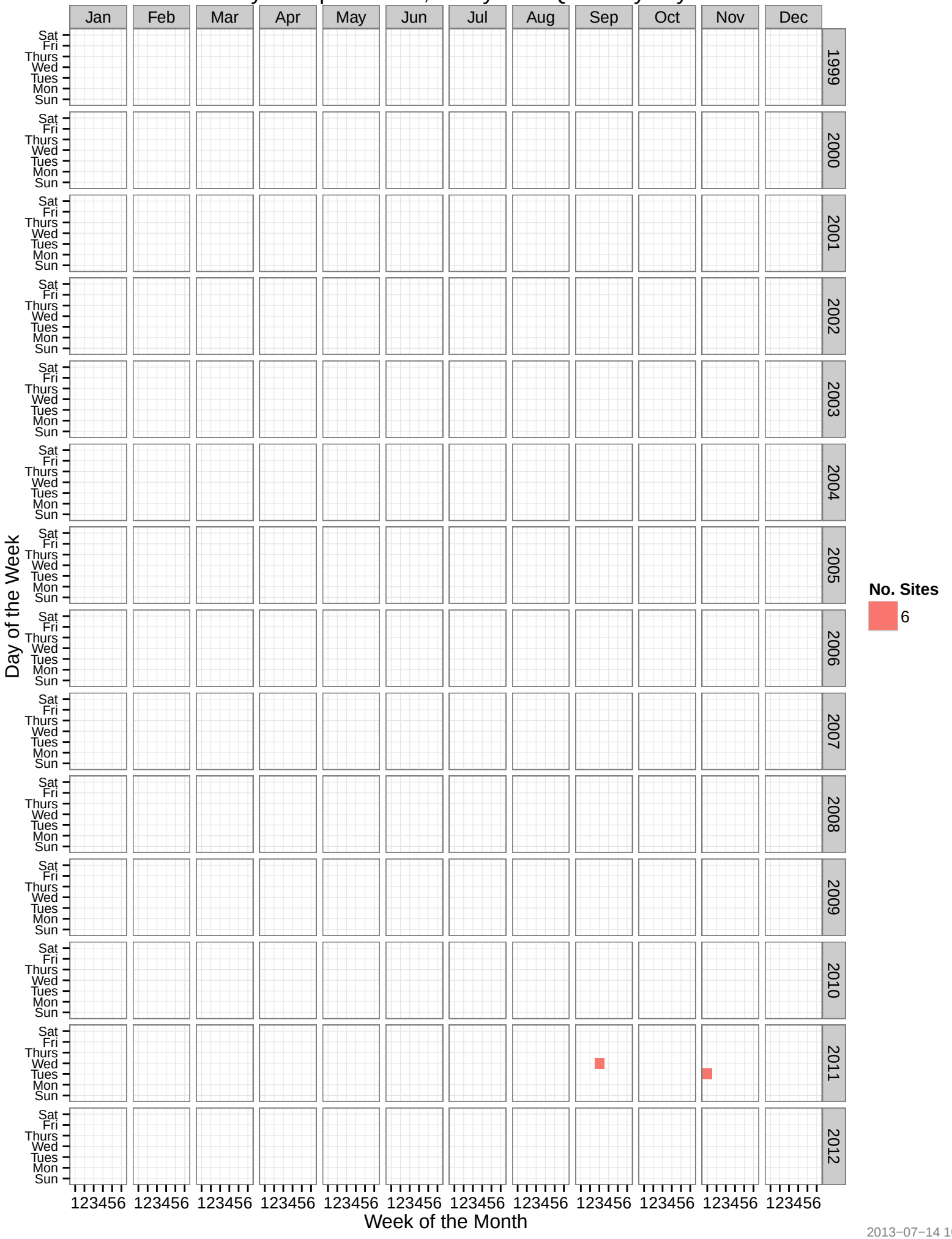
2013−07−14 10:48


Study Group: Routine, Study: Trib Quarterly Dry
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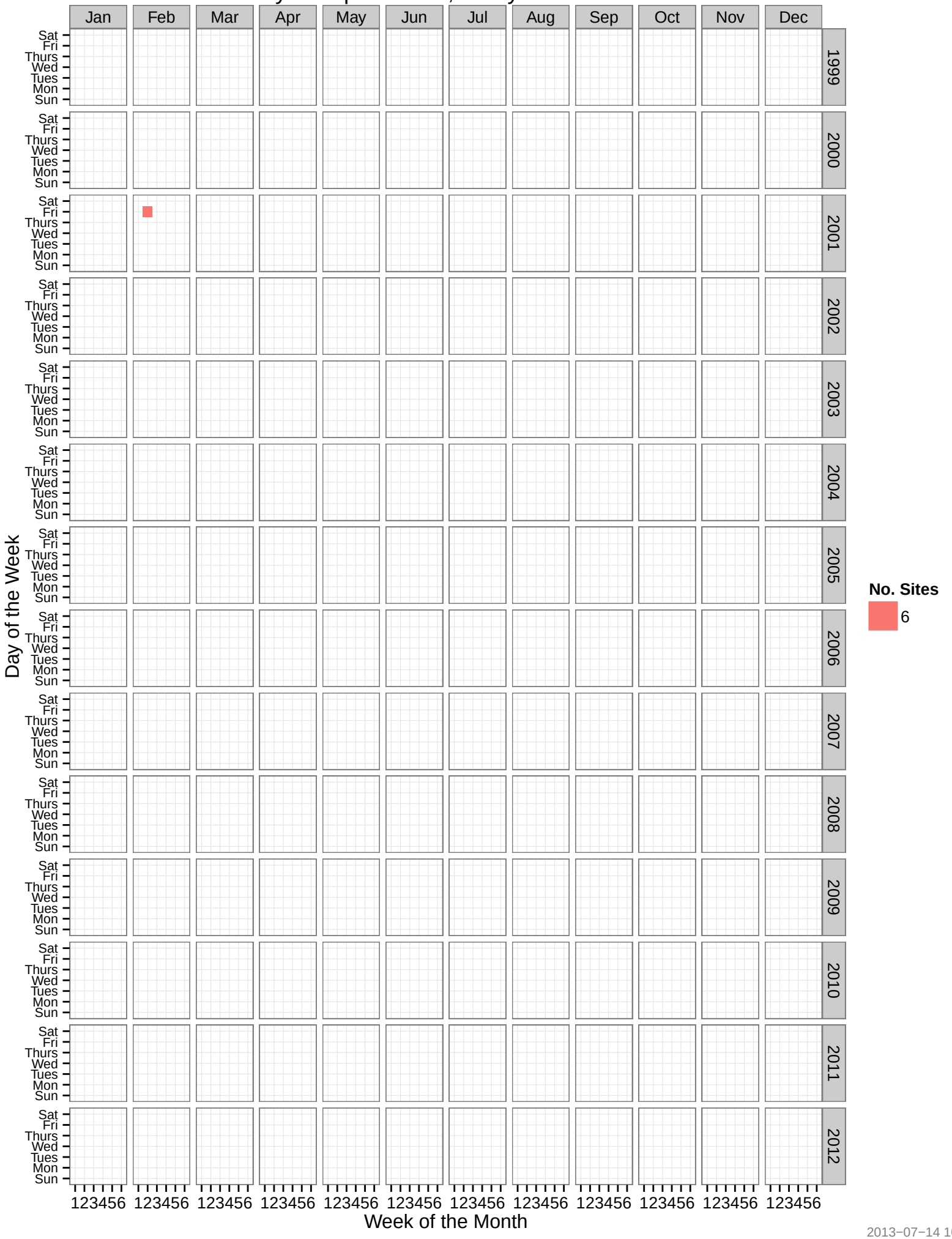
2013−07−14 10:48


Study Group: Routine, Study: Wet Weather
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Week of the Month
No. Sites
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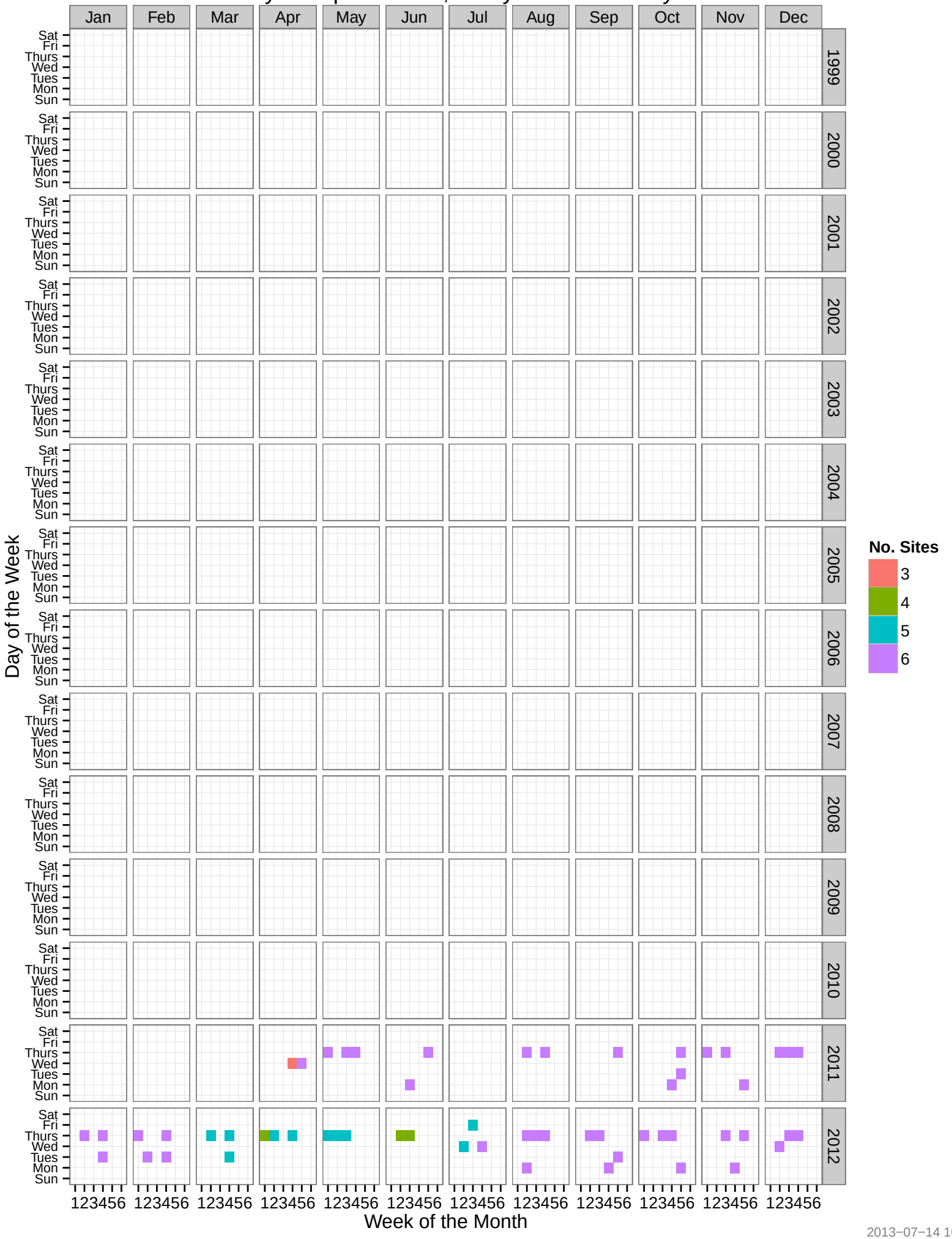
Study Group: Bacteria, Study: Trib Bacti Only
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123456
Week of the Month
No. Sites
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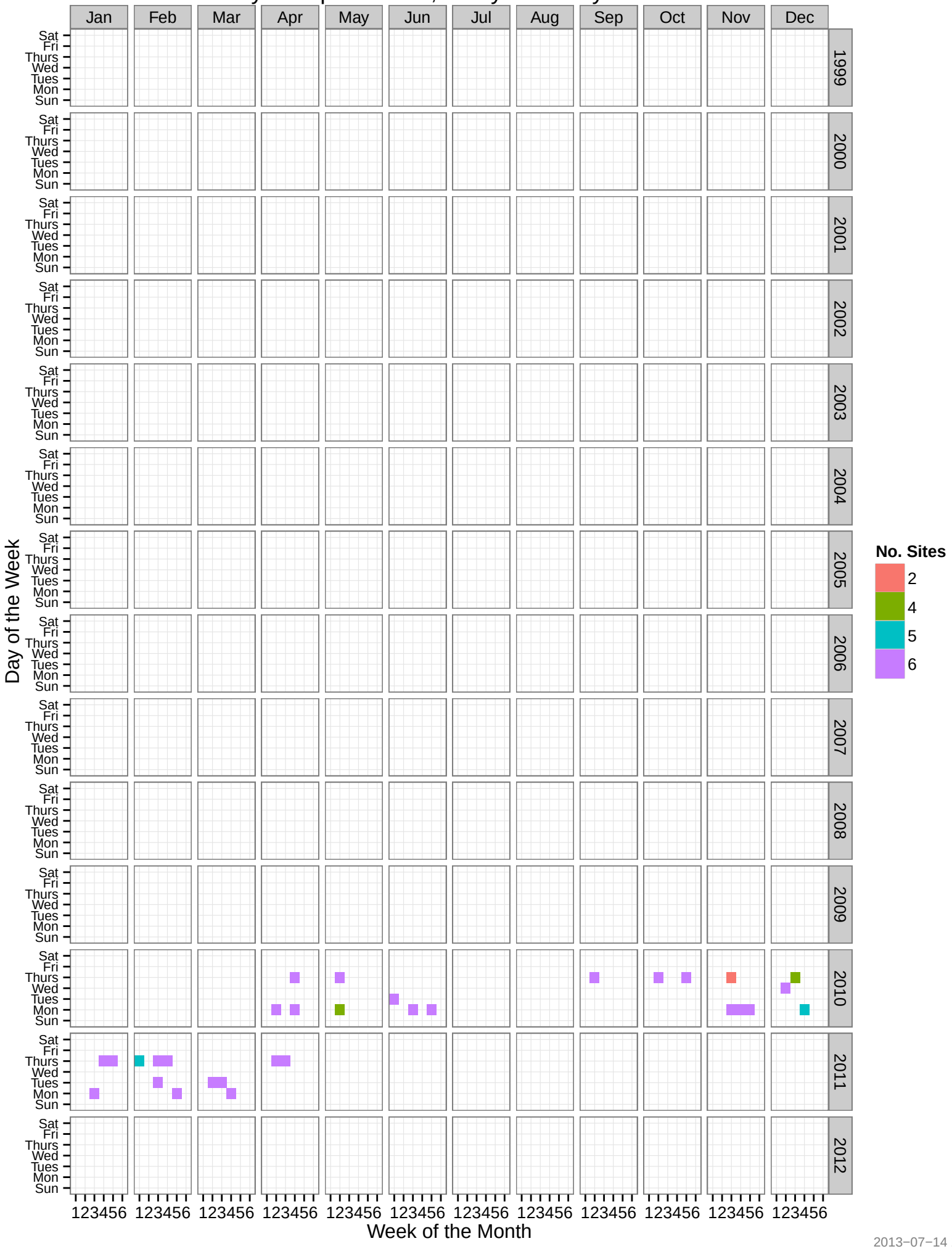
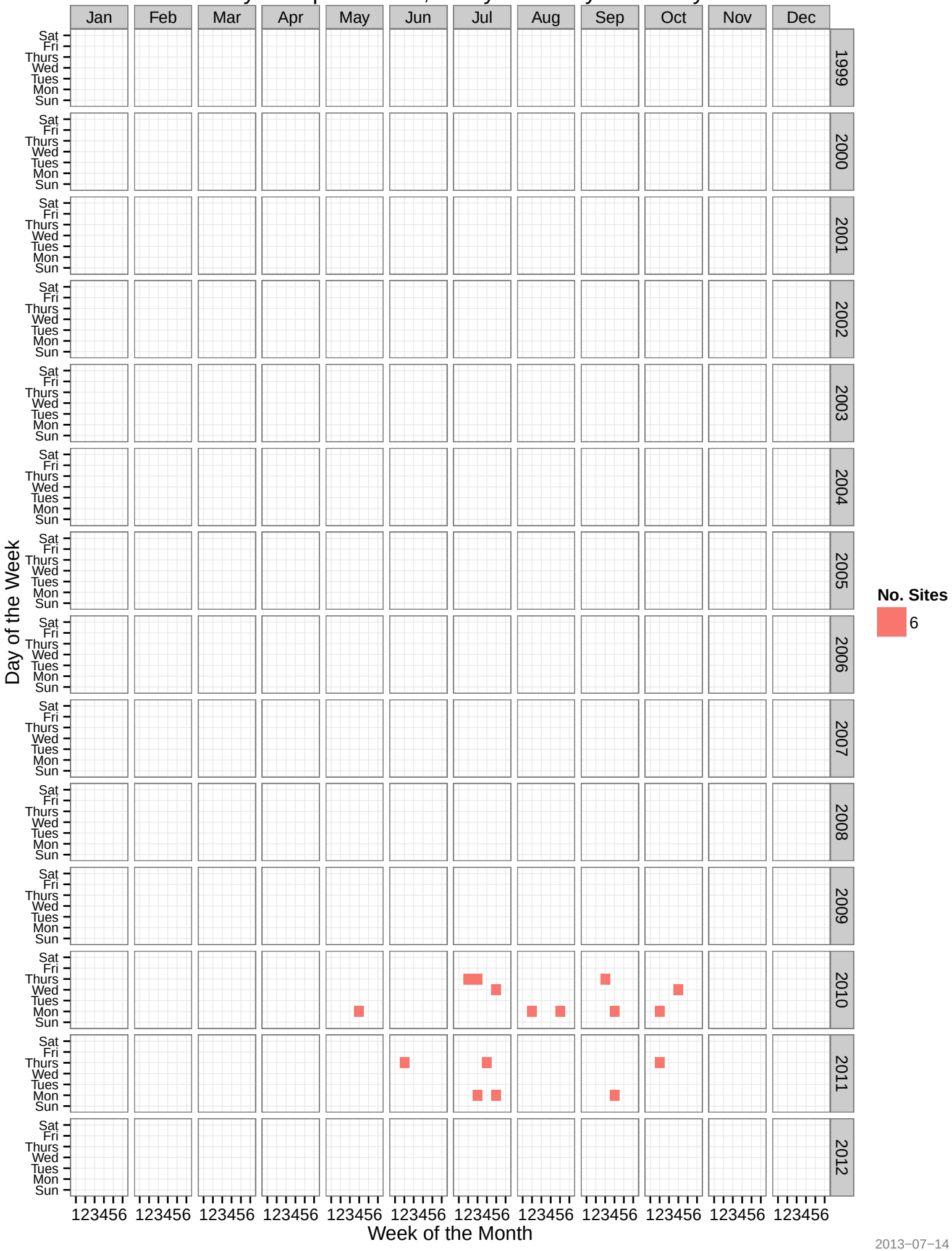
2013−07−14 10:49



2013−07−14 10:49


Study Group: Bacteria, Study: Tributary Bacti−Dry
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Day of the Week
123456
Week of the Month
No. Sites
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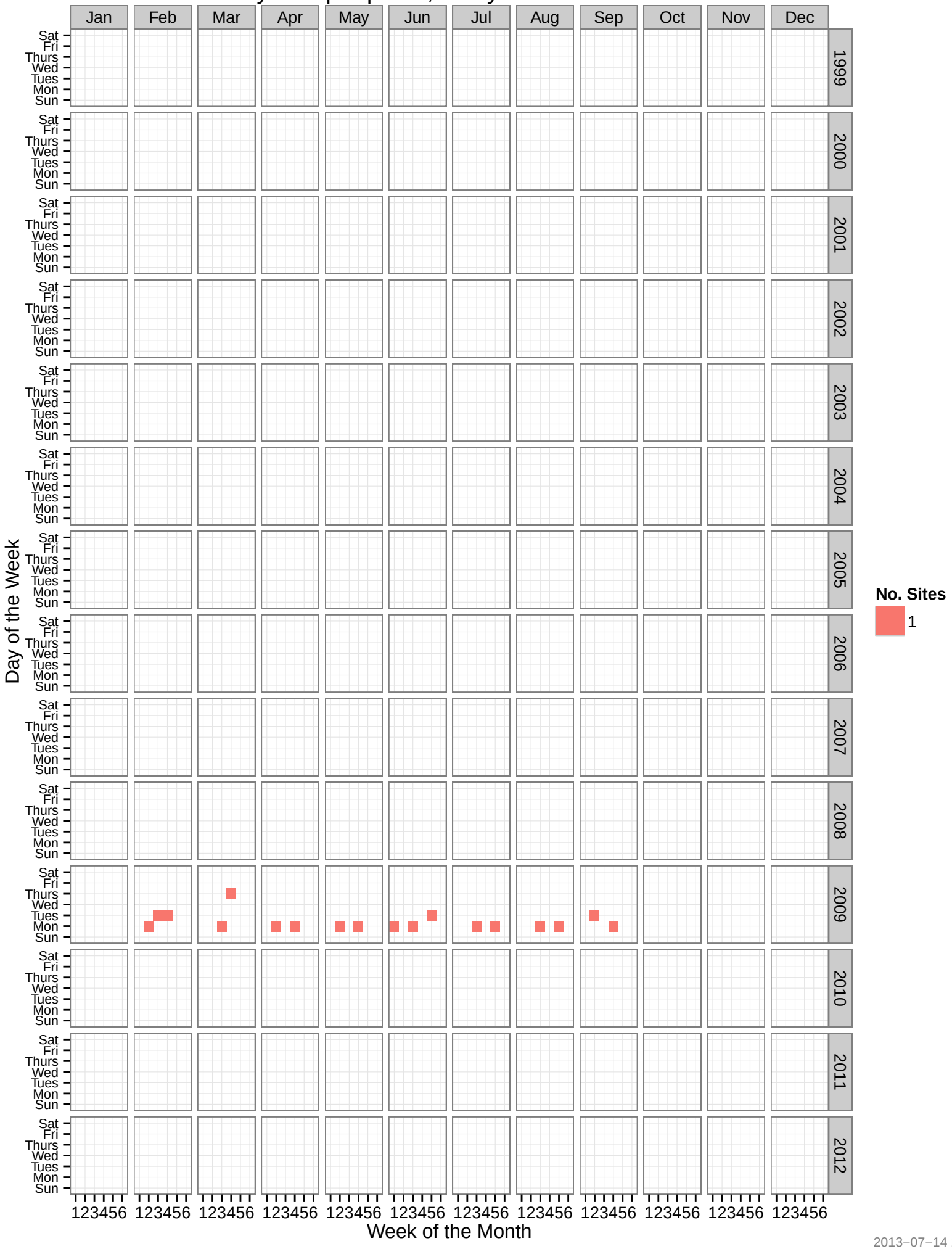
2013−07−14 10:49


Study Group: Special, Study: Clinton Phase 2A
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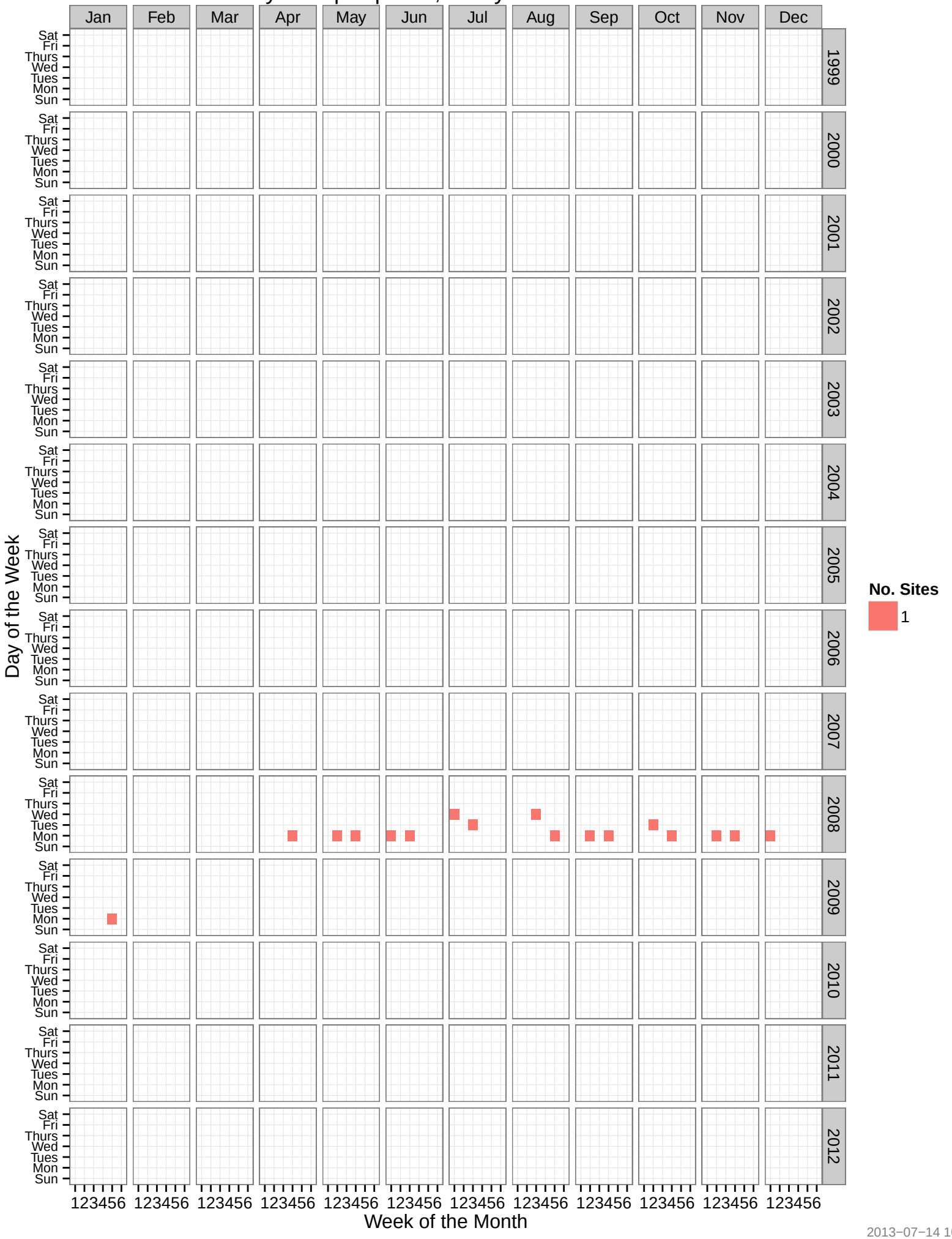
Week of the Month
No. Sites
1


Study Group: Special, Study: Clinton Phase I
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Week of the Month
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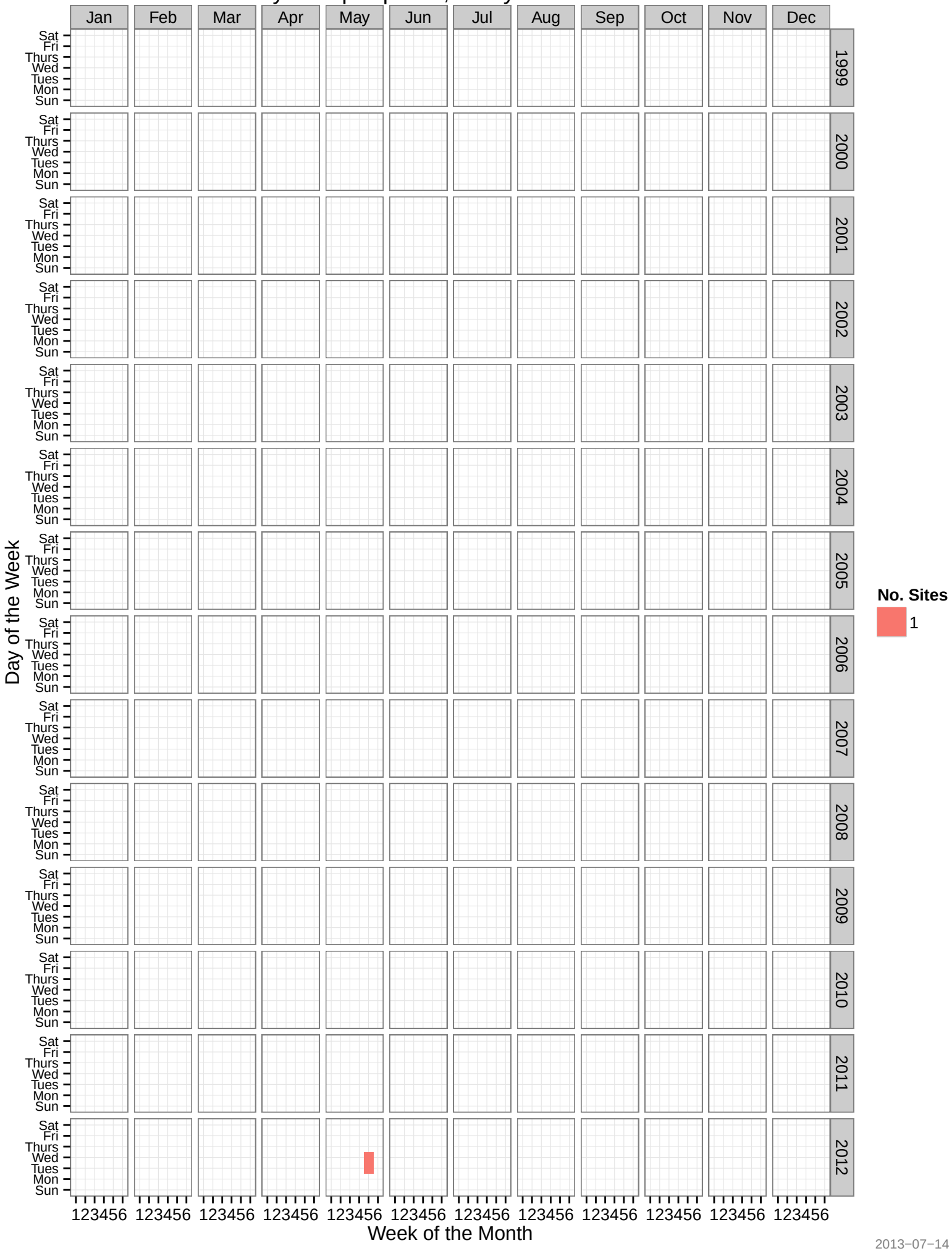
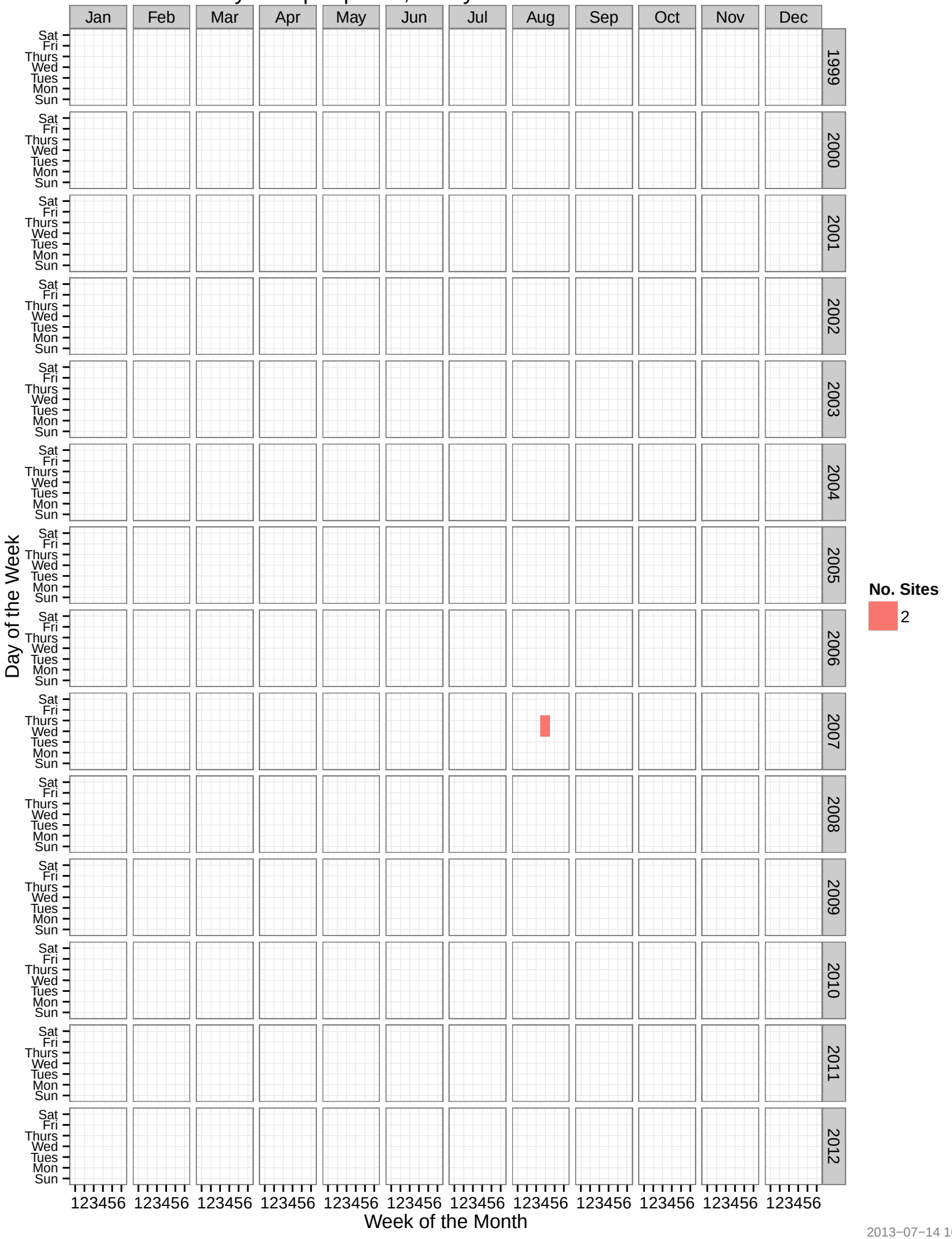
2013−07−14 10:49



2013−07−14 10:49


Study Group: Special, Study: HillcrestPS FM Break
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Day of the Week
123456
Week of the Month
No. Sites
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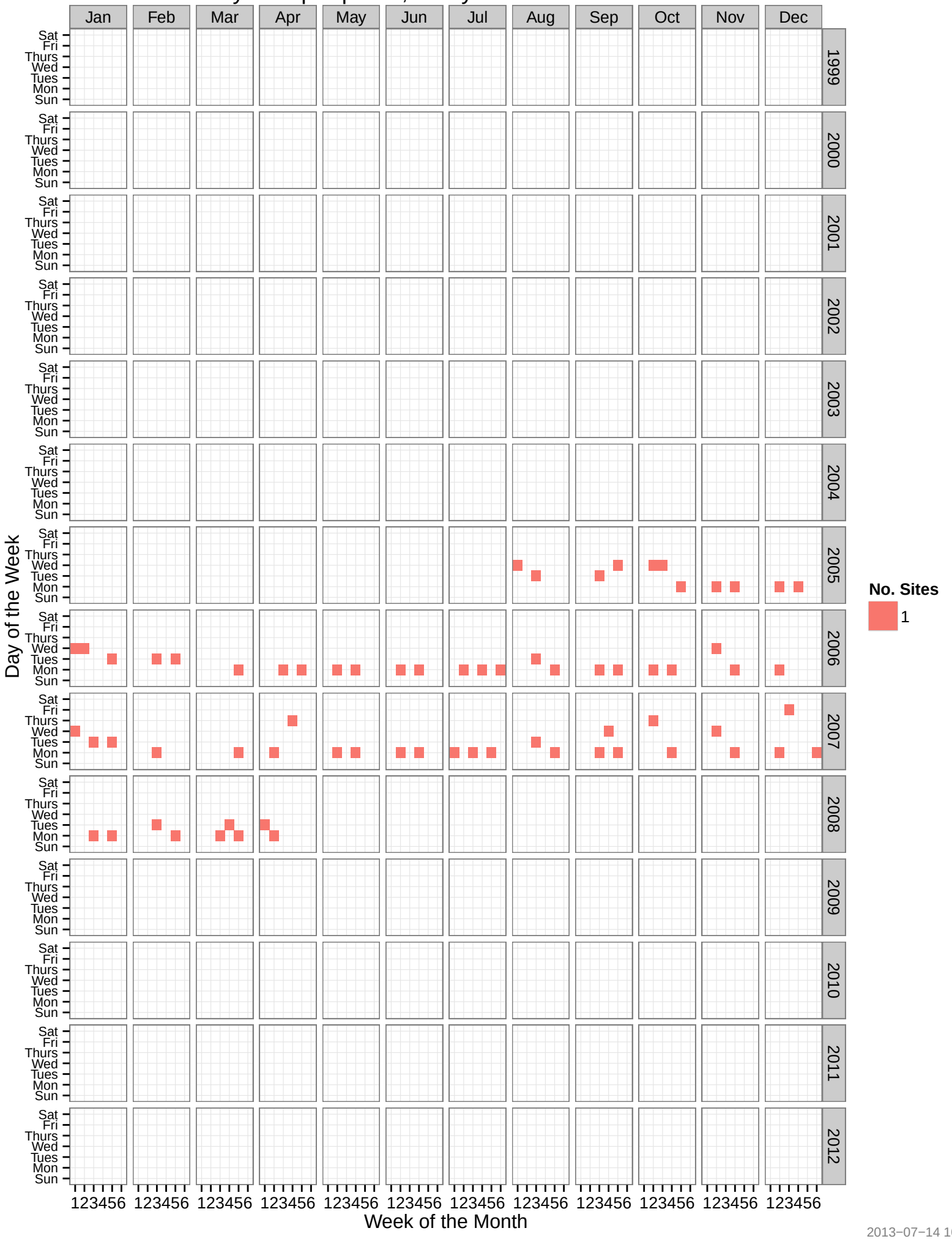
Study Group: Special, Study: Midland RTF Dewater
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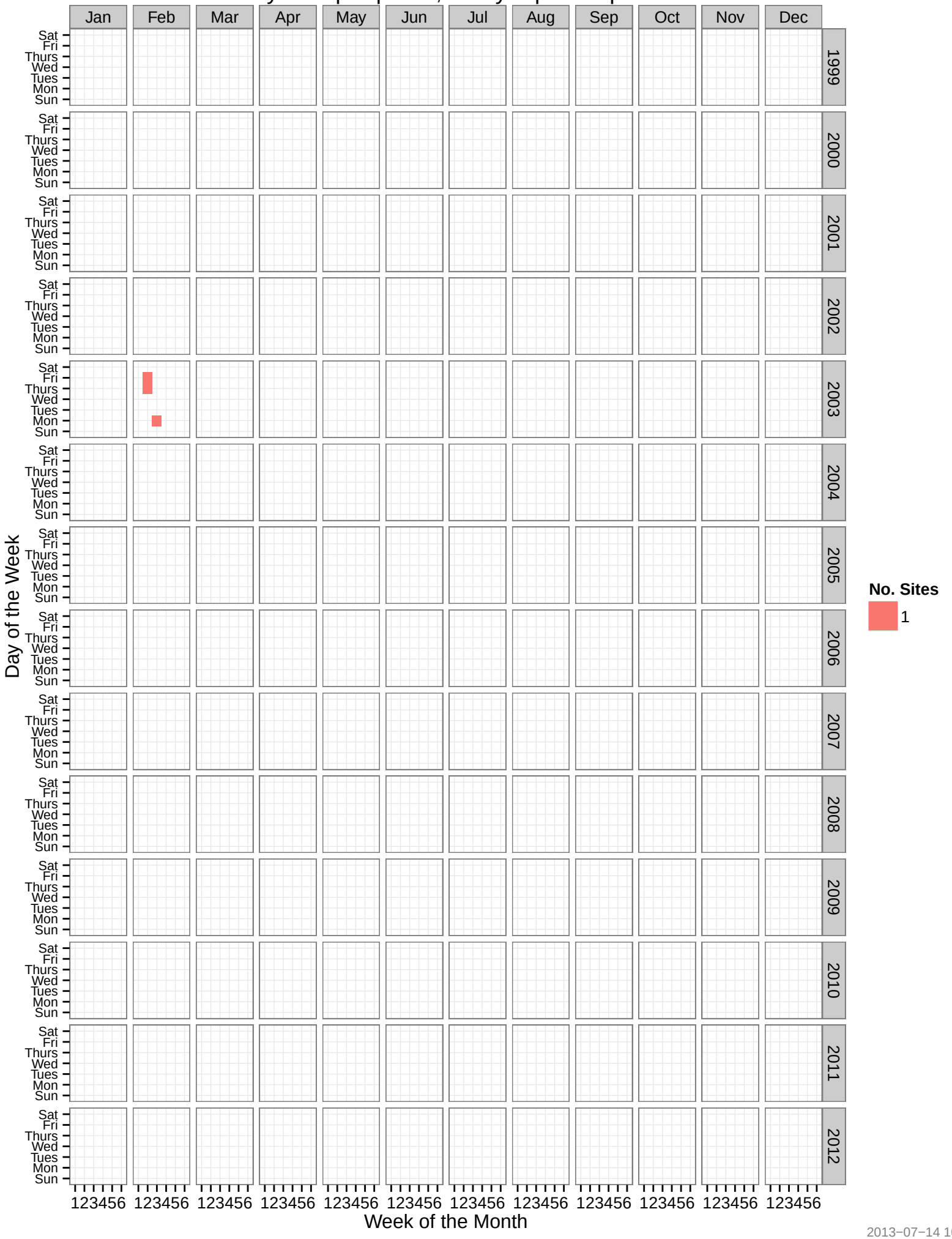
Day of the Week
123456
Week of the Month
No. Sites
1
2013−07−14 10:49


Study Group: Special, Study: Spill Response
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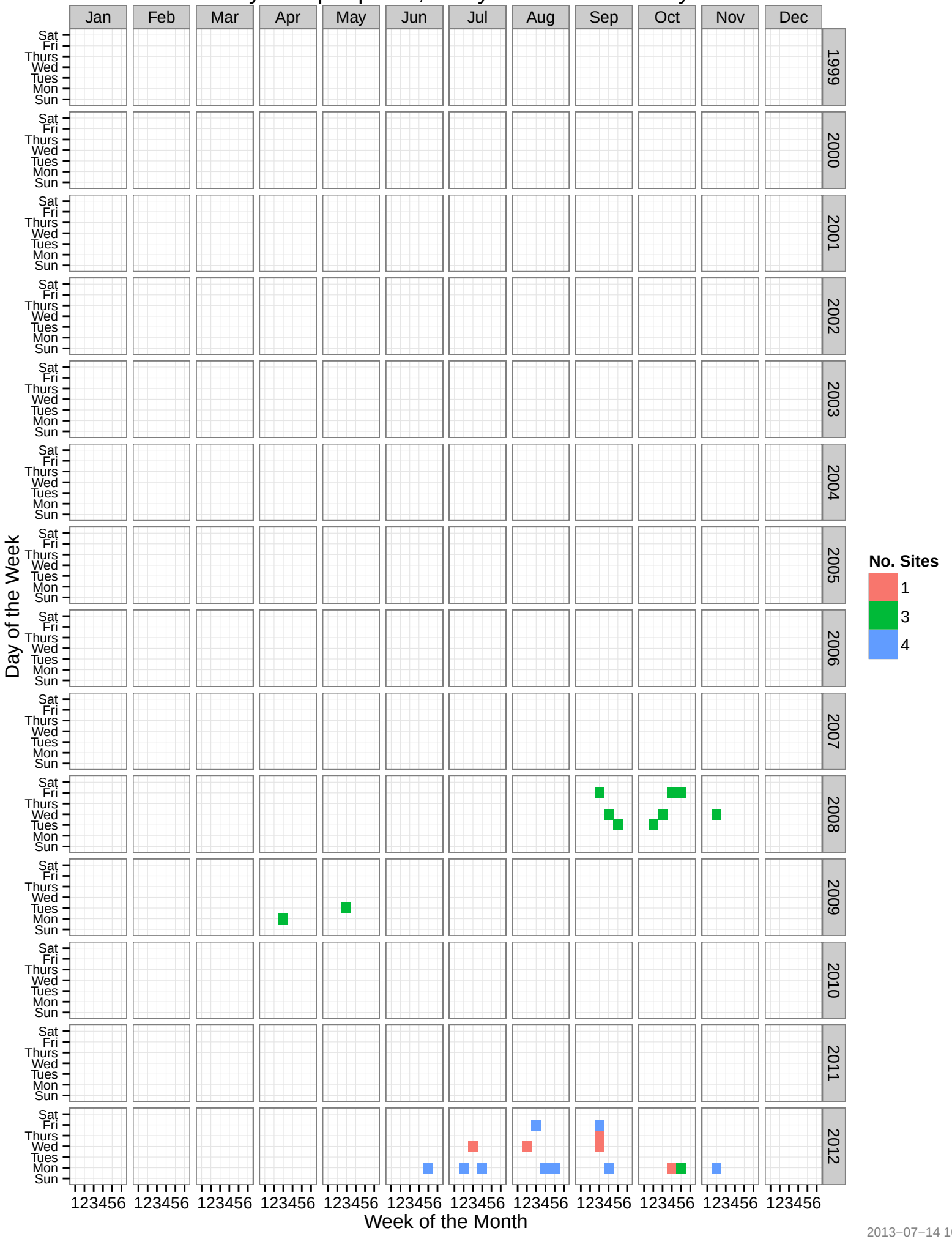
Study Group: Special, Study: Trib Bacti ID Study
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123456
Week of the Month
No. Sites
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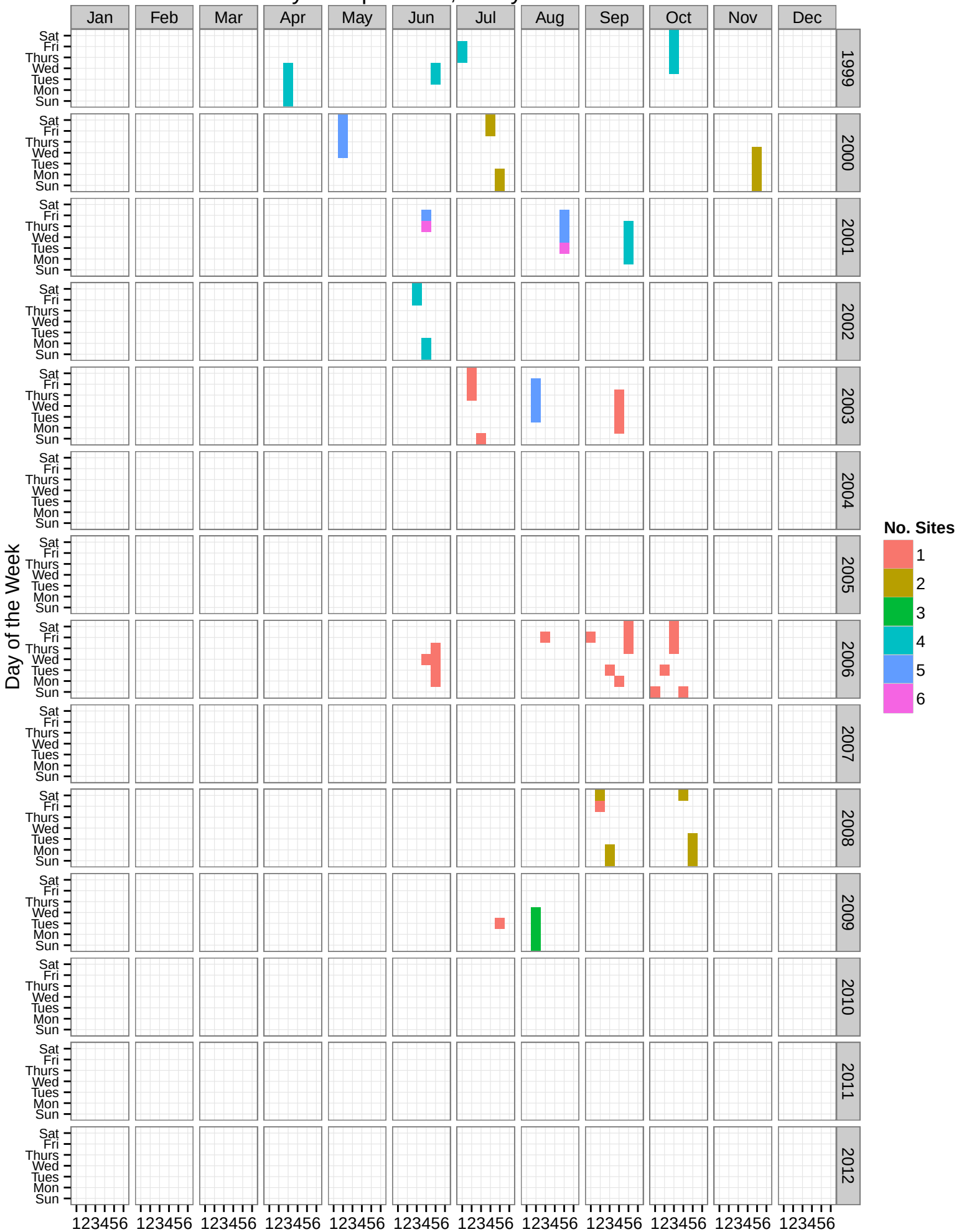
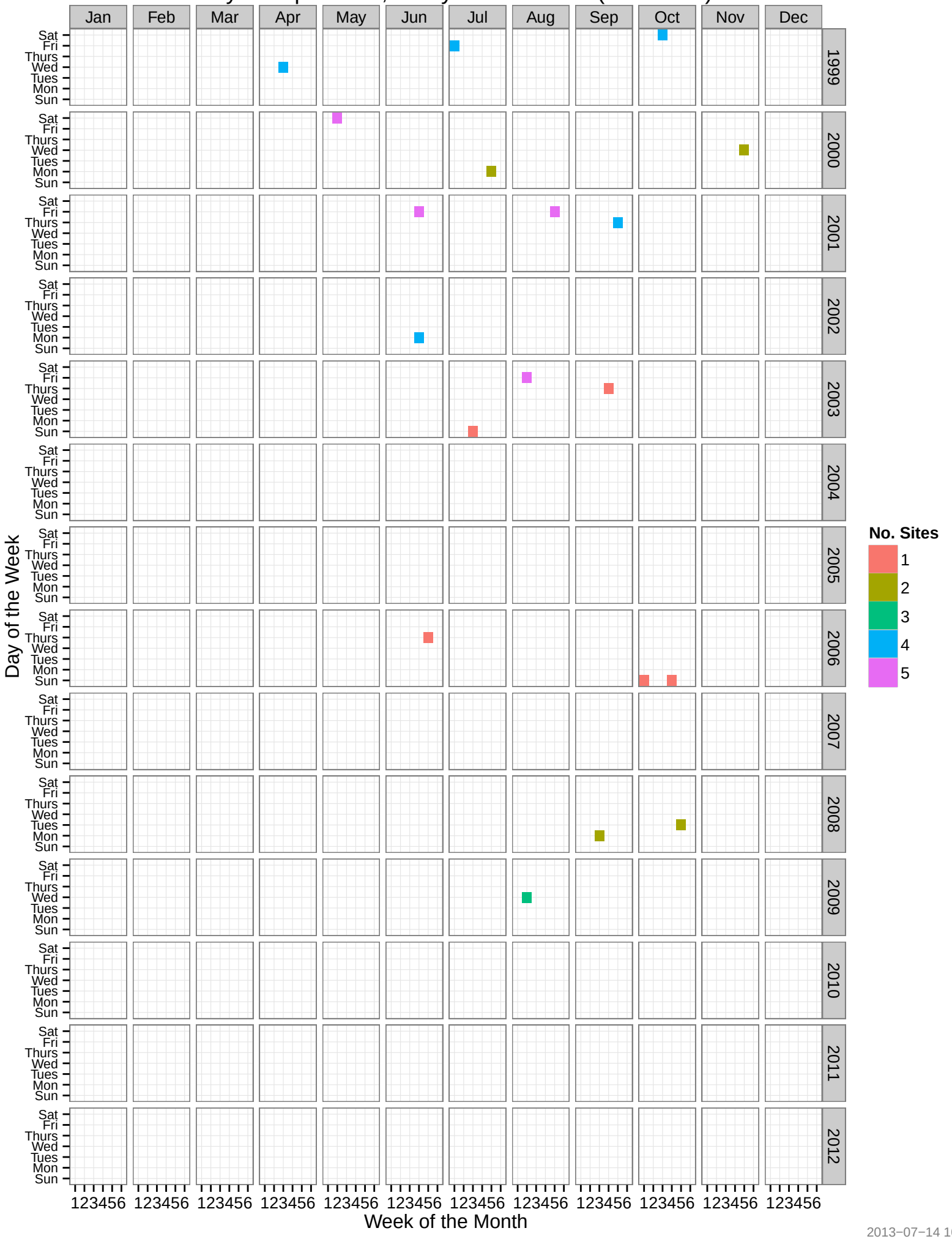
2013−07−14 10:50



2013−07−14 10:50



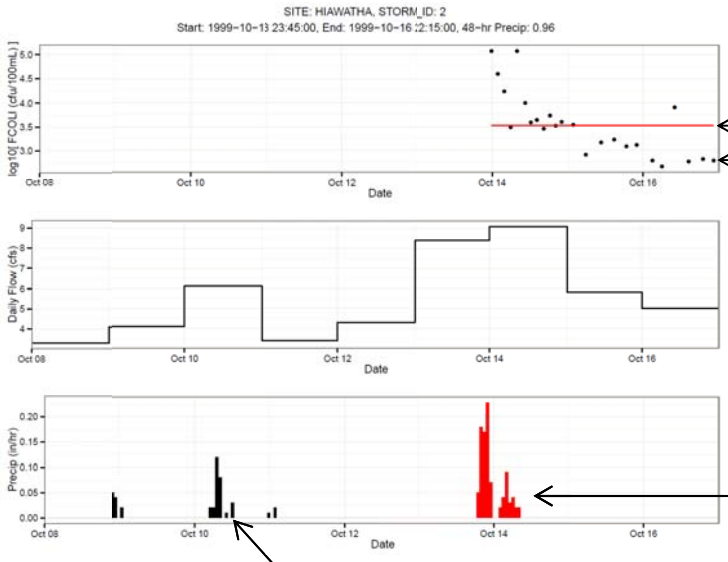
2013−07−14 10:50

Appendix B: Storm Event Data

Summary: Each plot shows the individual storm event samples, the geometric mean of the individual sample, and the corresponding daily flow and hourly precipitation for a single storm event.

The 48-hour precipitation for each event geometric mean was assigned the maximum 48-hour precipitation over the course of the event. Using this method, the 48-hour precipitation for the event geometric mean can account for whether the precipitation occurred before the first sample was collected or during the course of sampling either at the beginning of the event or towards the end.

The following example can be used as a guide for interpreting the storm event plots.



Fecal Coliform Concentrations ($\log_{10}$)

Red Line: event geometric mean

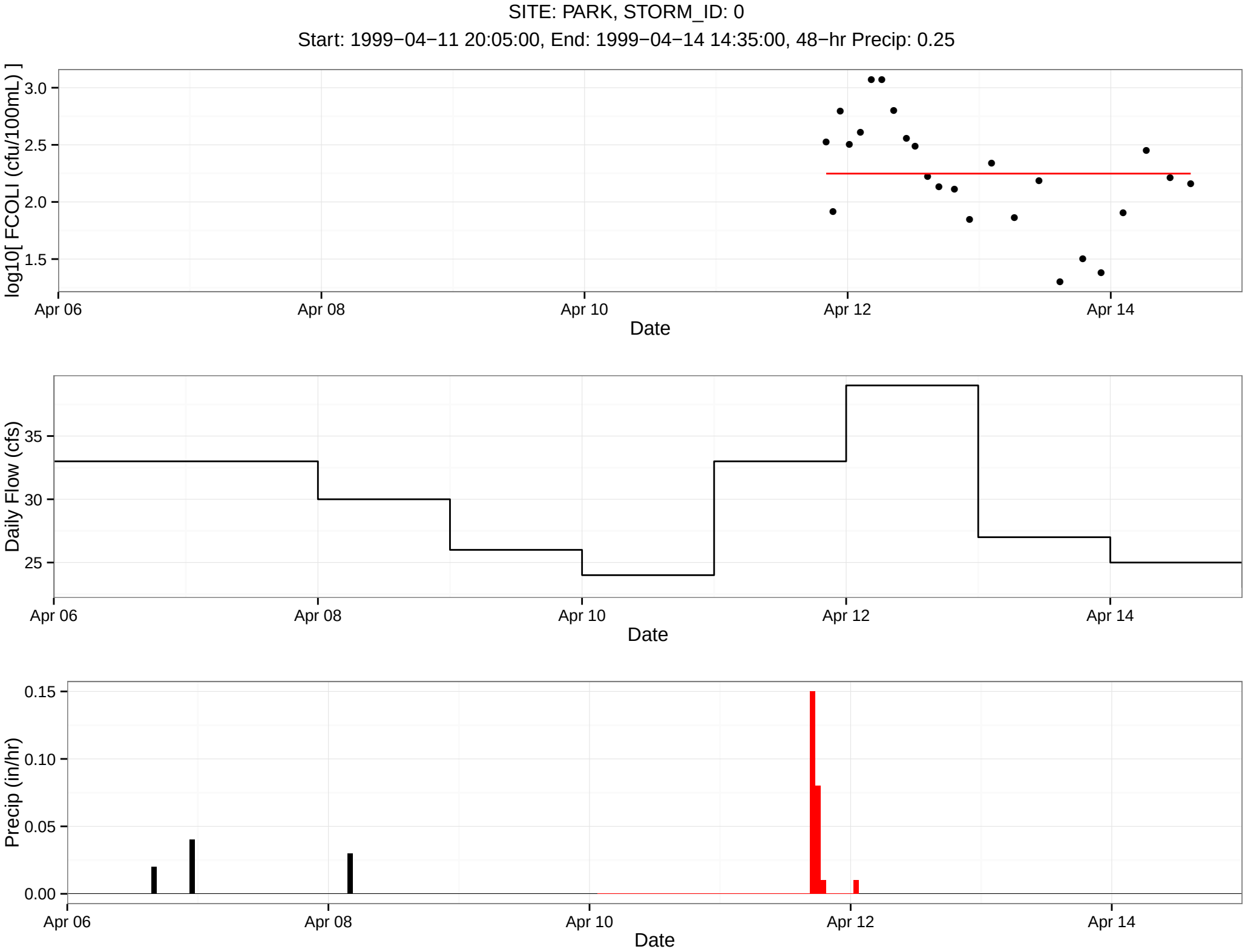
Black Circles: individual event samples

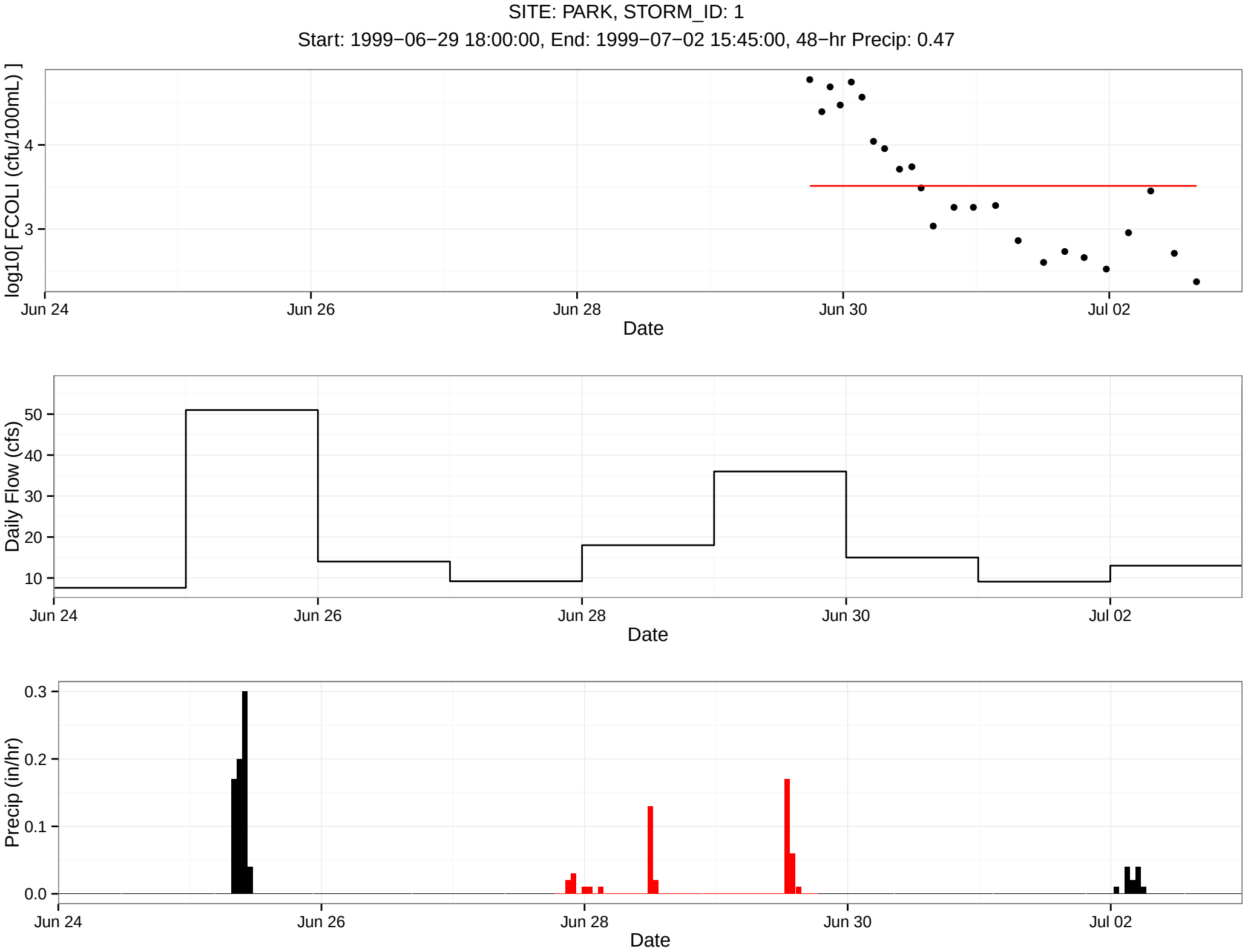
Daily flow

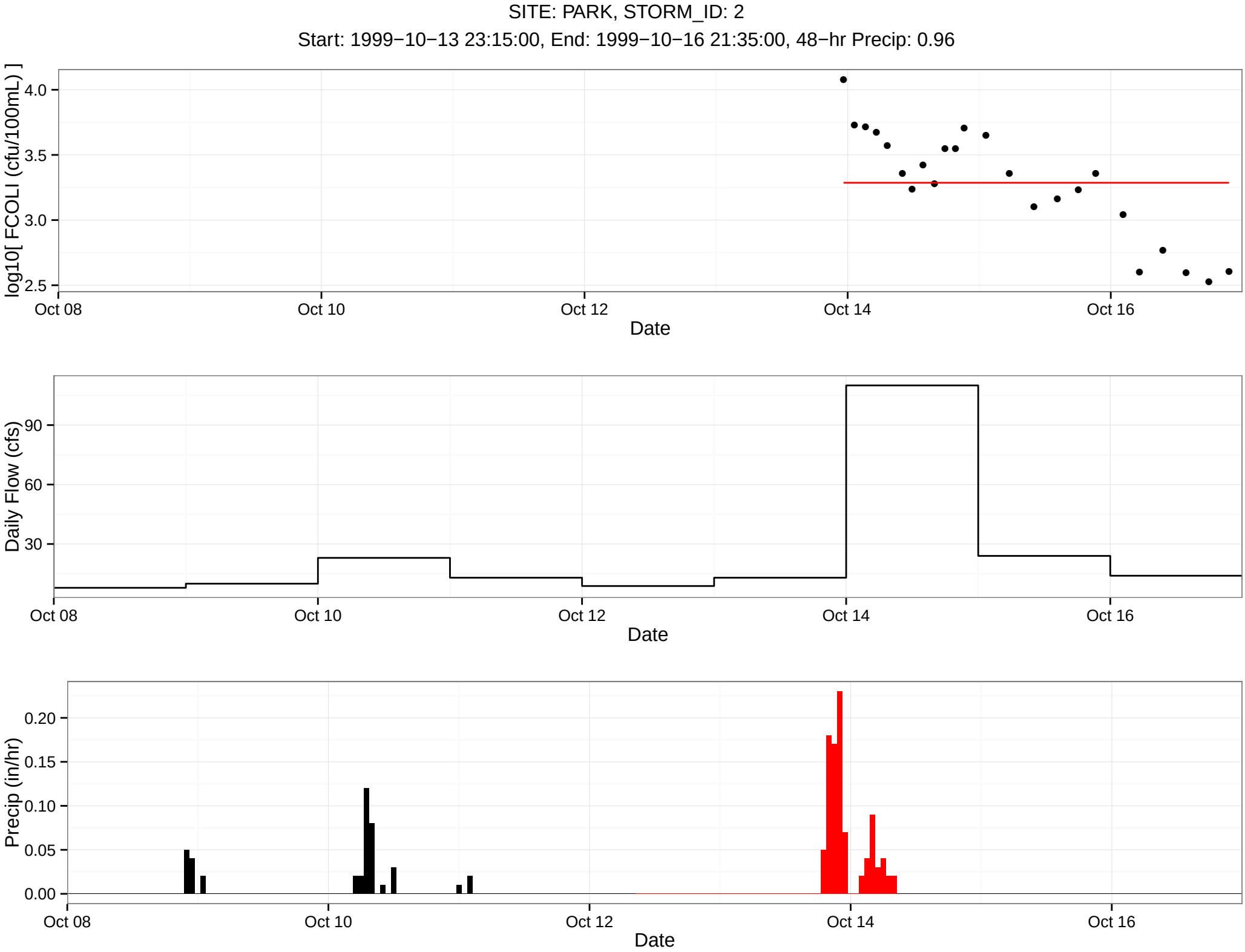
Hourly Precipitation

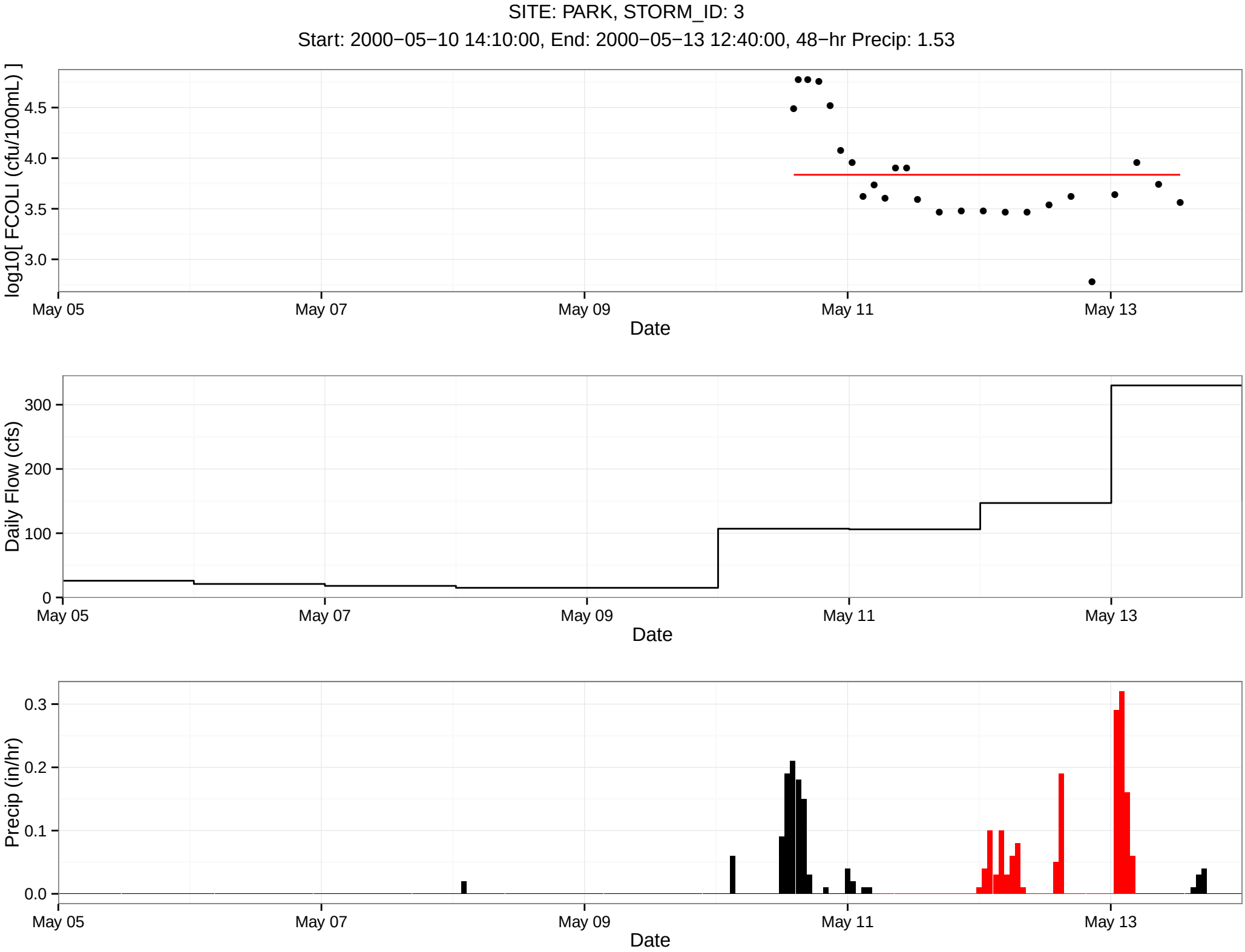
Red Bars: hourly precipitation included in 48-hour antecedent precipitation

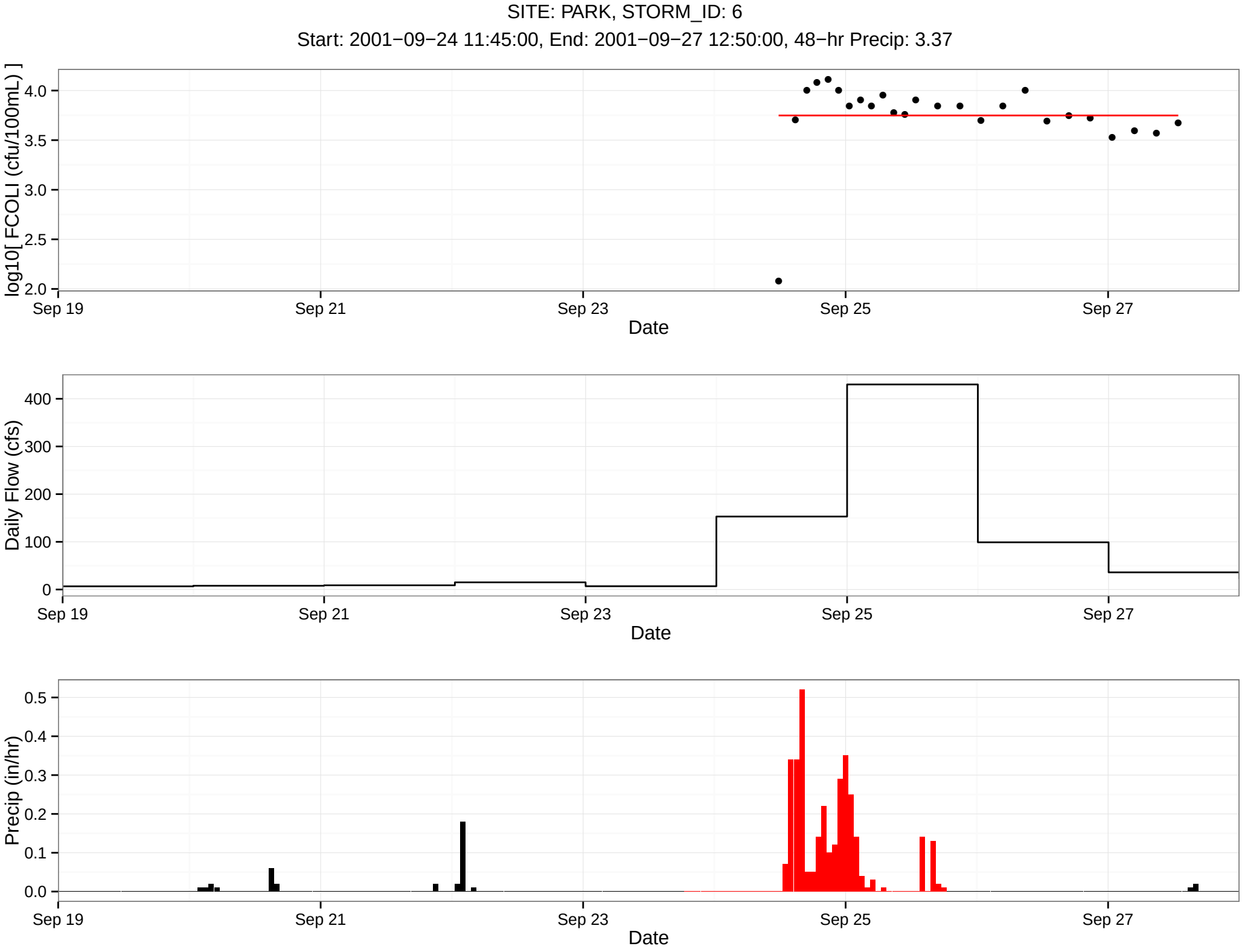
Black Bars: hourly precipitation *not* included in 48-hour antecedent precipitation

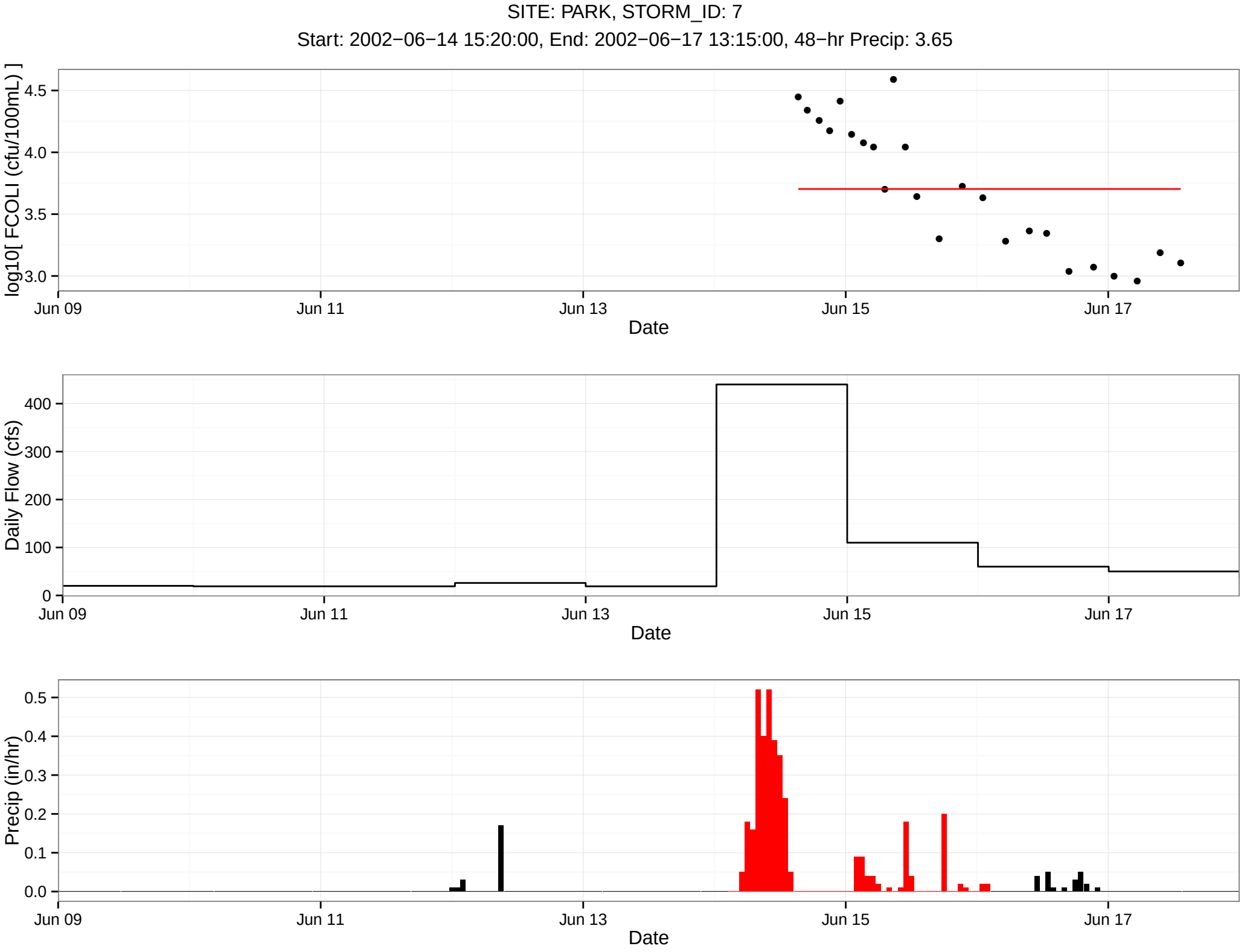

SITE: PARK, STORM_ID: 0
Start: 1999−04−11 20:05:00, End: 1999−04−14 14:35:00, 48−hr Precip: 0.25
log10[FCOLI (cfu/100mL)]
3.0
2.5
2.0
1.5
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date
Daily Flow (cfs)
35
30
25
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date
Precip (in/hr)
0.15
0.10
0.05
0.00
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date

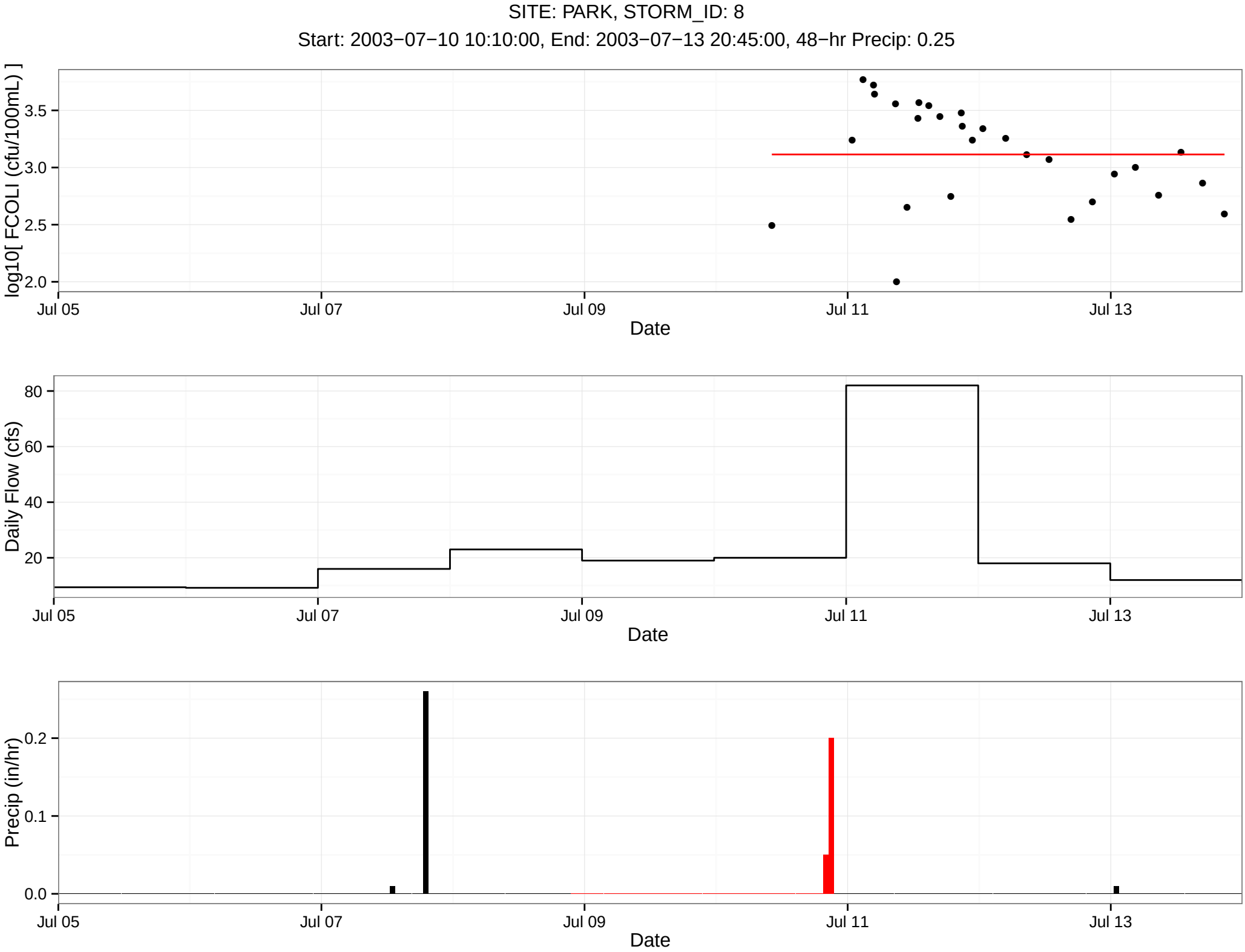

SITE: PARK, STORM_ID: 1
Start: 1999−06−29 18:00:00, End: 1999−07−02 15:45:00, 48−hr Precip: 0.47
log10[FCOLI (cfu/100mL)]
4
3
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date
Daily Flow (cfs)
50
40
30
20
10
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date

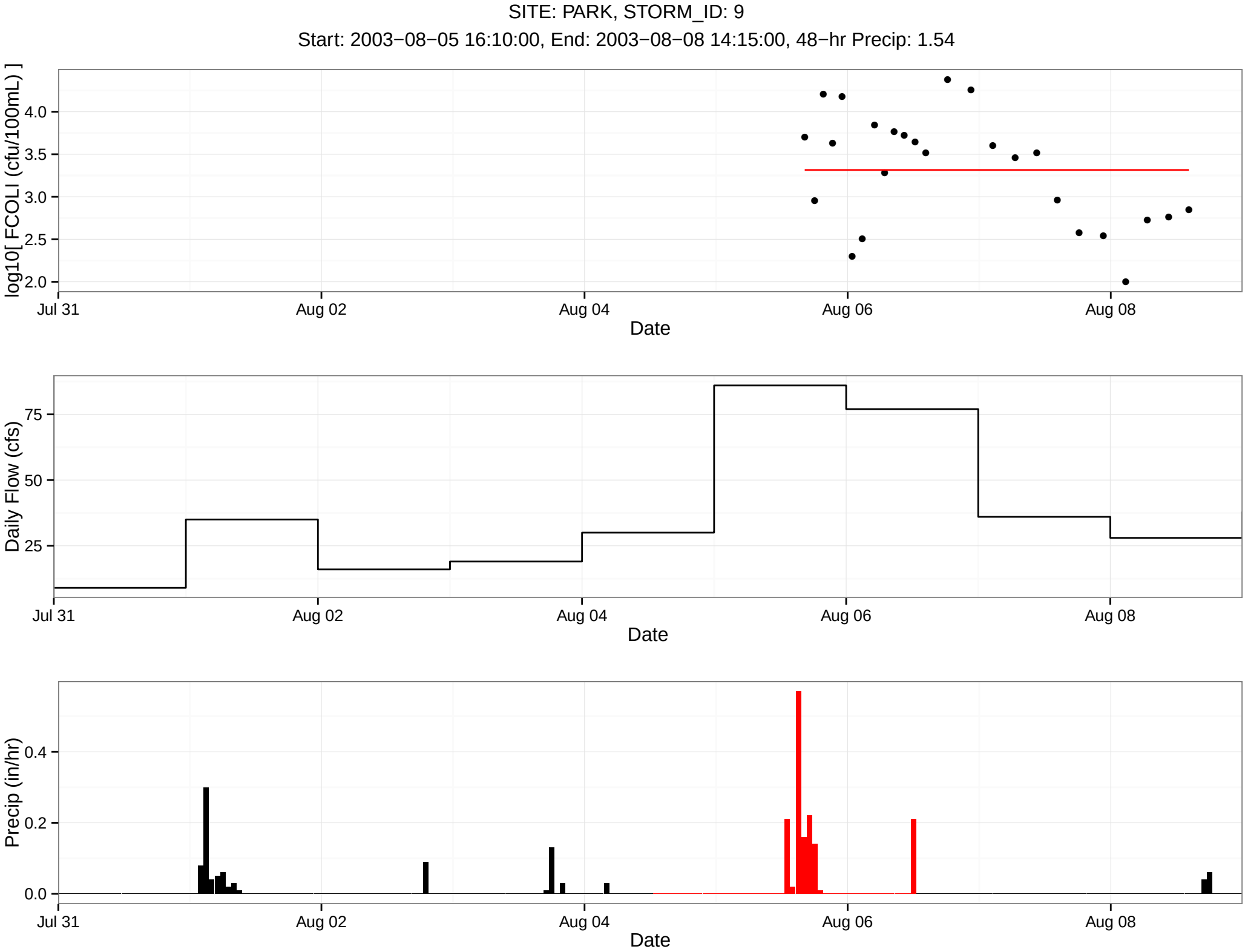

SITE: PARK, STORM_ID: 2
Start: 1999−10−13 23:15:00, End: 1999−10−16 21:35:00, 48−hr Precip: 0.96
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date
Daily Flow (cfs)
90
60
30
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date
Precip (in/hr)
0.20
0.15
0.10
0.05
0.00
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date

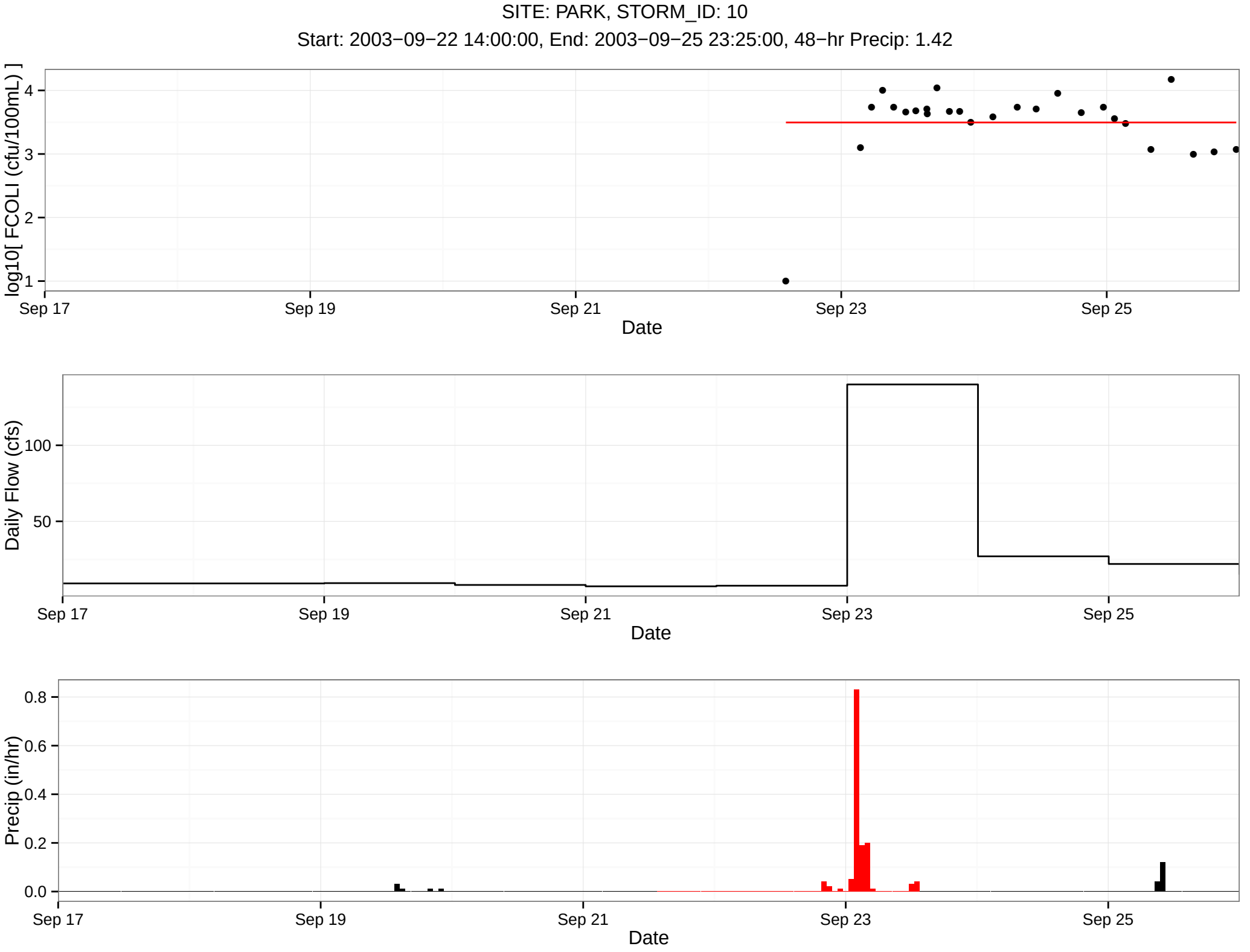

SITE: PARK, STORM_ID: 3
Start: 2000−05−10 14:10:00, End: 2000−05−13 12:40:00, 48−hr Precip: 1.53
log10[FCOLI (cfu/100mL)]
4.5
4.0
3.5
3.0
May 05
May 07
May 09
May 11
May 13
Date
Daily Flow (cfs)
300
200
100
0
May 05
May 07
May 09
May 11
May 13
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
May 05
May 07
May 09
May 11
May 13
Date

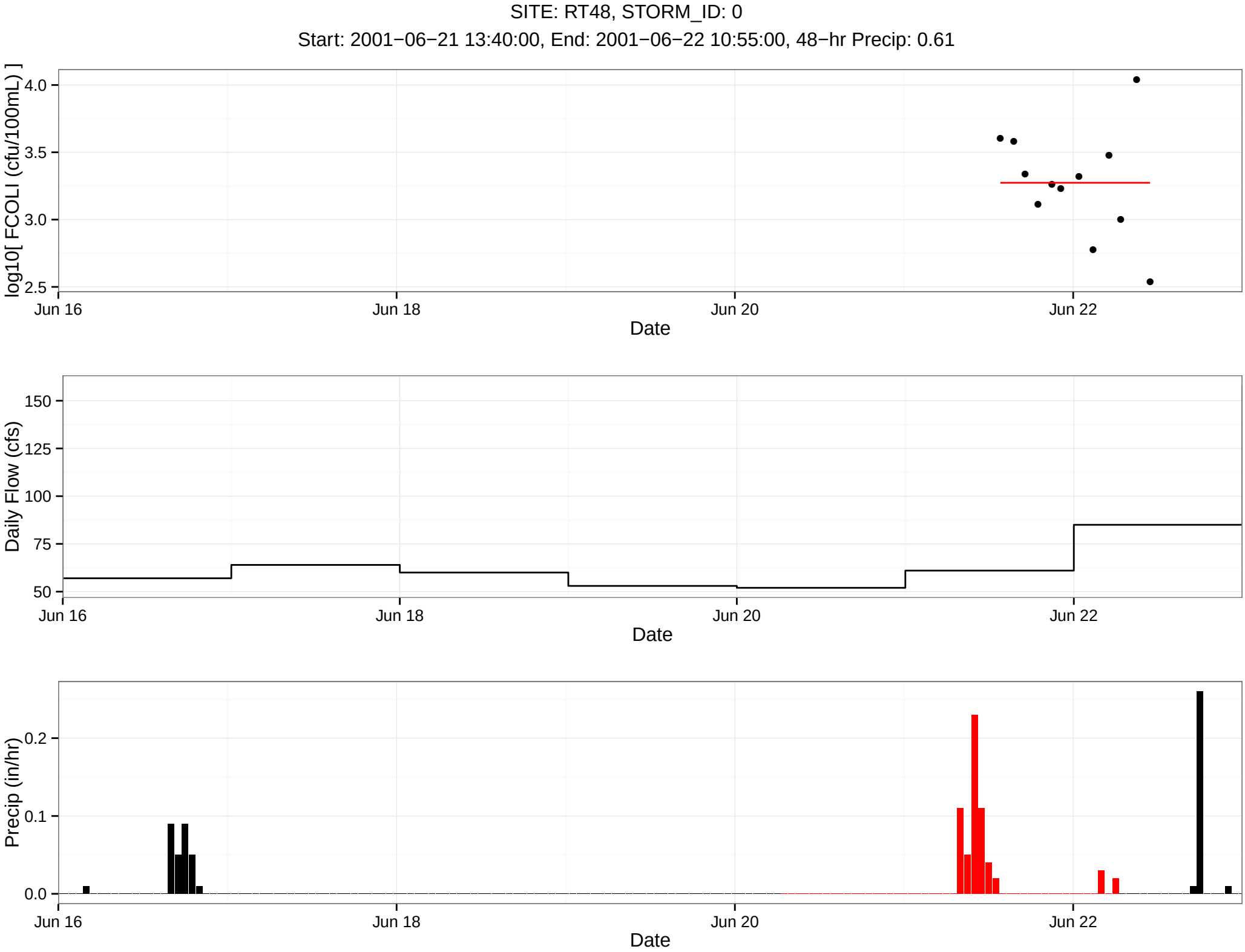

SITE: PARK, STORM_ID: 6
Start: 2001−09−24 11:45:00, End: 2001−09−27 12:50:00, 48−hr Precip: 3.37
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
2.0
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date
Daily Flow (cfs)
400
300
200
100
0
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date
Precip (in/hr)
0.5
0.4
0.3
0.2
0.1
0.0
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date

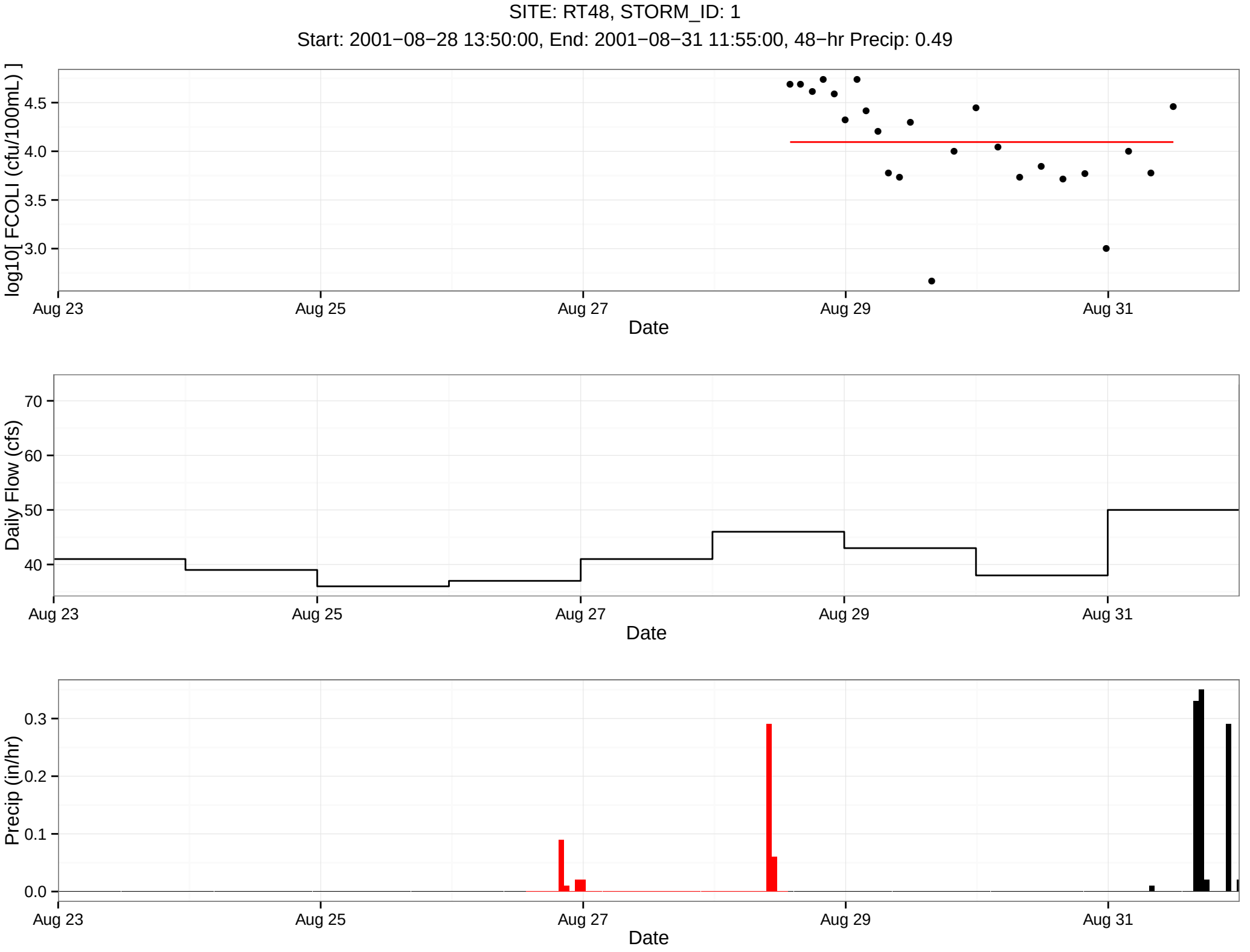

SITE: PARK, STORM_ID: 7
Start: 2002−06−14 15:20:00, End: 2002−06−17 13:15:00, 48−hr Precip: 3.65
log10[FCOLI (cfu/100mL)]
4.5
4.0
3.5
3.0
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date
Daily Flow (cfs)
400
300
200
100
0
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date
Precip (in/hr)
0.5
0.4
0.3
0.2
0.1
0.0
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date

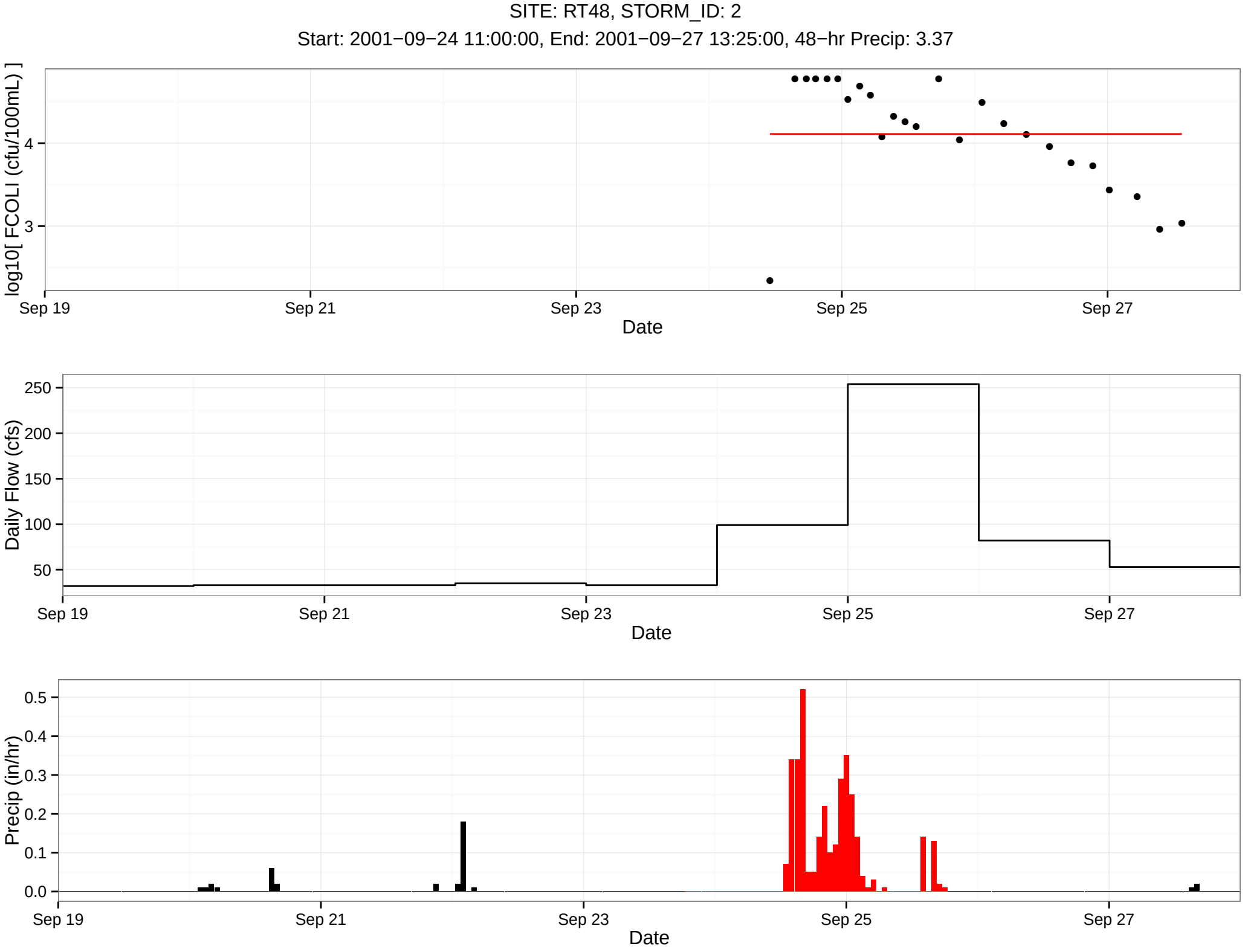

SITE: PARK, STORM_ID: 8
Start: 2003−07−10 10:10:00, End: 2003−07−13 20:45:00, 48−hr Precip: 0.25
log10[FCOLI (cfu/100mL)]
3.5
3.0
2.5
2.0
Jul 05
Jul 07
Jul 09
Jul 11
Jul 13
Date
Daily Flow (cfs)
80
60
40
20
Jul 05
Jul 07
Jul 09
Jul 11
Jul 13
Date
Precip (in/hr)
0.2
0.1
0.0
Jul 05
Jul 07
Jul 09
Jul 11
Jul 13
Date

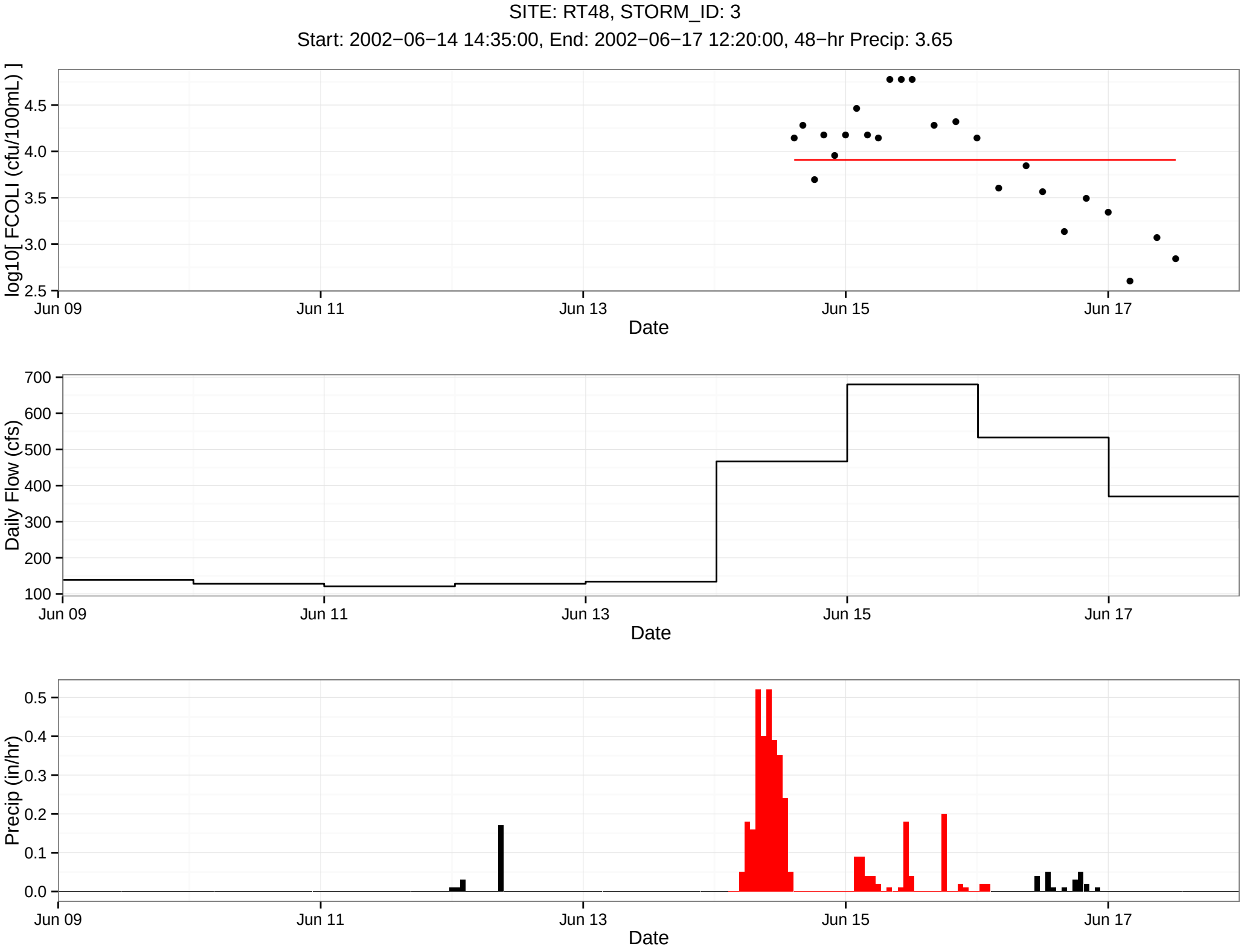

SITE: PARK, STORM_ID: 9
Start: 2003−08−05 16:10:00, End: 2003−08−08 14:15:00, 48−hr Precip: 1.54
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
2.0
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date
Daily Flow (cfs)
75
50
25
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date
Precip (in/hr)
0.4
0.2
0.0
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date

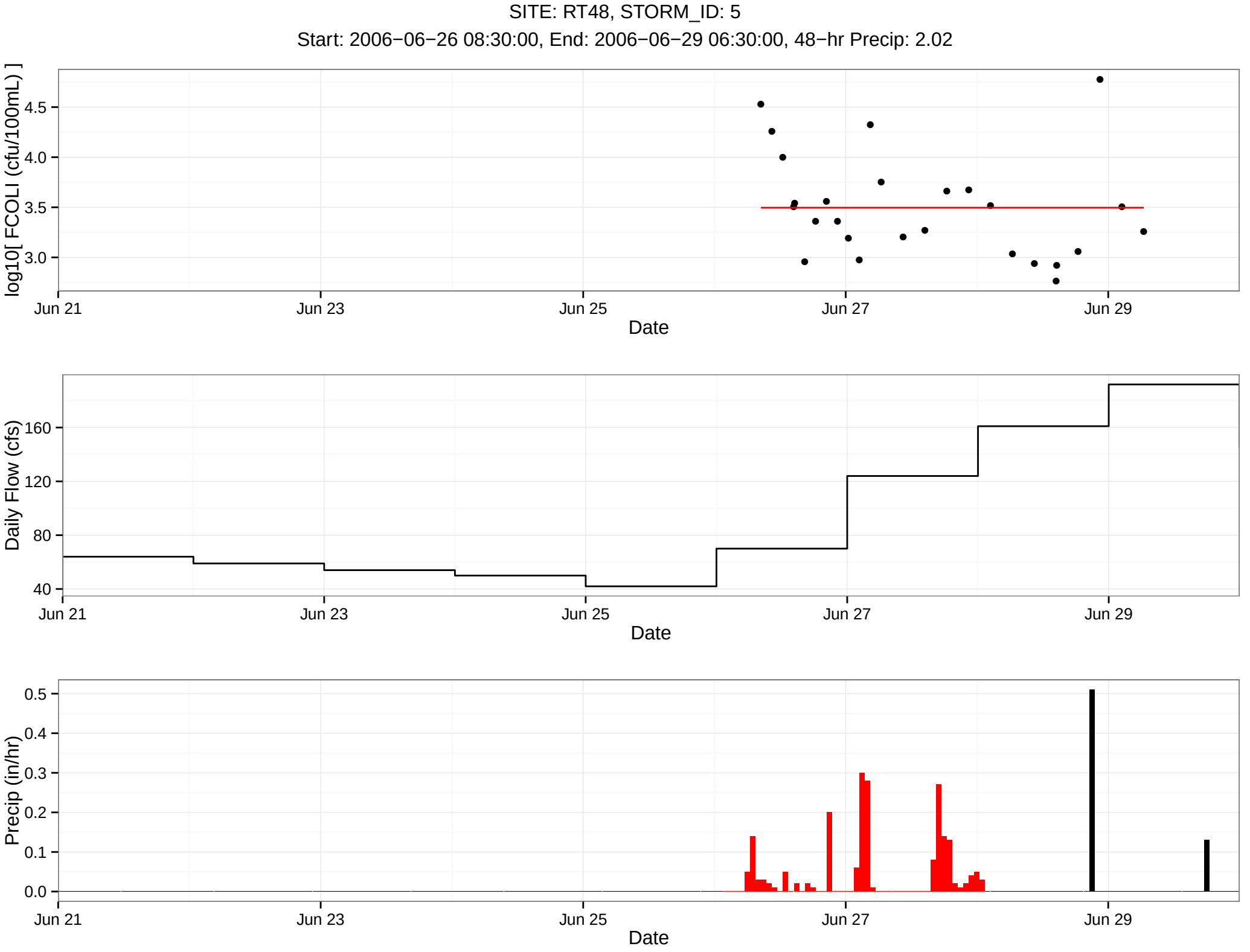

SITE: PARK, STORM_ID: 10
Start: 2003−09−22 14:00:00, End: 2003−09−25 23:25:00, 48−hr Precip: 1.42
log10[FCOLI (cfu/100mL)]
4
3
2
1
Sep 17
Sep 19
Sep 21
Sep 23
Sep 25
Date
Daily Flow (cfs)
100
50
Sep 17
Sep 19
Sep 21
Sep 23
Sep 25
Date
Precip (in/hr)
0.8
0.6
0.4
0.2
0.0
Sep 17
Sep 19
Sep 21
Sep 23
Sep 25
Date

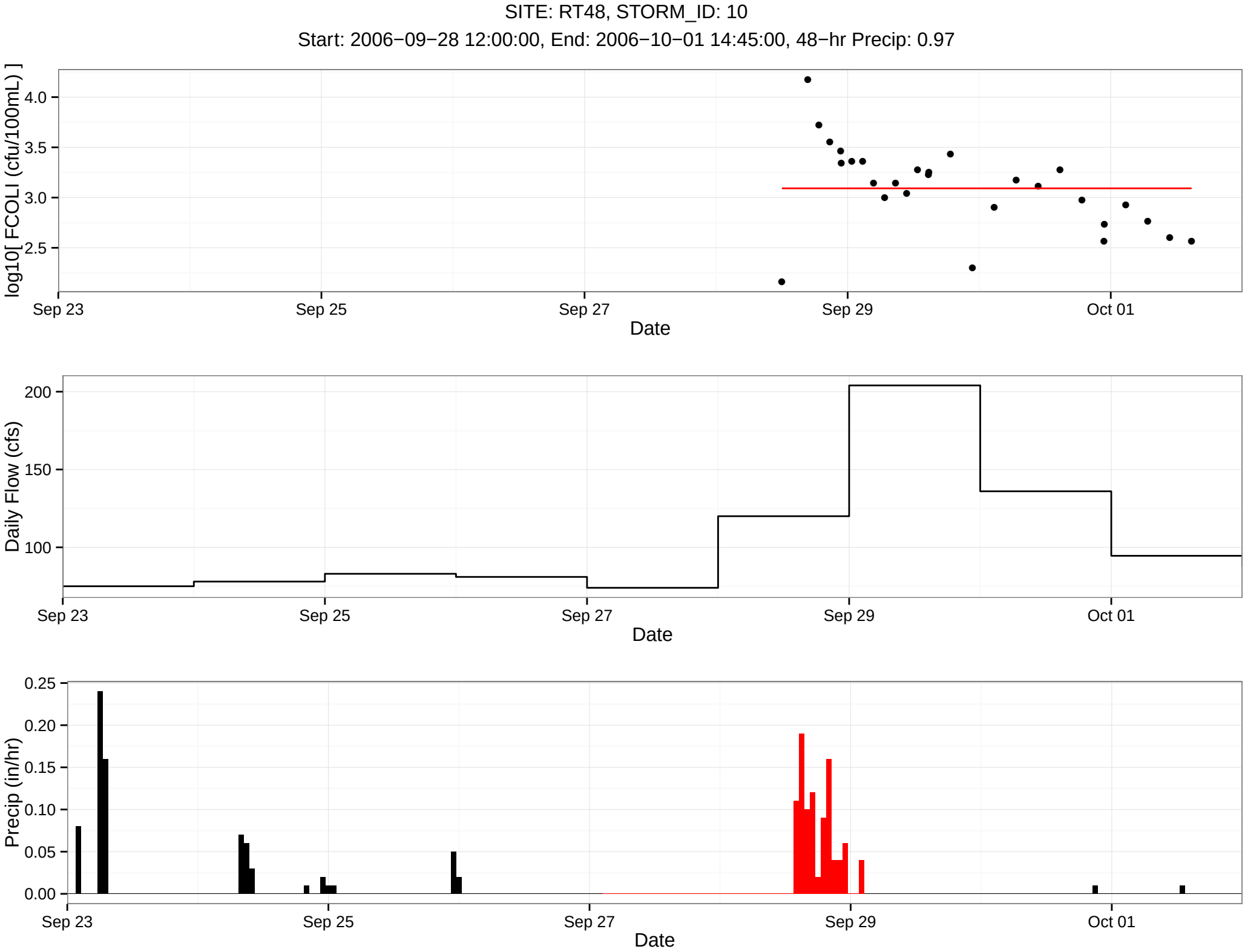

SITE: RT48, STORM_ID: 0
Start: 2001−06−21 13:40:00, End: 2001−06−22 10:55:00, 48−hr Precip: 0.61
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
Jun 16
Jun 18
Jun 20
Jun 22
Date
Daily Flow (cfs)
150
125
100
75
50
Jun 16
Jun 18
Jun 20
Jun 22
Date
Precip (in/hr)
0.2
0.1
0.0
Jun 16
Jun 18
Jun 20
Jun 22
Date

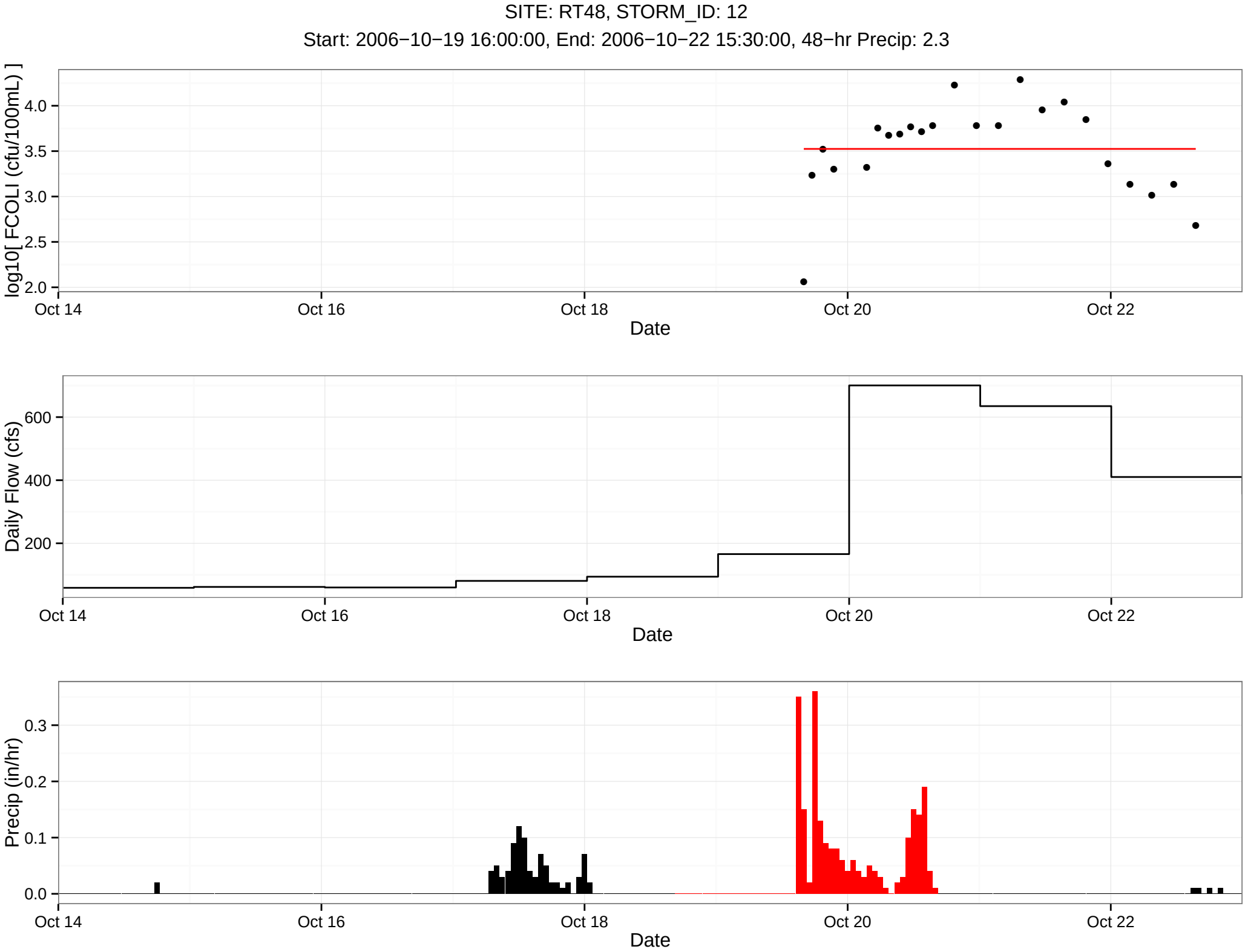

SITE: RT48, STORM_ID: 1
Start: 2001−08−28 13:50:00, End: 2001−08−31 11:55:00, 48−hr Precip: 0.49
log10[FCOLI (cfu/100mL)]
4.5
4.0
3.5
3.0
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date
Daily Flow (cfs)
70
60
50
40
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date

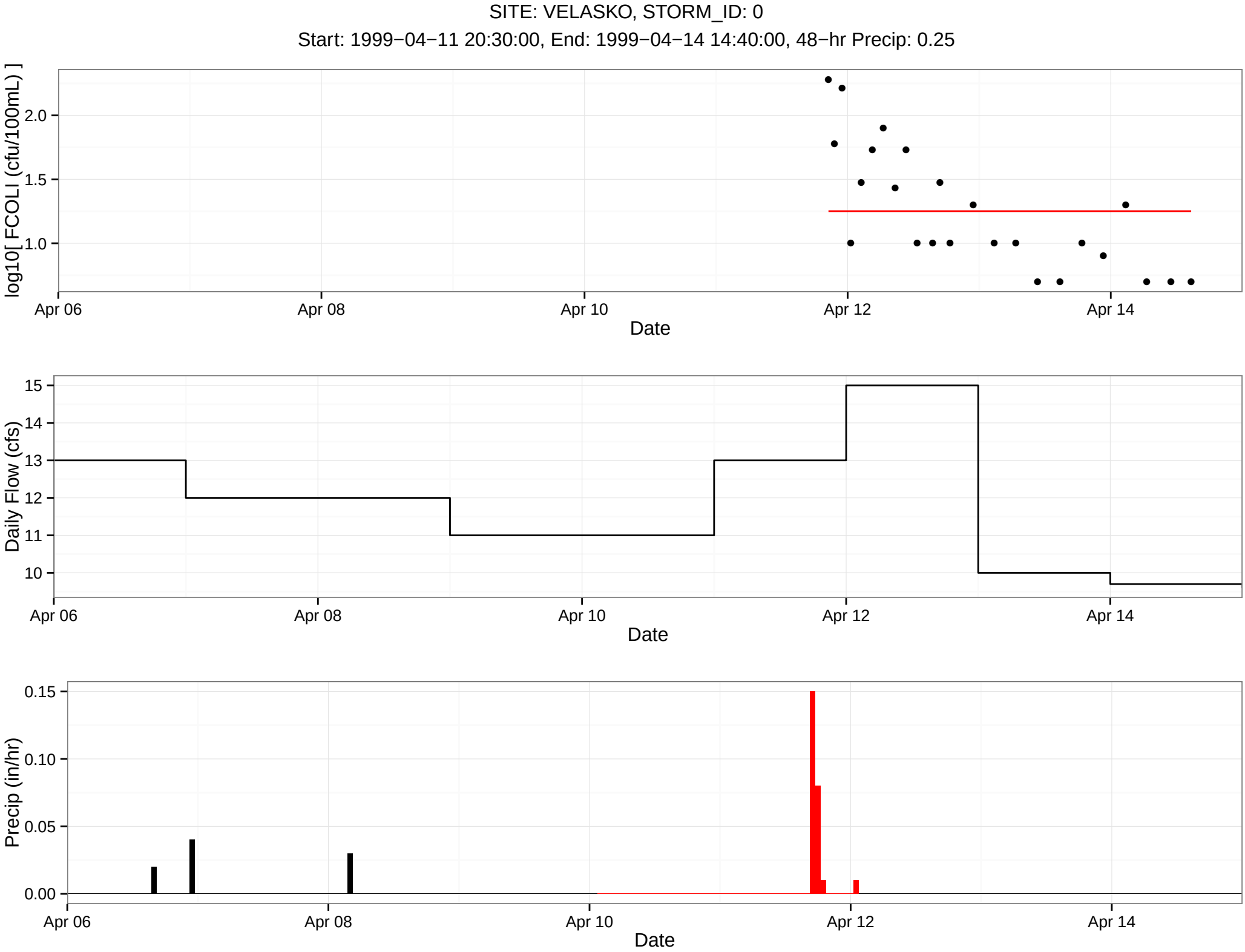

SITE: RT48, STORM_ID: 2
Start: 2001−09−24 11:00:00, End: 2001−09−27 13:25:00, 48−hr Precip: 3.37
log10[FCOLI (cfu/100mL)]
4
3
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date
Daily Flow (cfs)
250
200
150
100
50
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date
Precip (in/hr)
0.5
0.4
0.3
0.2
0.1
0.0
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date

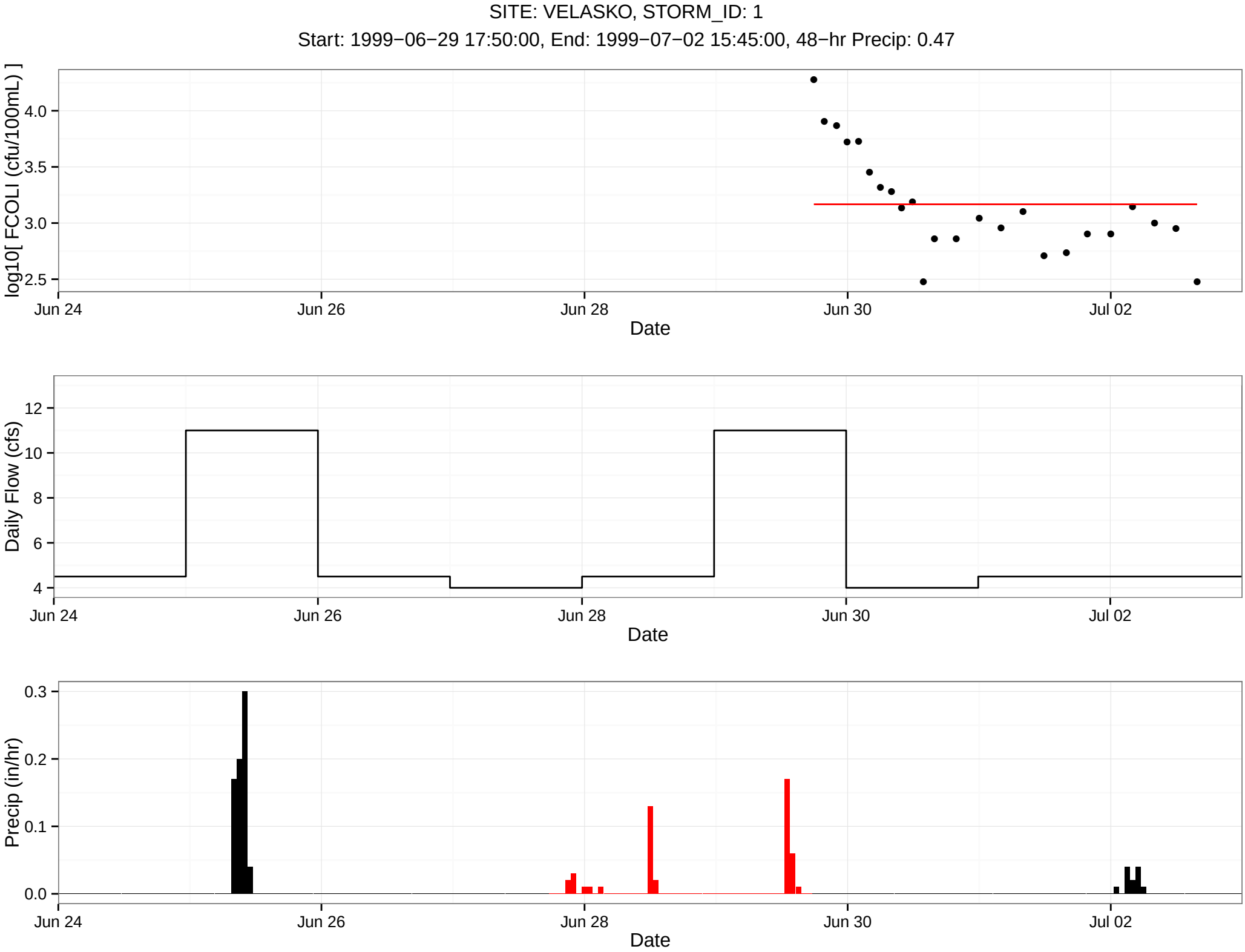

SITE: RT48, STORM_ID: 3
Start: 2002−06−14 14:35:00, End: 2002−06−17 12:20:00, 48−hr Precip: 3.65
log10[FCOLI (cfu/100mL)]
4.5
4.0
3.5
3.0
2.5
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date
Daily Flow (cfs)
700
600
500
400
300
200
100
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date
Precip (in/hr)
0.5
0.4
0.3
0.2
0.1
0.0
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date

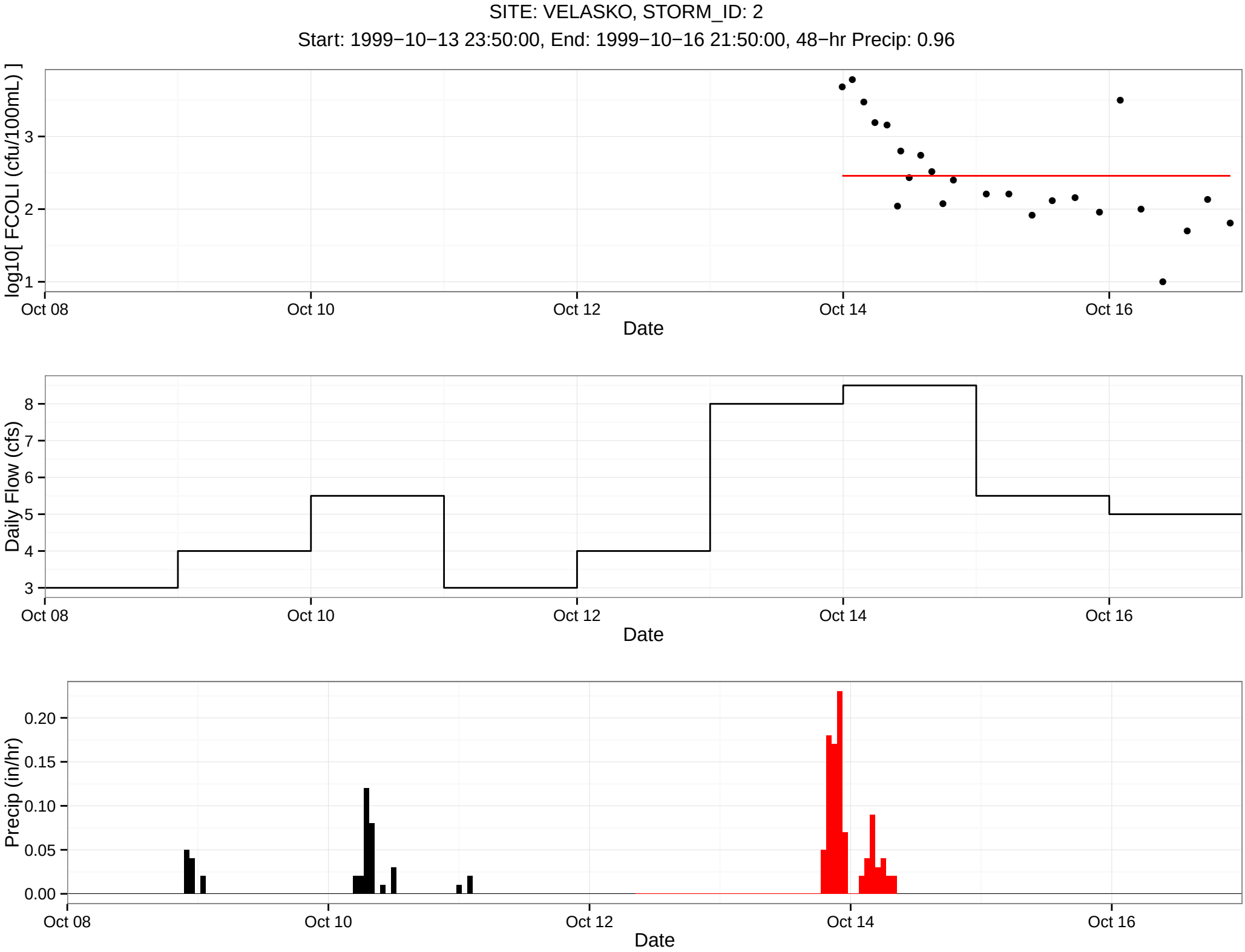

SITE: RT48, STORM_ID: 5
Start: 2006−06−26 08:30:00, End: 2006−06−29 06:30:00, 48−hr Precip: 2.02
log10[FCOLI (cfu/100mL)]
4.5
4.0
3.5
3.0
Jun 21
Jun 23
Jun 25
Jun 27
Jun 29
Date
Daily Flow (cfs)
160
120
80
40
Jun 21
Jun 23
Jun 25
Jun 27
Jun 29
Date
Precip (in/hr)
0.5
0.4
0.3
0.2
0.1
0.0
Jun 21
Jun 23
Jun 25
Jun 27
Jun 29
Date

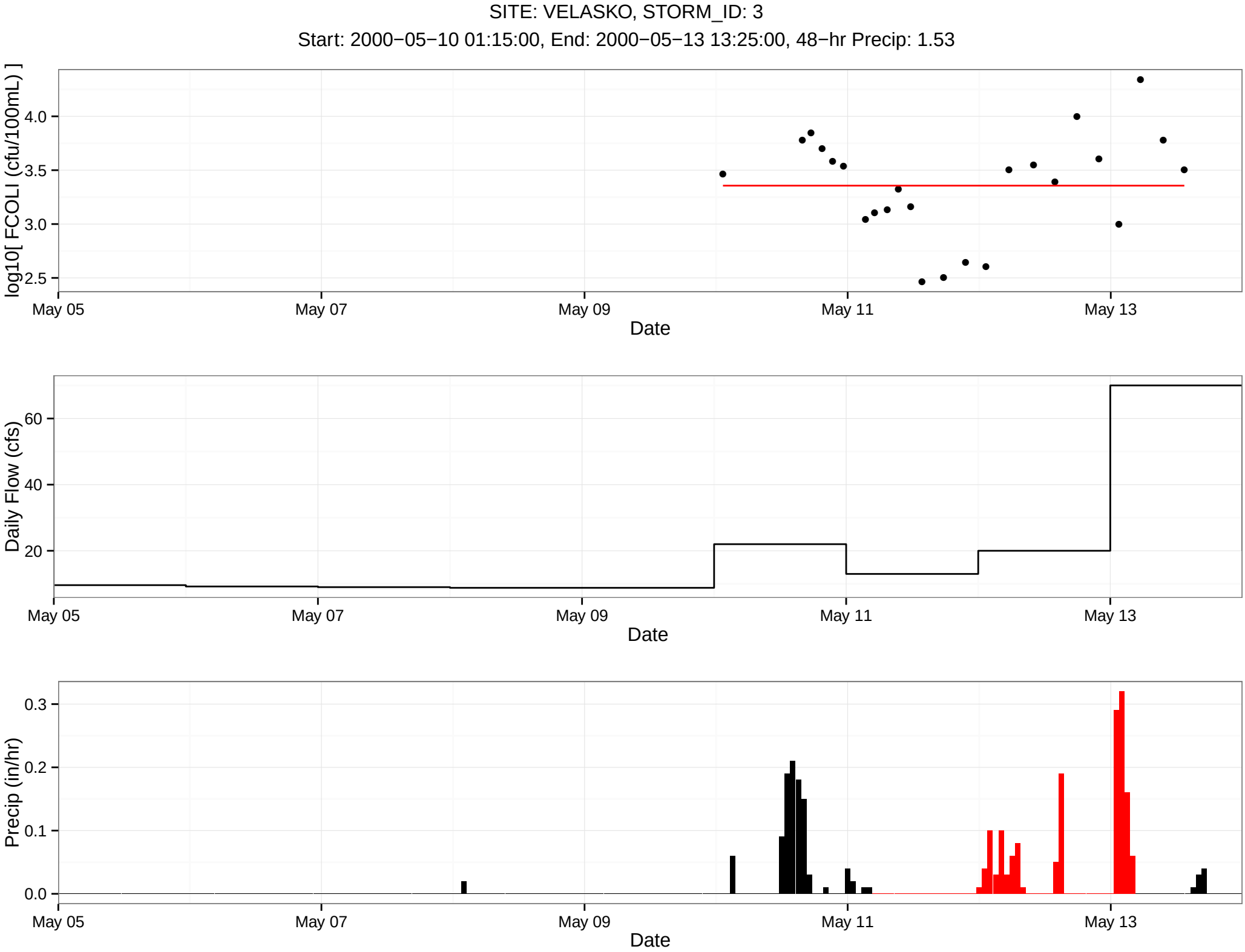

SITE: RT48, STORM_ID: 10
Start: 2006−09−28 12:00:00, End: 2006−10−01 14:45:00, 48−hr Precip: 0.97
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
Sep 23
Sep 25
Sep 27
Sep 29
Oct 01
Date
Daily Flow (cfs)
200
150
100
Sep 23
Sep 25
Sep 27
Sep 29
Oct 01
Date
Precip (in/hr)
0.25
0.20
0.15
0.10
0.05
0.00
Sep 23
Sep 25
Sep 27
Sep 29
Oct 01
Date

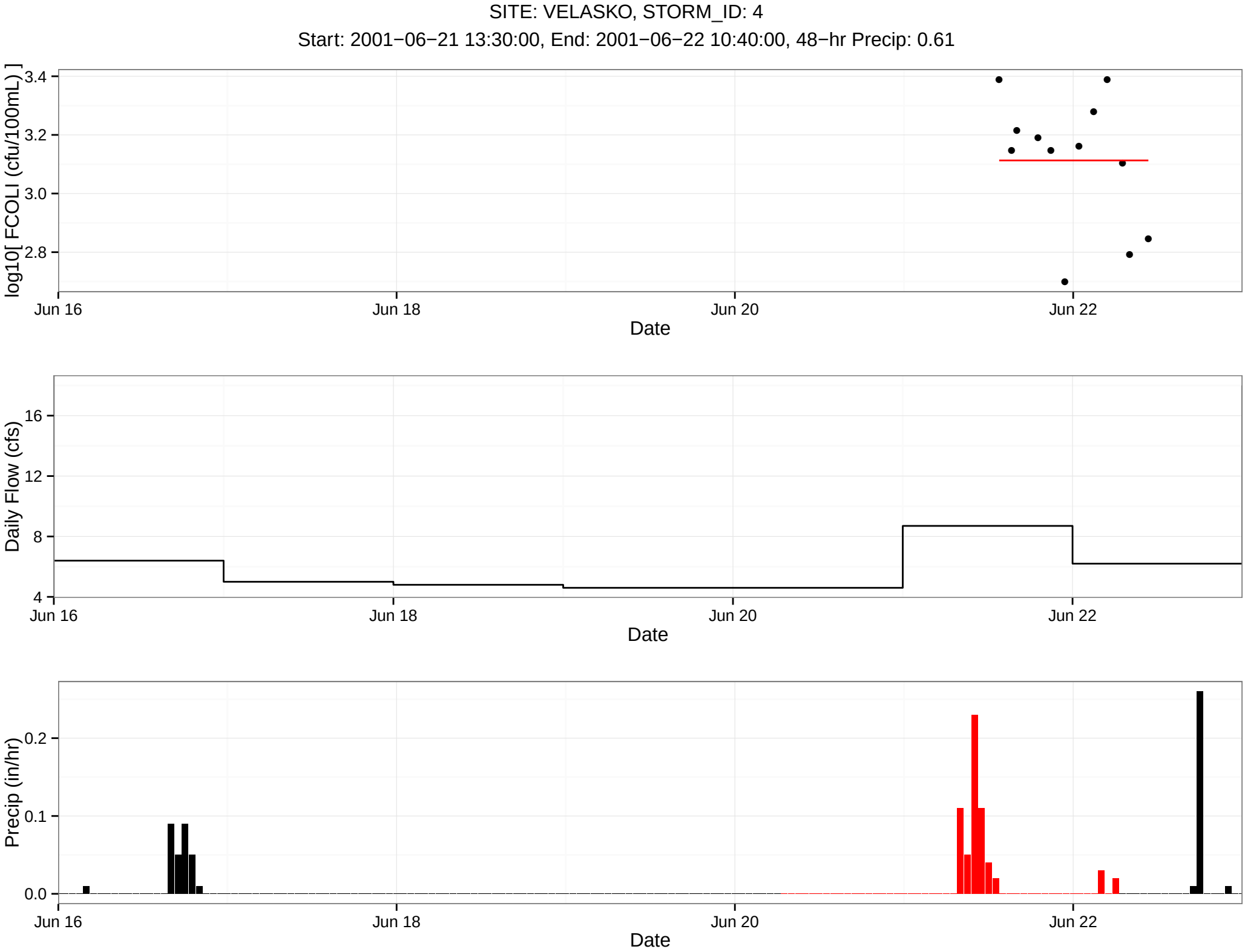

SITE: RT48, STORM_ID: 12
Start: 2006−10−19 16:00:00, End: 2006−10−22 15:30:00, 48−hr Precip: 2.3
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
2.0
Oct 14
Oct 16
Oct 18
Oct 20
Oct 22
Date
Daily Flow (cfs)
600
400
200
Oct 14
Oct 16
Oct 18
Oct 20
Oct 22
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
Oct 14
Oct 16
Oct 18
Oct 20
Oct 22
Date

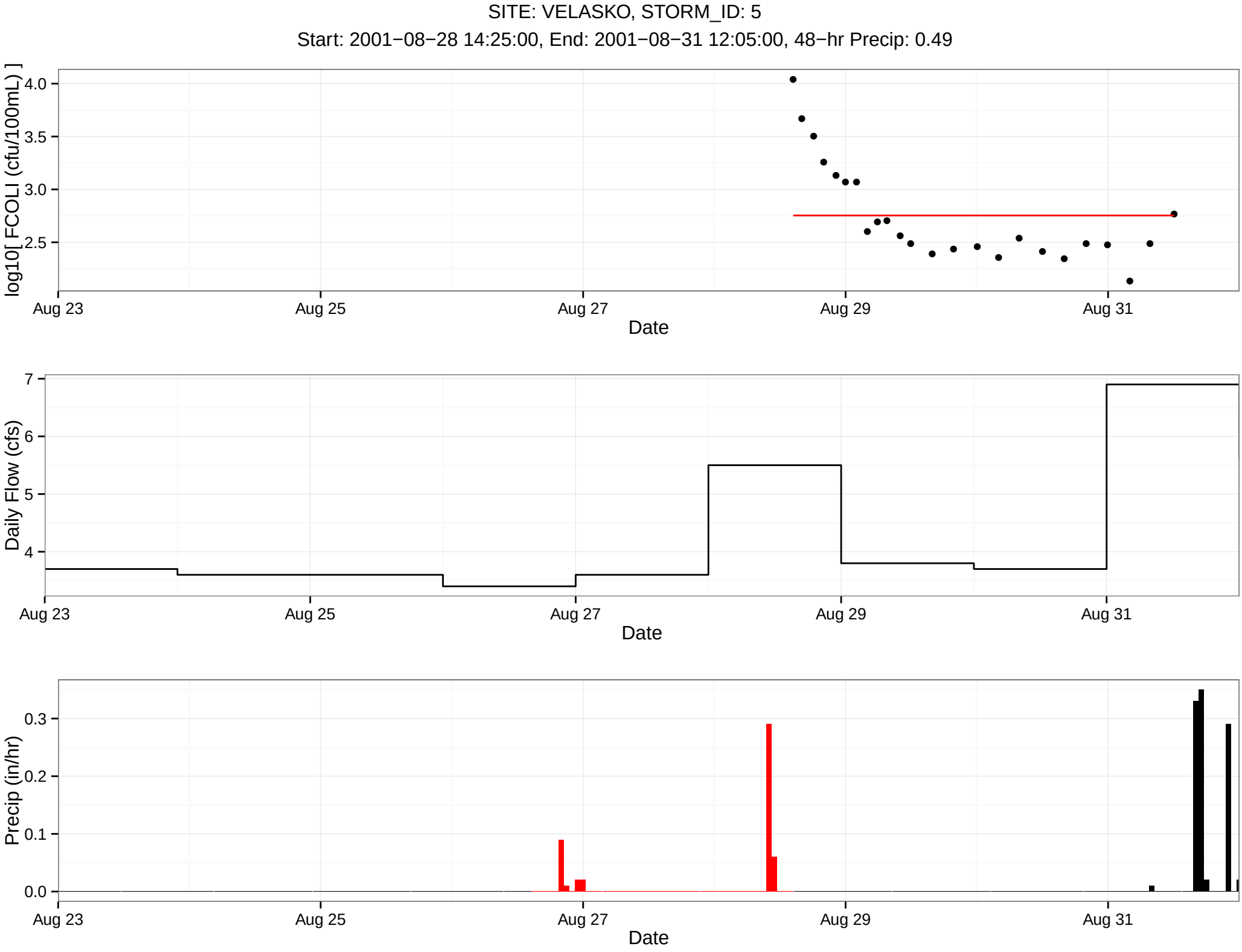

SITE: VELASKO, STORM_ID: 0
Start: 1999−04−11 20:30:00, End: 1999−04−14 14:40:00, 48−hr Precip: 0.25
log10[FCOLI (cfu/100mL)]
2.0
1.5
1.0
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date
Daily Flow (cfs)
15
14
13
12
11
10
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date
Precip (in/hr)
0.15
0.10
0.05
0.00
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date

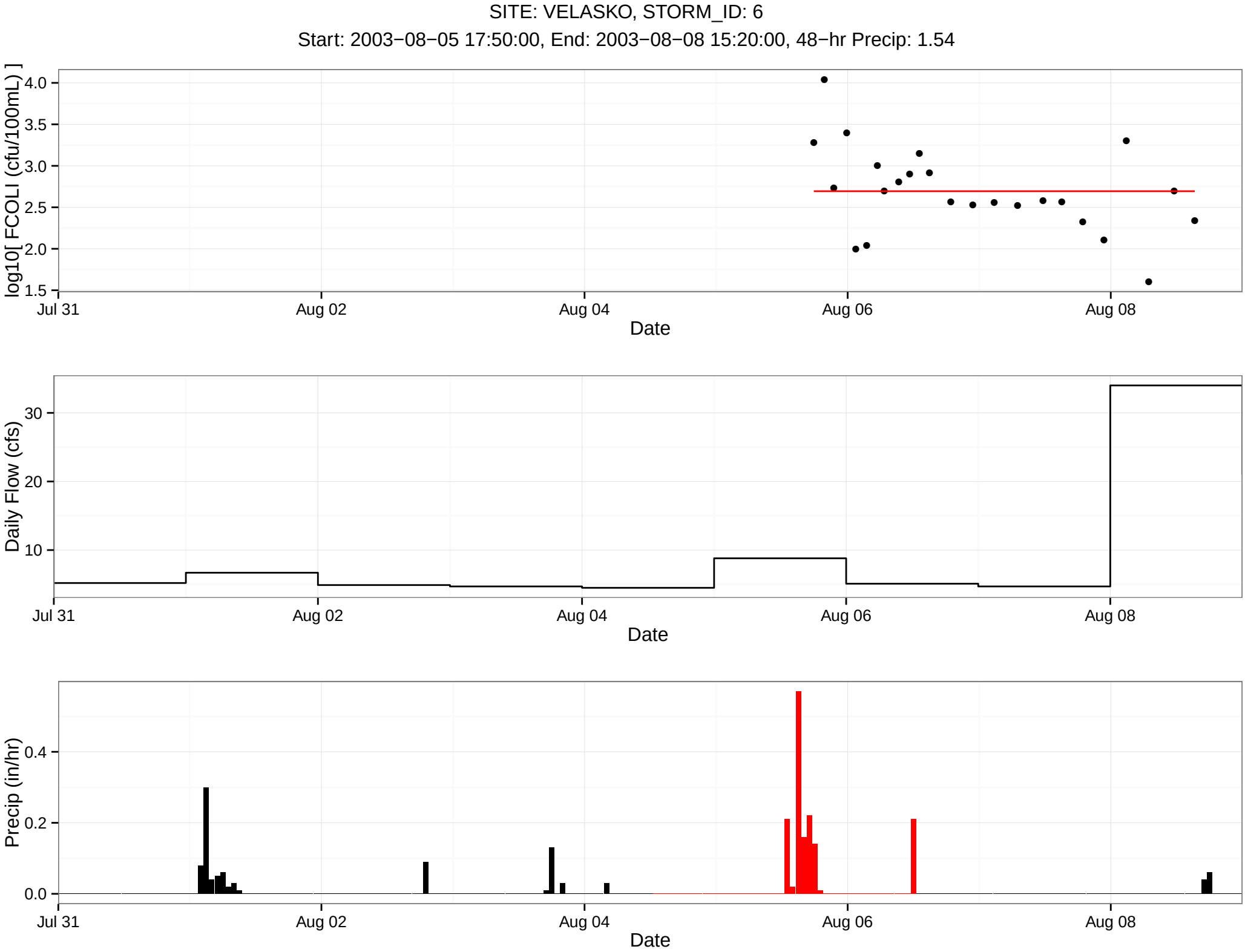

SITE: VELASKO, STORM_ID: 1
Start: 1999−06−29 17:50:00, End: 1999−07−02 15:45:00, 48−hr Precip: 0.47
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date
Daily Flow (cfs)
12
10
8
6
4
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date

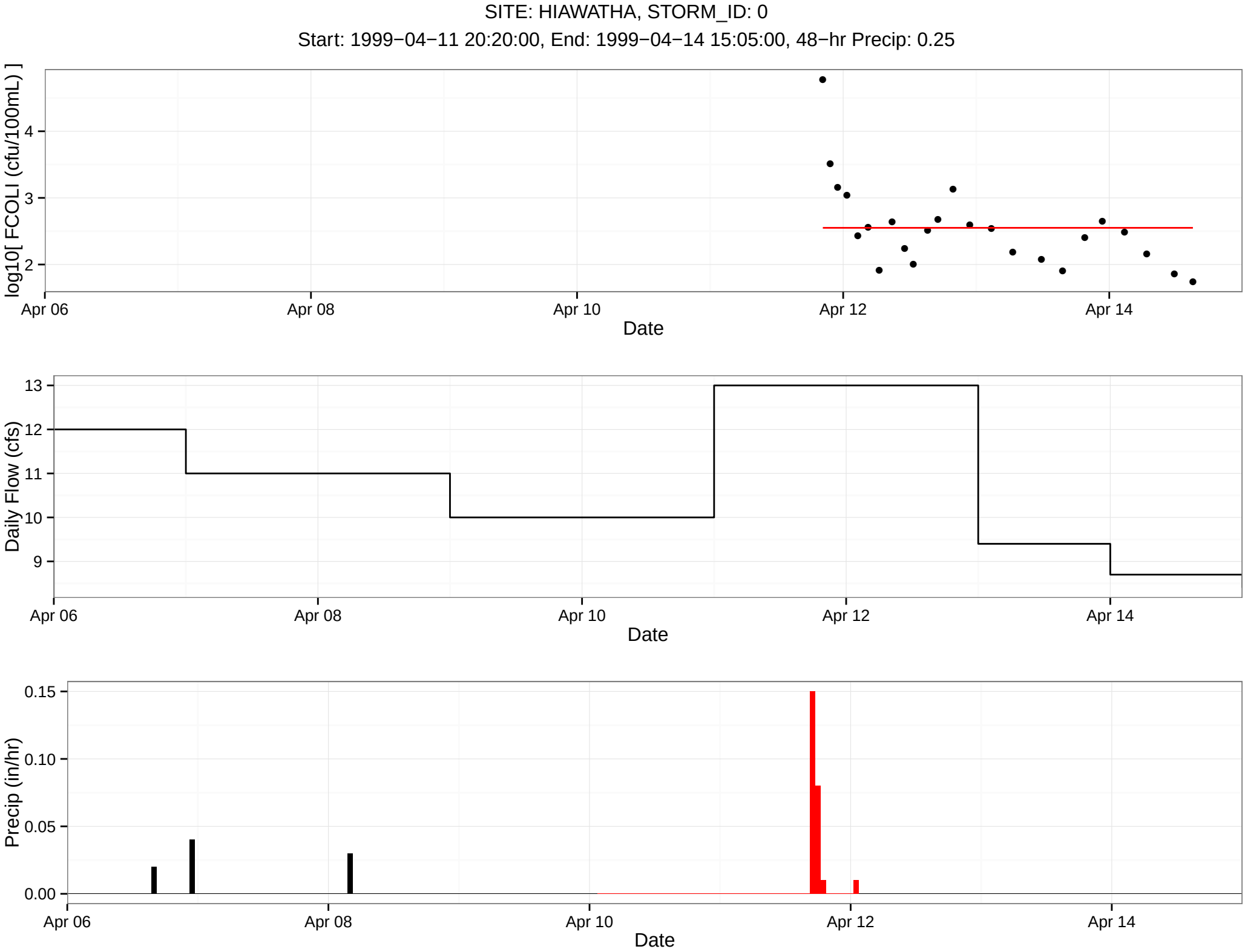

SITE: VELASKO, STORM_ID: 2
Start: 1999−10−13 23:50:00, End: 1999−10−16 21:50:00, 48−hr Precip: 0.96
log10[FCOLI (cfu/100mL)]
1
2
3
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date
Daily Flow (cfs)
3
4
5
6
7
8
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date
Precip (in/hr)
0.00
0.05
0.10
0.15
0.20
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date

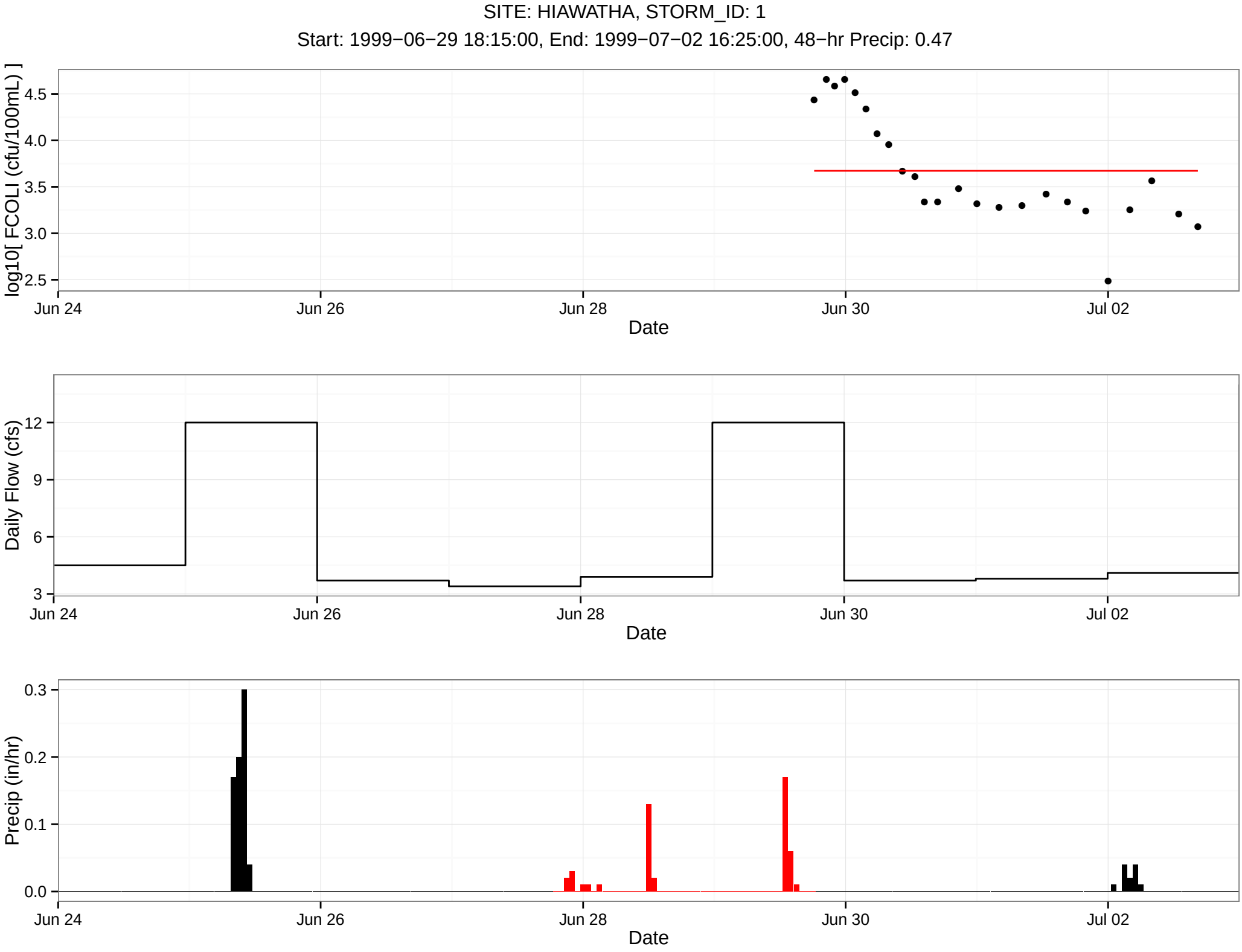

SITE: VELASKO, STORM_ID: 3
Start: 2000−05−10 01:15:00, End: 2000−05−13 13:25:00, 48−hr Precip: 1.53
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
May 05
May 07
May 09
May 11
May 13
Date
Daily Flow (cfs)
60
40
20
May 05
May 07
May 09
May 11
May 13
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
May 05
May 07
May 09
May 11
May 13
Date

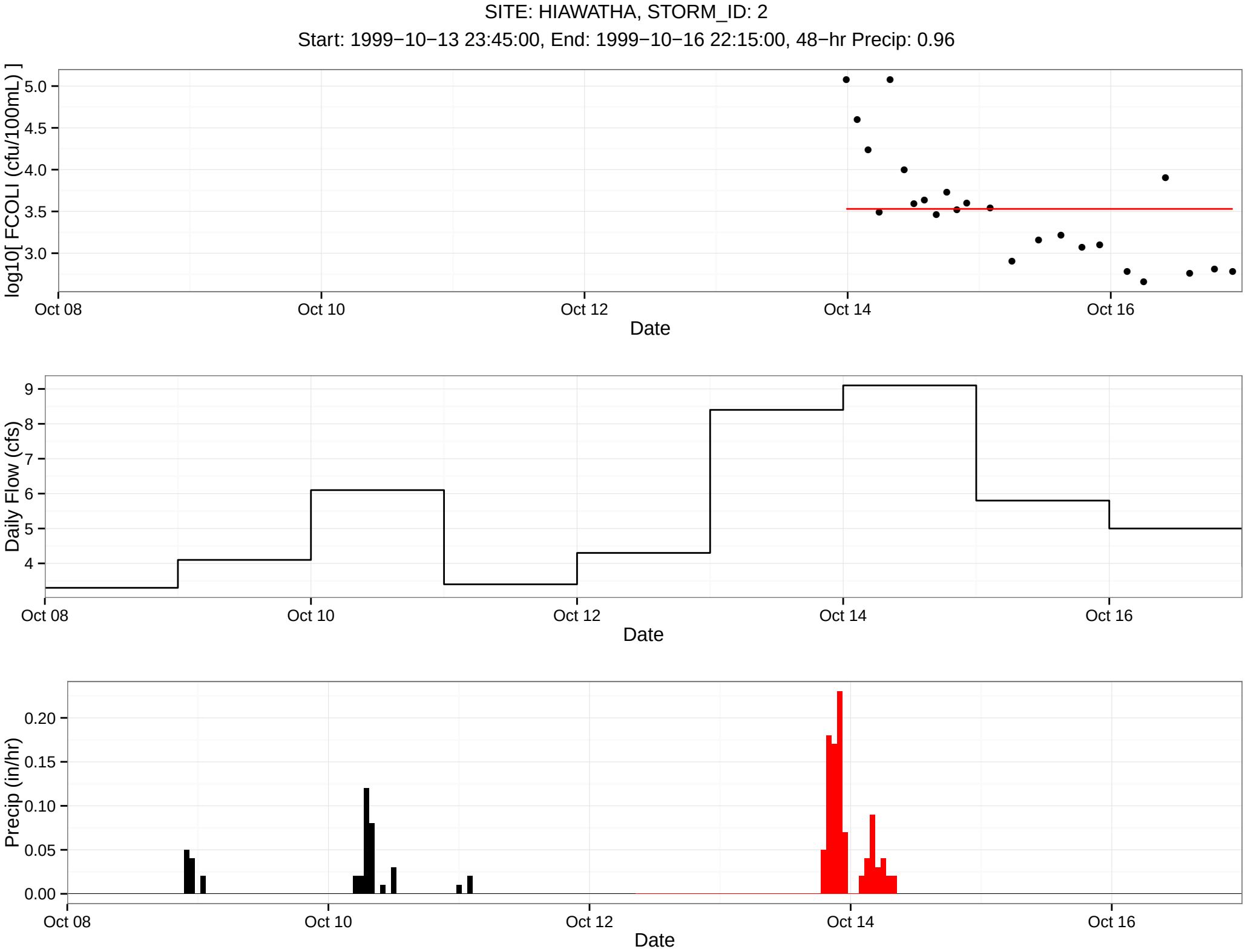

SITE: VELASKO, STORM_ID: 4
Start: 2001−06−21 13:30:00, End: 2001−06−22 10:40:00, 48−hr Precip: 0.61
log10[FCOLI (cfu/100mL)]
3.4
3.2
3.0
2.8
Jun 16
Jun 18
Jun 20
Jun 22
Date
Daily Flow (cfs)
16
12
8
4
Jun 16
Jun 18
Jun 20
Jun 22
Date
Precip (in/hr)
0.2
0.1
0.0
Jun 16
Jun 18
Jun 20
Jun 22
Date

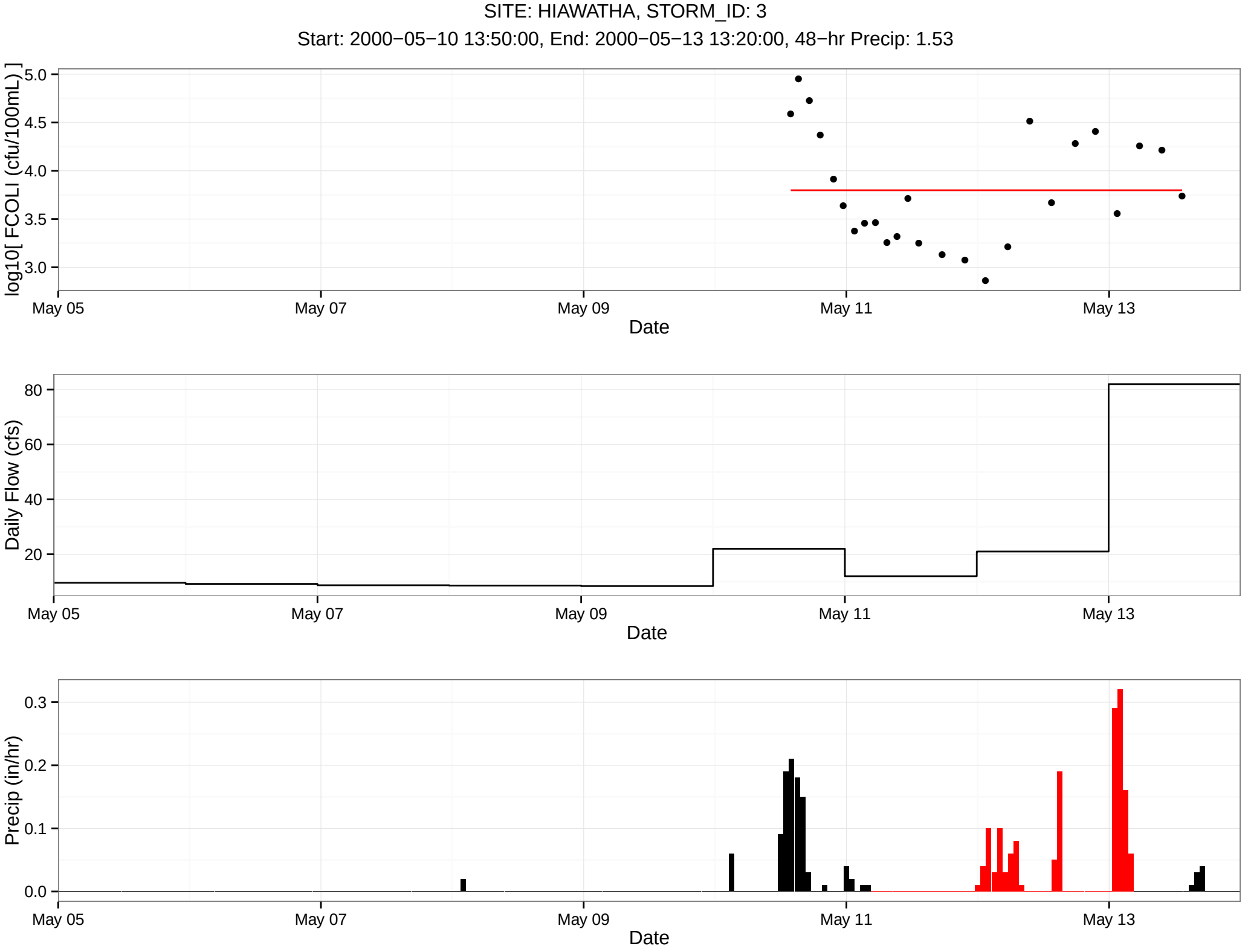

SITE: VELASKO, STORM_ID: 5
Start: 2001−08−28 14:25:00, End: 2001−08−31 12:05:00, 48−hr Precip: 0.49
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date
Daily Flow (cfs)
7
6
5
4
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date

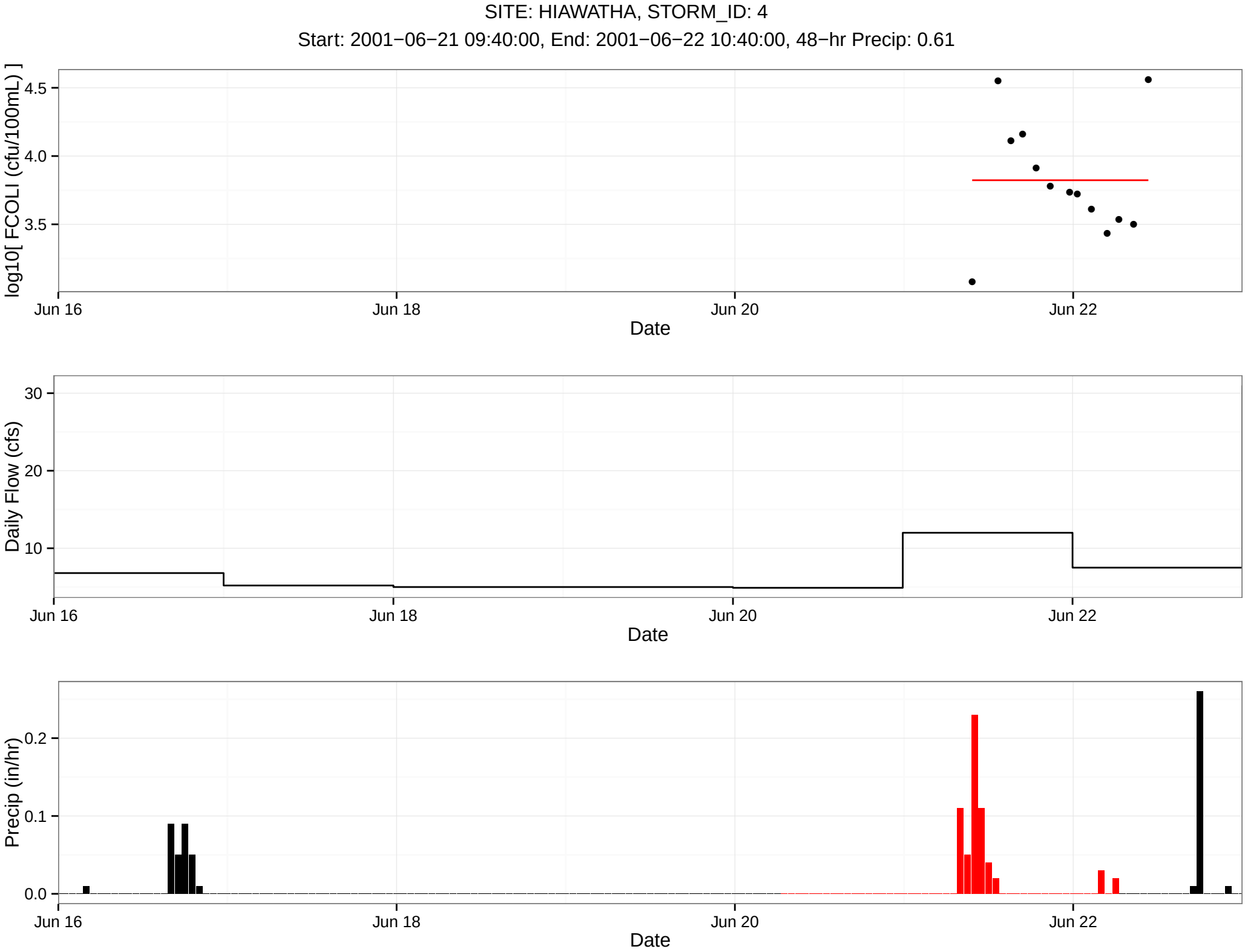

SITE: VELASKO, STORM_ID: 6
Start: 2003−08−05 17:50:00, End: 2003−08−08 15:20:00, 48−hr Precip: 1.54
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
2.0
1.5
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date
Daily Flow (cfs)
30
20
10
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date
Precip (in/hr)
0.4
0.2
0.0
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date

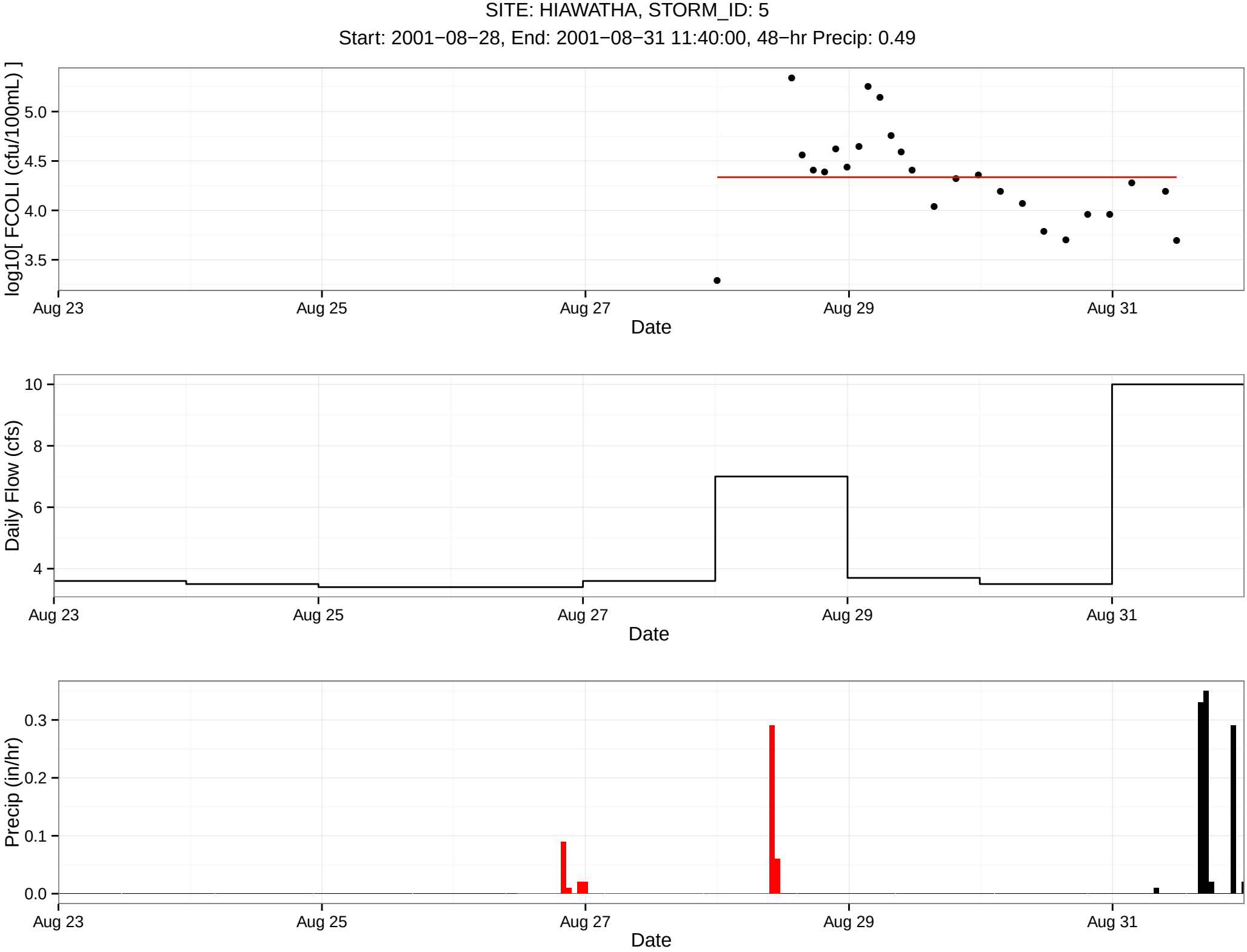

SITE: HIAWATHA, STORM_ID: 0
Start: 1999−04−11 20:20:00, End: 1999−04−14 15:05:00, 48−hr Precip: 0.25
log10[FCOLI (cfu/100mL)]
4
3
2
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date
Daily Flow (cfs)
13
12
11
10
9
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date
Precip (in/hr)
0.15
0.10
0.05
0.00
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date

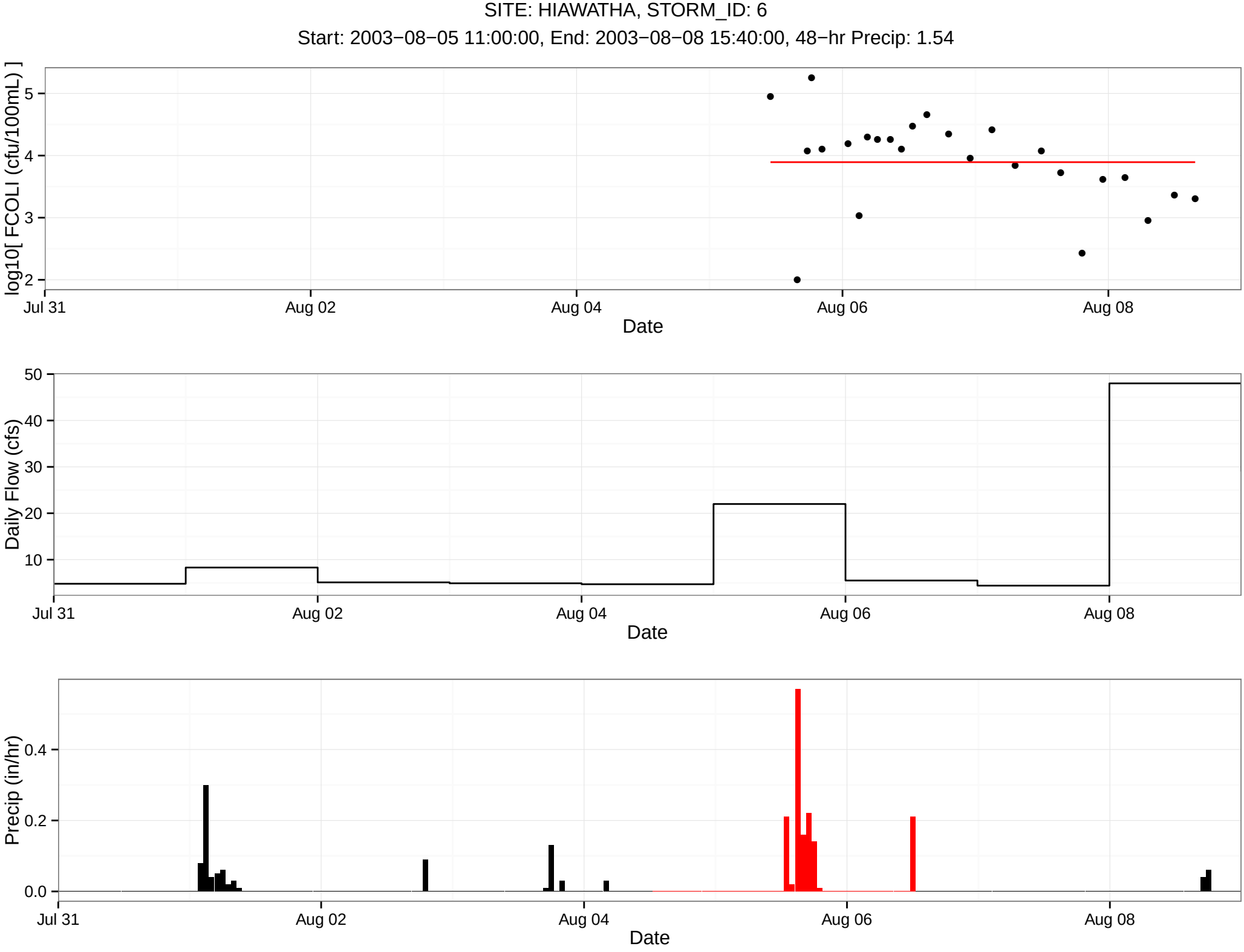

SITE: HIAWATHA, STORM_ID: 1
Start: 1999−06−29 18:15:00, End: 1999−07−02 16:25:00, 48−hr Precip: 0.47
log10[FCOLI (cfu/100mL)]
4.5
4.0
3.5
3.0
2.5
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date
Daily Flow (cfs)
12
9
6
3
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date

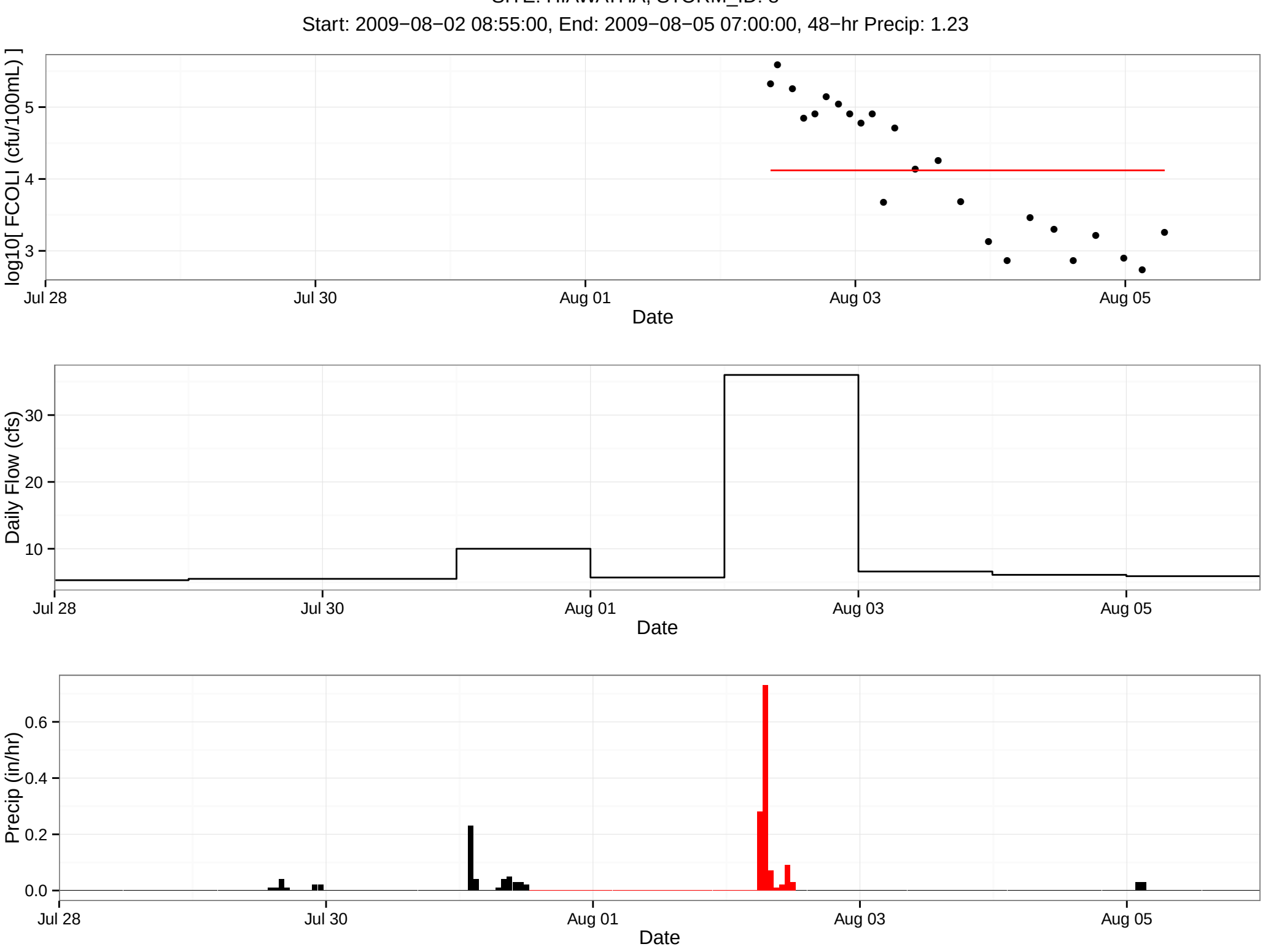

SITE: HIAWATHA, STORM_ID: 2
Start: 1999−10−13 23:45:00, End: 1999−10−16 22:15:00, 48−hr Precip: 0.96
log10[FCOLI (cfu/100mL)]
5.0
4.5
4.0
3.5
3.0
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date
Daily Flow (cfs)
9
8
7
6
5
4
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date
Precip (in/hr)
0.20
0.15
0.10
0.05
0.00
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date

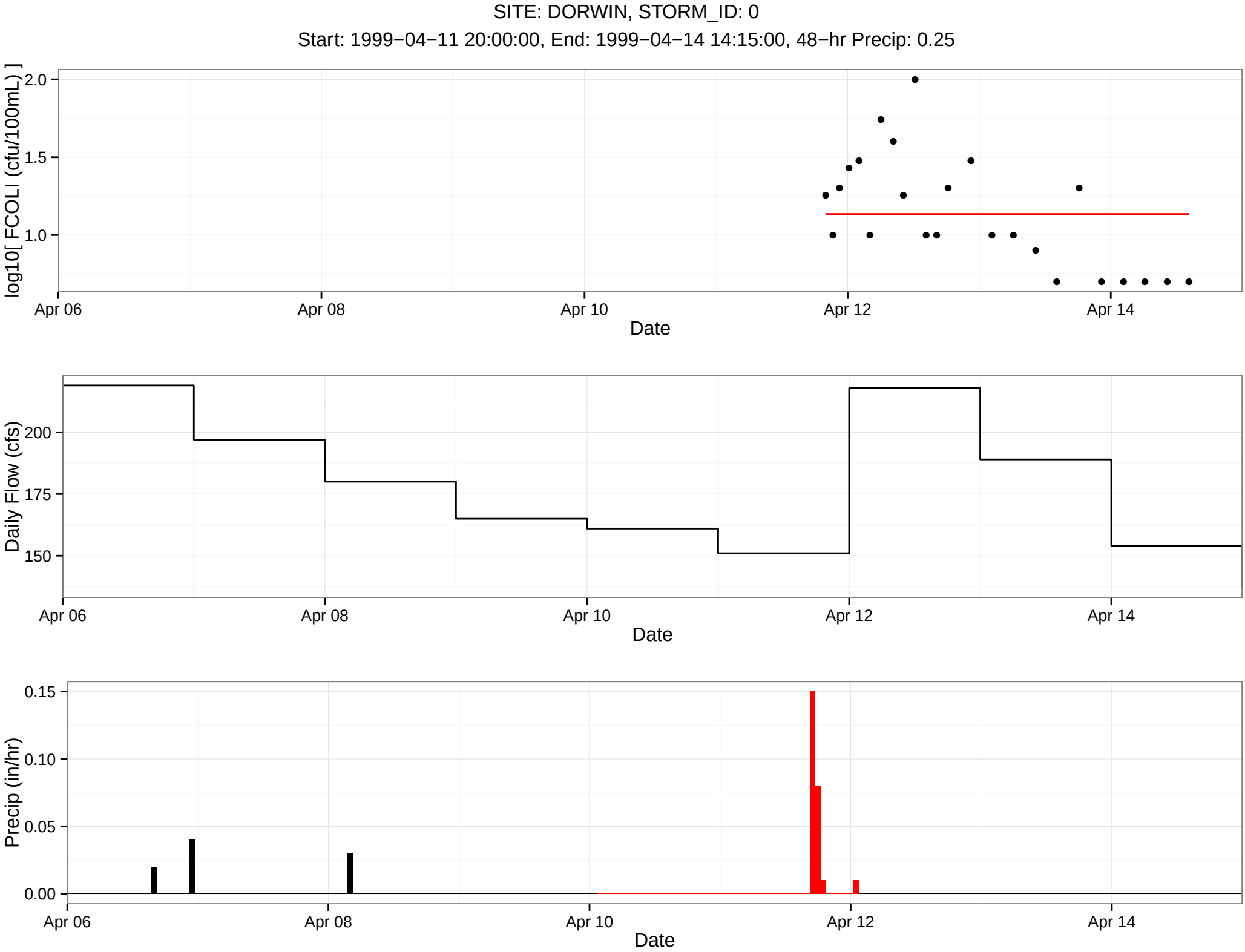

SITE: HIAWATHA, STORM_ID: 3
Start: 2000−05−10 13:50:00, End: 2000−05−13 13:20:00, 48−hr Precip: 1.53
log10[FCOLI (cfu/100mL)]
5.0
4.5
4.0
3.5
3.0
May 05
May 07
May 09
May 11
May 13
Date
Daily Flow (cfs)
80
60
40
20
May 05
May 07
May 09
May 11
May 13
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
May 05
May 07
May 09
May 11
May 13
Date

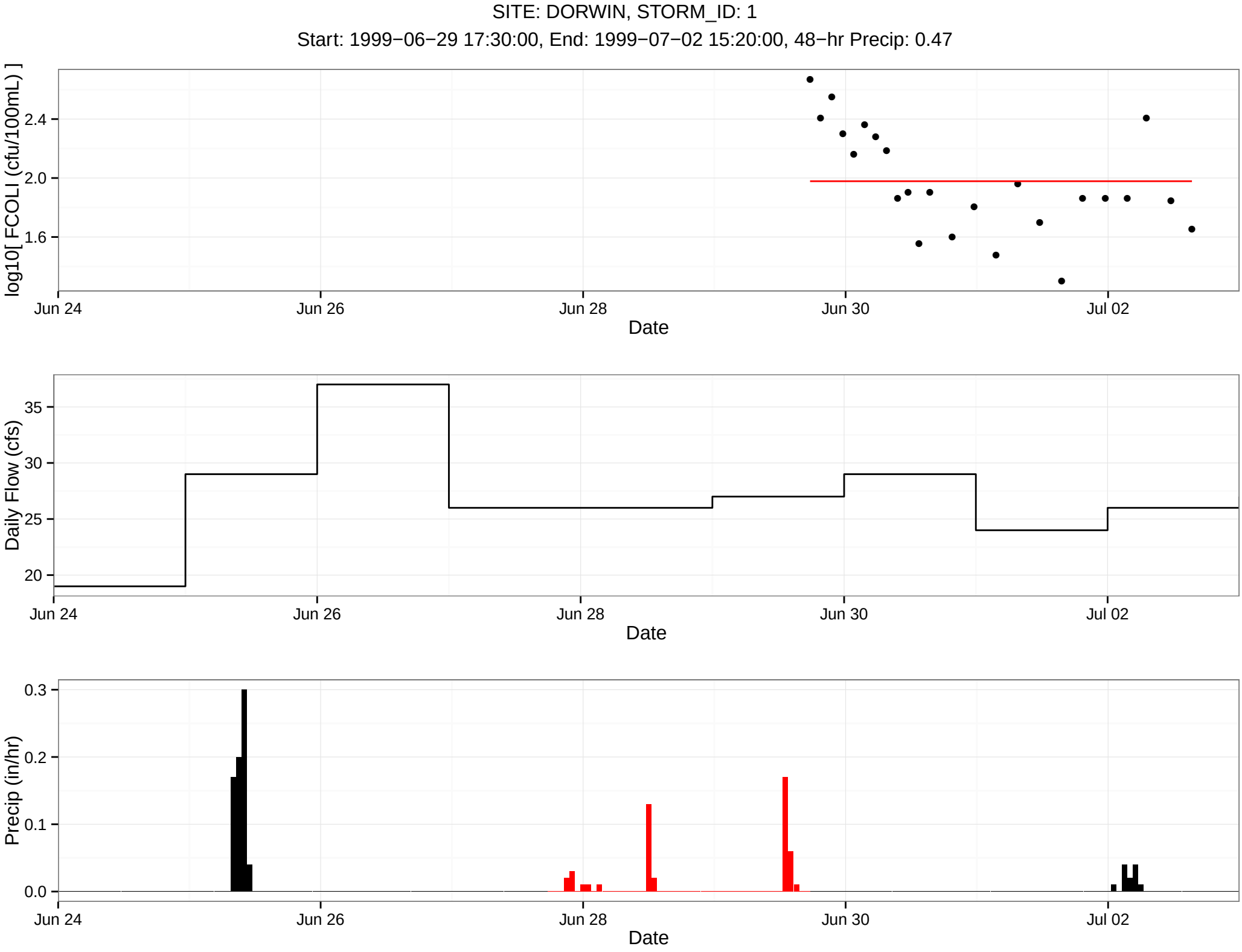

SITE: HIAWATHA, STORM_ID: 4
Start: 2001−06−21 09:40:00, End: 2001−06−22 10:40:00, 48−hr Precip: 0.61
log10[FCOLI (cfu/100mL)]
4.5
4.0
3.5
Jun 16
Jun 18
Jun 20
Jun 22
Date
Daily Flow (cfs)
30
20
10
Jun 16
Jun 18
Jun 20
Jun 22
Date
Precip (in/hr)
0.2
0.1
0.0
Jun 16
Jun 18
Jun 20
Jun 22
Date

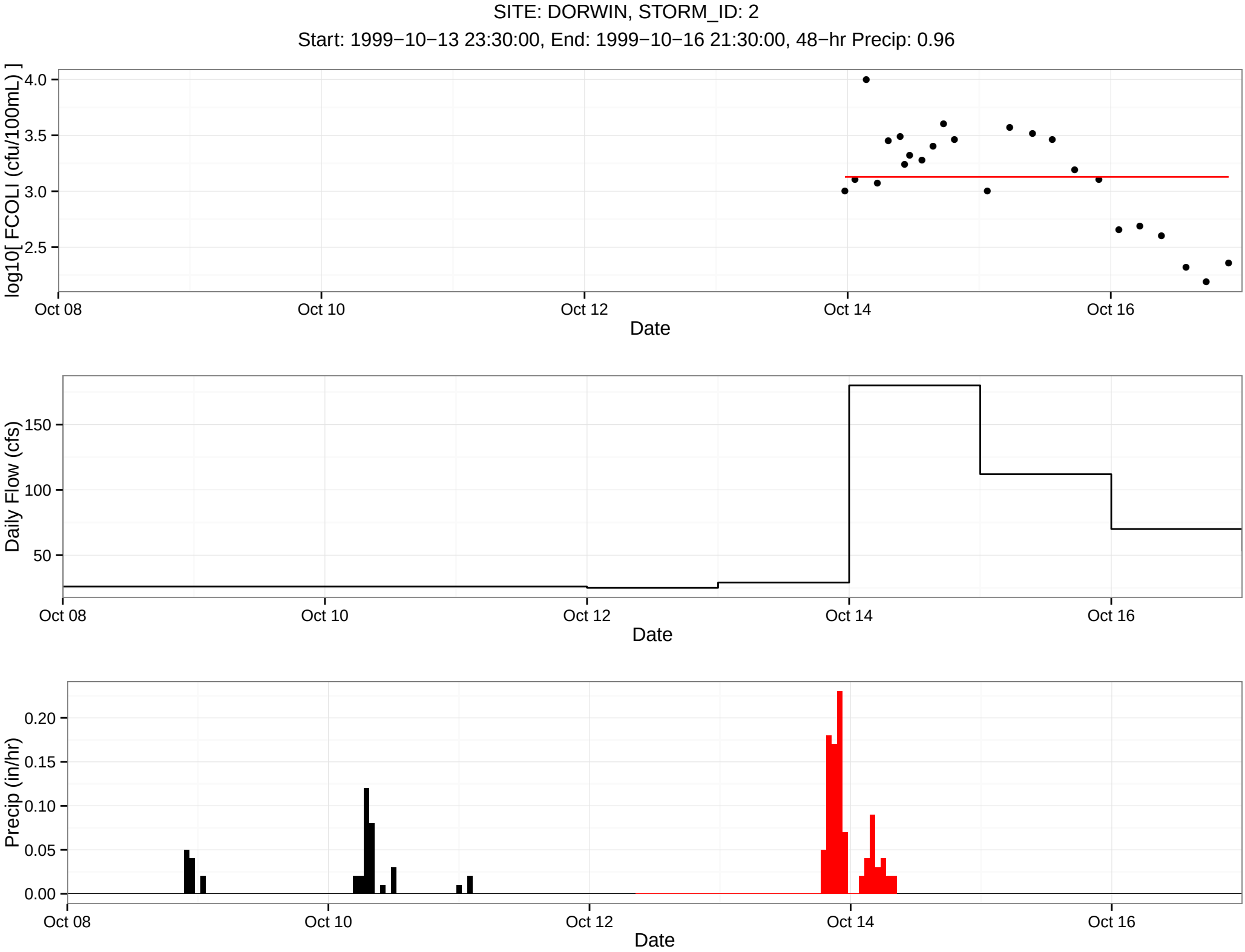

SITE: HIAWATHA, STORM_ID: 5
Start: 2001−08−28, End: 2001−08−31 11:40:00, 48−hr Precip: 0.49
log10[FCOLI (cfu/100mL)]
5.0
4.5
4.0
3.5
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date
Daily Flow (cfs)
10
8
6
4
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date

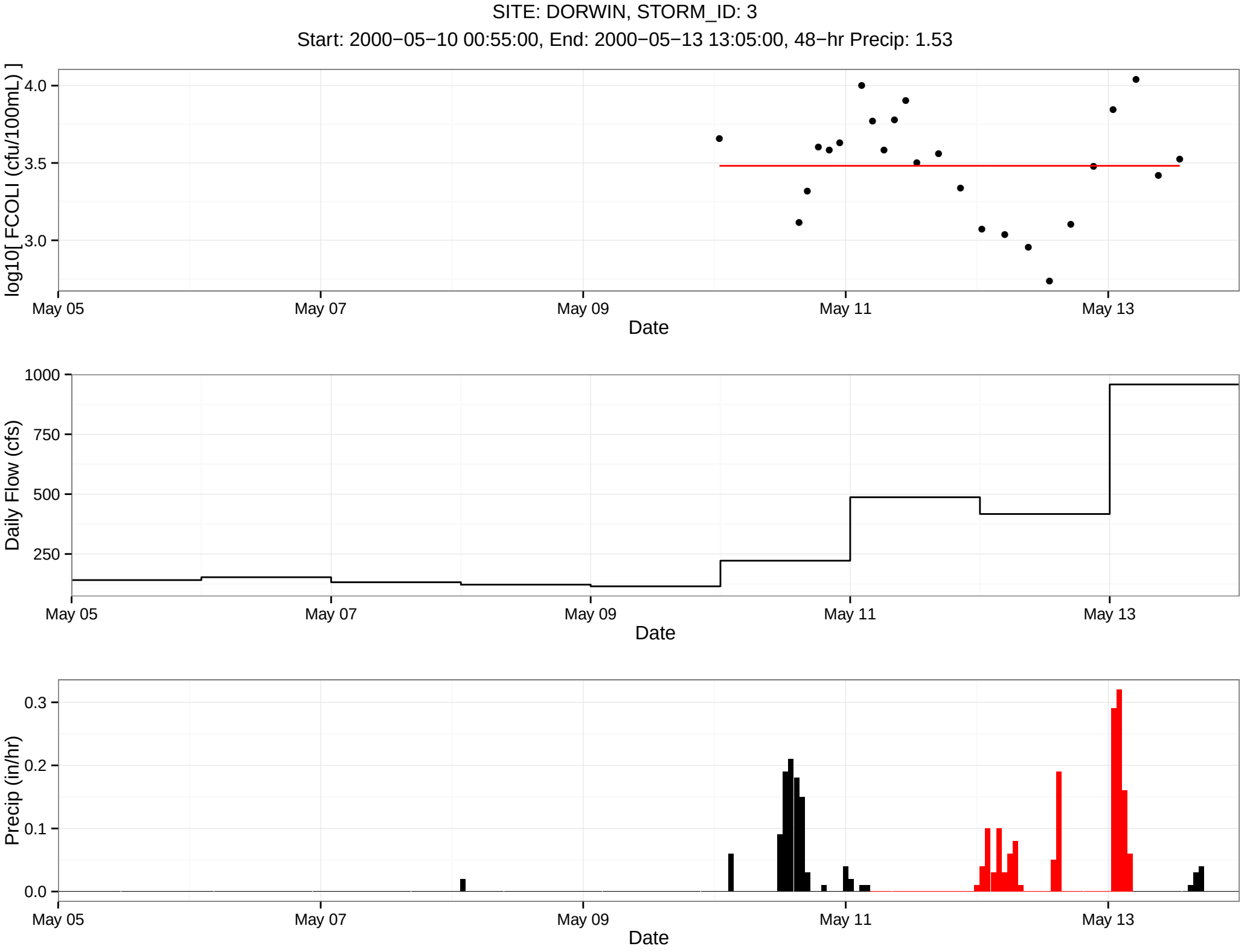

SITE: HIAWATHA, STORM_ID: 6
Start: 2003−08−05 11:00:00, End: 2003−08−08 15:40:00, 48−hr Precip: 1.54
log10[FCOLI (cfu/100mL)]
5
4
3
2
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date
Daily Flow (cfs)
50
40
30
20
10
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date
Precip (in/hr)
0.4
0.2
0.0
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date

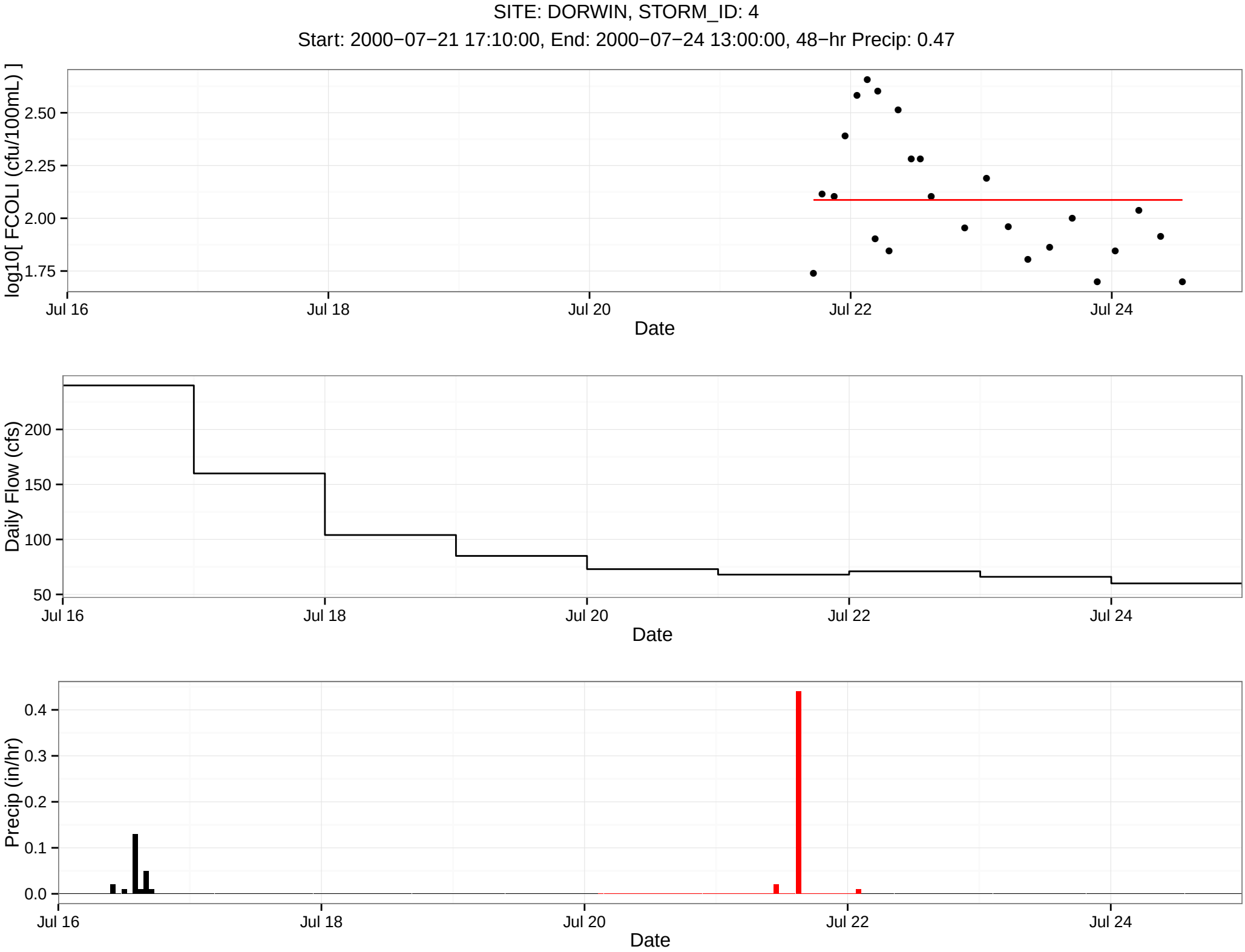

SITE: HIAWATHA, STORM_ID: 8
Start: 2009−08−02 08:55:00, End: 2009−08−05 07:00:00, 48−hr Precip: 1.23
log10[FCOLI (cfu/100mL)]
5
4
3
Jul 28
Jul 30
Aug 01
Aug 03
Aug 05
Date
Daily Flow (cfs)
30
20
10
Jul 28
Jul 30
Aug 01
Aug 03
Aug 05
Date
Precip (in/hr)
0.6
0.4
0.2
0.0
Jul 28
Jul 30
Aug 01
Aug 03
Aug 05
Date

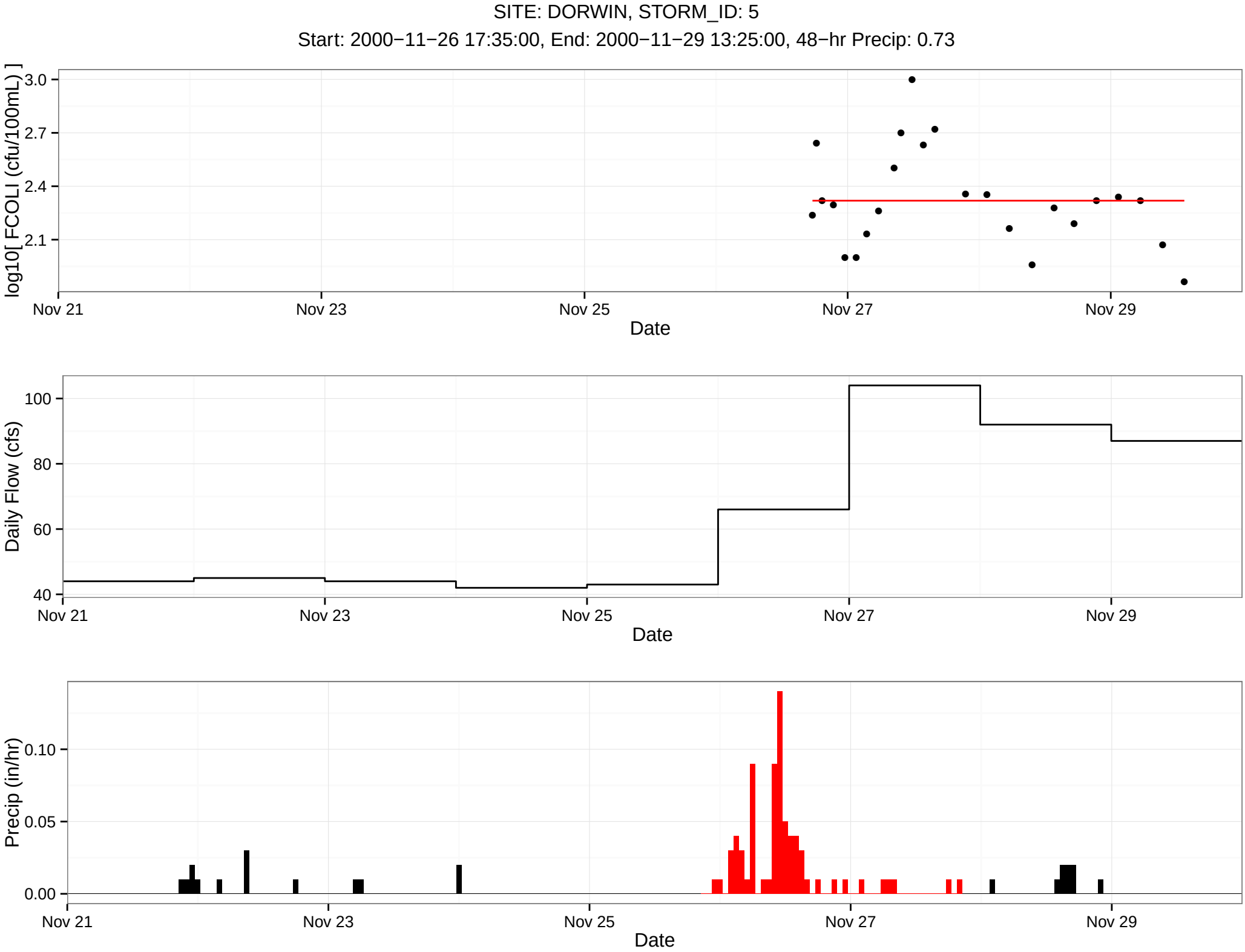

SITE: DORWIN, STORM_ID: 0
Start: 1999−04−11 20:00:00, End: 1999−04−14 14:15:00, 48−hr Precip: 0.25
log10[FCOLI (cfu/100mL)]
2.0
1.5
1.0
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date
Daily Flow (cfs)
200
175
150
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date
Precip (in/hr)
0.15
0.10
0.05
0.00
Apr 06
Apr 08
Apr 10
Apr 12
Apr 14
Date

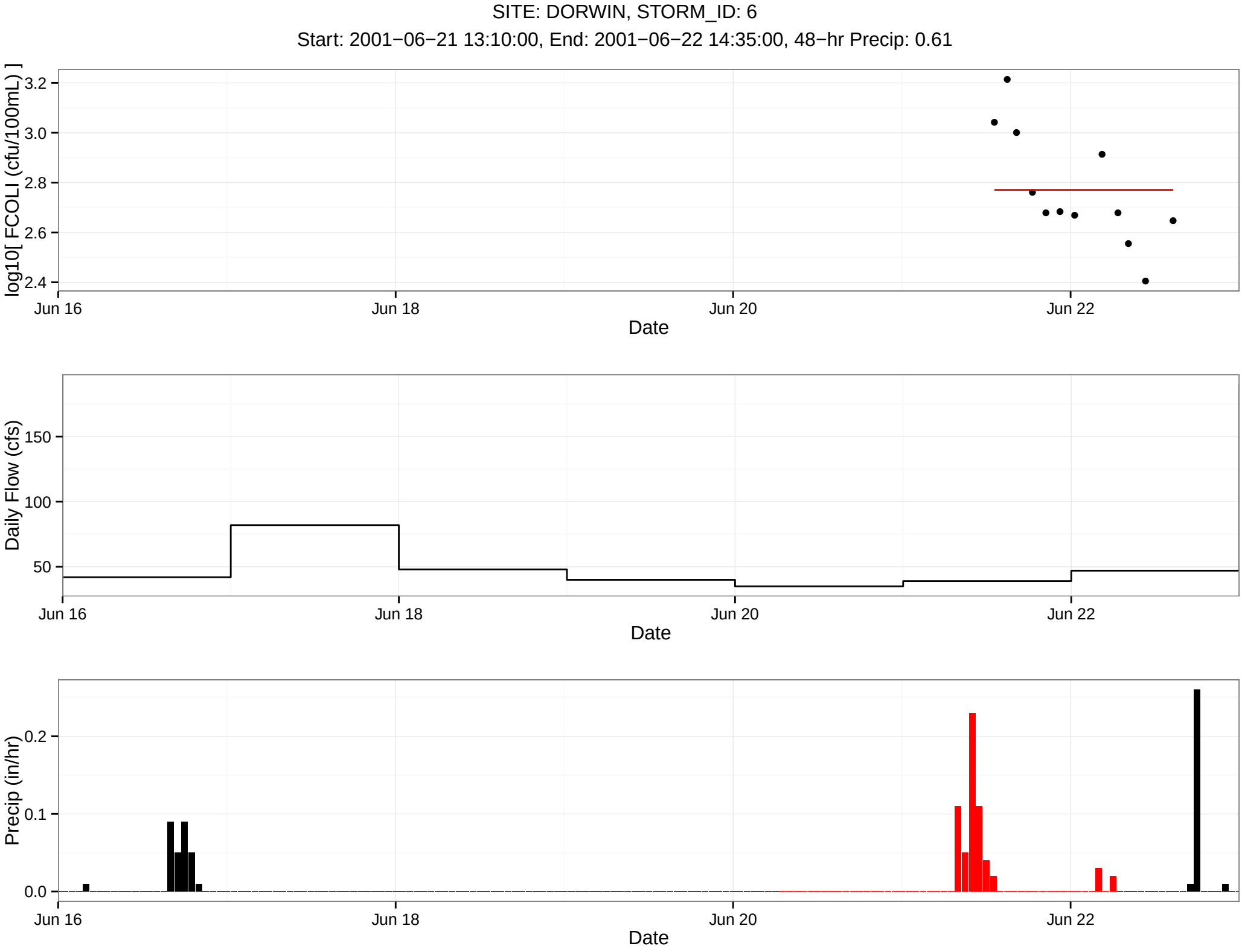

SITE: DORWIN, STORM_ID: 1
Start: 1999−06−29 17:30:00, End: 1999−07−02 15:20:00, 48−hr Precip: 0.47
log10[FCOLI (cfu/100mL)]
2.4
2.0
1.6
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date
Daily Flow (cfs)
35
30
25
20
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
Jun 24
Jun 26
Jun 28
Jun 30
Jul 02
Date

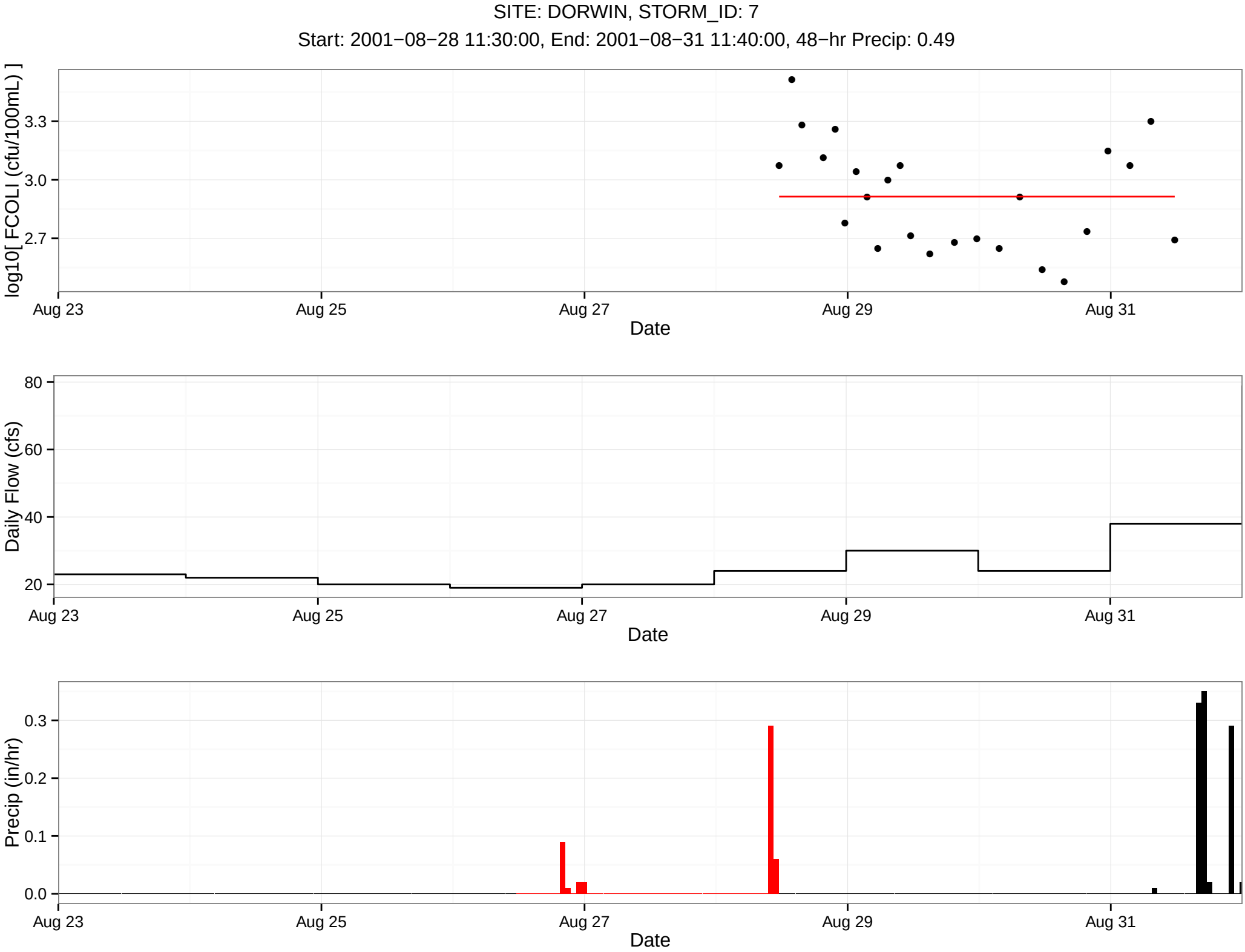

SITE: DORWIN, STORM_ID: 2
Start: 1999−10−13 23:30:00, End: 1999−10−16 21:30:00, 48−hr Precip: 0.96
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date
Daily Flow (cfs)
150
100
50
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date
Precip (in/hr)
0.20
0.15
0.10
0.05
0.00
Oct 08
Oct 10
Oct 12
Oct 14
Oct 16
Date

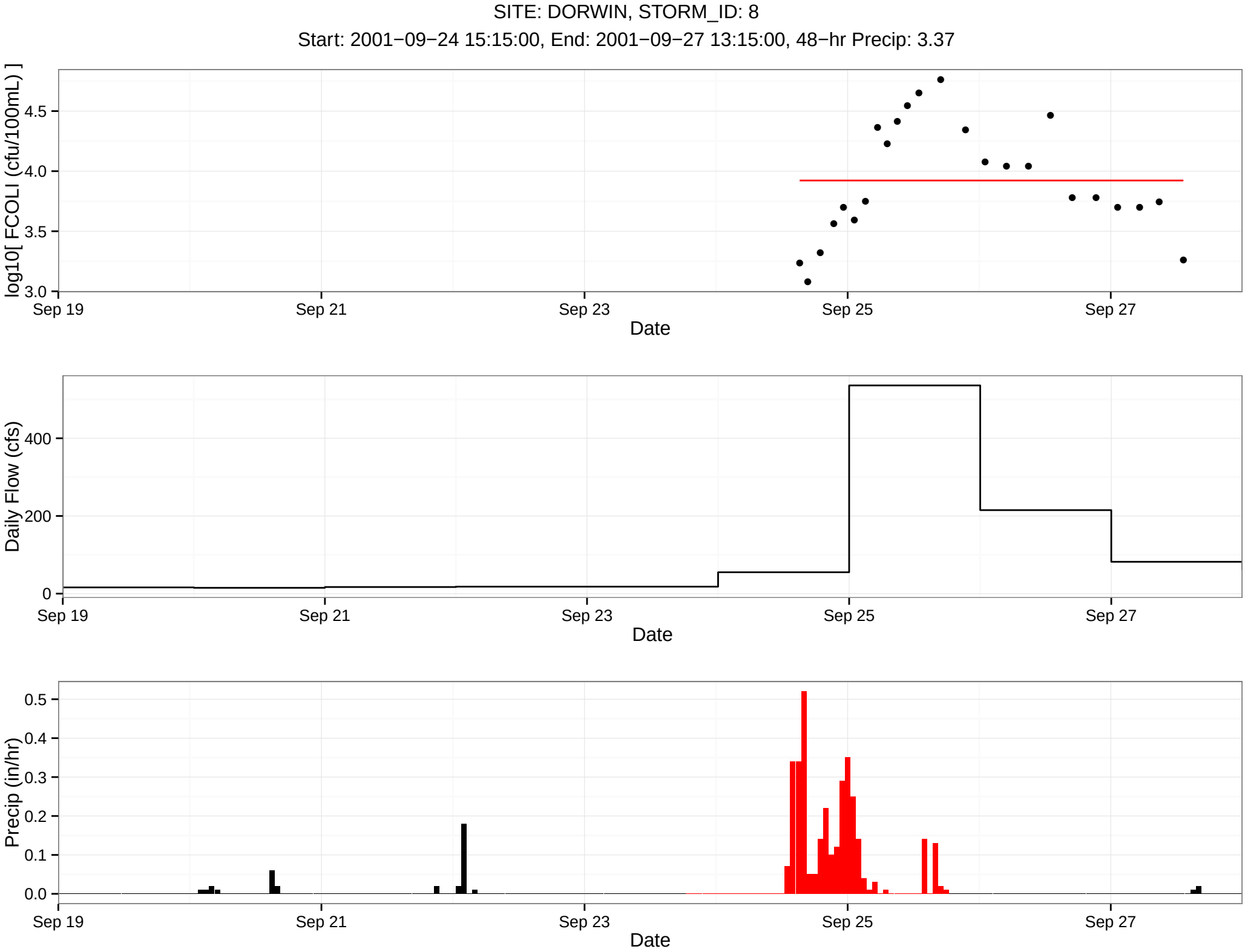

SITE: DORWIN, STORM_ID: 3
Start: 2000−05−10 00:55:00, End: 2000−05−13 13:05:00, 48−hr Precip: 1.53
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
May 05
May 07
May 09
May 11
May 13
Date
Daily Flow (cfs)
1000
750
500
250
May 05
May 07
May 09
May 11
May 13
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
May 05
May 07
May 09
May 11
May 13
Date

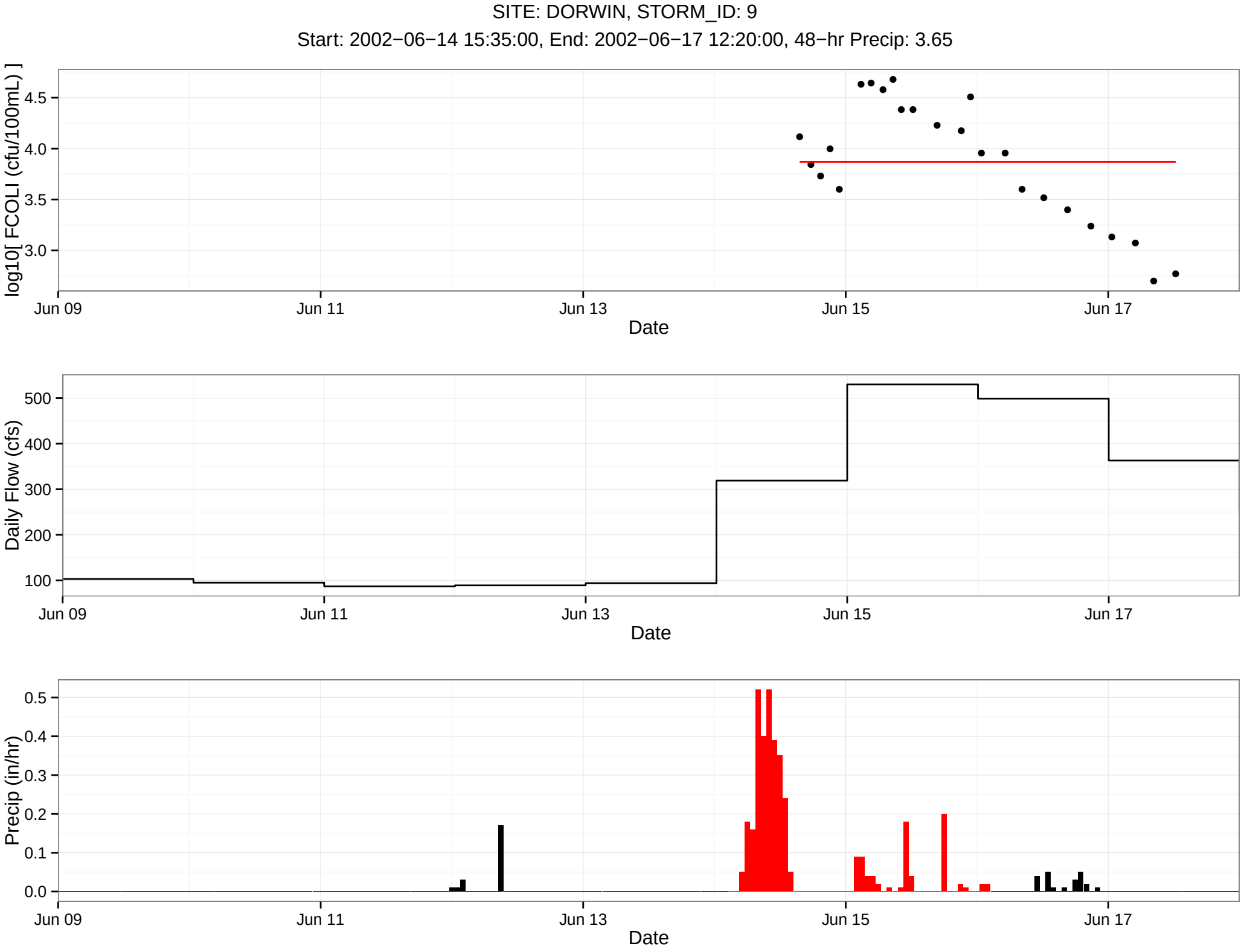

SITE: DORWIN, STORM_ID: 4
Start: 2000−07−21 17:10:00, End: 2000−07−24 13:00:00, 48−hr Precip: 0.47
log10[FCOLI (cfu/100mL)]
2.50
2.25
2.00
1.75
Jul 16
Jul 18
Jul 20
Jul 22
Jul 24
Date
Daily Flow (cfs)
200
150
100
50
Jul 16
Jul 18
Jul 20
Jul 22
Jul 24
Date
Precip (in/hr)
0.4
0.3
0.2
0.1
0.0
Jul 16
Jul 18
Jul 20
Jul 22
Jul 24
Date

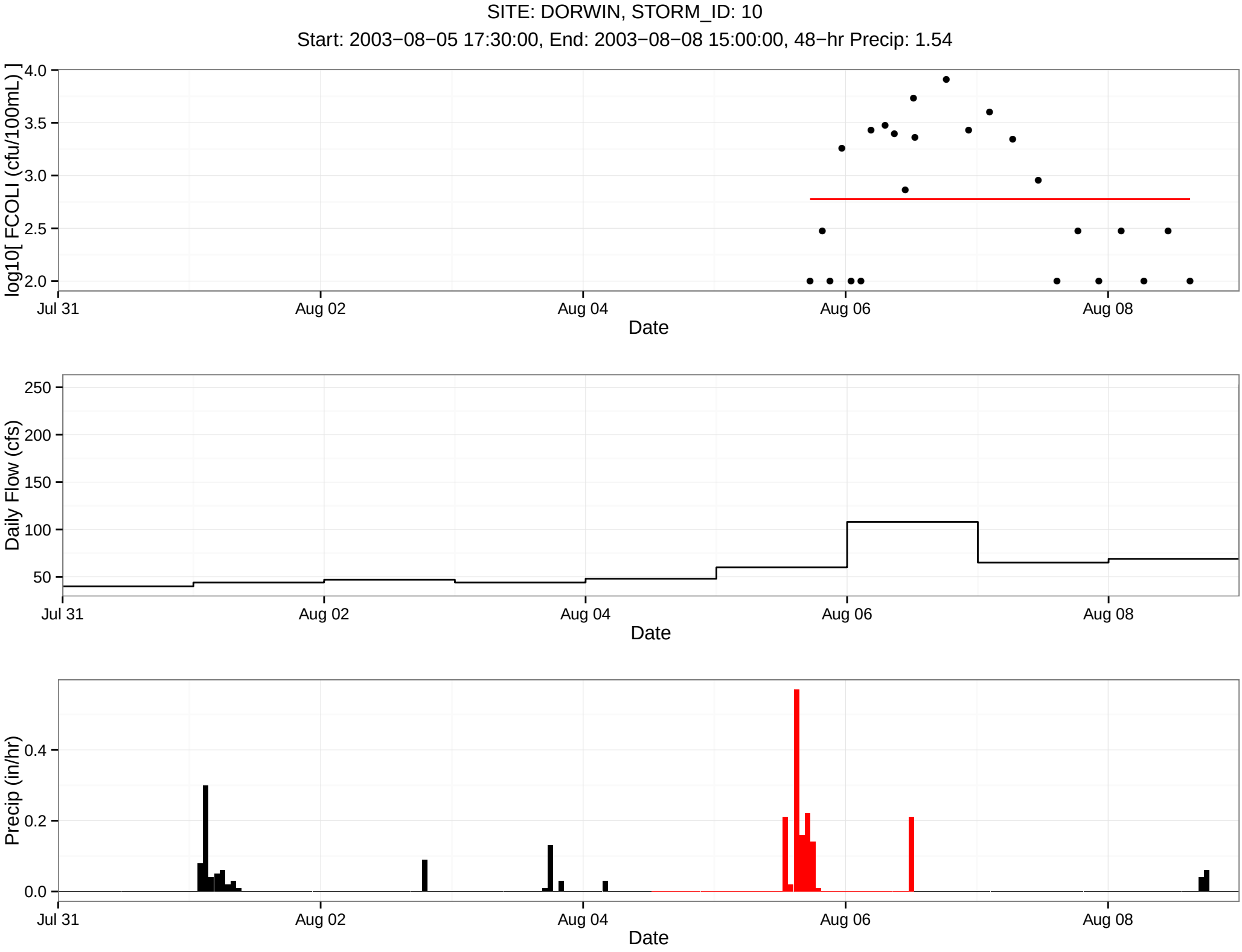

SITE: DORWIN, STORM_ID: 5
Start: 2000−11−26 17:35:00, End: 2000−11−29 13:25:00, 48−hr Precip: 0.73
log10[FCOLI (cfu/100mL)]
3.0
2.7
2.4
2.1
Nov 21
Nov 23
Nov 25
Nov 27
Nov 29
Date
Daily Flow (cfs)
100
80
60
40
Nov 21
Nov 23
Nov 25
Nov 27
Nov 29
Date
Precip (in/hr)
0.10
0.05
0.00
Nov 21
Nov 23
Nov 25
Nov 27
Nov 29
Date

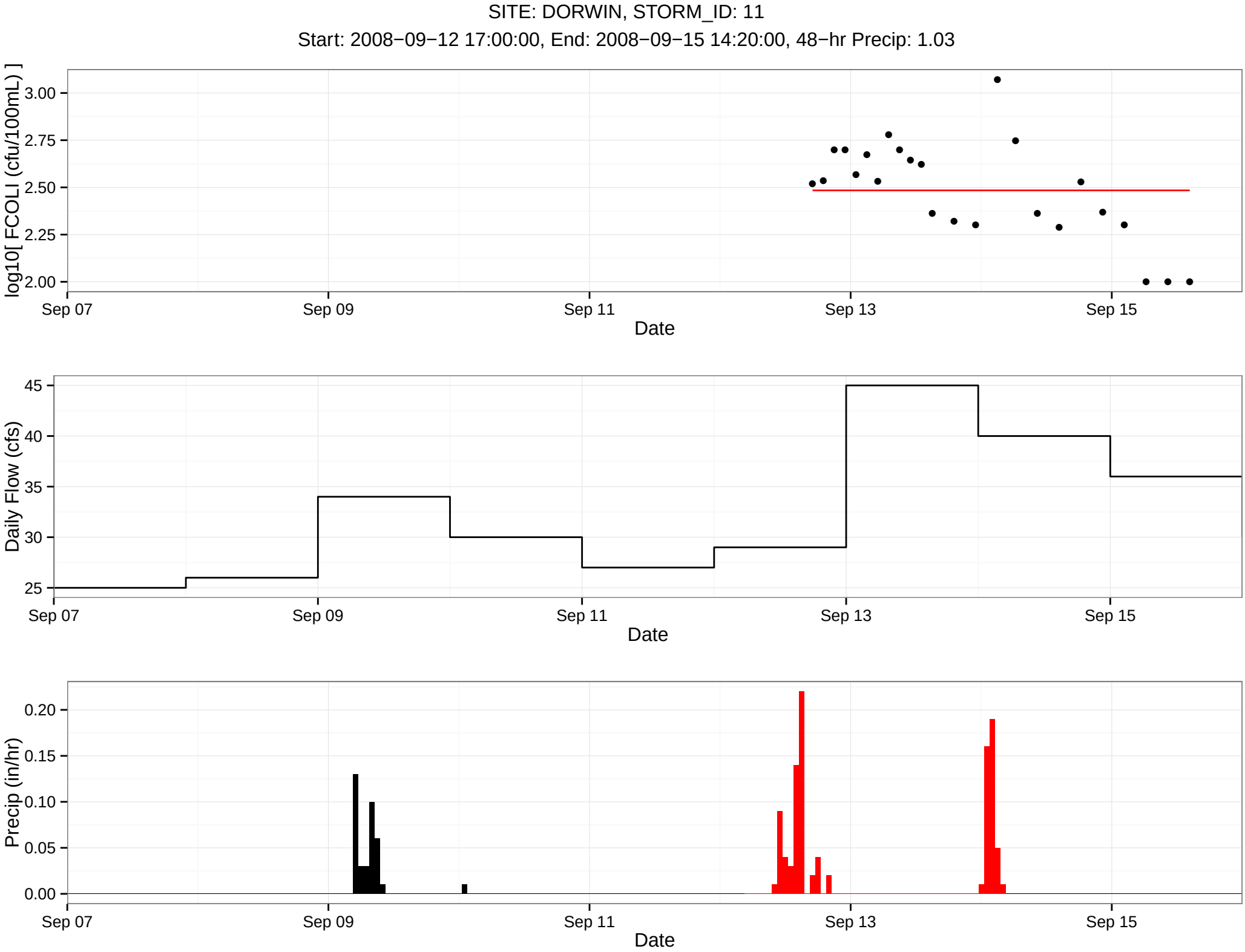

SITE: DORWIN, STORM_ID: 6
Start: 2001−06−21 13:10:00, End: 2001−06−22 14:35:00, 48−hr Precip: 0.61
log10[FCOLI (cfu/100mL)]
3.2
3.0
2.8
2.6
2.4
Jun 16
Jun 18
Jun 20
Jun 22
Date
Daily Flow (cfs)
150
100
50
Jun 16
Jun 18
Jun 20
Jun 22
Date
Precip (in/hr)
0.2
0.1
0.0
Jun 16
Jun 18
Jun 20
Jun 22
Date

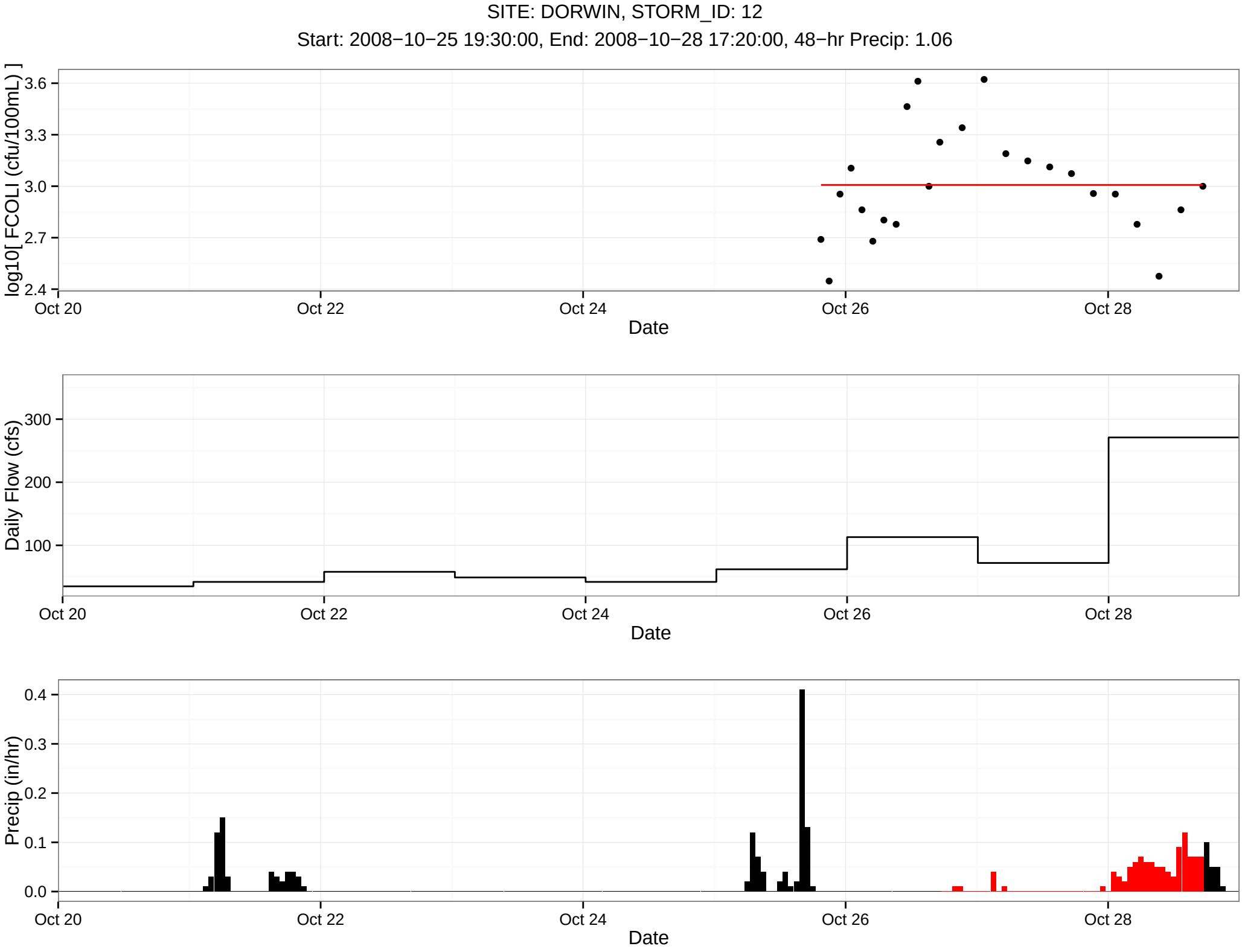

SITE: DORWIN, STORM_ID: 7
Start: 2001−08−28 11:30:00, End: 2001−08−31 11:40:00, 48−hr Precip: 0.49
log10[FCOLI (cfu/100mL)]
3.3
3.0
2.7
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date
Daily Flow (cfs)
80
60
40
20
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date

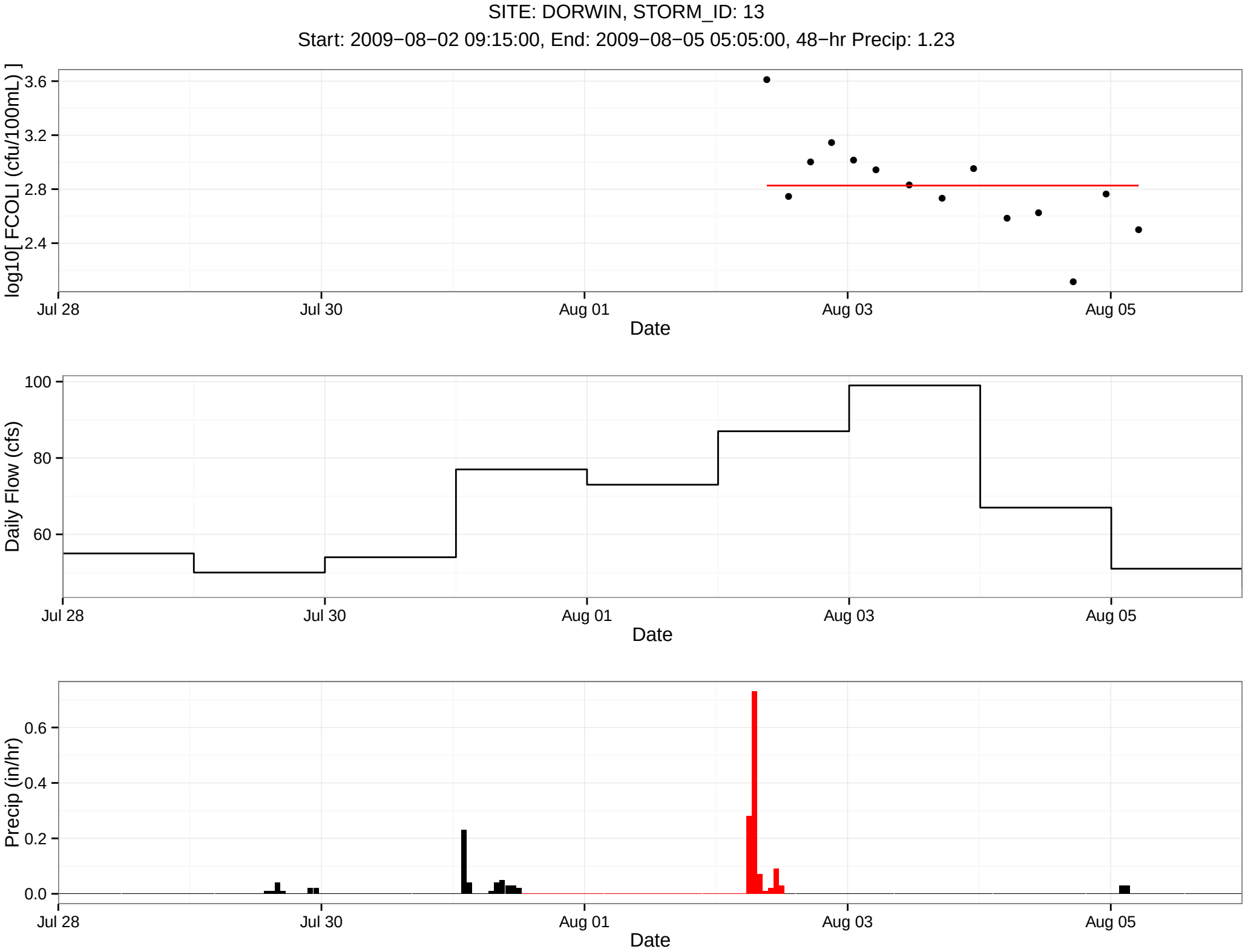

SITE: DORWIN, STORM_ID: 8
Start: 2001−09−24 15:15:00, End: 2001−09−27 13:15:00, 48−hr Precip: 3.37
log10[FCOLI (cfu/100mL)]
4.5
4.0
3.5
3.0
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date
Daily Flow (cfs)
400
200
0
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date
Precip (in/hr)
0.5
0.4
0.3
0.2
0.1
0.0
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date

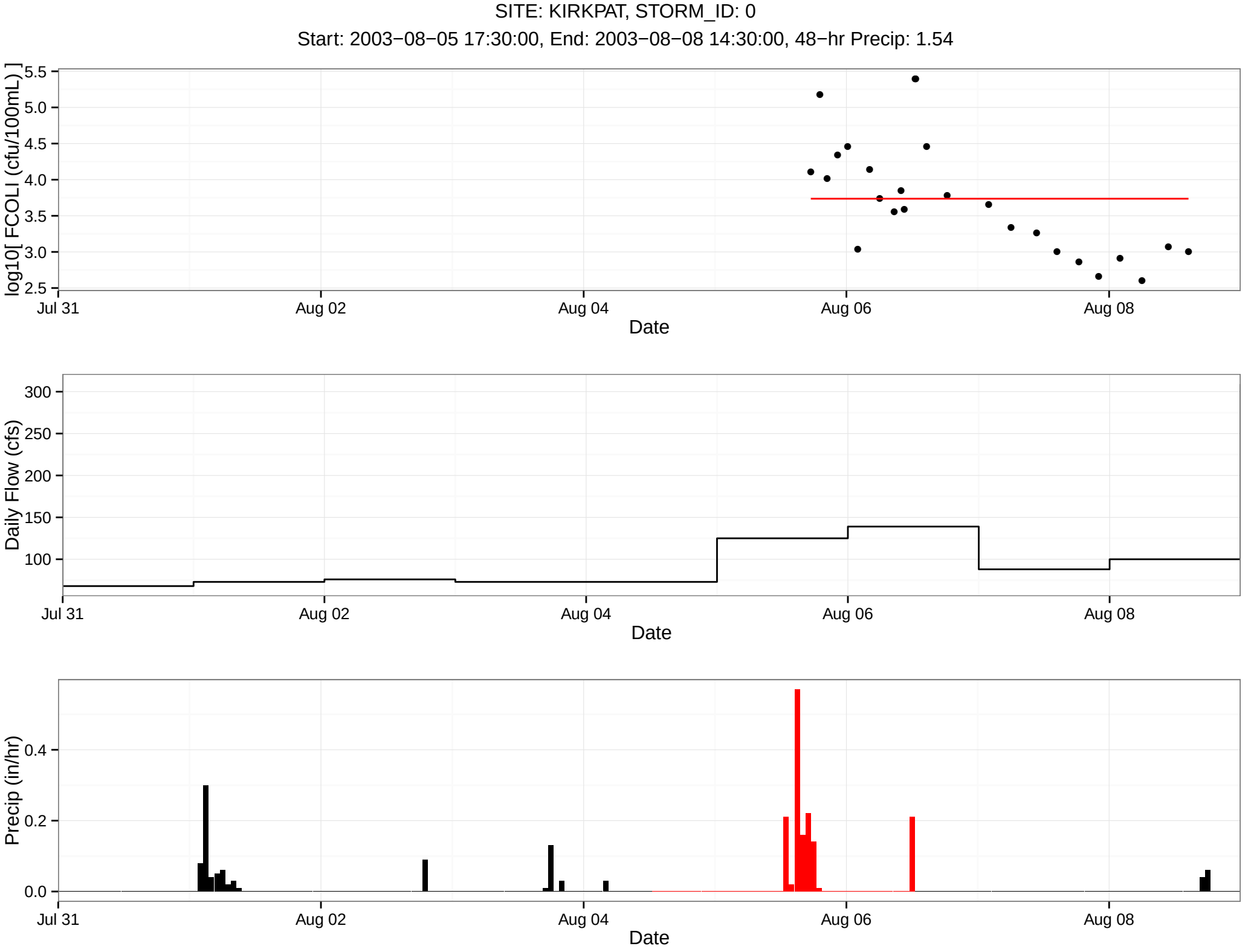

SITE: DORWIN, STORM_ID: 9
Start: 2002−06−14 15:35:00, End: 2002−06−17 12:20:00, 48−hr Precip: 3.65
log10[FCOLI (cfu/100mL)]
4.5
4.0
3.5
3.0
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date
Daily Flow (cfs)
500
400
300
200
100
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date
Precip (in/hr)
0.5
0.4
0.3
0.2
0.1
0.0
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date

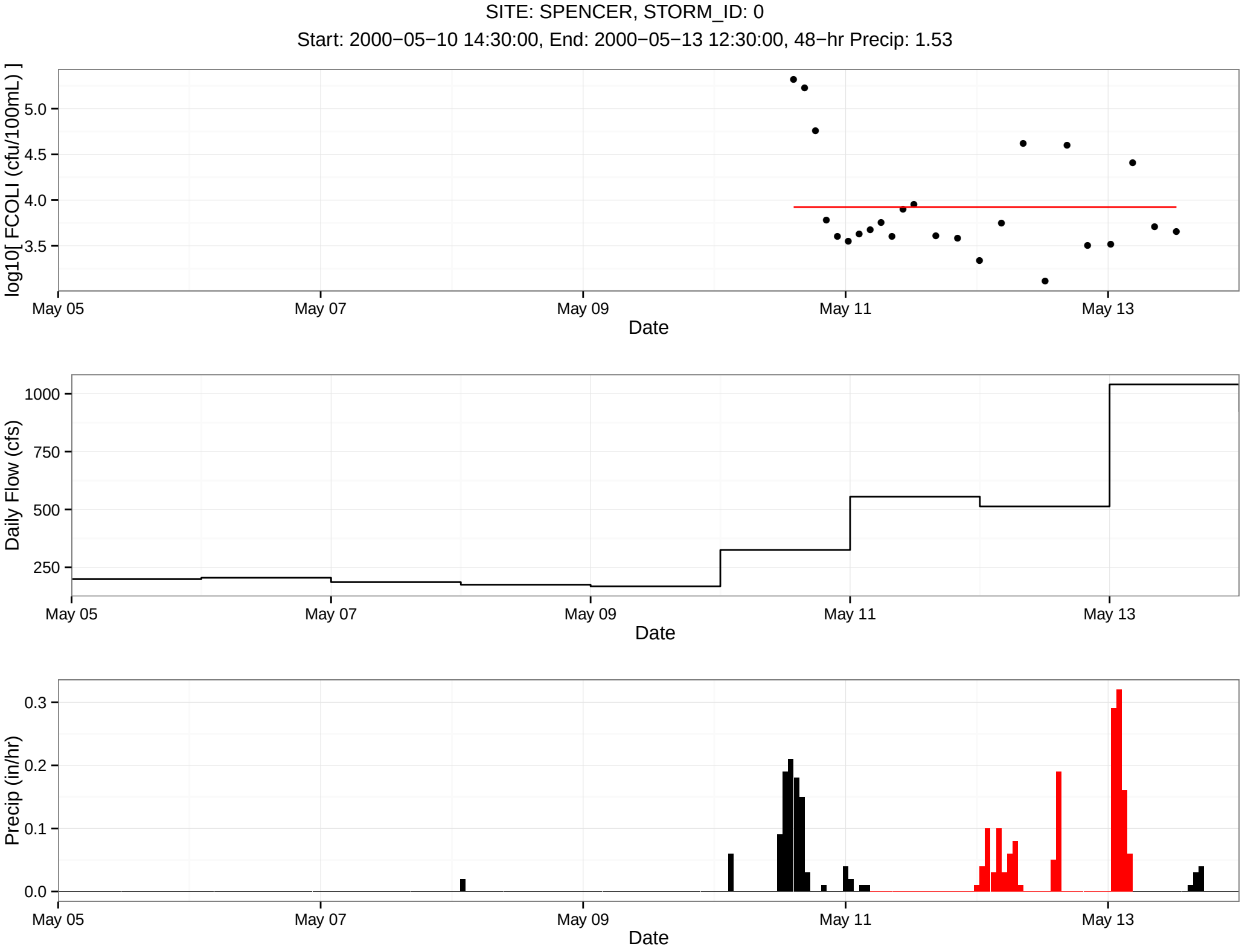

SITE: DORWIN, STORM_ID: 10
Start: 2003−08−05 17:30:00, End: 2003−08−08 15:00:00, 48−hr Precip: 1.54
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
2.0
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date
Daily Flow (cfs)
250
200
150
100
50
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date
Precip (in/hr)
0.4
0.2
0.0
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date

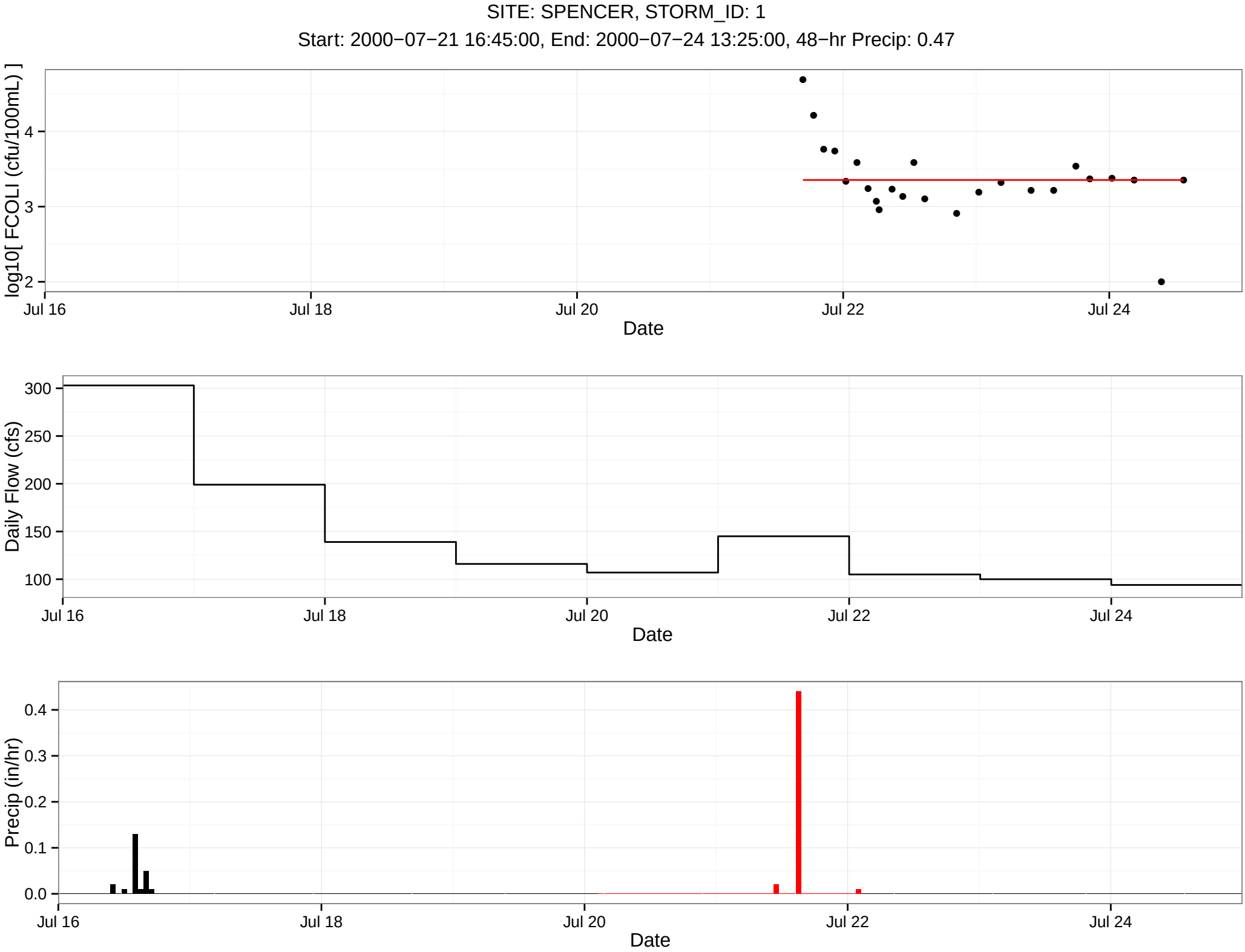

SITE: DORWIN, STORM_ID: 11
Start: 2008−09−12 17:00:00, End: 2008−09−15 14:20:00, 48−hr Precip: 1.03
log10[FCOLI (cfu/100mL)]
3.00
2.75
2.50
2.25
2.00
Sep 07
Sep 09
Sep 11
Sep 13
Sep 15
Date
Daily Flow (cfs)
45
40
35
30
25
Sep 07
Sep 09
Sep 11
Sep 13
Sep 15
Date
Precip (in/hr)
0.20
0.15
0.10
0.05
0.00
Sep 07
Sep 09
Sep 11
Sep 13
Sep 15
Date

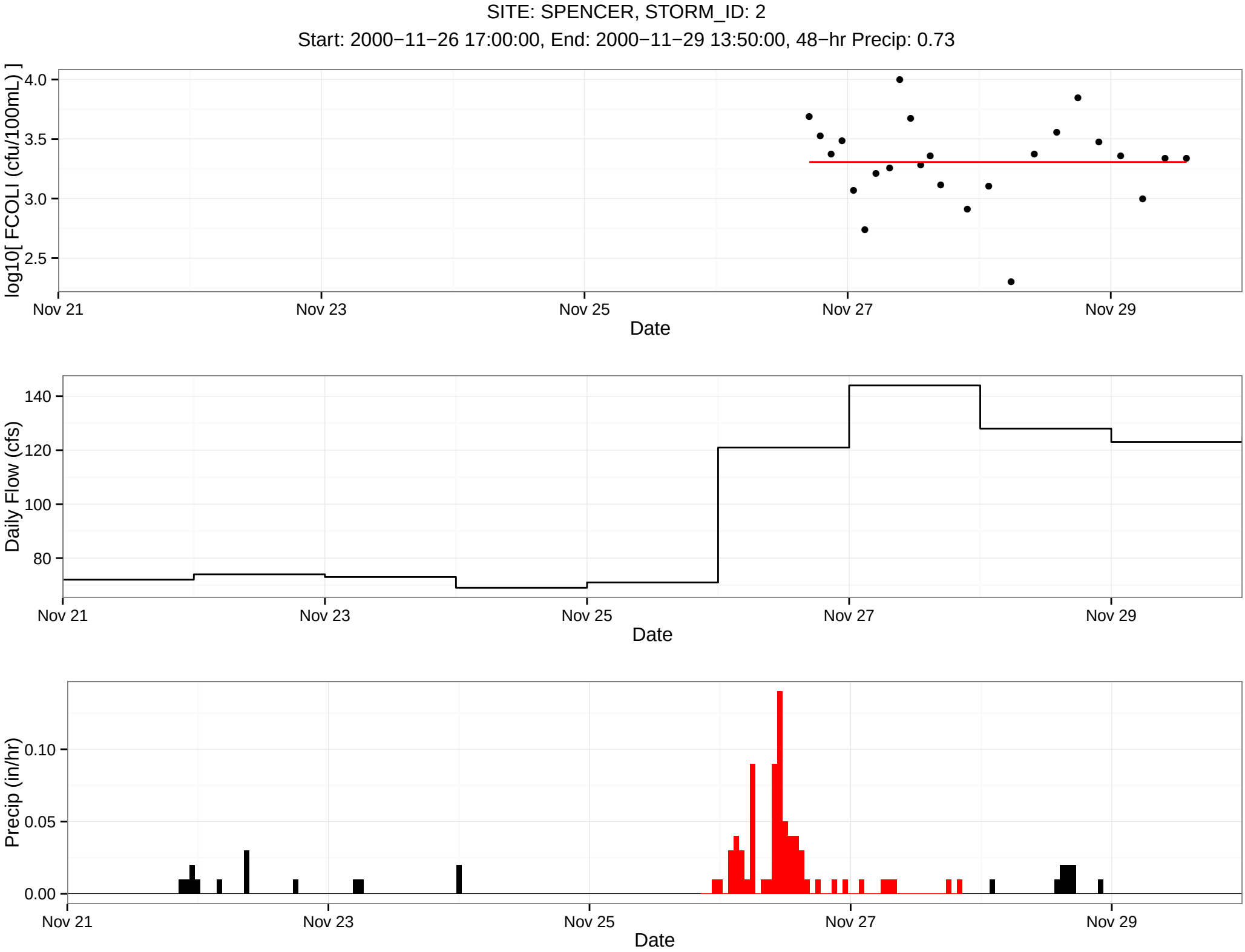

SITE: DORWIN, STORM_ID: 12
Start: 2008−10−25 19:30:00, End: 2008−10−28 17:20:00, 48−hr Precip: 1.06
log10[FCOLI (cfu/100mL)]
3.6
3.3
3.0
2.7
2.4
Oct 20
Oct 22
Oct 24
Oct 26
Oct 28
Date
Daily Flow (cfs)
300
200
100
Oct 20
Oct 22
Oct 24
Oct 26
Oct 28
Date
Precip (in/hr)
0.4
0.3
0.2
0.1
0.0
Oct 20
Oct 22
Oct 24
Oct 26
Oct 28
Date

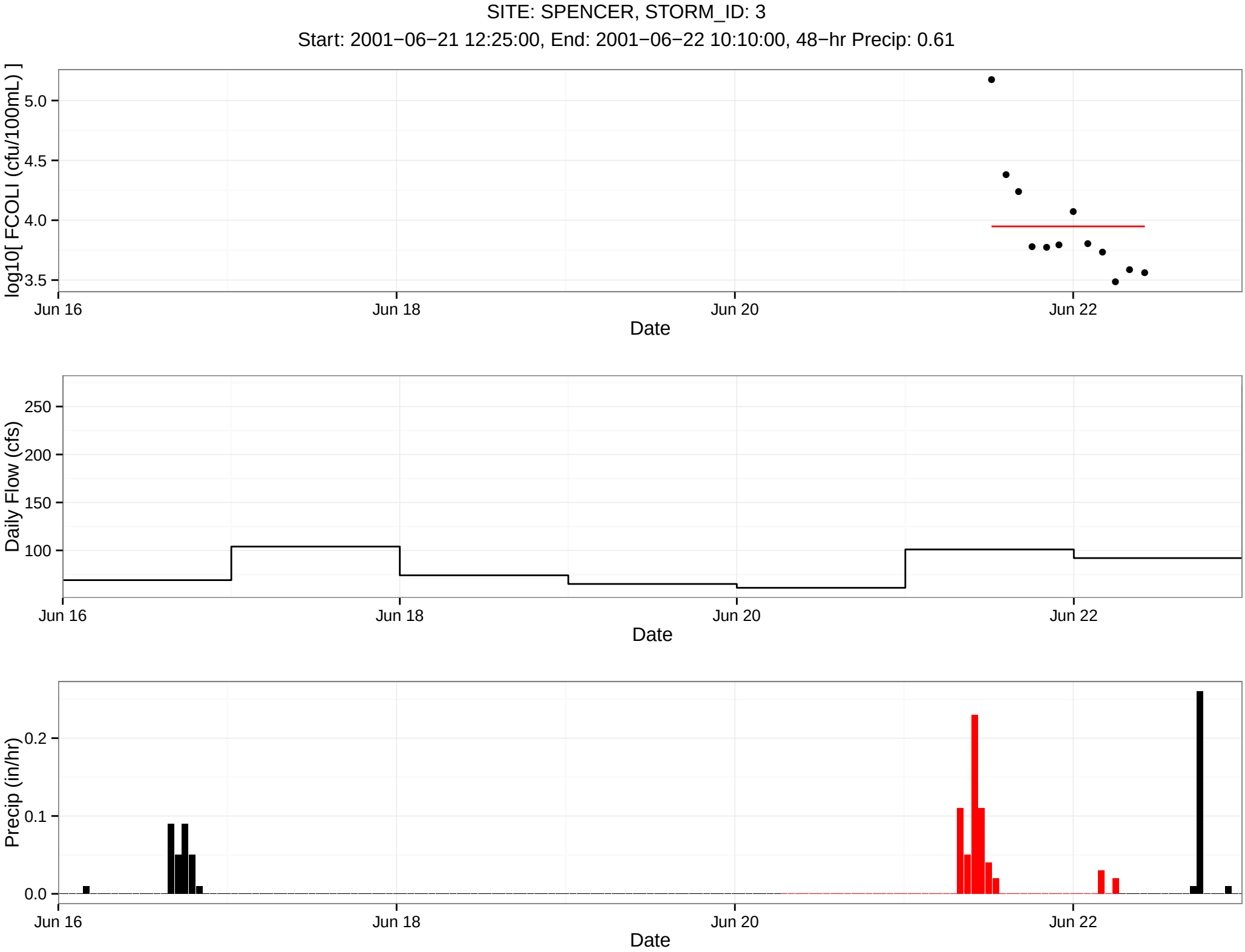

SITE: DORWIN, STORM_ID: 13
Start: 2009−08−02 09:15:00, End: 2009−08−05 05:05:00, 48−hr Precip: 1.23
log10[FCOLI (cfu/100mL)]
3.6
3.2
2.8
2.4
Jul 28
Jul 30
Aug 01
Aug 03
Aug 05
Date
Daily Flow (cfs)
100
80
60
Jul 28
Jul 30
Aug 01
Aug 03
Aug 05
Date
Precip (in/hr)
0.6
0.4
0.2
0.0
Jul 28
Jul 30
Aug 01
Aug 03
Aug 05
Date

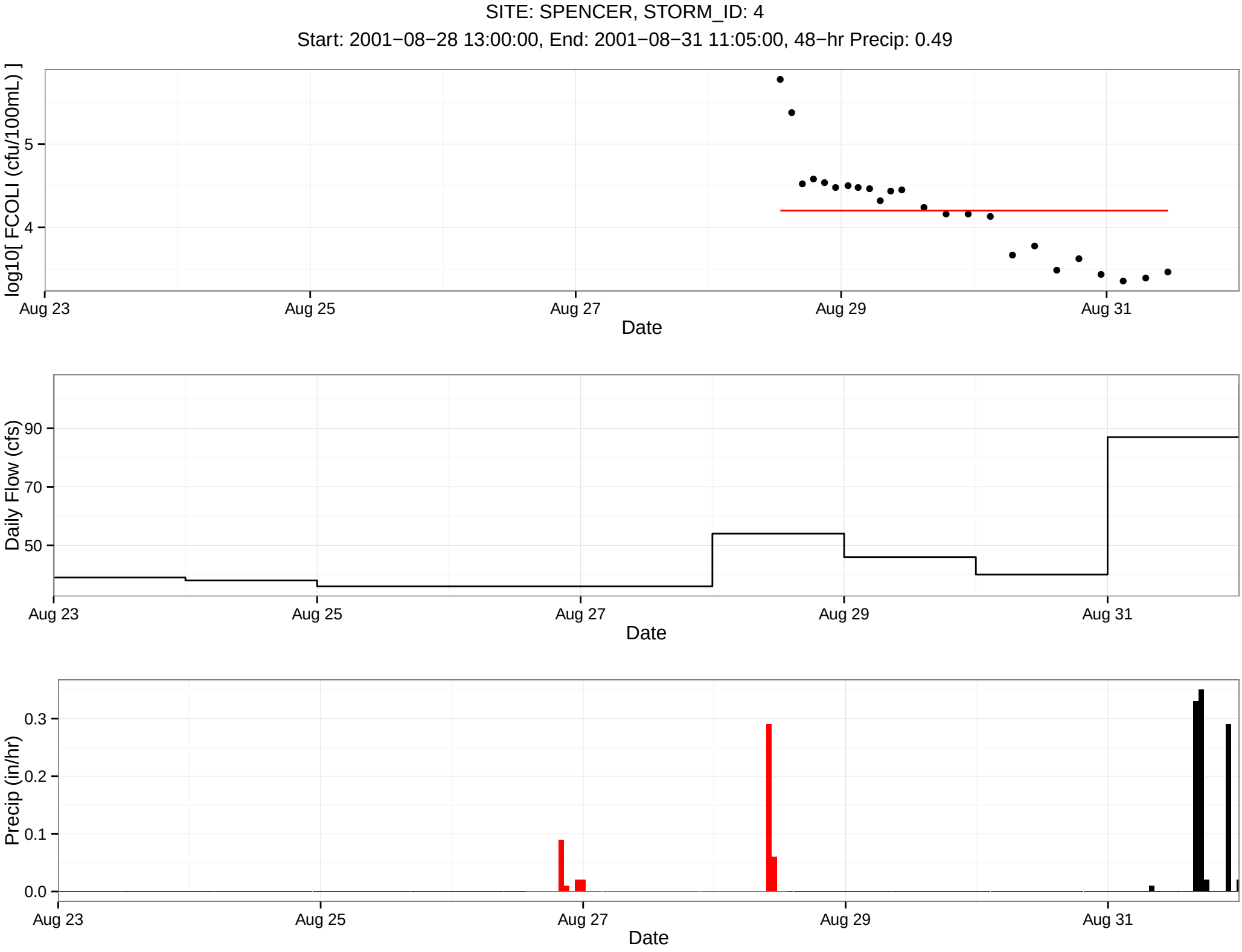

SITE: KIRKPAT, STORM_ID: 0
Start: 2003−08−05 17:30:00, End: 2003−08−08 14:30:00, 48−hr Precip: 1.54
log10[FCOLI (cfu/100mL)]
5.5
5.0
4.5
4.0
3.5
3.0
2.5
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date
Daily Flow (cfs)
300
250
200
150
100
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date
Precip (in/hr)
0.4
0.2
0.0
Jul 31
Aug 02
Aug 04
Aug 06
Aug 08
Date

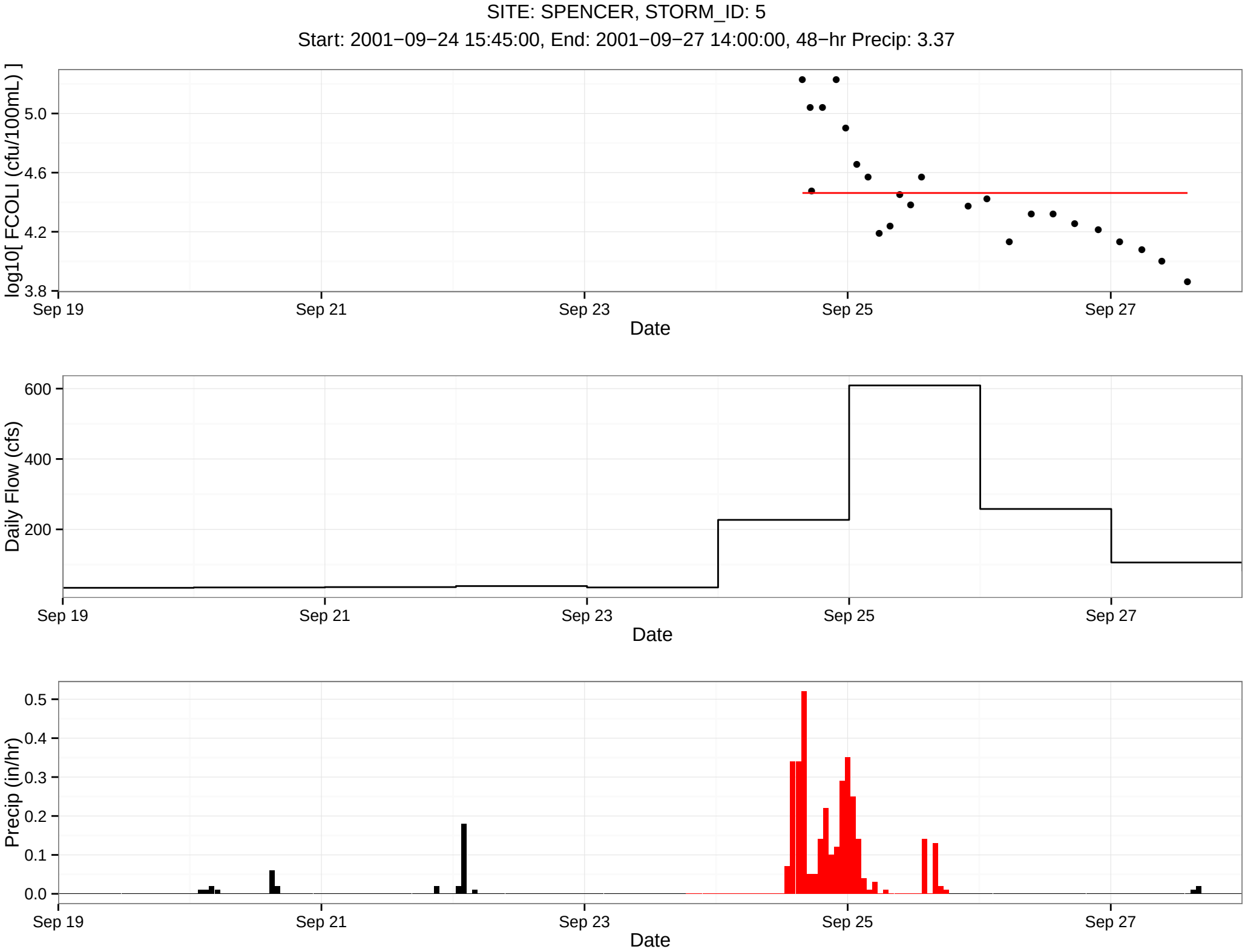

SITE: SPENCER, STORM_ID: 0
Start: 2000−05−10 14:30:00, End: 2000−05−13 12:30:00, 48−hr Precip: 1.53
log10[FCOLI (cfu/100mL)]
5.0
4.5
4.0
3.5
May 05
May 07
May 09
May 11
May 13
Date
Daily Flow (cfs)
1000
750
500
250
May 05
May 07
May 09
May 11
May 13
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
May 05
May 07
May 09
May 11
May 13
Date

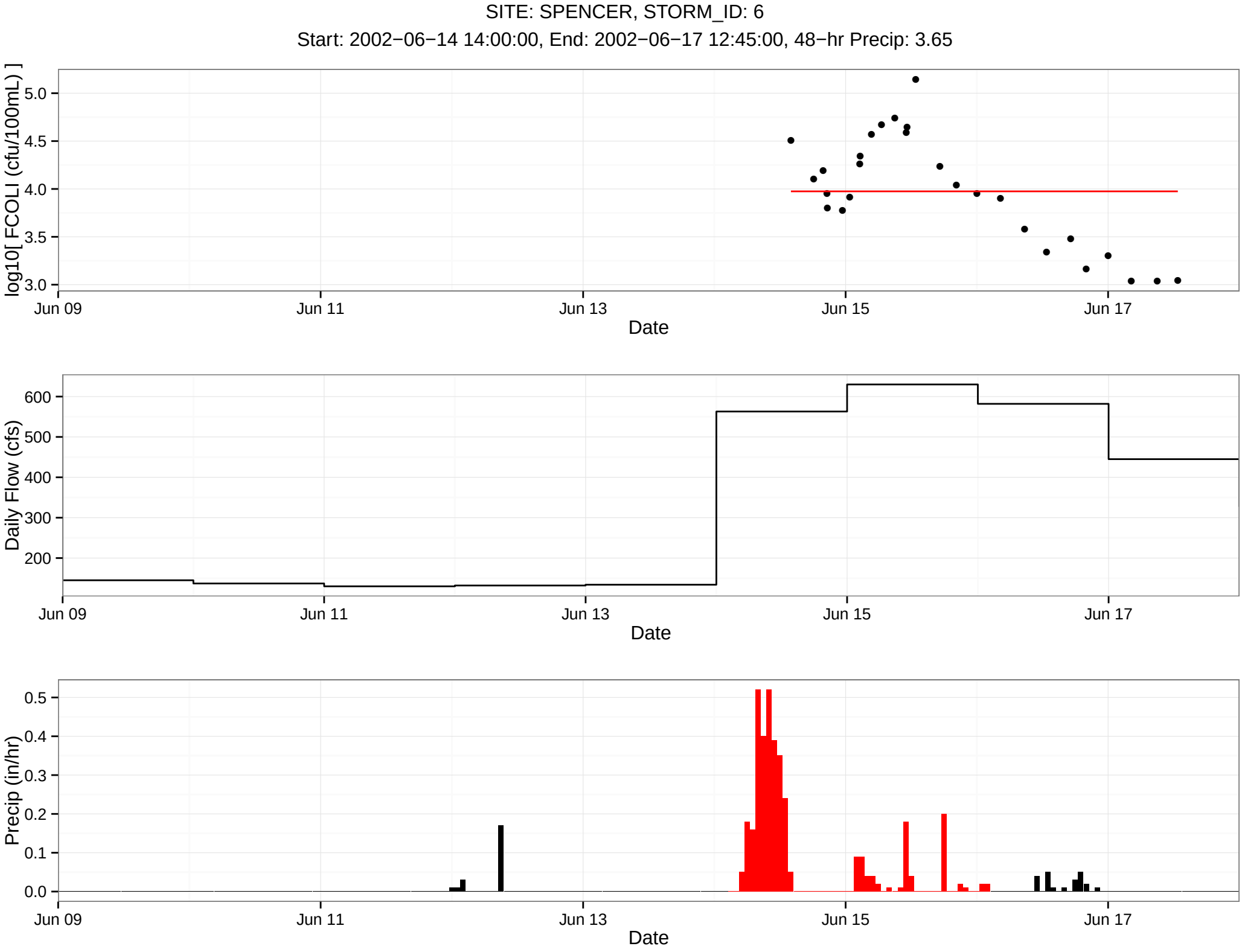

SITE: SPENCER, STORM_ID: 1
Start: 2000−07−21 16:45:00, End: 2000−07−24 13:25:00, 48−hr Precip: 0.47
log10[FCOLI (cfu/100mL)]
4
3
2
Jul 16
Jul 18
Jul 20
Jul 22
Jul 24
Date
Daily Flow (cfs)
300
250
200
150
100
Jul 16
Jul 18
Jul 20
Jul 22
Jul 24
Date
Precip (in/hr)
0.4
0.3
0.2
0.1
0.0
Jul 16
Jul 18
Jul 20
Jul 22
Jul 24
Date

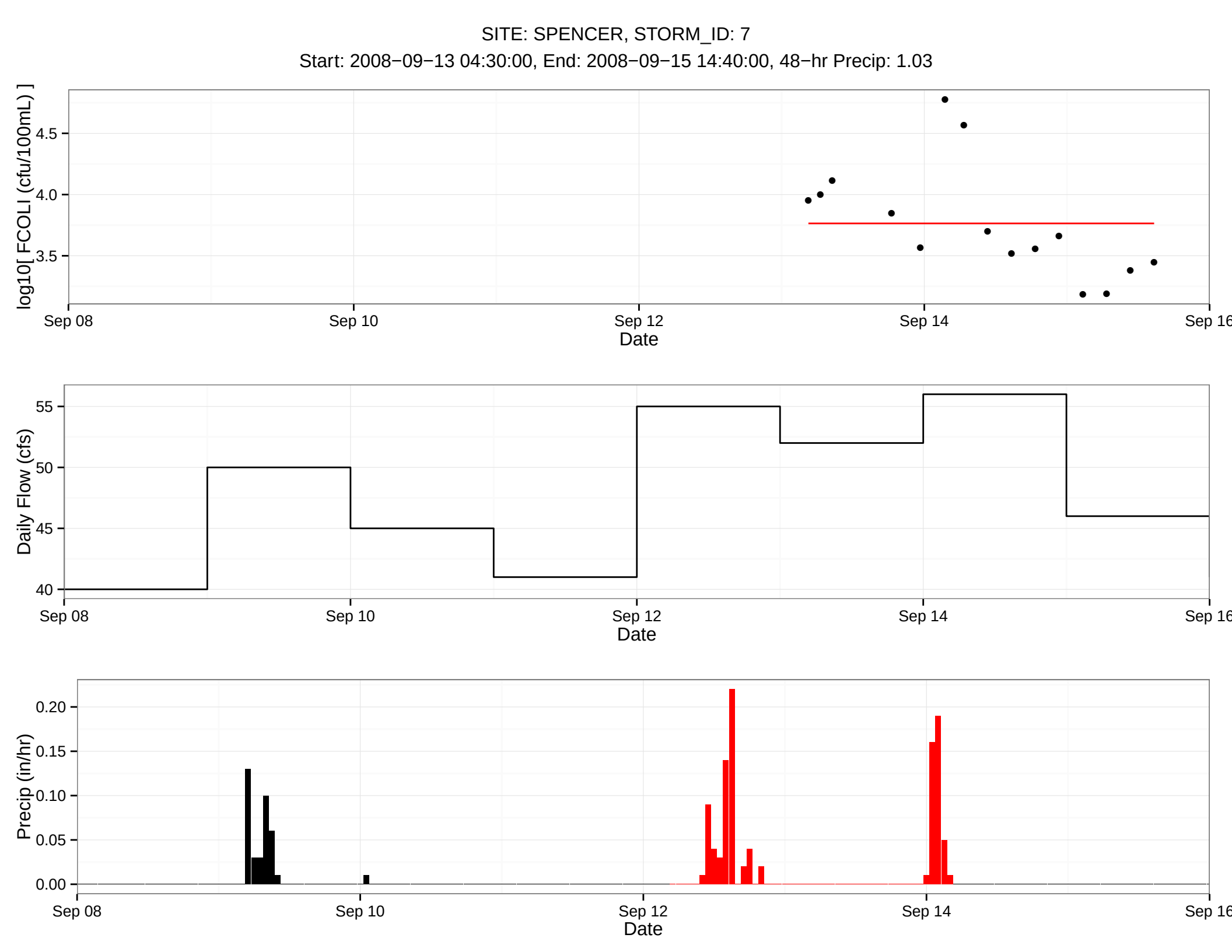

SITE: SPENCER, STORM_ID: 2
Start: 2000−11−26 17:00:00, End: 2000−11−29 13:50:00, 48−hr Precip: 0.73
log10[FCOLI (cfu/100mL)]
4.0
3.5
3.0
2.5
Nov 21
Nov 23
Nov 25
Nov 27
Nov 29
Date
Daily Flow (cfs)
140
120
100
80
Nov 21
Nov 23
Nov 25
Nov 27
Nov 29
Date
Precip (in/hr)
0.10
0.05
0.00
Nov 21
Nov 23
Nov 25
Nov 27
Nov 29
Date

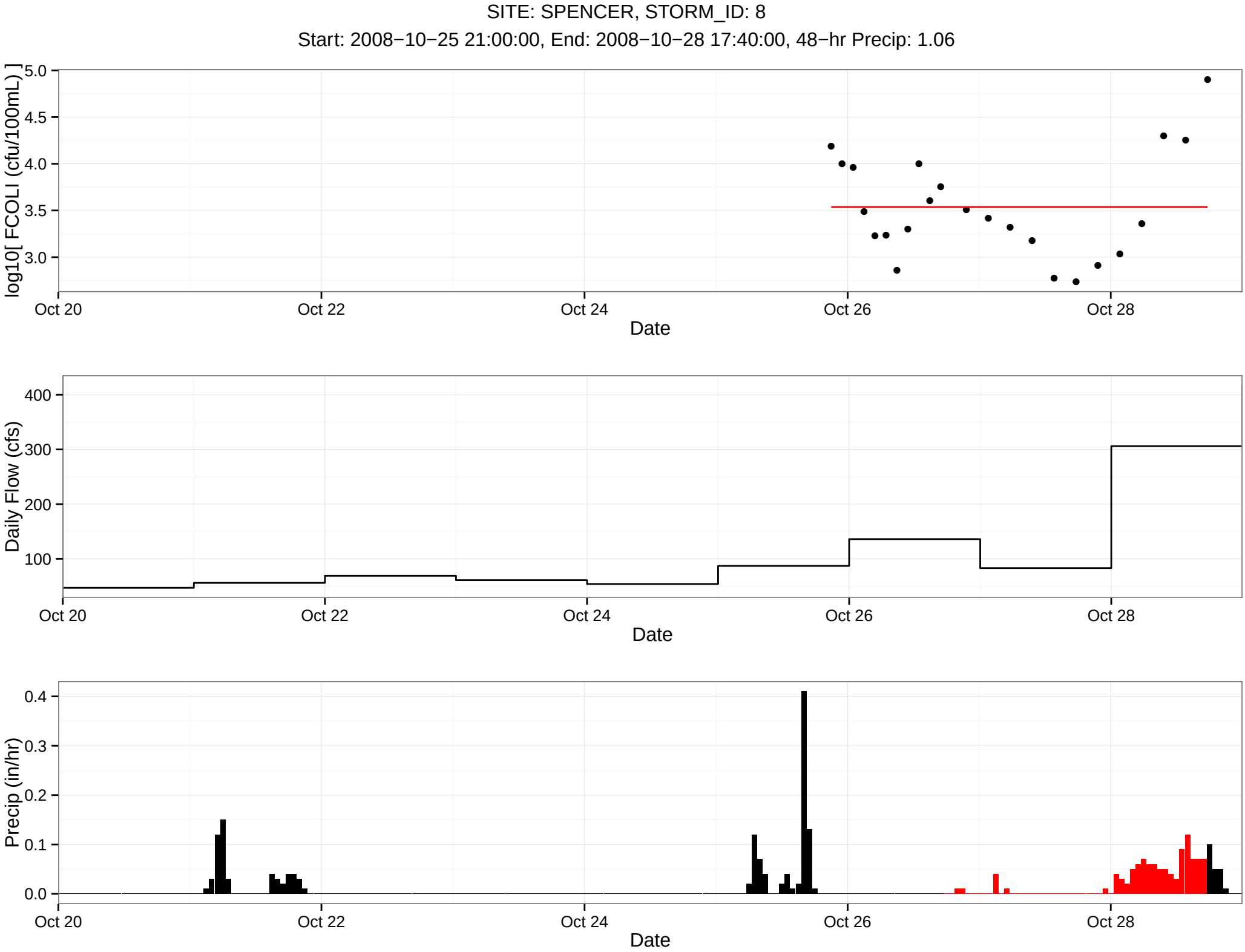

SITE: SPENCER, STORM_ID: 3
Start: 2001−06−21 12:25:00, End: 2001−06−22 10:10:00, 48−hr Precip: 0.61
log10[FCOLI (cfu/100mL)]
5.0
4.5
4.0
3.5
Jun 16
Jun 18
Jun 20
Jun 22
Date
Daily Flow (cfs)
250
200
150
100
Jun 16
Jun 18
Jun 20
Jun 22
Date
Precip (in/hr)
0.2
0.1
0.0
Jun 16
Jun 18
Jun 20
Jun 22
Date

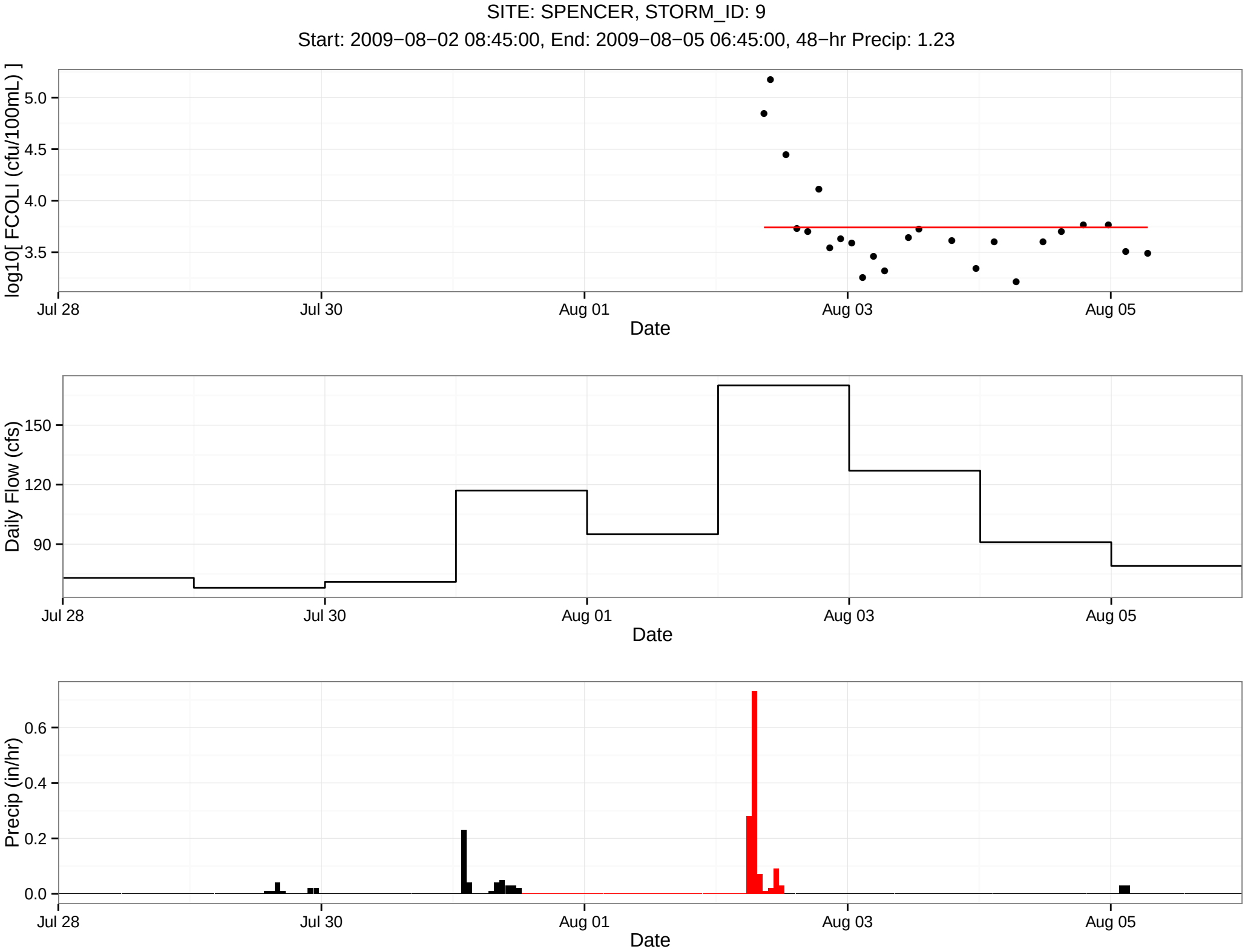

SITE: SPENCER, STORM_ID: 4
Start: 2001−08−28 13:00:00, End: 2001−08−31 11:05:00, 48−hr Precip: 0.49
log10[FCOLI (cfu/100mL)]
5
4
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date
Daily Flow (cfs)
90
70
50
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date
Precip (in/hr)
0.3
0.2
0.1
0.0
Aug 23
Aug 25
Aug 27
Aug 29
Aug 31
Date


SITE: SPENCER, STORM_ID: 5
Start: 2001−09−24 15:45:00, End: 2001−09−27 14:00:00, 48−hr Precip: 3.37
log10[FCOLI (cfu/100mL)]
5.0
4.6
4.2
3.8
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date
Daily Flow (cfs)
600
400
200
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date
Precip (in/hr)
0.5
0.4
0.3
0.2
0.1
0.0
Sep 19
Sep 21
Sep 23
Sep 25
Sep 27
Date


SITE: SPENCER, STORM_ID: 6
Start: 2002−06−14 14:00:00, End: 2002−06−17 12:45:00, 48−hr Precip: 3.65
log10[FCOLI (cfu/100mL)]
5.0
4.5
4.0
3.5
3.0
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date
Daily Flow (cfs)
600
500
400
300
200
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date
Precip (in/hr)
0.5
0.4
0.3
0.2
0.1
0.0
Jun 09
Jun 11
Jun 13
Jun 15
Jun 17
Date


SITE: SPENCER, STORM_ID: 7
Start: 2008−09−13 04:30:00, End: 2008−09−15 14:40:00, 48−hr Precip: 1.03
log10[FCOLI (cfu/100mL)]
4.5
4.0
3.5
Sep 08
Sep 10
Sep 12
Sep 14
Sep 16
Date
Daily Flow (cfs)
55
50
45
40
Sep 08
Sep 10
Sep 12
Sep 14
Sep 16
Date
Precip (in/hr)
0.20
0.15
0.10
0.05
0.00
Sep 08
Sep 10
Sep 12
Sep 14
Sep 16
Date


SITE: SPENCER, STORM_ID: 8
Start: 2008−10−25 21:00:00, End: 2008−10−28 17:40:00, 48−hr Precip: 1.06
log10[FCOLI (cfu/100mL)]
5.0
4.5
4.0
3.5
3.0
Oct 20
Oct 22
Oct 24
Oct 26
Oct 28
Date
Daily Flow (cfs)
400
300
200
100
Oct 20
Oct 22
Oct 24
Oct 26
Oct 28
Date
Precip (in/hr)
0.4
0.3
0.2
0.1
0.0
Oct 20
Oct 22
Oct 24
Oct 26
Oct 28
Date


SITE: SPENCER, STORM_ID: 9
Start: 2009−08−02 08:45:00, End: 2009−08−05 06:45:00, 48−hr Precip: 1.23
log10[FCOLI (cfu/100mL)]
5.0
4.5
4.0
3.5
Jul 28
Jul 30
Aug 01
Aug 03
Aug 05
Date
Daily Flow (cfs)
150
120
90
Jul 28
Jul 30
Aug 01
Aug 03
Aug 05
Date
Precip (in/hr)
0.6
0.4
0.2
0.0
Jul 28
Jul 30
Aug 01
Aug 03
Aug 05
Date

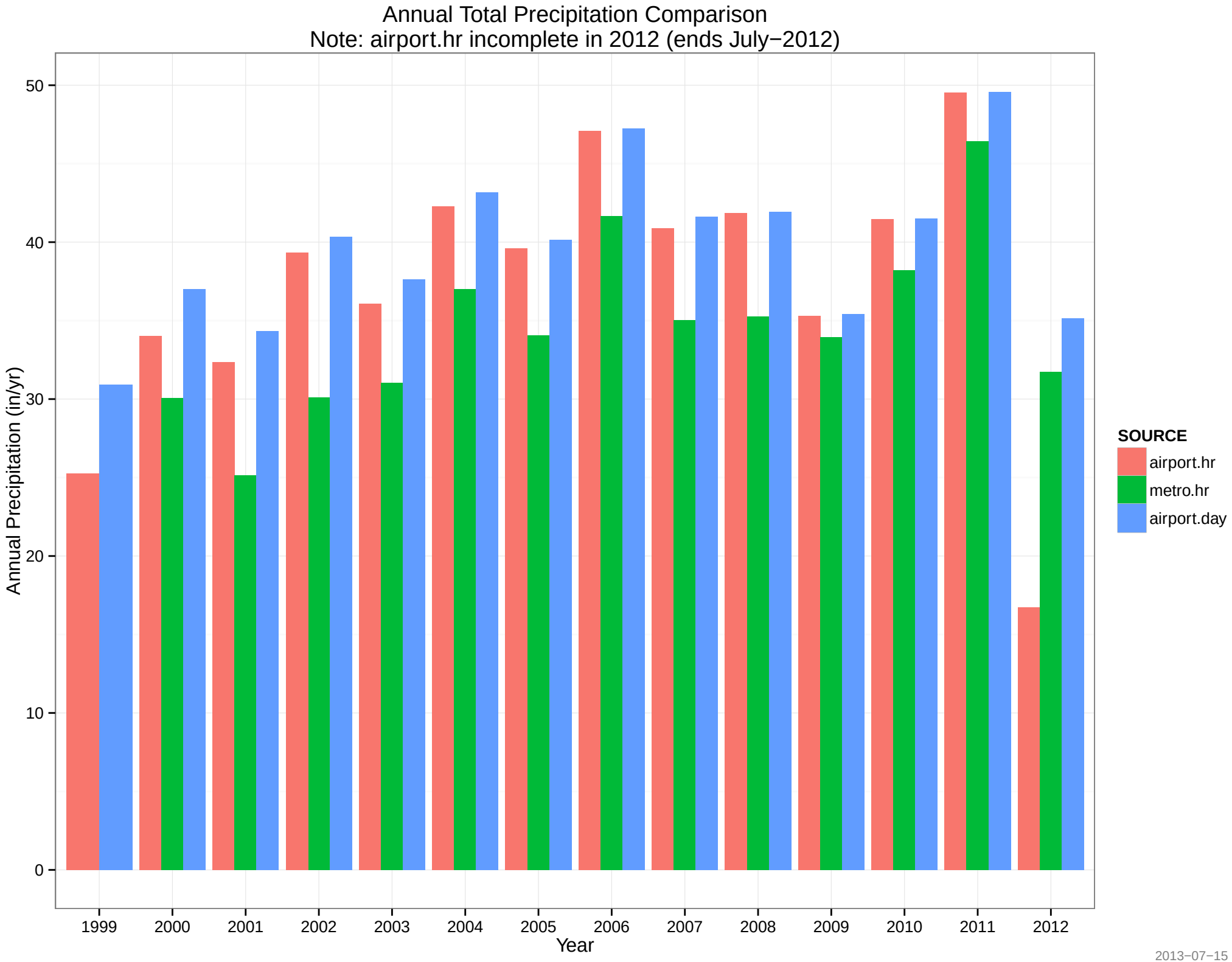
Appendix C: Comparison of Precipitation Datasets

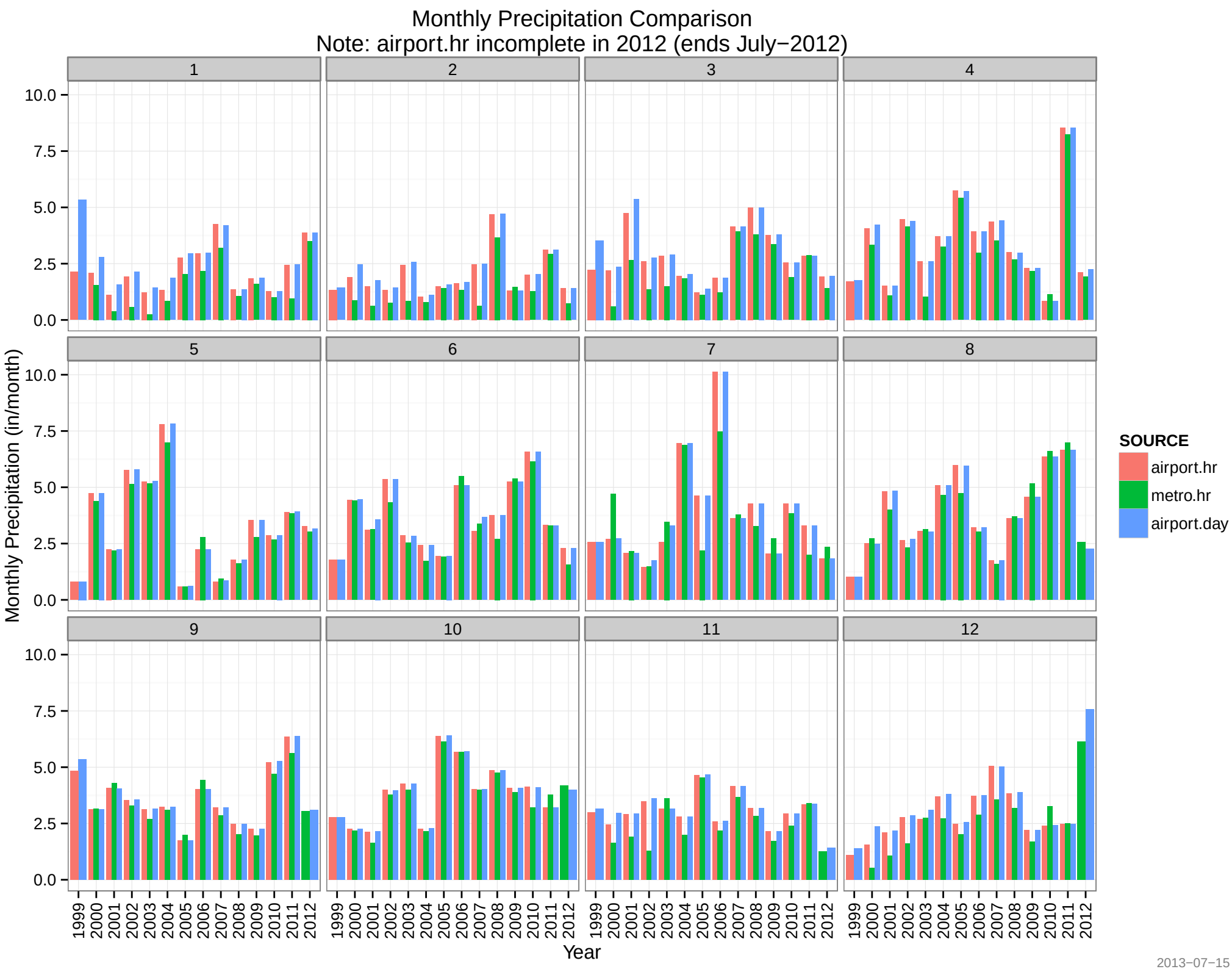
Summary: Comparisons of three precipitation datasets:

- **airport.hr:** hourly precipitation at Hancock International Airport (COOP Station 308383)
- **airport.day:** daily precipitation at Hancock International Airport (GHCND Station USW00014771)
- **metro.hr:** hourly precipitation at Metro Wastewater Treatment Plant.

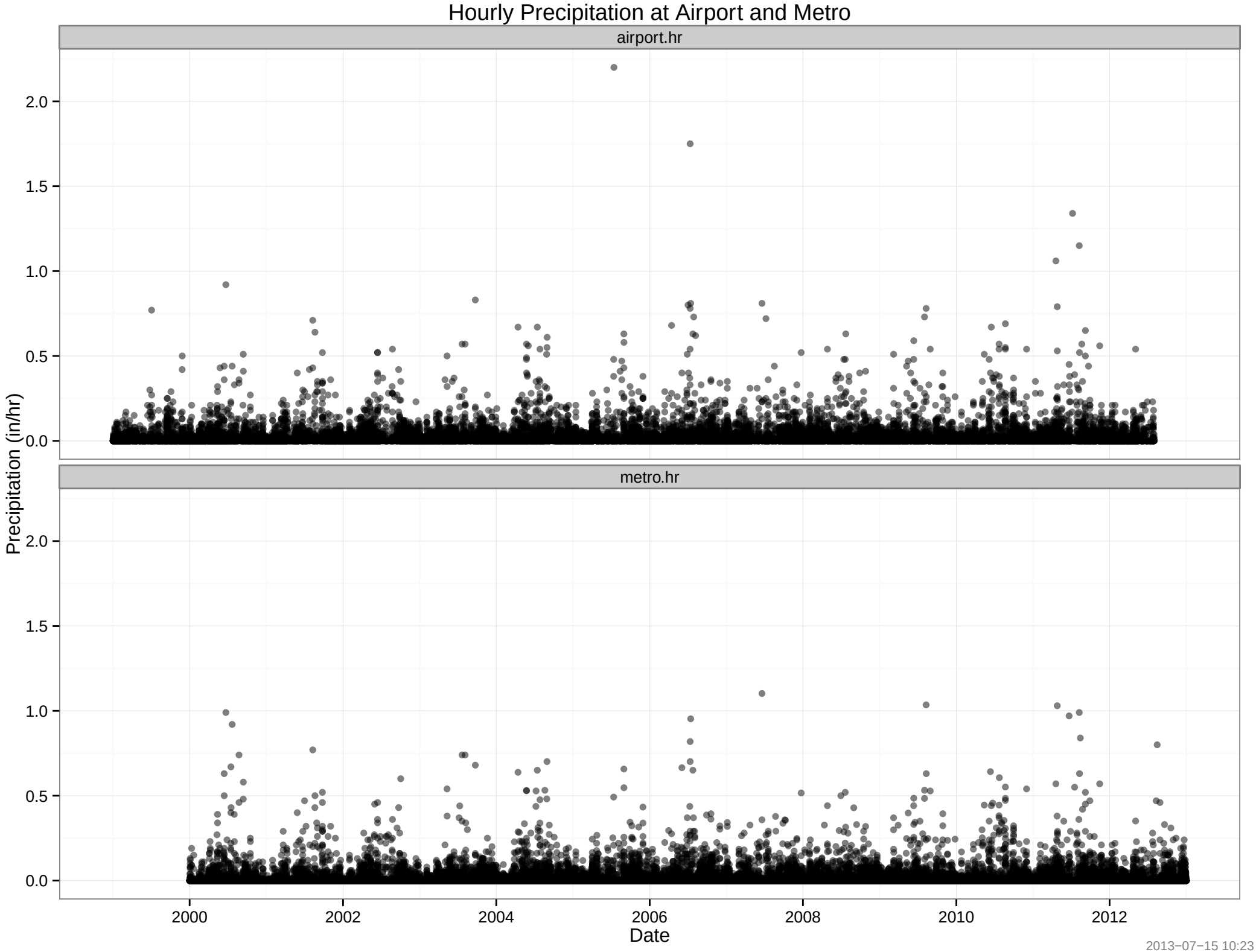
Plots include:

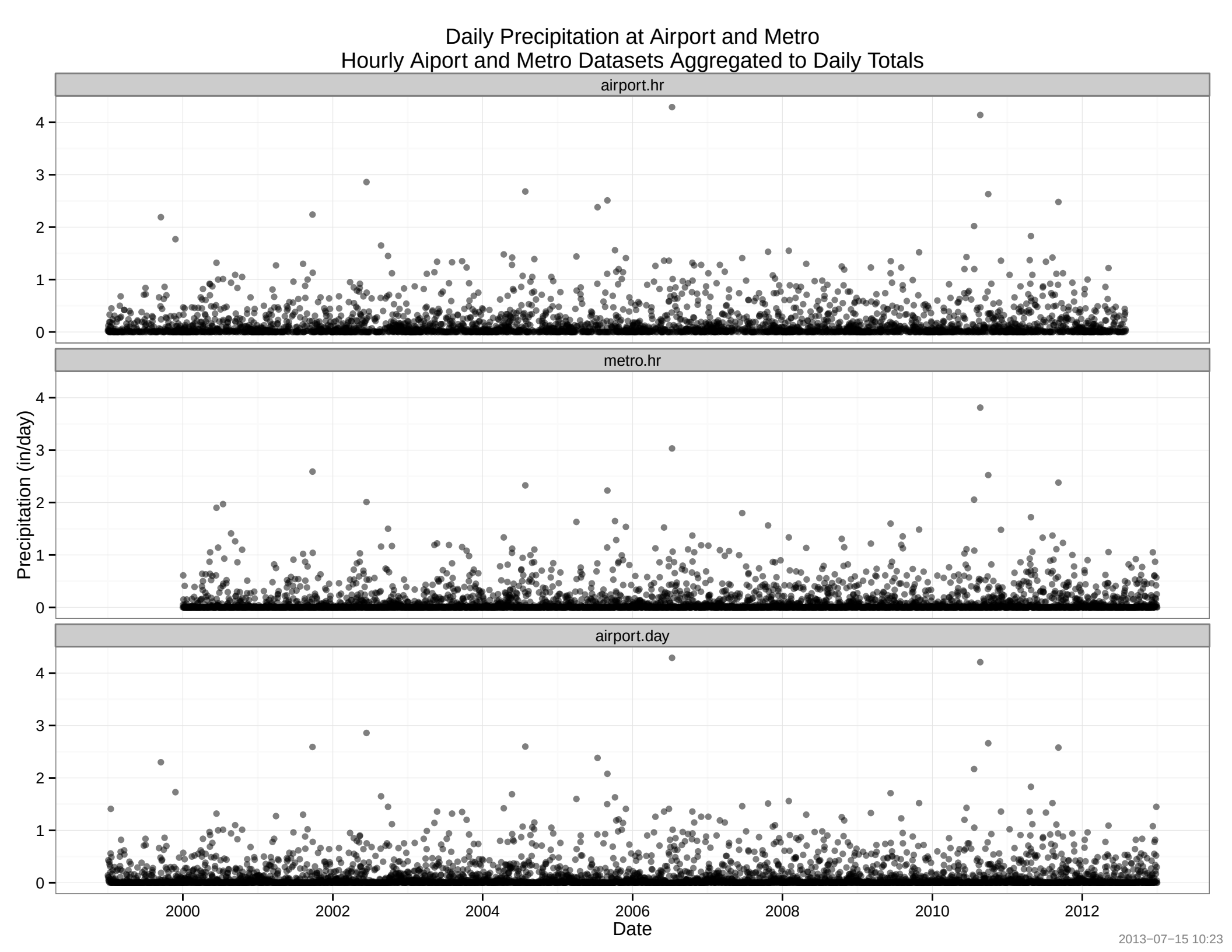
- Timeseries of Annual Total Precipitation
- Timeseries of Annual Total Precipitation grouped by Month
- Timeseries of Hourly Precipitation (airport.hr and metro.hr only)
- Scatterplot of Hourly Precipitation at Metro vs. Airport
- Scatterplot of Daily-Aggregated Hourly Precipitation at Metro vs. Airport
- Scatterplot Matrix and Correlations between Daily-Aggregated Hourly Precipitation at Metro and Airport, and Daily Precipitation at Airport

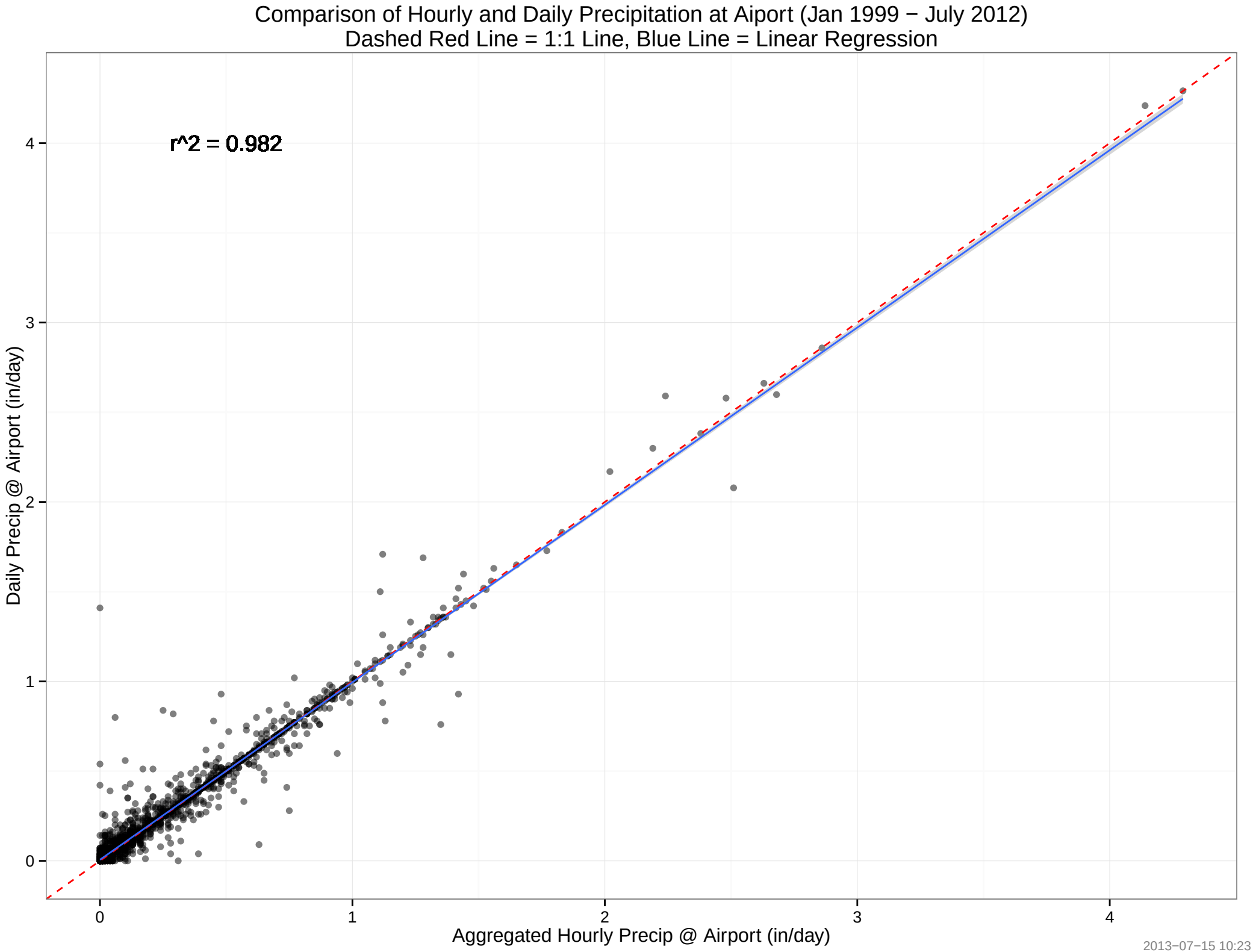

Annual Total Precipitation Comparison
Note: airport.hr incomplete in 2012 (ends July−2012)
Annual Precipitation (in/yr)
50
40
30
20
10
0
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
Year
SOURCE
airport.hr
metro.hr
airport.day
2013−07−15 10:22

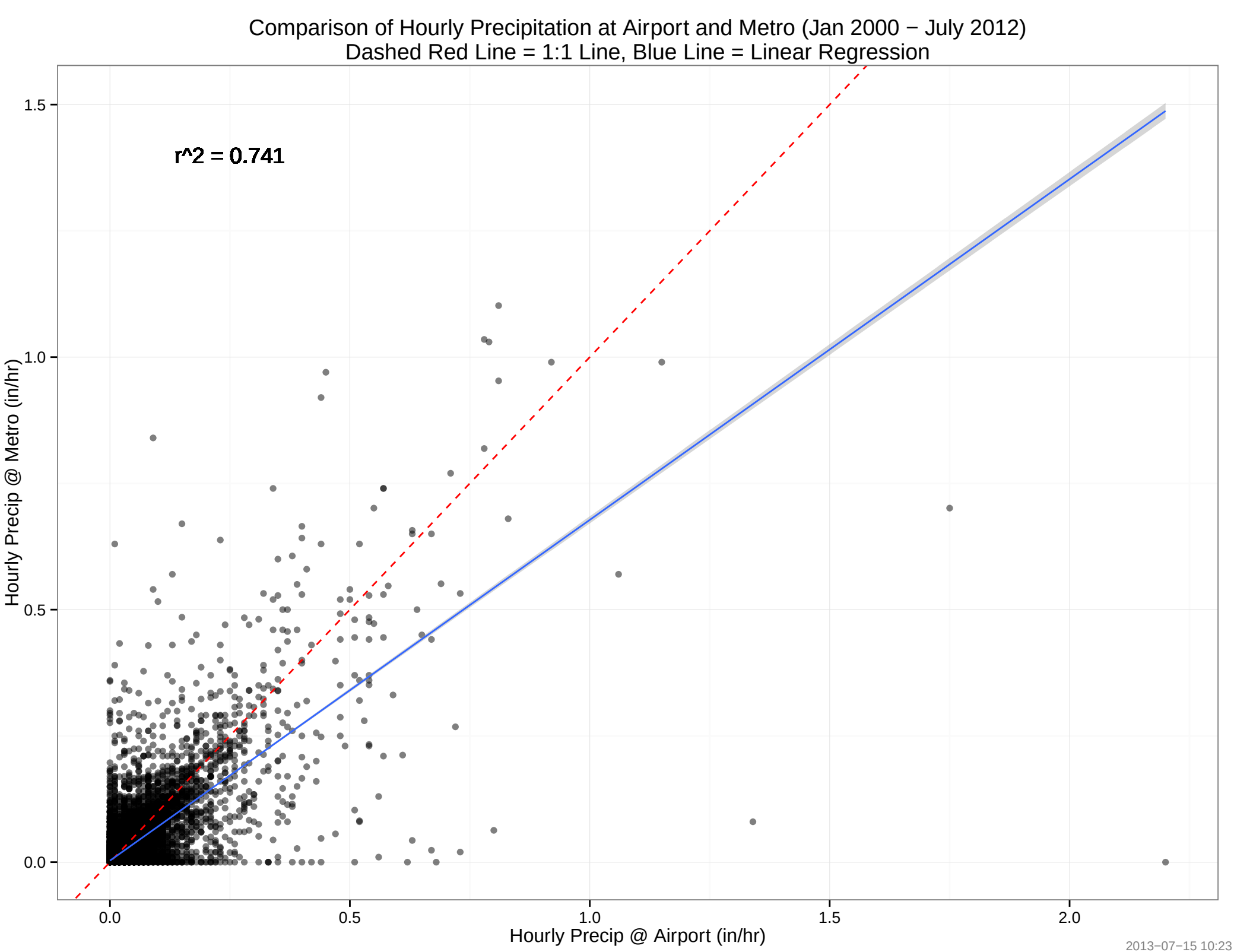


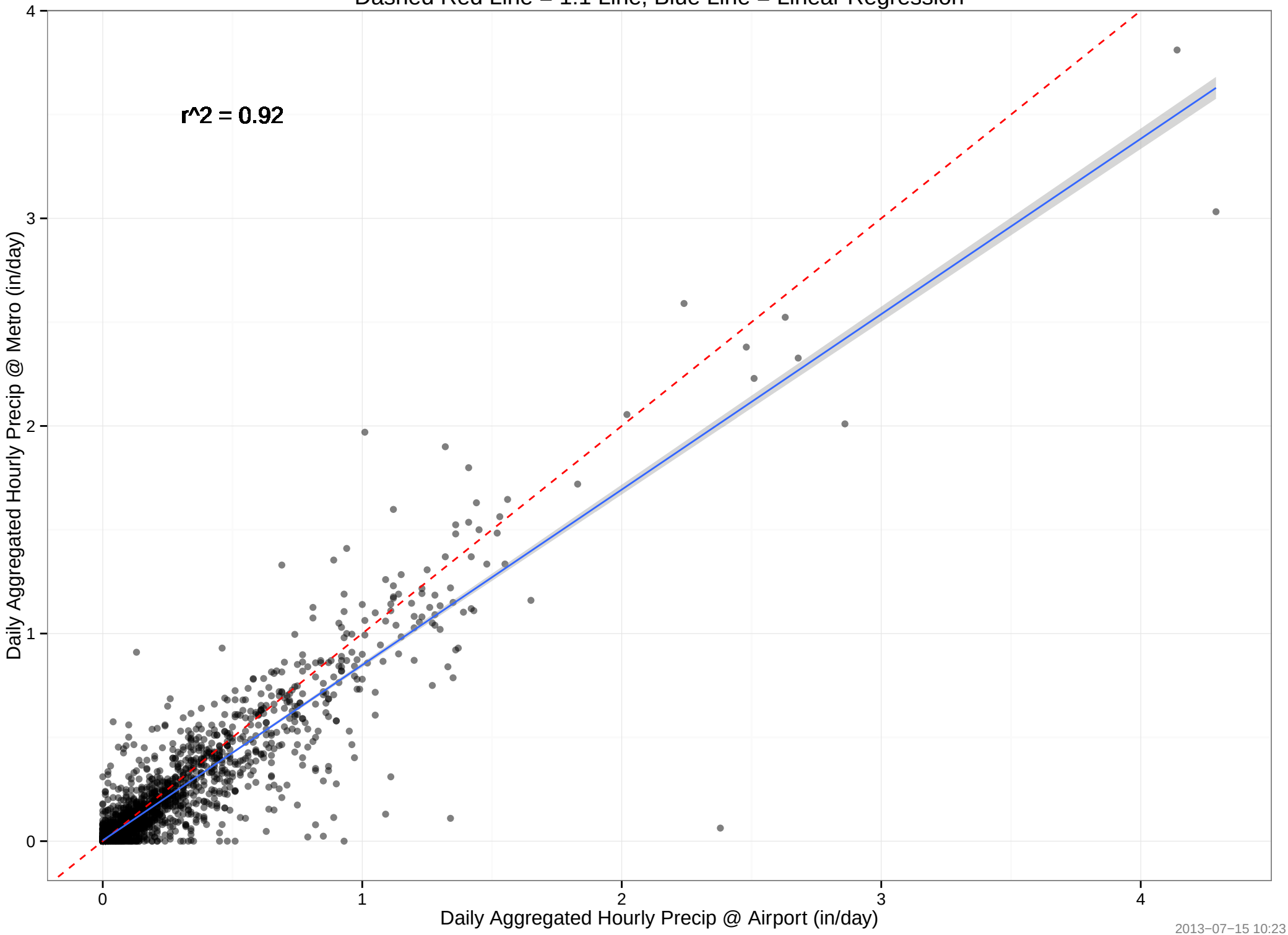
2013−07−15 10:22


Hourly Precipitation at Airport and Metro
airport.hr
metro.hr
Precipitation (in/hr)
2.0
1.5
1.0
0.5
0.0
2000
2002
2004
2006
2008
2010
2012
Date
2013−07−15 10:23


Daily Precipitation at Airport and Metro
Hourly Aiport and Metro Datasets Aggregated to Daily Totals
airport.hr
metro.hr
airport.day
Precipitation (in/day)
0
1
2
3
4
2000
2002
2004
2006
2008
2010
2012
Date
2013−07−15 10:23


Comparison of Hourly and Daily Precipitation at Aiport (Jan 1999 − July 2012)
Dashed Red Line = 1:1 Line, Blue Line = Linear Regression
r^2 = 0.982
Daily Precip @ Airport (in/day)
Aggregated Hourly Precip @ Airport (in/day)
0
1
2
3
4
2013−07−15 10:23


Comparison of Hourly Precipitation at Airport and Metro (Jan 2000 − July 2012)
Dashed Red Line = 1:1 Line, Blue Line = Linear Regression
r^2 = 0.741
Hourly Precip @ Metro (in/hr)
Hourly Precip @ Airport (in/hr)
0.0
0.5
1.0
1.5
2.0
2013−07−15 10:23


Comparison of Daily Aggregated Hourly Precipitation at Airport and Metro (Jan 2000 − July 2012)
Dashed Red Line = 1:1 Line, Blue Line = Linear Regression
r^2 = 0.92
Daily Aggregated Hourly Precip @ Metro (in/day)
Daily Aggregated Hourly Precip @ Airport (in/day)
0
1
2
3
4
2013−07−15 10:23

Appendix D: Correlations with Precipitation and Flow

Summary: Correlations between fecal coliform concentrations and antecedent precipitation and flow using all data and seasonal subsets (May-Oct, Nov-Apr).

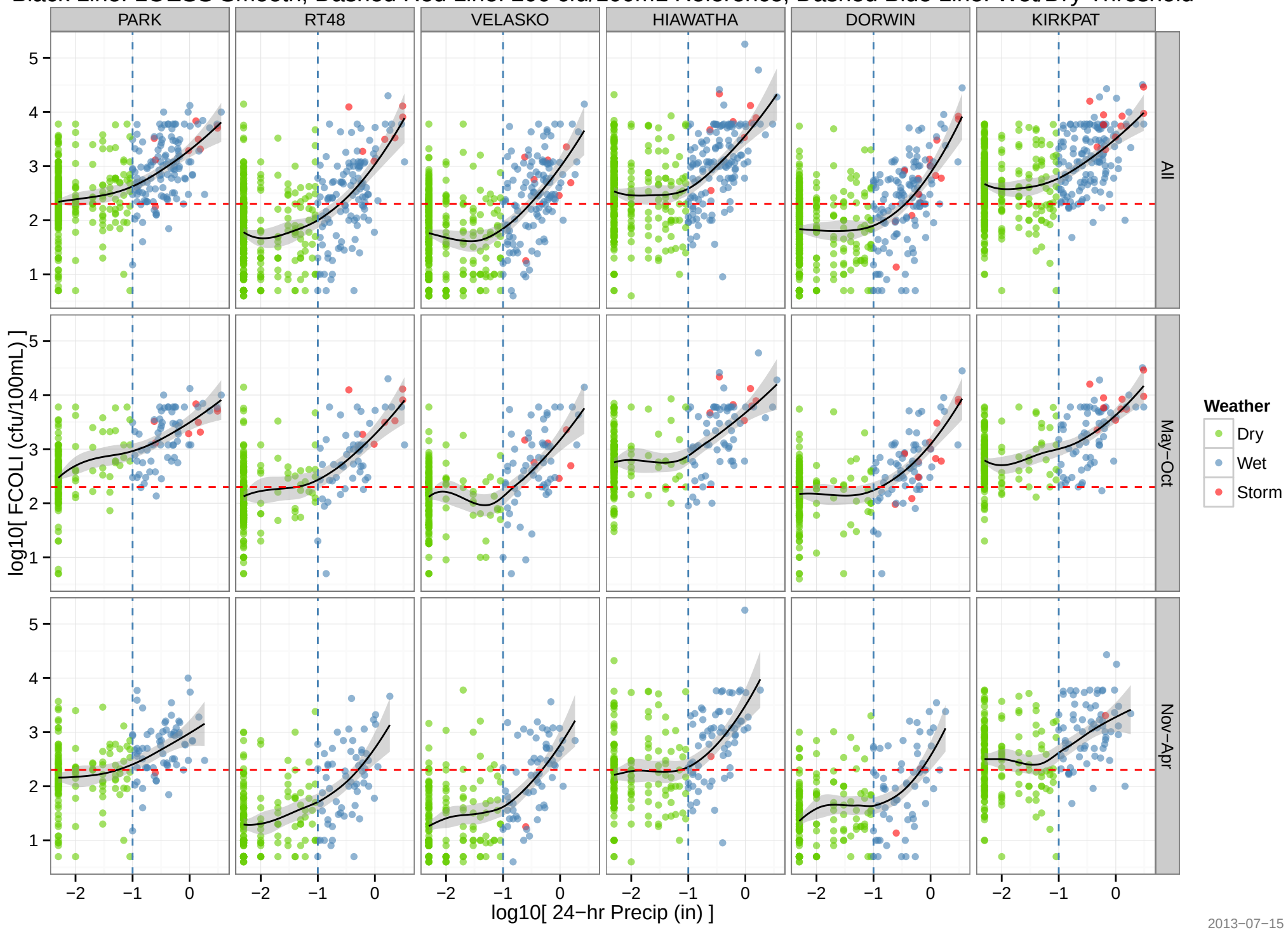
Precipitation correlations included for a range of antecedent periods (24, 48, 72, 96, and 120 days). Both axes are $\log_{10}$-transformed and points with zero antecedent precipitation were set to 0.005 inches to allow plotting on the log-scale.

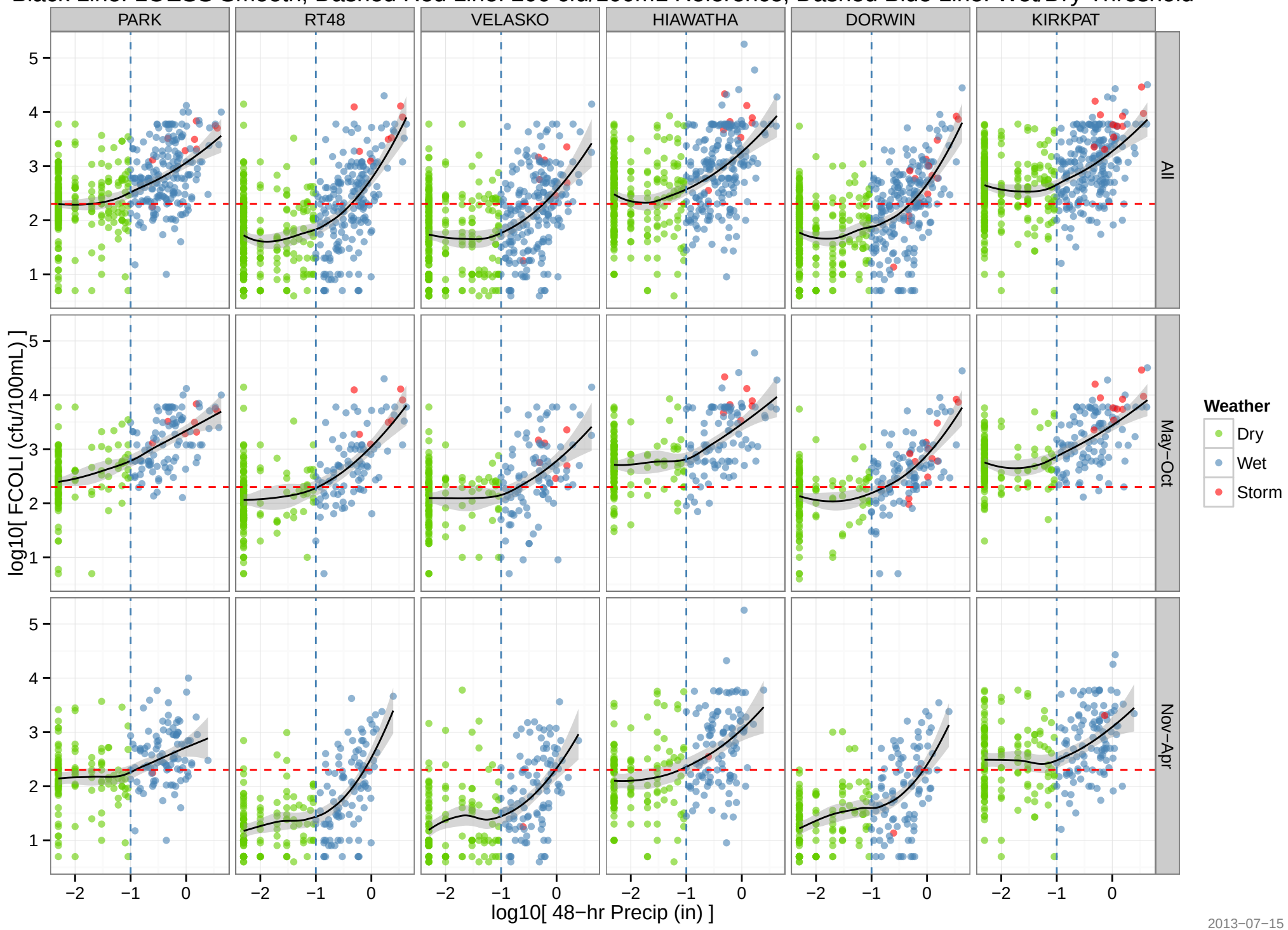
Flow correlations use daily USGS flows at each site. Both axes are $\log_{10}$-transformed.

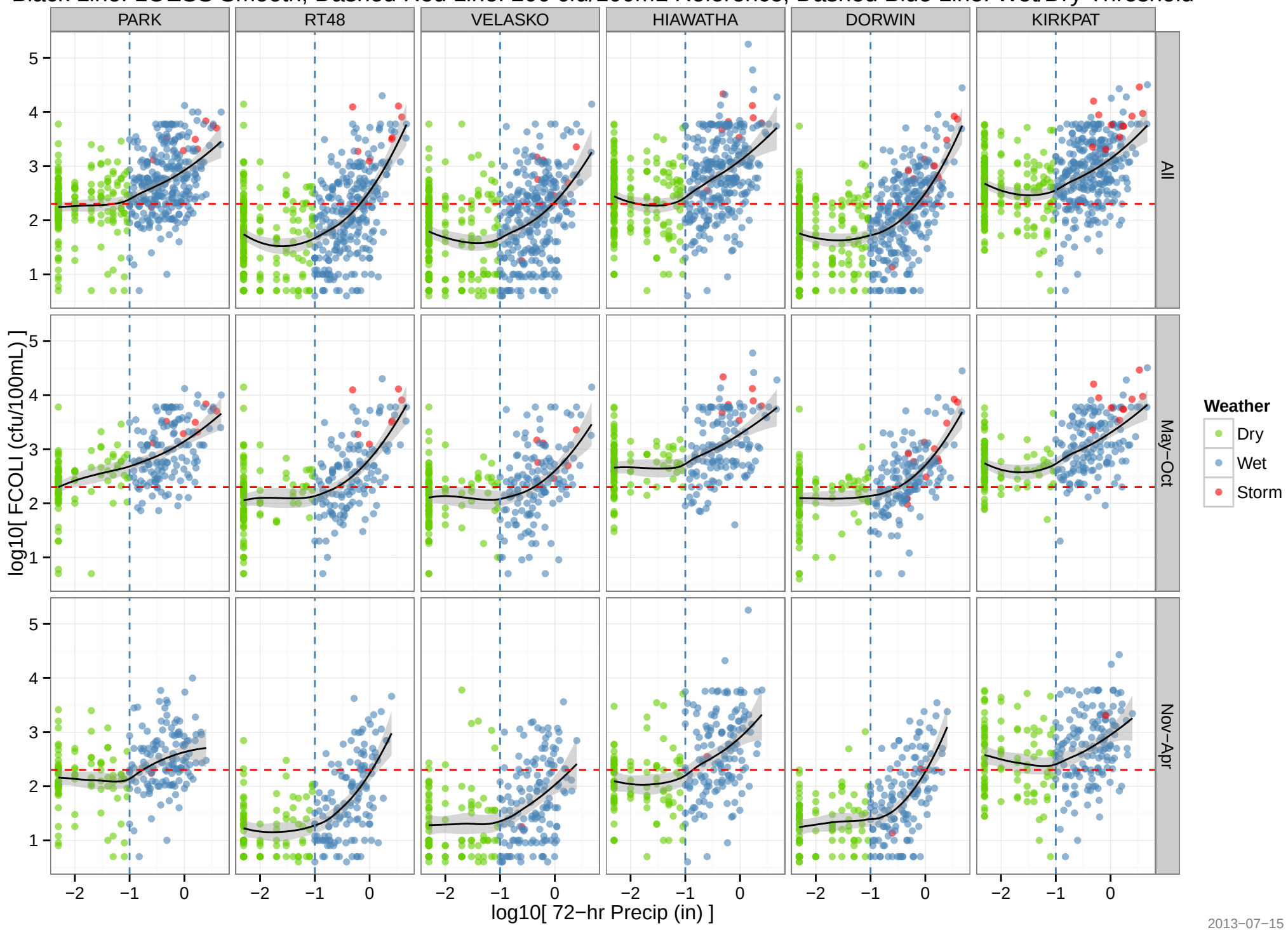
The symbols are colored by weather condition (dry, wet, storm) where storm indicates storm event geometric means, and dry/wet classifications are based on the following thresholds:

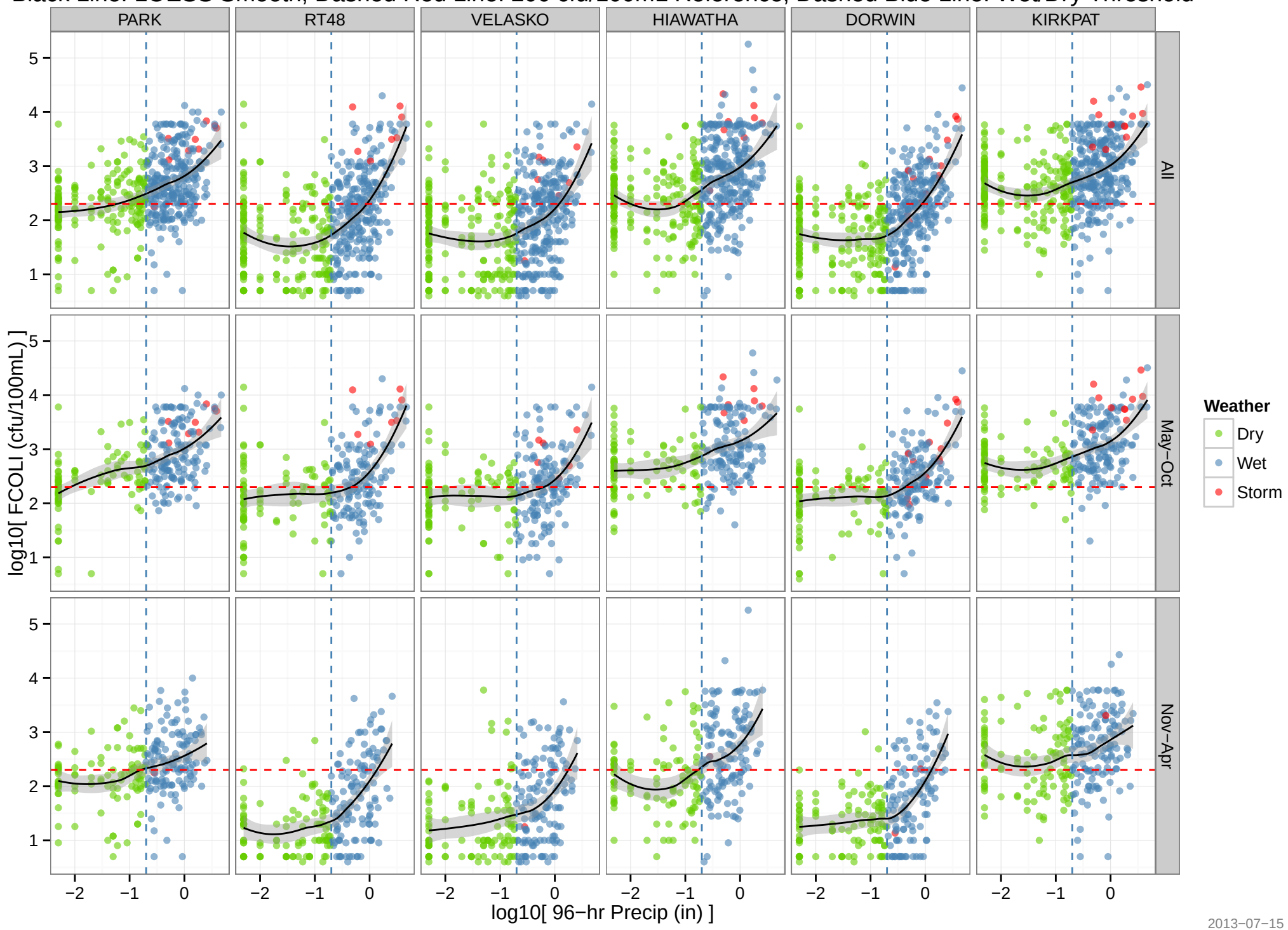
- 24 hours: 0.1 in
- 48 hours: 0.1 in
- 72 hours: 0.1 in
- 96 hours: 0.2 in
- 120 hours: 0.4 in

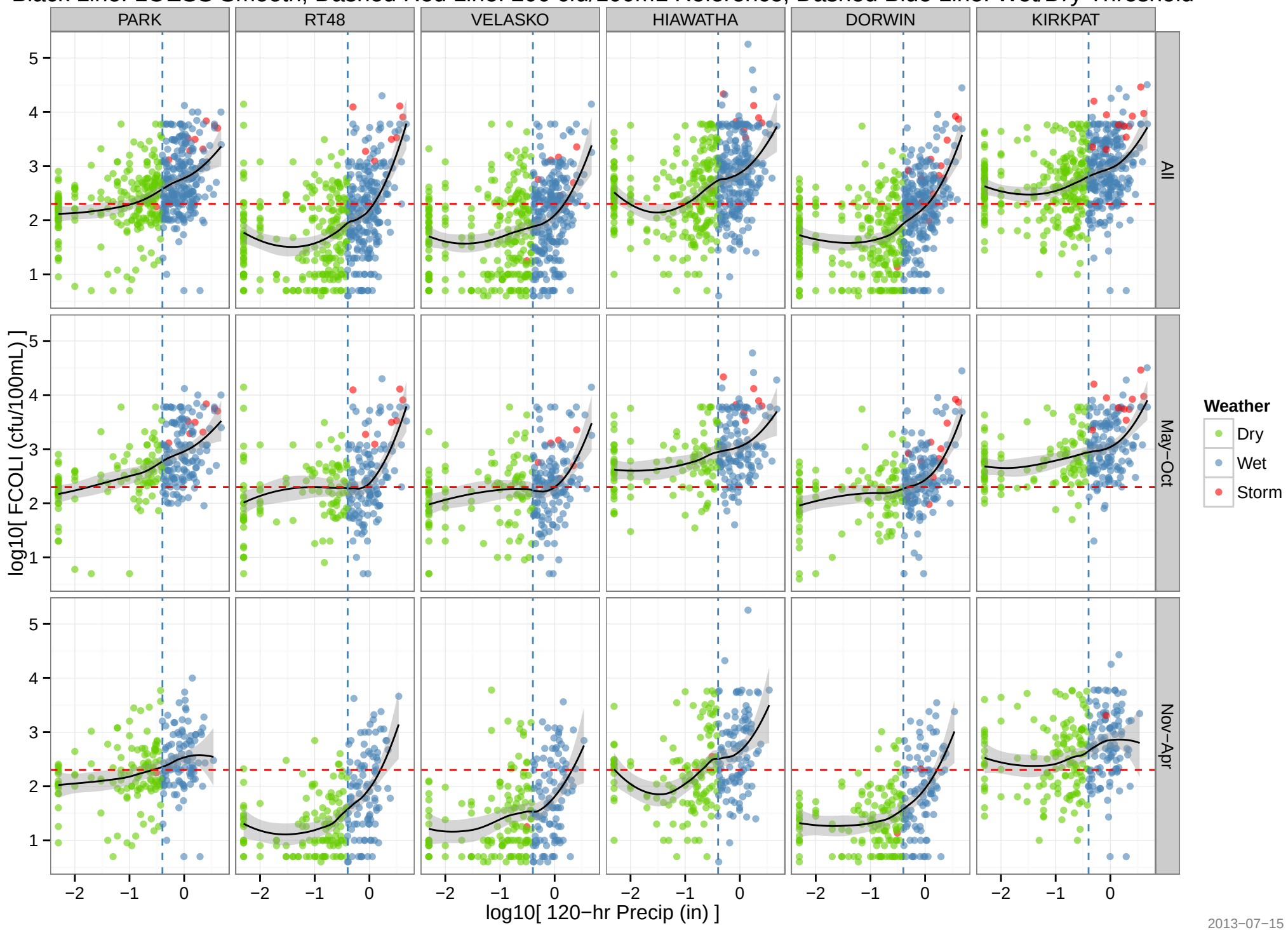
The black line is a LOESS smooth with 95% confidence intervals indicating non-linear relationships between fecal coliform and precipitation or flow.

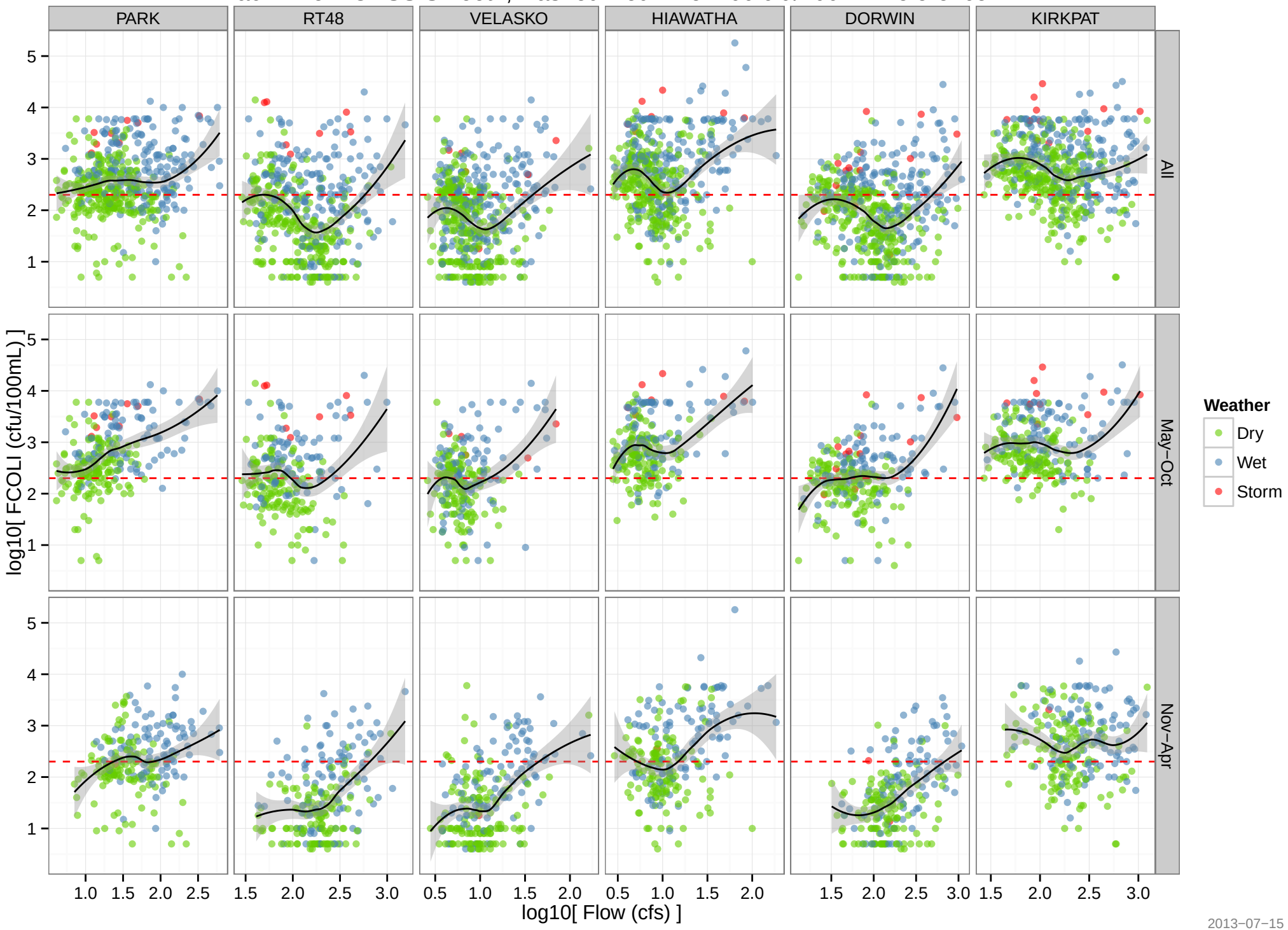

log−FColi vs. log−Precip Relationship for All Data and Seasonal Subsets
Antecedent Period: 24 hrs, Wet/Dry Threshold: 0.1 in
Black Line: LOESS Smooth, Dashed Red Line: 200 cfu/100mL Reference, Dashed Blue Line: Wet/Dry Threshold
PARK
RT48
VELASKO
HIAWATHA
DORWIN
KIRKPAT
All
May−Oct
Nov−Apr
log10[FCOLI (cfu/100mL)]
log10[24−hr Precip (in)]
Weather
Dry
Wet
Storm
2013−07−15 10:54


log−FColi vs. log−Precip Relationship for All Data and Seasonal Subsets
Antecedent Period: 48 hrs, Wet/Dry Threshold: 0.1 in
Black Line: LOESS Smooth, Dashed Red Line: 200 cfu/100mL Reference, Dashed Blue Line: Wet/Dry Threshold
PARK
RT48
VELASKO
HIAWATHA
DORWIN
KIRKPAT
All
May−Oct
Nov−Apr
log10[FCOLI (cfu/100mL)]
log10[48−hr Precip (in)]
Weather
Dry
Wet
Storm
2013−07−15 10:54


log−FColi vs. log−Precip Relationship for All Data and Seasonal Subsets
Antecedent Period: 72 hrs, Wet/Dry Threshold: 0.1 in
Black Line: LOESS Smooth, Dashed Red Line: 200 cfu/100mL Reference, Dashed Blue Line: Wet/Dry Threshold
PARK
RT48
VELASKO
HIAWATHA
DORWIN
KIRKPAT
All
May−Oct
Nov−Apr
log10[FCOLI (cfu/100mL)]
log10[72−hr Precip (in)]
Weather
Dry
Wet
Storm
2013−07−15 10:54


log−FColi vs. log−Precip Relationship for All Data and Seasonal Subsets
Antecedent Period: 96 hrs, Wet/Dry Threshold: 0.2 in
Black Line: LOESS Smooth, Dashed Red Line: 200 cfu/100mL Reference, Dashed Blue Line: Wet/Dry Threshold
PARK
RT48
VELASKO
HIAWATHA
DORWIN
KIRKPAT
All
May−Oct
Nov−Apr
log10[FCOLI (cfu/100mL)]
log10[96−hr Precip (in)]
Weather
Dry
Wet
Storm
2013−07−15 10:54


log−FColi vs. log−Precip Relationship for All Data and Seasonal Subsets
Antecedent Period: 120 hrs, Wet/Dry Threshold: 0.4 in
Black Line: LOESS Smooth, Dashed Red Line: 200 cfu/100mL Reference, Dashed Blue Line: Wet/Dry Threshold
PARK
RT48
VELASKO
HIAWATHA
DORWIN
KIRKPAT
All
May−Oct
Nov−Apr
log10[FCOLI (cfu/100mL)]
log10[120−hr Precip (in)]
Weather
Dry
Wet
Storm
2013−07−15 10:54


log−FColi vs. log−Flow Relationship for All Data and Seasonal Subsets
Antecedent Period: 48 hrs, Wet/Dry Threshold: 0.1 in
Black Line: LOESS Smooth, Dashed Red Line: 200 cfu/100mL Reference
PARK
RT48
VELASKO
HIAWATHA
DORWIN
KIRKPAT
All
May−Oct
Nov−Apr
log10[FCOLI (cfu/100mL)]
log10[Flow (cfs)]
Weather
Dry
Wet
Storm
2013−07−15 10:55

Appendix E: Trend Analysis Results

Summary: Summary and diagnostic plots for the Seasonal-Kendall trend tests of fecal coliform concentrations at each site using the three dataset versions (Primary, All, Biweekly, see Table 2 in the main text).

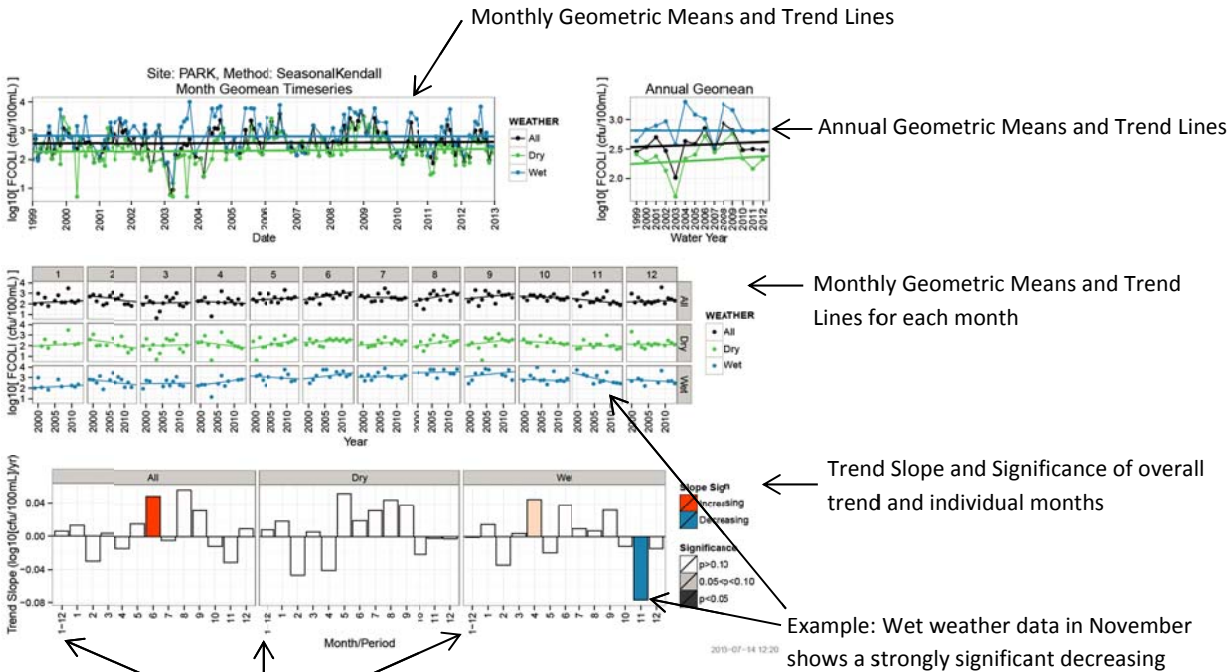
Summary plots include a comparison of three alternative trend test methods (seasonal Kendall, linear regression, and Mann-Kendall).

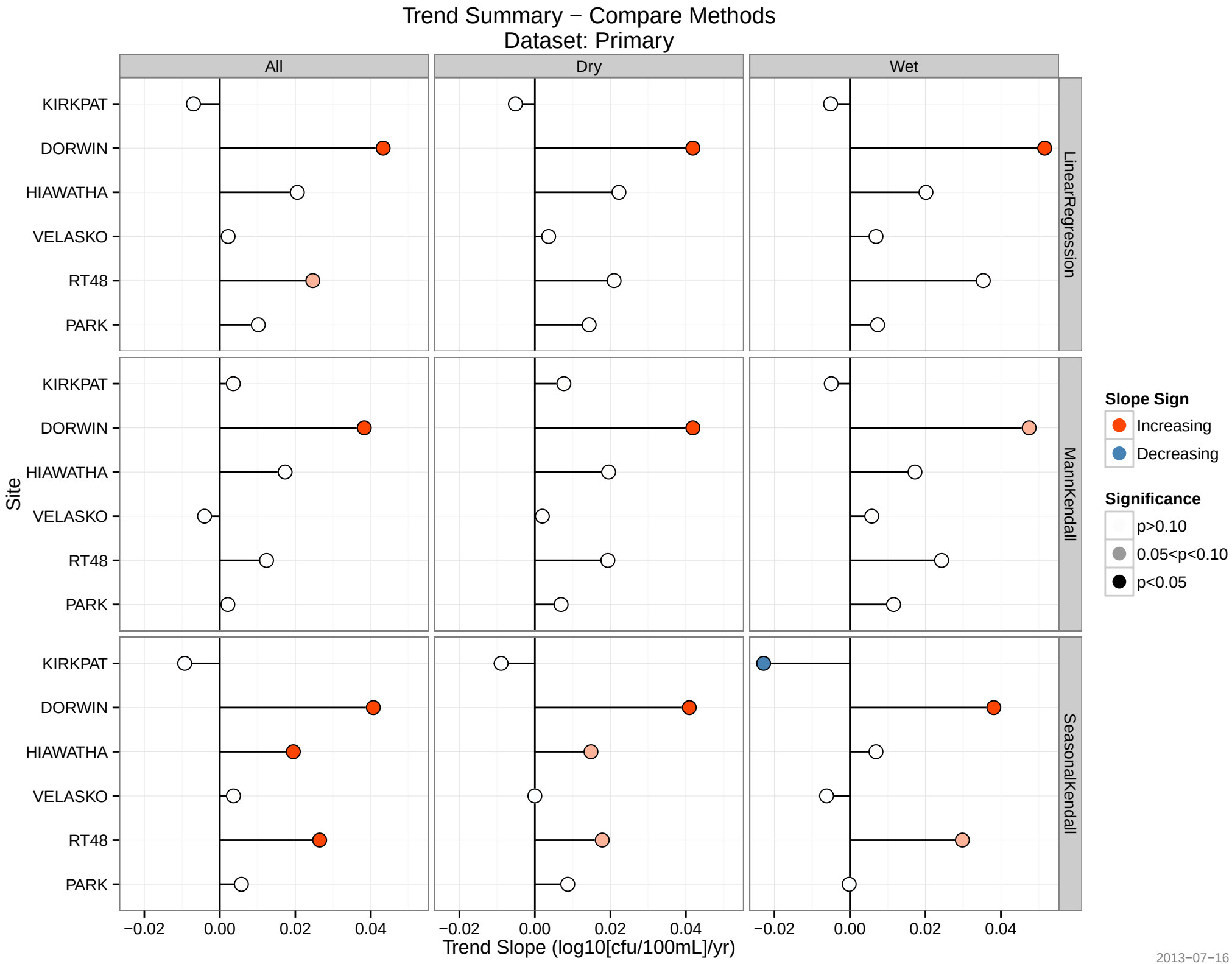
Diagnostic plots shows time series of the monthly and annual geometric means with trend lines based on the Sen slope estimate, and trends of individual months that are used to compute the overall trend in the seasonal Kendall test.

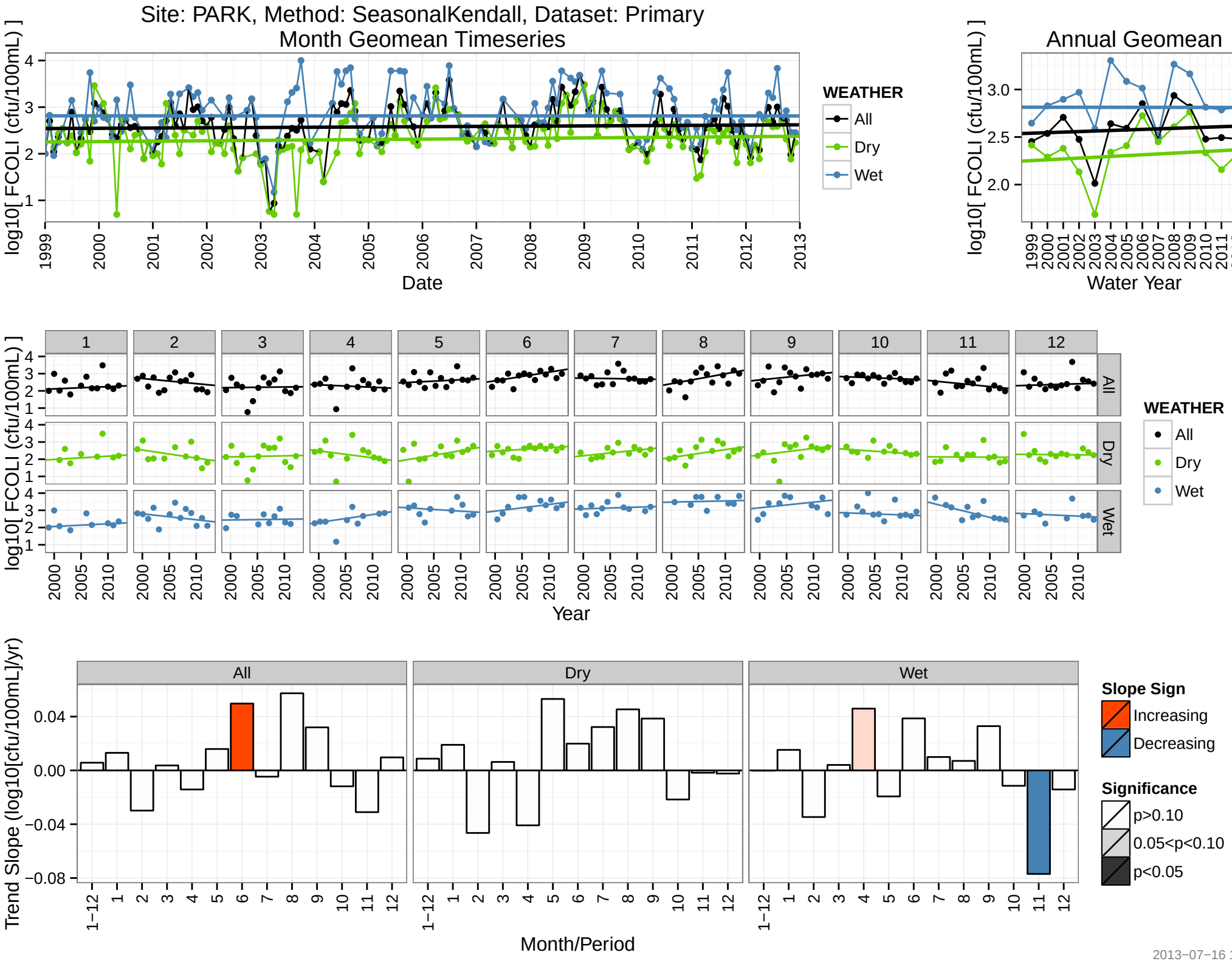
Results tables list the slope, percent slope, and p-value for each site, month and method.

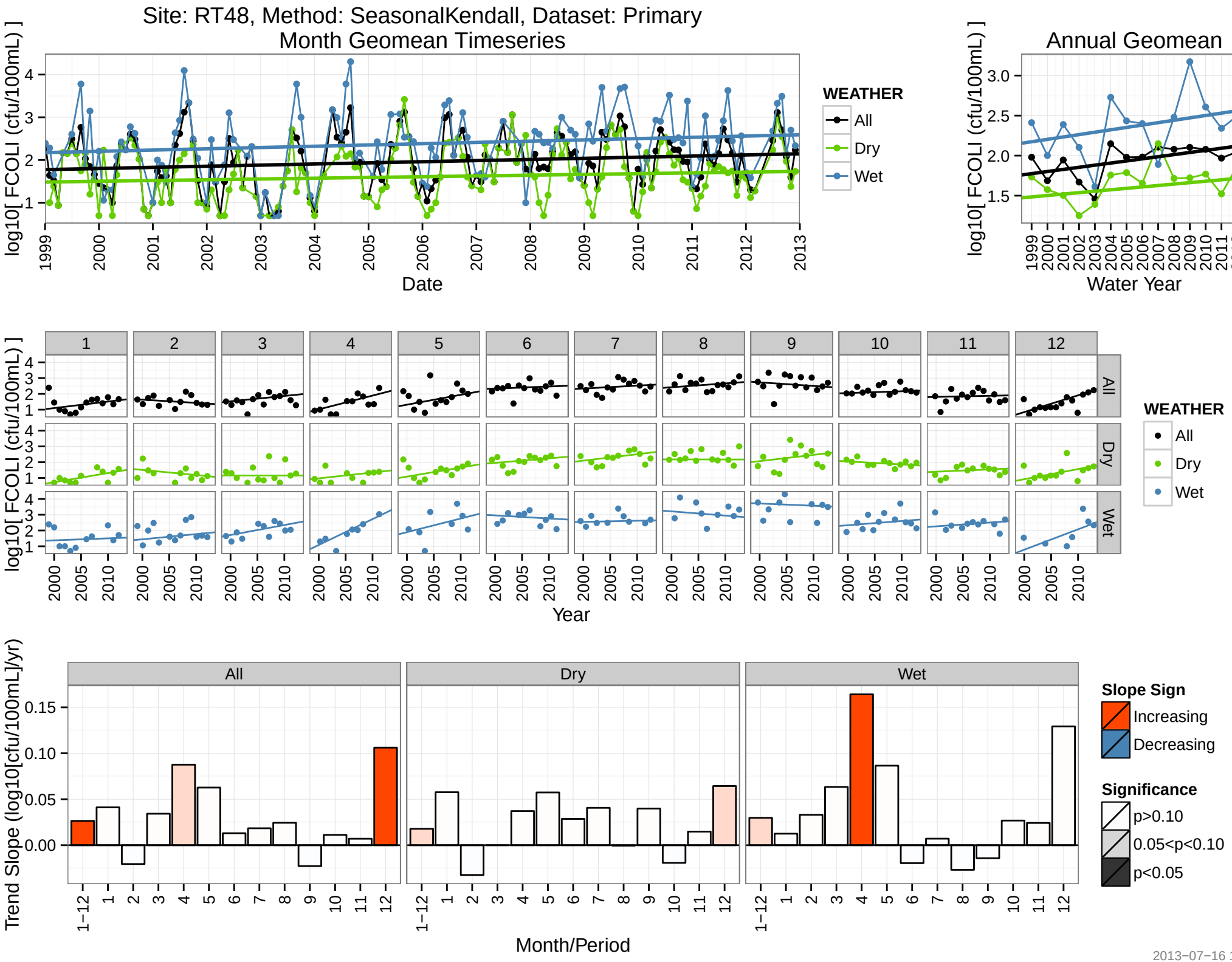
Dry/wet classifications are based on a 48-hour precipitation threshold of 0.1 inches for all analyses.

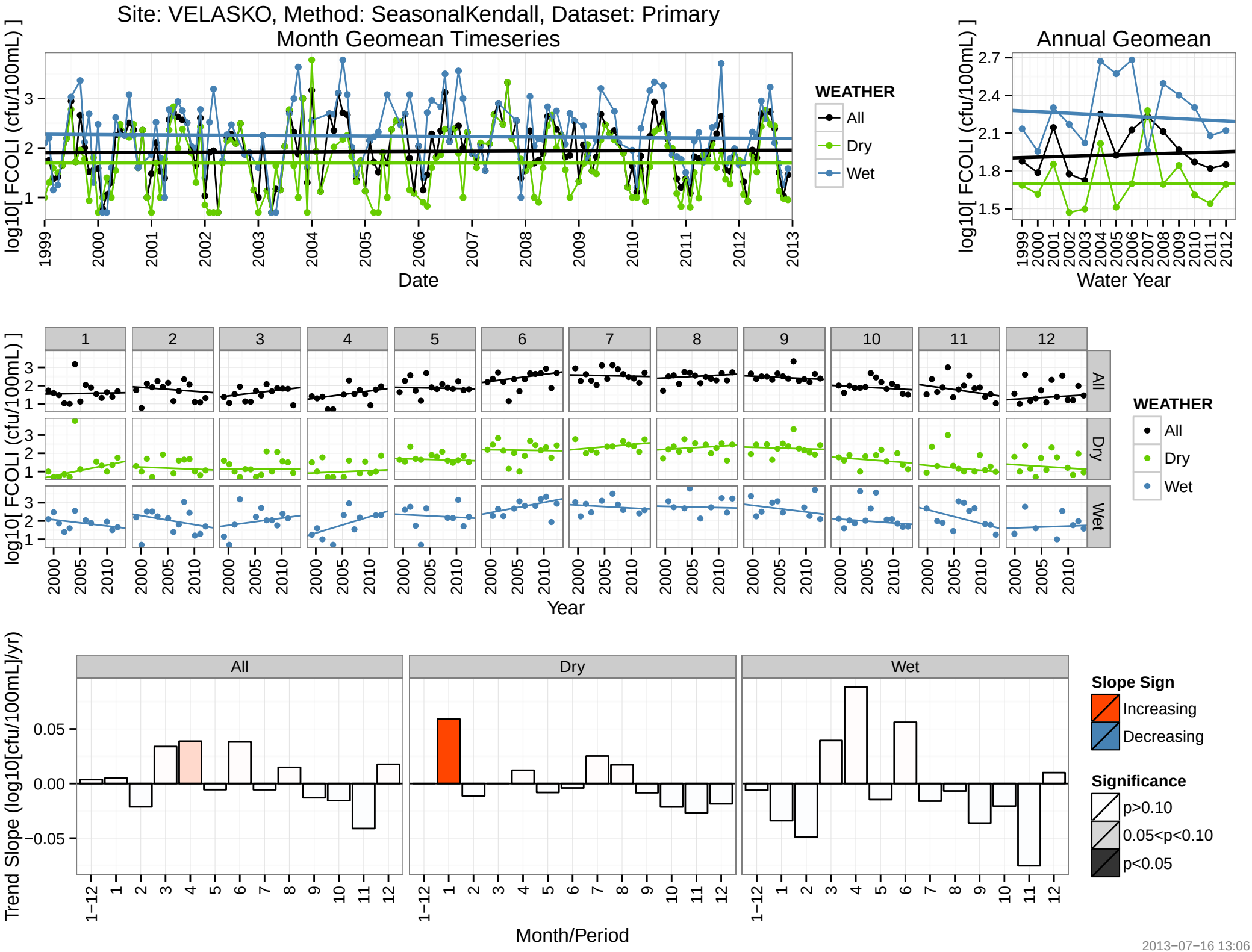
The following example can be used as a guide for interpreting the diagnostic plots.

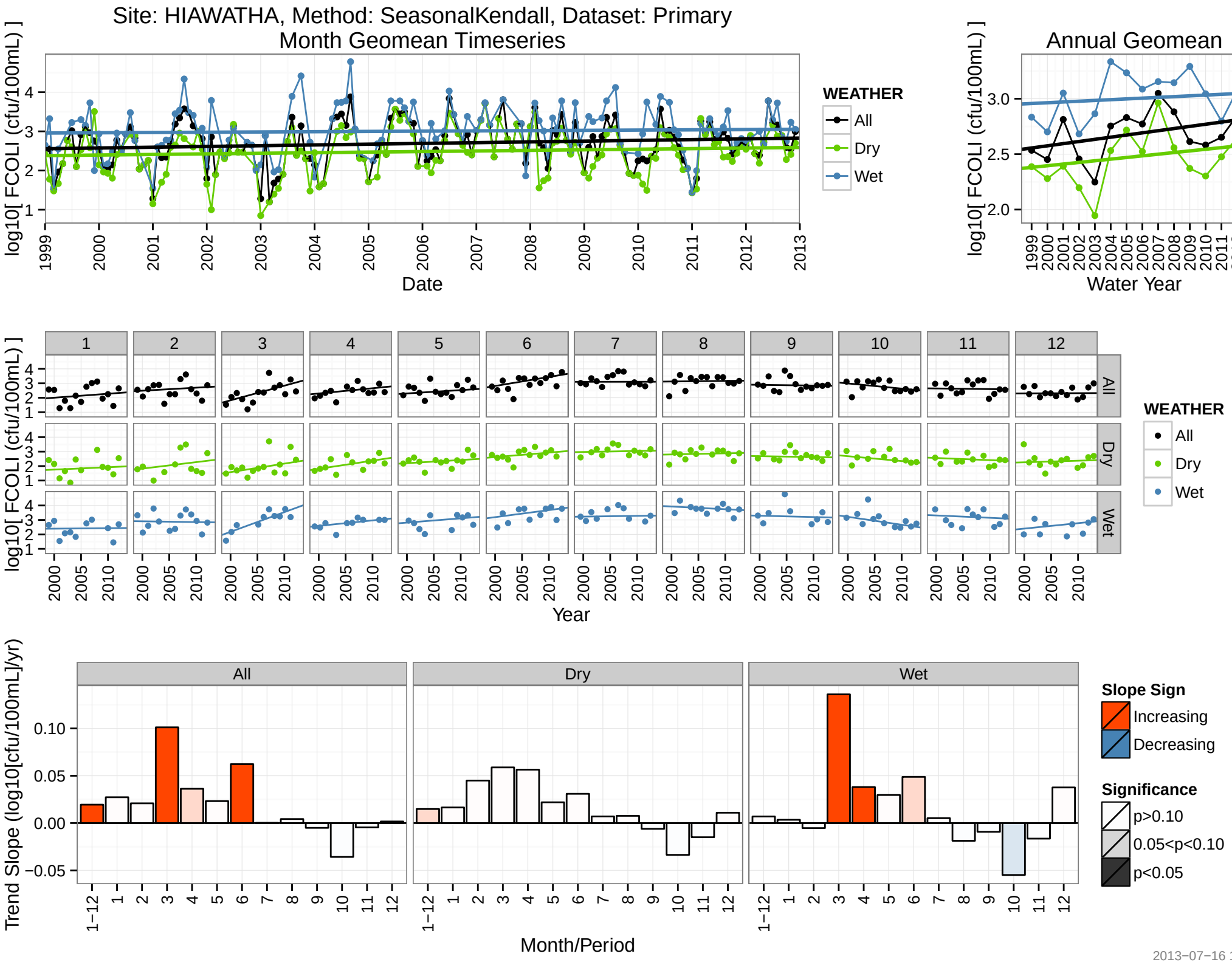


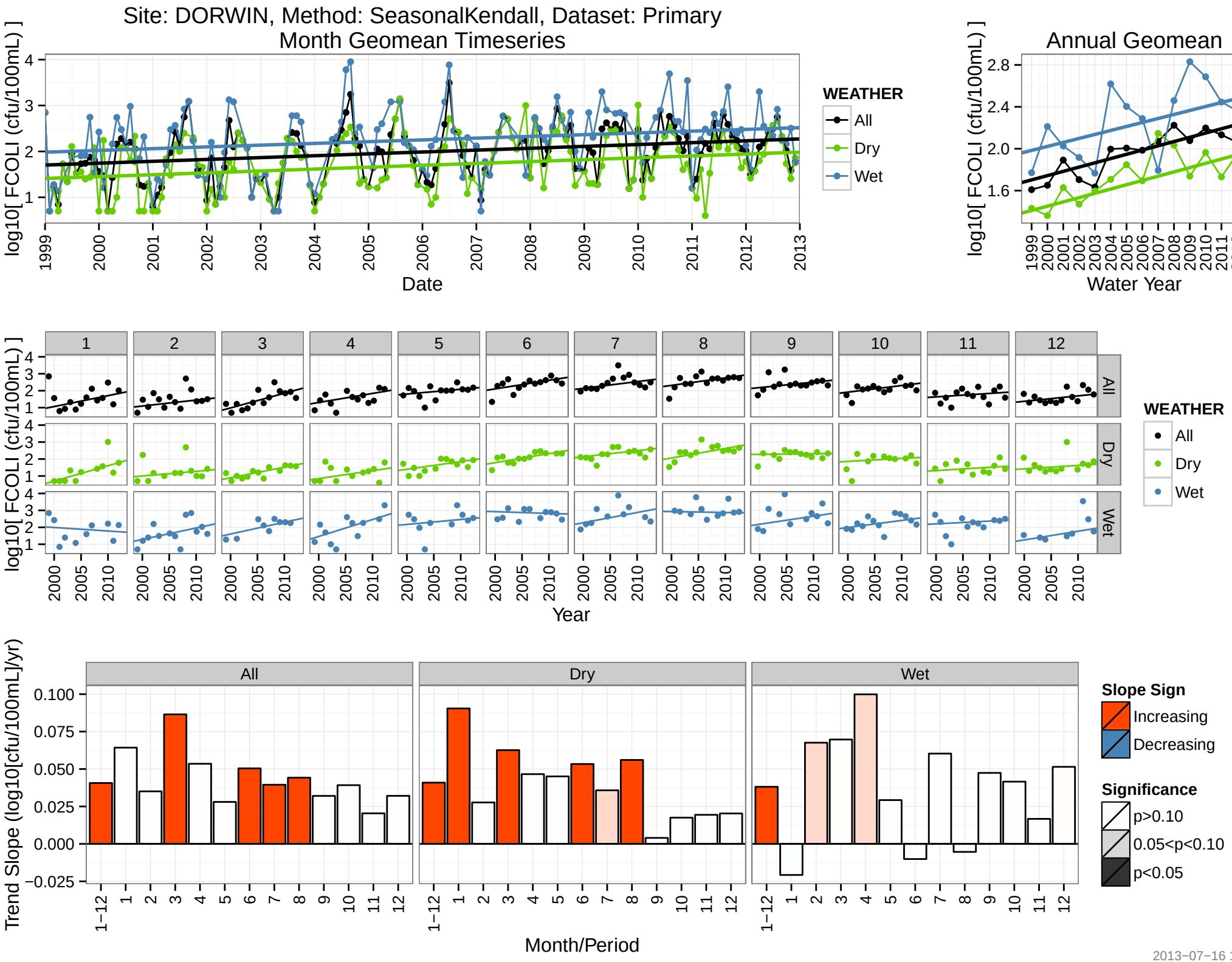

Trend Summary − Compare Methods
Dataset: Primary
All
Dry
Wet
LinearRegression
MannKendall
SeasonalKendall
KIRKPAT
DORWIN
HIAWATHA
VELASKO
RT48
PARK
Site
−0.02
0.00
0.02
0.04
Trend Slope (log10[cfu/100mL]/yr)
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:06

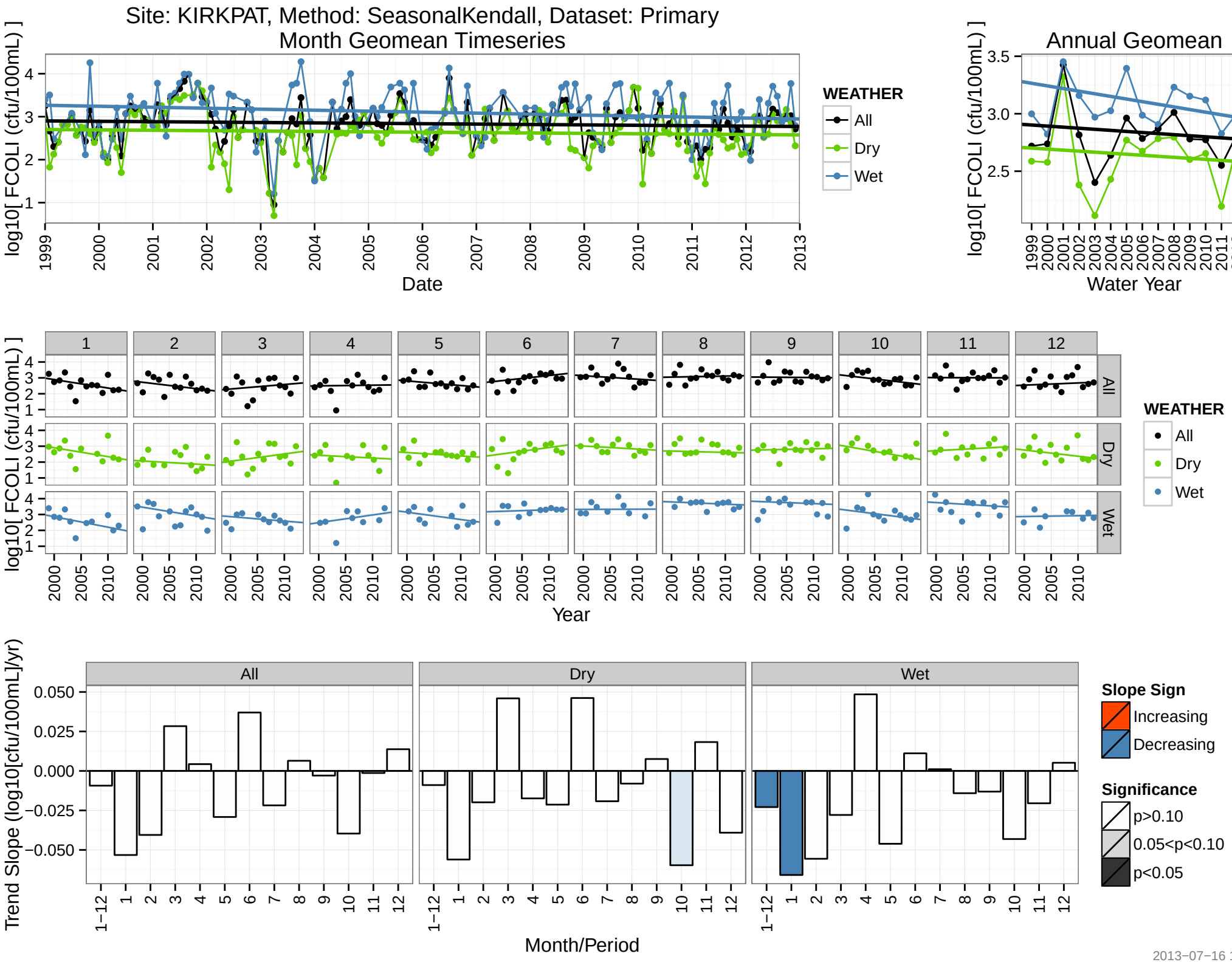

Site: PARK, Method: SeasonalKendall, Dataset: Primary
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:06


Site: RT48, Method: SeasonalKendall, Dataset: Primary
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
1
2
3
4
5
6
7
8
9
10
11
12
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:06


Site: VELASKO, Method: SeasonalKendall, Dataset: Primary
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
log10[FCOLI (cfu/100mL)]
Water Year
1
2
3
4
5
6
7
8
9
10
11
12
All
Dry
Wet
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:06


Site: HIAWATHA, Method: SeasonalKendall, Dataset: Primary
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:06


Site: DORWIN, Method: SeasonalKendall, Dataset: Primary
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:07


Site: KIRKPAT, Method: SeasonalKendall, Dataset: Primary
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:07

Dataset: Primary

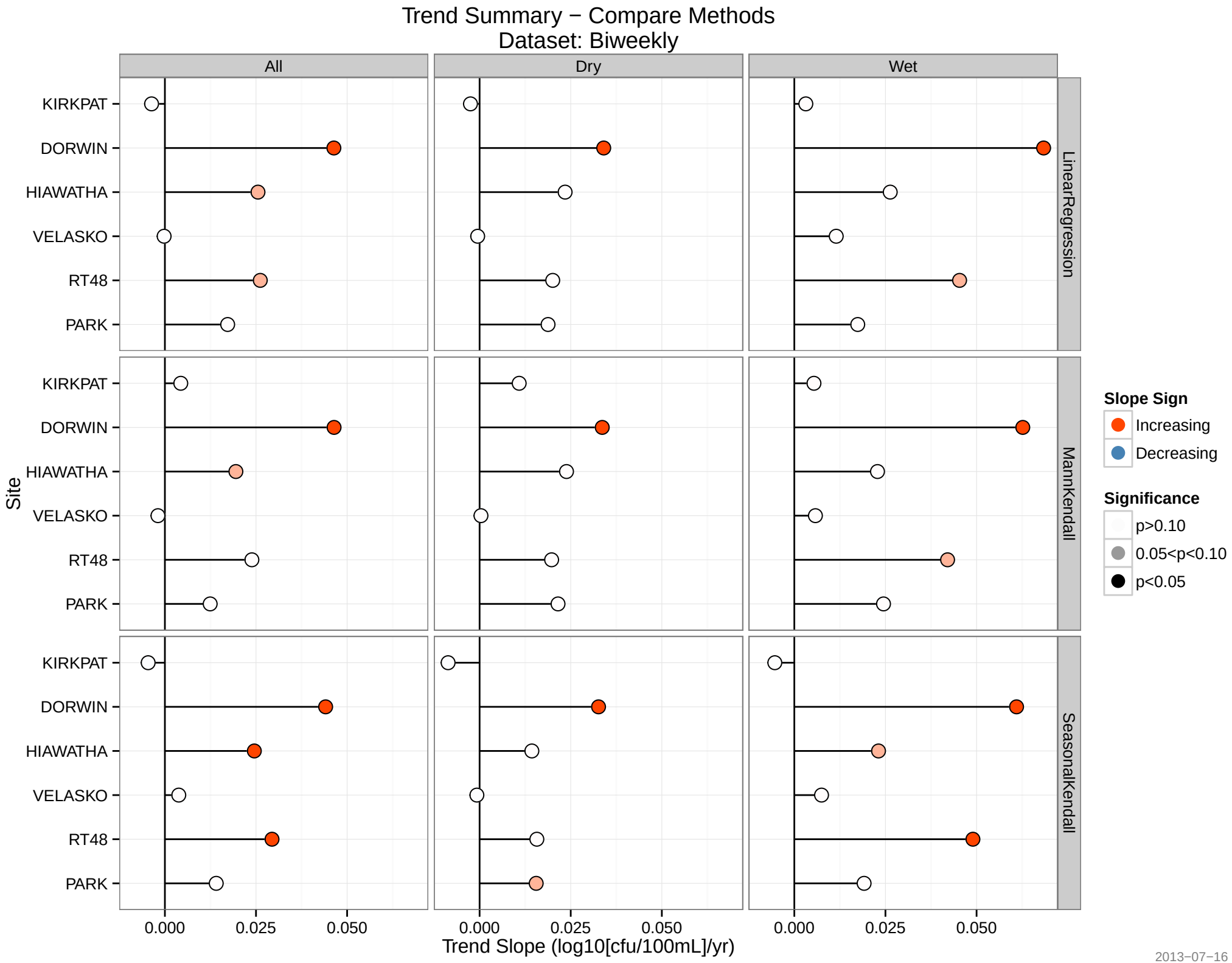
					Seasonal Kendall			Mann Kendall			Linear Regression		
Site	Weather	Month	No. Samples	Geometric Mean (cfu/100mL)	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value
PARK	All	1	31	241.0	0.0131	3.1%	0.669						
		2	38	295.5	-0.0299	-6.6%	0.381						
		3	44	158.9	0.0037	0.9%	0.913						
		4	37	209.7	-0.0142	-3.2%	0.583						
		5	40	440.8	0.0159	3.7%	0.381						
		6	38	625.7	0.0497	12.1%	0.037						
		7	44	568.3	-0.0047	-1.1%	0.743						
		8	42	523.3	0.0573	14.1%	0.155						
		9	41	609.8	0.0320	7.6%	0.584						
		10	43	529.2	-0.0118	-2.7%	0.274						
		11	40	300.8	-0.0310	-6.9%	0.443						
		12	37	325.2	0.0097	2.3%	0.743						
		Annual	**475**	**370.1**	**0.0057**	**1.3%**	**0.510**	**0.0102**	**2.4%**	**0.517**	**0.0021**	**0.5%**	**0.584**
	Dry	1	16	209.0	0.0190	4.5%	0.711						
		2	16	185.9	-0.0465	-10.2%	0.276						
		3	28	141.4	0.0063	1.5%	0.661						
		4	22	189.6	-0.0408	-9.0%	0.169						
		5	24	219.6	0.0531	13.0%	0.127						
		6	22	341.5	0.0199	4.7%	0.272						
		7	27	263.2	0.0322	7.7%	0.150						
		8	28	285.2	0.0454	11.0%	0.127						
		9	26	270.3	0.0385	9.3%	0.360						
		10	20	305.0	-0.0216	-4.9%	0.213						
		11	24	154.7	-0.0017	-0.4%	0.945						
		12	20	222.6	-0.0023	-0.5%	0.951						
		Annual	**273**	**225.5**	**0.0087**	**2.0%**	**0.210**	**0.0144**	**3.4%**	**0.438**	**0.0069**	**1.6%**	**0.661**
	Wet	1	15	195.6	0.0152	3.6%	0.602						
		2	22	458.4	-0.0347	-7.7%	0.360						
		3	16	303.6	0.0041	0.9%	0.858						
		4	15	268.6	0.0459	11.2%	0.059						
		5	16	1,015.5	-0.0193	-4.4%	0.721						
		6	16	1,877.2	0.0386	9.3%	0.276						
		7	17	1,467.6	0.0100	2.3%	0.640						
		8	14	3,327.6	0.0070	1.6%	0.670						
		9	15	1,833.5	0.0329	7.9%	0.788						
		10	23	897.3	-0.0114	-2.6%	0.373						
		11	16	855.0	-0.0770	-16.2%	0.043						
		12	17	552.1	-0.0142	-3.2%	0.466						
		Annual	**202**	**786.2**	**-0.0002**	**0.0%**	**0.867**	**0.0073**	**1.7%**	**0.665**	**0.0116**	**2.7%**	**0.827**
RT48	All	1	39	24.0	0.0412	9.9%	0.298						
		2	37	35.3	-0.0205	-4.6%	0.502						
		3	41	38.9	0.0343	8.2%	0.228						
		4	29	25.8	0.0876	22.3%	0.099						
		5	34	65.6	0.0627	15.5%	0.360						
		6	36	210.7	0.0130	3.0%	0.760						
		7	37	281.4	0.0184	4.3%	0.584						
		8	43	377.4	0.0244	5.8%	0.511						
		9	40	456.3	-0.0227	-5.1%	0.443						
		10	44	171.9	0.0112	2.6%	0.443						
		11	42	63.6	0.0070	1.6%	0.827						
		12	35	25.9	0.1062	27.7%	0.010						
		Annual	**457**	**87.3**	**0.0264**	**6.3%**	**0.011**	**0.0246**	**5.8%**	**0.060**	**0.0124**	**2.9%**	**0.228**
	Dry	1	21	11.7	0.0577	14.2%	0.110						
		2	15	18.2	-0.0324	-7.2%	0.273						
		3	24	18.5	0.0000	0.0%	1.000						
		4	17	13.1	0.0371	8.9%	0.173						
		5	21	27.7	0.0574	14.1%	0.304						
		6	20	105.2	0.0286	6.8%	0.360						
		7	22	177.1	0.0407	9.8%	0.304						
		8	28	221.1	-0.0004	-0.1%	0.951						
		9	26	172.5	0.0398	9.6%	0.428						
		10	21	88.5	-0.0192	-4.3%	0.244						
		11	25	26.7	0.0148	3.5%	0.837						
		12	21	22.4	0.0644	16.0%	0.098						
		Annual	**261**	**46.2**	**0.0178**	**4.2%**	**0.064**	**0.0210**	**4.9%**	**0.155**	**0.0193**	**4.6%**	**0.155**
	Wet	1	18	32.9	0.0125	2.9%	0.938						
		2	22	71.4	0.0330	7.9%	0.855						
		3	17	94.1	0.0633	15.7%	0.119						
		4	12	70.4	0.1641	45.9%	0.009						
		5	13	233.7	0.0865	22.0%	0.536						
		6	16	554.5	-0.0195	-4.4%	0.721						
		7	15	470.4	0.0071	1.7%	0.858						
		8	15	1,507.4	-0.0268	-6.0%	0.754						
		9	14	2,303.9	-0.0141	-3.2%	0.530						
		10	23	359.8	0.0268	6.4%	0.451						
		11	17	256.8	0.0242	5.7%	0.640						
		12	14	87.0	0.1293	34.7%	0.230						
		Annual	**196**	**229.9**	**0.0298**	**7.1%**	**0.091**	**0.0353**	**8.5%**	**0.169**	**0.0243**	**5.8%**	**0.189**

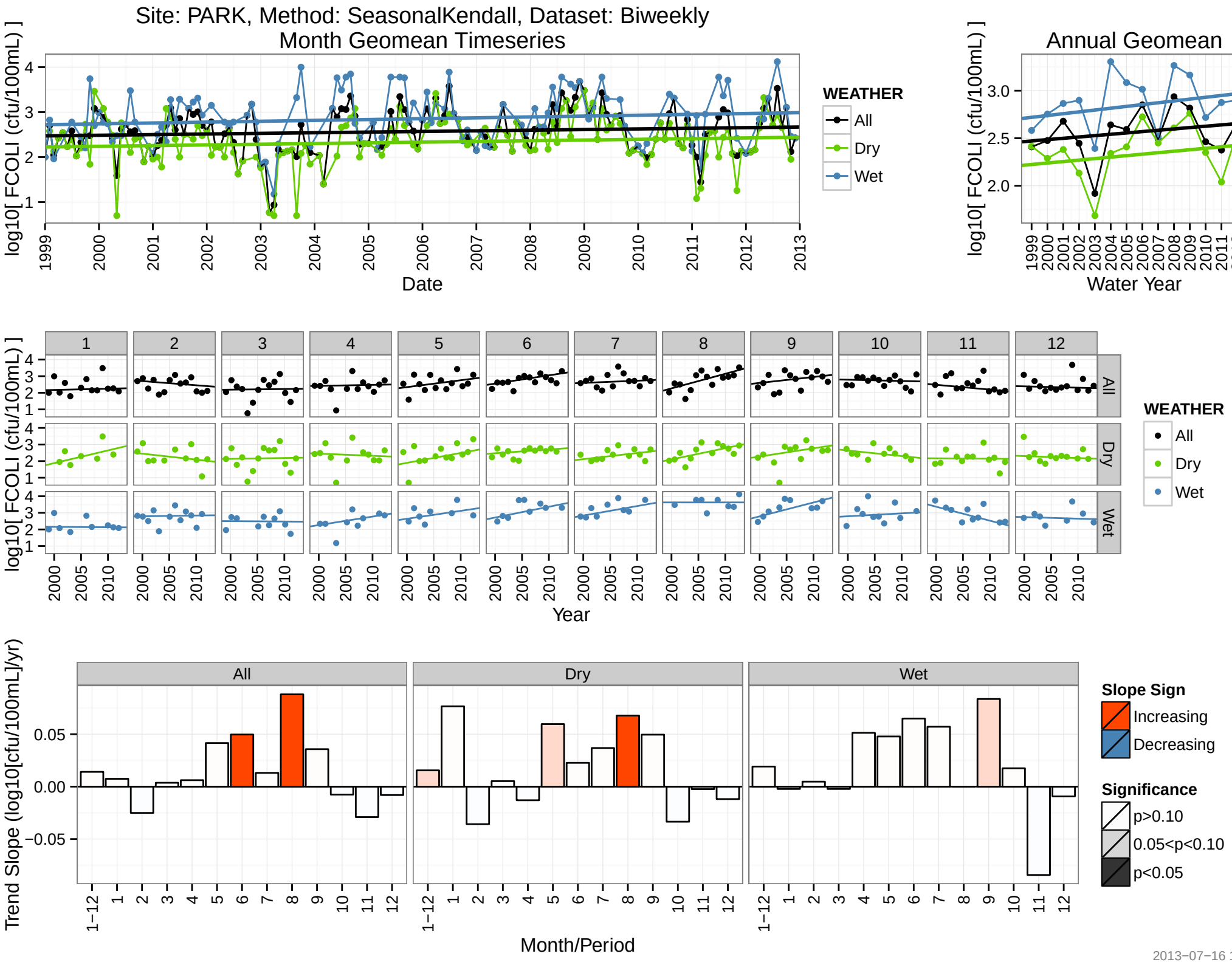
Dataset: Primary

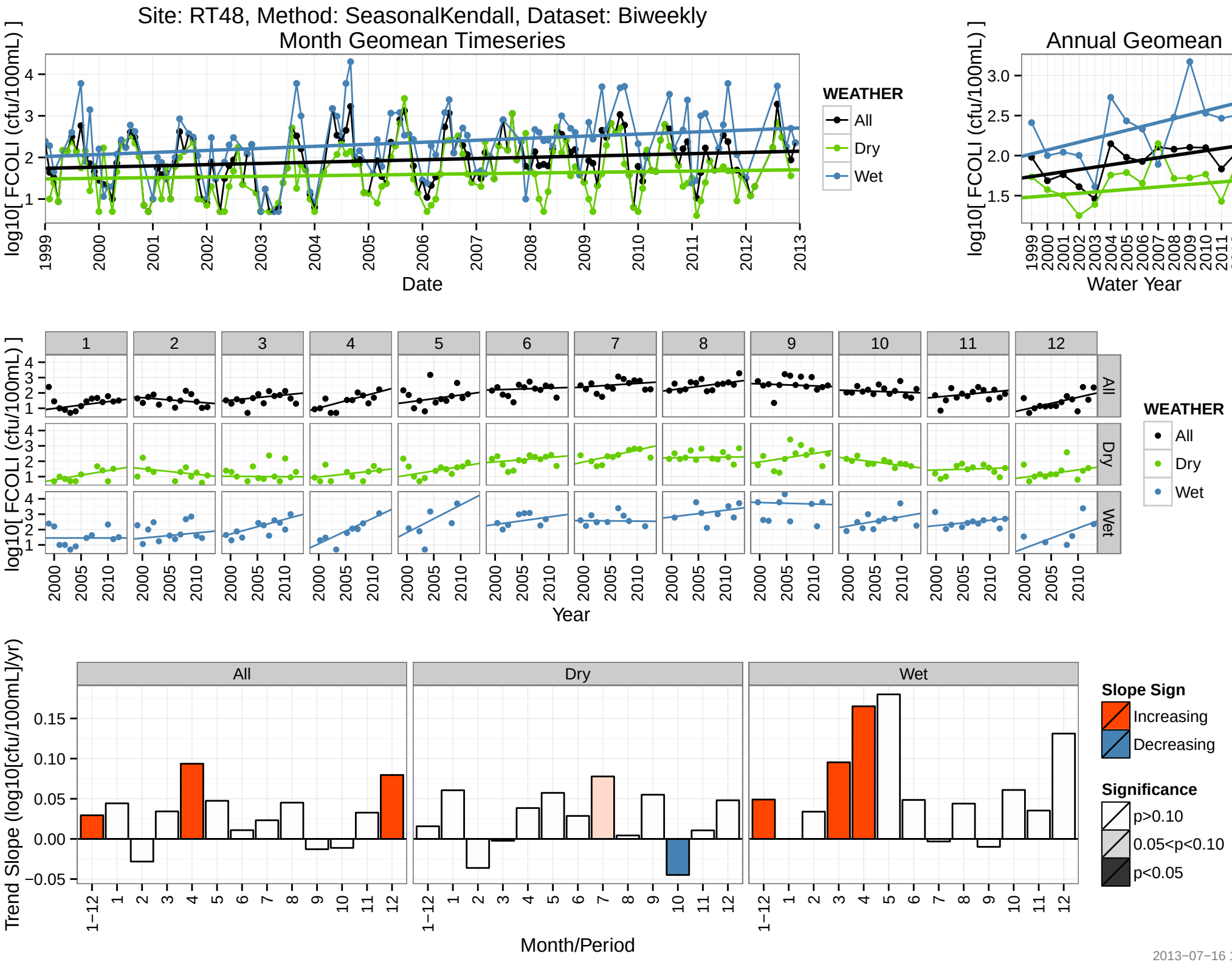
					Seasonal Kendall			Mann Kendall			Linear Regression		
Site	Weather	Month	No. Samples	Geometric Mean (cfu/100mL)	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value
VELASKO	All	1	40	41.4	0.0049	1.1%	1.000						
		2	40	48.9	-0.0213	-4.8%	0.584						
		3	46	34.6	0.0339	8.1%	0.381						
		4	36	28.0	0.0388	9.3%	0.067						
		5	40	90.0	-0.0056	-1.3%	0.827						
		6	38	210.5	0.0381	9.2%	0.155						
		7	43	371.9	-0.0057	-1.3%	1.000						
		8	42	262.6	0.0148	3.5%	0.661						
		9	39	319.5	-0.0130	-2.9%	0.443						
		10	43	92.4	-0.0156	-3.5%	0.443						
		11	41	69.9	-0.0412	-9.0%	0.324						
		12	37	40.8	0.0176	4.1%	0.661						
		Annual	**485**	**91.2**	**0.0036**	**0.8%**	**0.667**	**0.0022**	**0.5%**	**0.861**	**-0.0041**	**-0.9%**	**0.827**
	Dry	1	21	20.9	0.0591	14.6%	0.044						
		2	17	19.0	-0.0113	-2.6%	0.783						
		3	28	18.2	0.0000	0.0%	1.000						
		4	22	15.3	0.0121	2.8%	0.580						
		5	23	56.4	-0.0082	-1.9%	0.502						
		6	21	127.7	-0.0040	-0.9%	0.743						
		7	26	236.4	0.0252	6.0%	0.276						
		8	28	179.5	0.0172	4.0%	0.669						
		9	26	200.0	-0.0084	-1.9%	0.760						
		10	19	45.6	-0.0214	-4.8%	0.755						
		11	25	27.6	-0.0268	-6.0%	0.336						
		12	22	28.8	-0.0186	-4.2%	0.669						
		Annual	**278**	**50.2**	**0.0000**	**0.0%**	**0.941**	**0.0036**	**0.8%**	**0.816**	**0.0020**	**0.5%**	**0.827**
	Wet	1	19	82.1	-0.0340	-7.5%	0.350						
		2	23	87.3	-0.0491	-10.7%	0.428						
		3	18	103.4	0.0394	9.5%	0.350						
		4	14	66.1	0.0886	22.6%	0.127						
		5	17	157.2	-0.0147	-3.3%	0.858						
		6	17	540.1	0.0561	13.8%	0.101						
		7	17	603.1	-0.0161	-3.6%	0.592						
		8	14	800.8	-0.0068	-1.5%	0.917						
		9	13	561.7	-0.0362	-8.0%	0.592						
		10	24	168.1	-0.0207	-4.7%	0.428						
		11	16	159.9	-0.0753	-15.9%	0.161						
		12	15	66.2	0.0100	2.3%	1.000						
		Annual	**207**	**184.7**	**-0.0062**	**-1.4%**	**0.561**	**0.0069**	**1.6%**	**0.697**	**0.0058**	**1.3%**	**0.827**
HIAWATHA	All	1	40	150.8	0.0273	6.5%	0.476						
		2	40	343.4	0.0209	4.9%	0.661						
		3	43	214.9	0.1012	26.2%	0.016						
		4	35	274.3	0.0362	8.7%	0.100						
		5	38	343.4	0.0232	5.5%	0.381						
		6	35	1,075.1	0.0623	15.4%	0.037						
		7	43	1,571.8	0.0002	0.1%	1.000						
		8	45	1,272.2	0.0043	1.0%	0.869						
		9	39	838.8	-0.0050	-1.2%	0.827						
		10	42	597.1	-0.0358	-7.9%	0.228						
		11	42	461.8	-0.0046	-1.1%	0.913						
		12	38	247.3	0.0017	0.4%	1.000						
		Annual	**480**	**475.6**	**0.0195**	**4.6%**	**0.045**	**0.0205**	**4.8%**	**0.151**	**0.0173**	**4.1%**	**0.155**
	Dry	1	22	87.5	0.0165	3.9%	0.732						
		2	16	125.6	0.0449	10.9%	0.640						
		3	26	104.5	0.0588	14.5%	0.125						
		4	21	141.3	0.0564	13.9%	0.115						
		5	23	218.4	0.0220	5.2%	0.300						
		6	20	581.6	0.0309	7.4%	0.300						
		7	26	1,058.9	0.0069	1.6%	0.837						
		8	28	647.2	0.0077	1.8%	0.669						
		9	27	530.3	-0.0061	-1.4%	0.951						
		10	20	379.3	-0.0336	-7.4%	0.213						
		11	24	273.7	-0.0150	-3.4%	0.537						
		12	21	219.0	0.0109	2.5%	0.855						
		Annual	**274**	**273.5**	**0.0149**	**3.5%**	**0.100**	**0.0223**	**5.3%**	**0.180**	**0.0195**	**4.6%**	**0.228**
	Wet	1	18	209.8	0.0035	0.8%	1.000						
		2	24	767.2	-0.0053	-1.2%	0.951						
		3	17	883.1	0.1360	36.8%	0.012						
		4	14	566.2	0.0380	9.1%	0.039						
		5	15	668.0	0.0297	7.1%	0.592						
		6	15	2,320.4	0.0488	11.9%	0.098						
		7	17	2,296.1	0.0052	1.2%	0.928						
		8	17	5,527.0	-0.0187	-4.2%	0.181						
		9	12	2,184.5	-0.0092	-2.1%	0.917						
		10	22	992.3	-0.0549	-11.9%	0.064						
		11	18	1,313.4	-0.0164	-3.7%	0.876						
		12	17	299.3	0.0376	9.1%	0.402						
		Annual	**206**	**1,030.9**	**0.0069**	**1.6%**	**0.348**	**0.0201**	**4.7%**	**0.160**	**0.0172**	**4.0%**	**0.381**

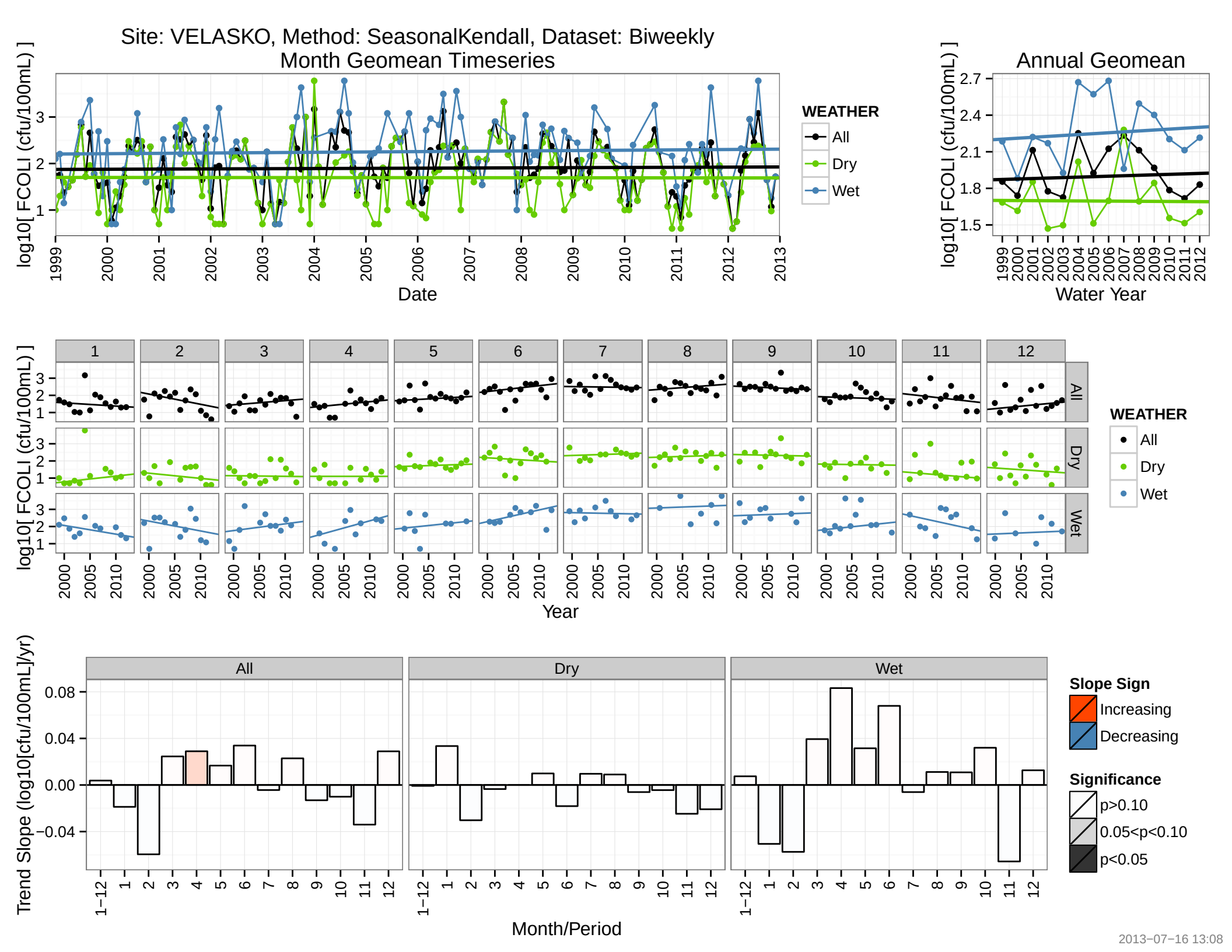
Dataset: Primary

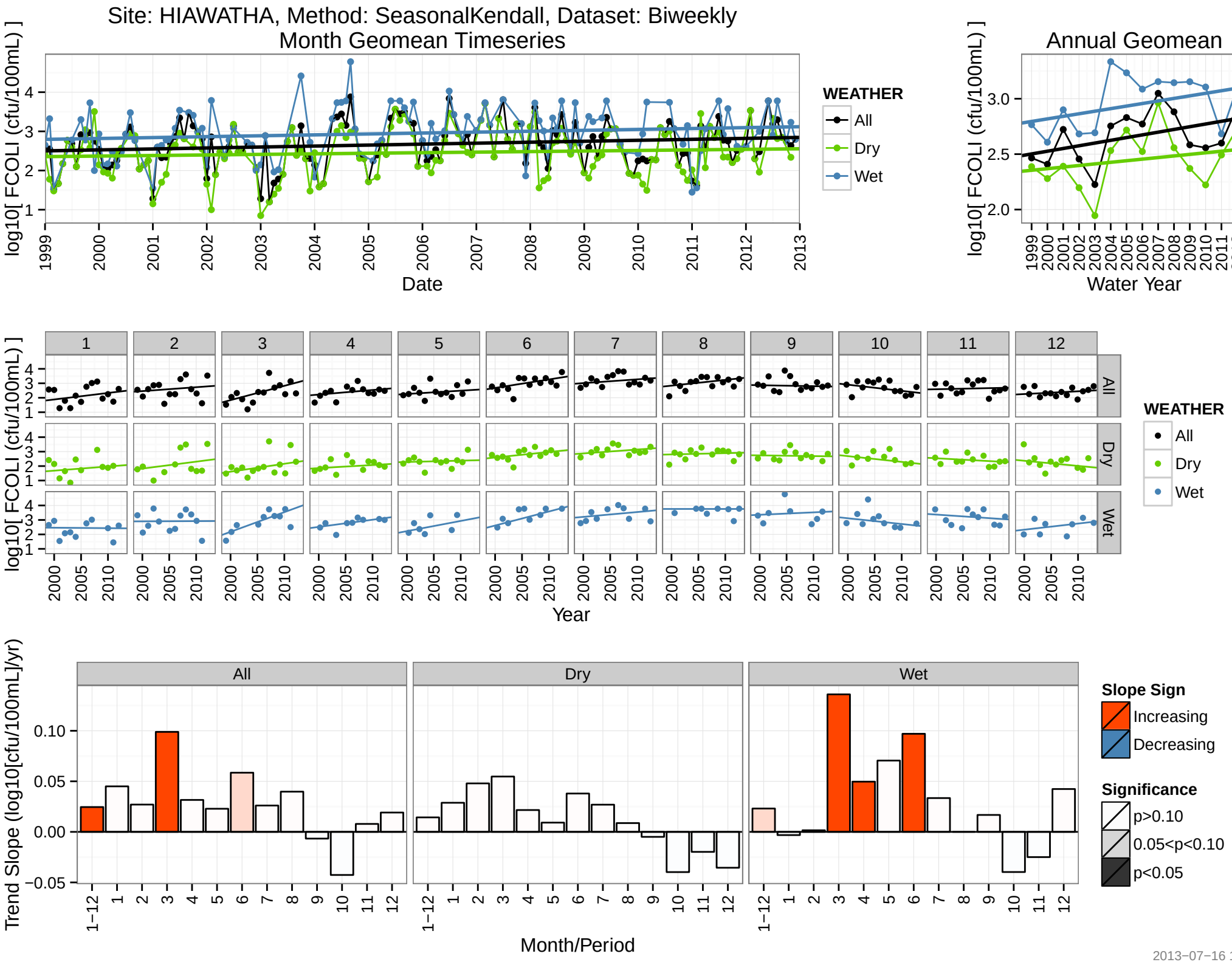
					Seasonal Kendall			Mann Kendall			Linear Regression		
Site	Weather	Month	No. Samples	Geometric Mean (cfu/100mL)	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value
DORWIN	All	1	37	37.2	0.0643	16.0%	0.324						
		2	38	29.3	0.0351	8.4%	0.274						
		3	44	31.6	0.0865	22.0%	0.016						
		4	37	33.2	0.0535	13.1%	0.127						
		5	41	85.5	0.0280	6.7%	0.101						
		6	39	230.2	0.0504	12.3%	0.029						
		7	44	290.8	0.0395	9.5%	0.049						
		8	46	376.2	0.0442	10.7%	0.029						
		9	40	270.0	0.0320	7.7%	0.125						
		10	44	135.1	0.0392	9.5%	0.101						
		11	42	52.8	0.0204	4.8%	0.443						
		12	34	43.8	0.0321	7.7%	0.274						
		Annual	**486**	**88.2**	**0.0407**	**9.8%**	**0.000**	**0.0432**	**10.5%**	**0.000**	**0.0383**	**9.2%**	**0.001**
	Dry	1	20	20.1	0.0904	23.2%	0.010						
		2	17	19.8	0.0277	6.6%	0.404						
		3	28	16.0	0.0626	15.5%	0.007						
		4	21	14.9	0.0466	11.3%	0.580						
		5	25	40.3	0.0451	10.9%	0.112						
		6	18	121.3	0.0533	13.1%	0.020						
		7	28	192.1	0.0358	8.6%	0.100						
		8	28	265.0	0.0560	13.8%	0.024						
		9	25	167.8	0.0040	0.9%	0.855						
		10	19	75.2	0.0175	4.1%	0.755						
		11	24	28.0	0.0194	4.6%	0.837						
		12	20	44.8	0.0203	4.8%	0.502						
		Annual	**273**	**53.2**	**0.0409**	**9.9%**	**0.000**	**0.0418**	**10.1%**	**0.002**	**0.0418**	**10.1%**	**0.004**
	Wet	1	17	61.2	-0.0208	-4.7%	1.000						
		2	21	47.4	0.0676	16.8%	0.067						
		3	16	109.0	0.0697	17.4%	0.251						
		4	16	82.5	0.0999	25.8%	0.062						
		5	16	215.3	0.0292	7.0%	0.721						
		6	21	562.9	-0.0101	-2.3%	0.696						
		7	16	482.1	0.0603	14.9%	0.210						
		8	18	995.3	-0.0053	-1.2%	0.876						
		9	15	462.9	0.0474	11.5%	0.436						
		10	25	186.2	0.0416	10.0%	0.161						
		11	18	145.7	0.0167	3.9%	0.732						
		12	14	77.3	0.0515	12.6%	0.108						
		Annual	**213**	**184.7**	**0.0381**	**9.2%**	**0.003**	**0.0516**	**12.6%**	**0.020**	**0.0475**	**11.6%**	**0.063**
KIRKPAT	All	1	40	388.4	-0.0532	-11.5%	0.125						
		2	40	387.2	-0.0405	-8.9%	0.189						
		3	46	267.2	0.0284	6.7%	0.443						
		4	36	286.4	0.0043	1.0%	0.951						
		5	41	499.6	-0.0291	-6.5%	0.228						
		6	39	810.6	0.0370	8.9%	0.189						
		7	43	1,190.3	-0.0218	-4.9%	0.743						
		8	46	1,263.8	0.0064	1.5%	0.913						
		9	40	1,170.2	-0.0029	-0.7%	1.000						
		10	43	822.6	-0.0396	-8.7%	0.381						
		11	44	1,116.8	-0.0013	-0.3%	1.000						
		12	38	623.7	0.0138	3.2%	0.743						
		Annual	**496**	**642.8**	**-0.0093**	**-2.1%**	**0.426**	**-0.0070**	**-1.6%**	**0.674**	**0.0036**	**0.8%**	**0.913**
	Dry	1	22	404.1	-0.0561	-12.1%	0.193						
		2	17	135.9	-0.0199	-4.5%	0.492						
		3	28	230.1	0.0460	11.2%	0.511						
		4	22	200.4	-0.0174	-3.9%	0.631						
		5	24	318.7	-0.0213	-4.8%	0.428						
		6	21	430.3	0.0462	11.2%	0.428						
		7	27	825.1	-0.0192	-4.3%	0.537						
		8	28	713.8	-0.0080	-1.8%	0.583						
		9	25	618.1	0.0076	1.8%	0.760						
		10	20	597.4	-0.0597	-12.8%	0.062						
		11	25	671.3	0.0183	4.3%	0.837						
		12	21	445.3	-0.0391	-8.6%	0.502						
		Annual	**280**	**408.1**	**-0.0089**	**-2.0%**	**0.182**	**-0.0051**	**-1.2%**	**0.804**	**0.0077**	**1.8%**	**0.661**
	Wet	1	18	406.7	-0.0659	-14.1%	0.043						
		2	23	862.1	-0.0556	-12.0%	0.200						
		3	18	431.0	-0.0279	-6.2%	0.276						
		4	14	461.4	0.0485	11.8%	0.175						
		5	17	746.1	-0.0461	-10.1%	0.371						
		6	18	1,788.0	0.0112	2.6%	0.585						
		7	16	2,483.1	0.0011	0.3%	0.928						
		8	18	4,257.7	-0.0141	-3.2%	0.386						
		9	15	3,097.9	-0.0131	-3.0%	0.640						
		10	23	1,051.3	-0.0431	-9.5%	0.244						
		11	19	2,878.2	-0.0205	-4.6%	0.409						
		12	17	755.0	0.0052	1.2%	1.000						
		Annual	**216**	**1,199.5**	**-0.0229**	**-5.1%**	**0.023**	**-0.0051**	**-1.2%**	**0.702**	**-0.0049**	**-1.1%**	**0.743**

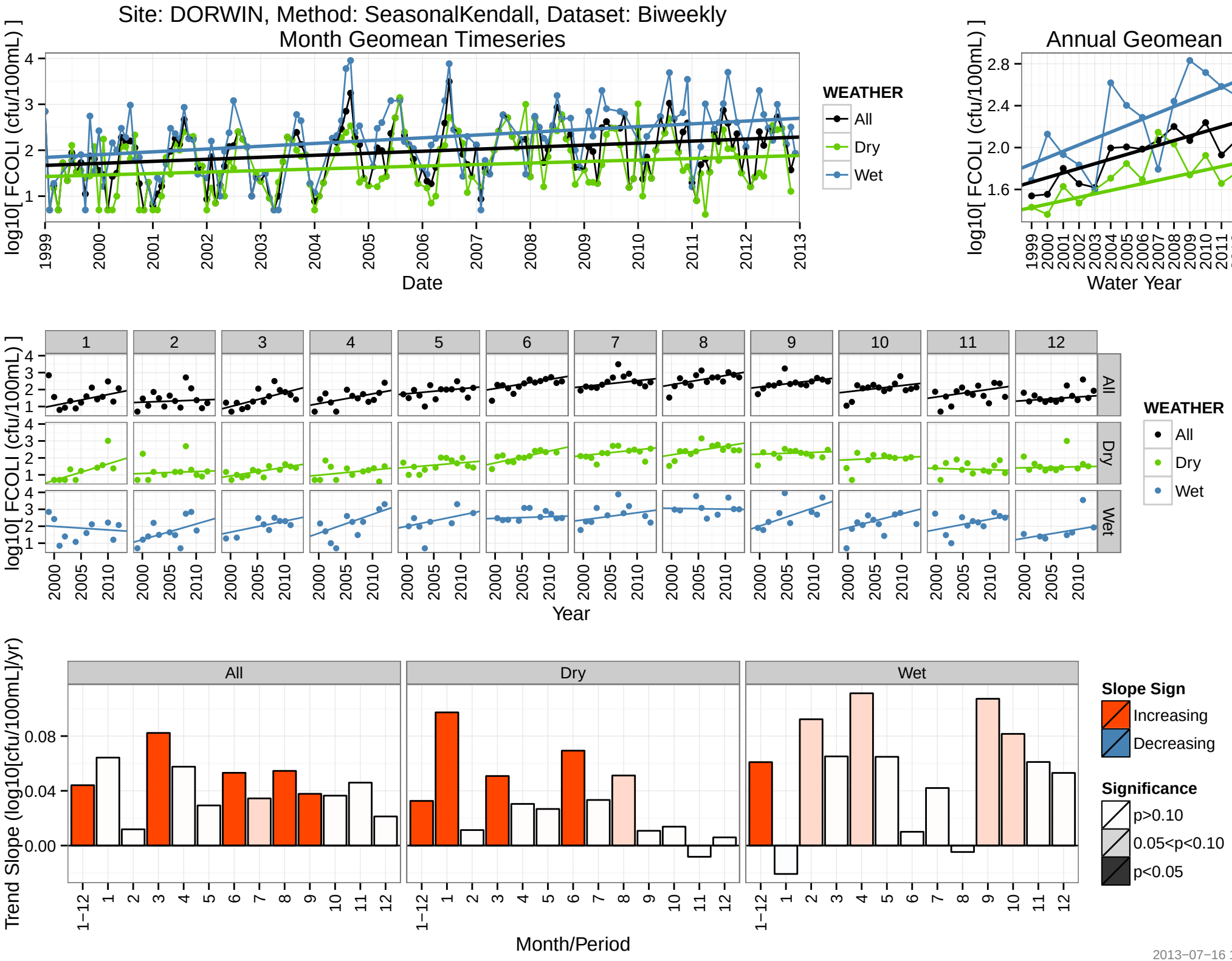

Trend Summary − Compare Methods
Dataset: Biweekly
All
Dry
Wet
LinearRegression
MannKendall
SeasonalKendall
KIRKPAT
DORWIN
HIAWATHA
VELASKO
RT48
PARK
Site
0.000
0.025
0.050
Trend Slope (log10[cfu/100mL]/yr)
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:07

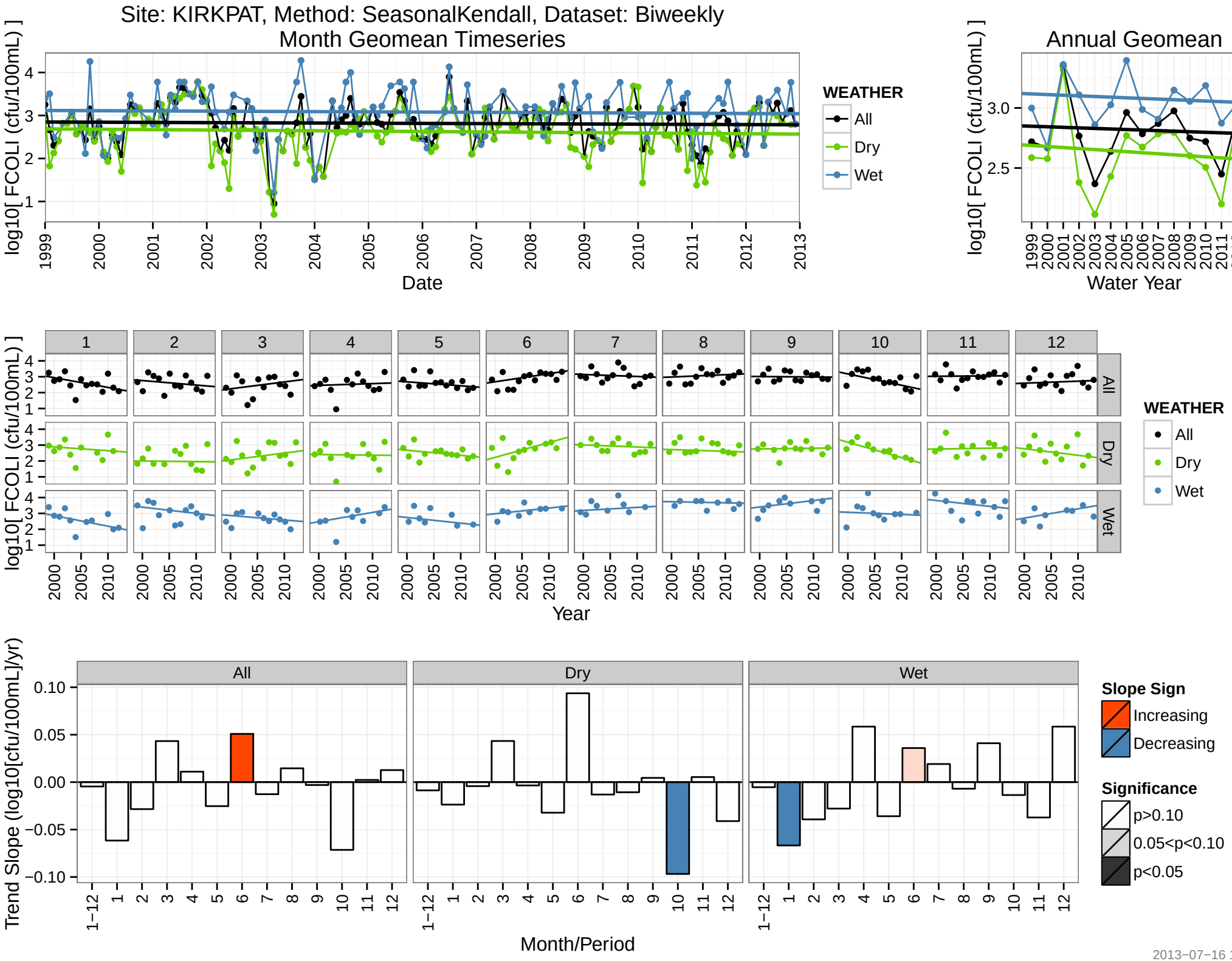

Site: PARK, Method: SeasonalKendall, Dataset: Biweekly
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:07


Site: RT48, Method: SeasonalKendall, Dataset: Biweekly
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
1
2
3
4
5
6
7
8
9
10
11
12
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:08


Site: VELASKO, Method: SeasonalKendall, Dataset: Biweekly
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
log10[FCOLI (cfu/100mL)]
Water Year
log10[FCOLI (cfu/100mL)]
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:08


Site: HIAWATHA, Method: SeasonalKendall, Dataset: Biweekly
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:08


Site: DORWIN, Method: SeasonalKendall, Dataset: Biweekly
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
log10[FCOLI (cfu/100mL)]
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:08


Site: KIRKPAT, Method: SeasonalKendall, Dataset: Biweekly
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:08

Dataset: Biweekly

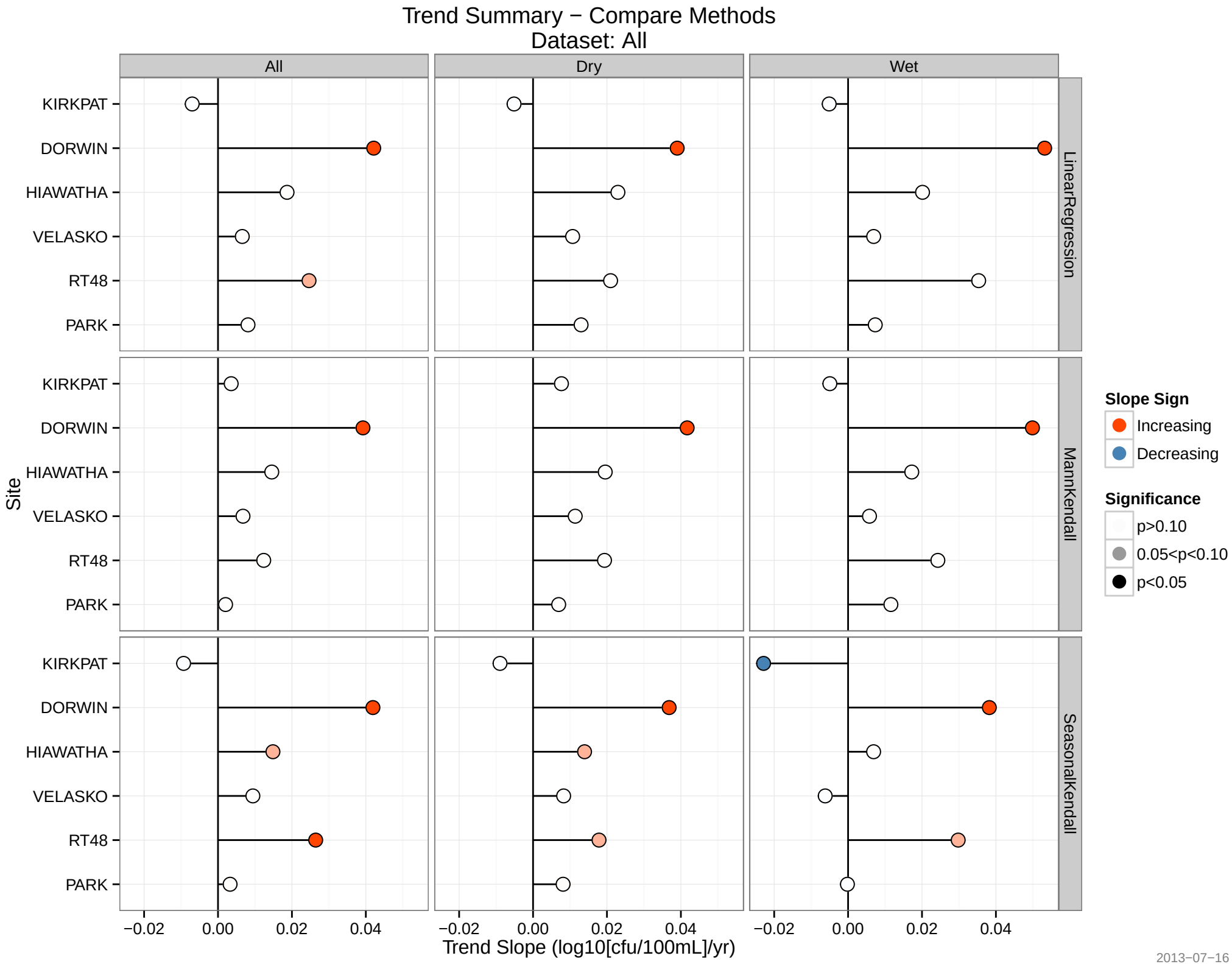
					Seasonal Kendall			Mann Kendall			Linear Regression		
Site	Weather	Month	No. Samples	Geometric Mean (cfu/100mL)	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value
PARK	All	1	25	238.1	0.0075	1.7%	0.855						
		2	29	300.5	-0.0251	-5.6%	0.443						
		3	38	147.6	0.0037	0.9%	1.000						
		4	26	233.8	0.0061	1.4%	0.760						
		5	31	390.5	0.0416	10.0%	0.324						
		6	29	555.9	0.0497	12.1%	0.049						
		7	33	539.1	0.0131	3.1%	0.584						
		8	33	573.5	0.0880	22.5%	0.021						
		9	30	556.7	0.0357	8.6%	0.324						
		10	30	485.9	-0.0076	-1.7%	0.661						
		11	30	295.8	-0.0290	-6.5%	0.381						
		12	28	313.5	-0.0080	-1.8%	0.913						
		Annual	**362**	**357.9**	**0.0141**	**3.3%**	**0.127**	**0.0172**	**4.0%**	**0.322**	**0.0124**	**2.9%**	**0.443**
	Dry	1	11	238.9	0.0766	19.3%	0.368						
		2	12	182.7	-0.0358	-7.9%	0.640						
		3	24	135.7	0.0052	1.2%	0.827						
		4	15	216.8	-0.0130	-2.9%	0.783						
		5	21	241.2	0.0597	14.7%	0.077						
		6	19	337.9	0.0227	5.4%	0.358						
		7	20	249.8	0.0368	8.8%	0.216						
		8	23	336.1	0.0678	16.9%	0.044						
		9	20	263.0	0.0496	12.1%	0.304						
		10	15	301.5	-0.0335	-7.4%	0.283						
		11	17	142.4	-0.0024	-0.5%	1.000						
		12	16	219.5	-0.0119	-2.7%	0.537						
		Annual	**213**	**228.6**	**0.0155**	**3.6%**	**0.071**	**0.0188**	**4.4%**	**0.333**	**0.0215**	**5.1%**	**0.274**
	Wet	1	14	182.4	-0.0022	-0.5%	1.000						
		2	17	547.9	0.0048	1.1%	0.945						
		3	14	272.3	-0.0022	-0.5%	1.000						
		4	11	292.4	0.0513	12.5%	0.142						
		5	10	868.2	0.0478	11.6%	0.536						
		6	10	1,570.2	0.0649	16.1%	0.175						
		7	13	1,654.8	0.0571	14.1%	0.142						
		8	10	3,825.3	0.0000	0.0%	1.000						
		9	10	1,914.2	0.0836	21.2%	0.076						
		10	15	924.9	0.0175	4.1%	1.000						
		11	13	911.5	-0.0843	-17.6%	0.107						
		12	12	600.8	-0.0094	-2.1%	1.000						
		Annual	**149**	**774.6**	**0.0191**	**4.5%**	**0.147**	**0.0174**	**4.1%**	**0.358**	**0.0245**	**5.8%**	**0.324**
RT48	All	1	33	23.8	0.0443	10.7%	0.298						
		2	28	32.1	-0.0282	-6.3%	0.360						
		3	37	39.3	0.0343	8.2%	0.207						
		4	23	26.8	0.0936	24.1%	0.039						
		5	28	58.6	0.0475	11.5%	0.502						
		6	27	150.4	0.0109	2.5%	0.760						
		7	30	286.2	0.0232	5.5%	0.661						
		8	34	334.5	0.0451	11.0%	0.189						
		9	30	380.6	-0.0128	-2.9%	0.443						
		10	30	142.4	-0.0112	-2.5%	0.827						
		11	33	72.4	0.0327	7.8%	0.324						
		12	27	25.9	0.0796	20.1%	0.042						
		Annual	**360**	**81.4**	**0.0294**	**7.0%**	**0.015**	**0.0262**	**6.2%**	**0.062**	**0.0239**	**5.7%**	**0.274**
	Dry	1	16	10.9	0.0606	15.0%	0.194						
		2	11	17.0	-0.0362	-8.0%	0.210						
		3	22	18.0	-0.0023	-0.5%	0.902						
		4	13	14.2	0.0384	9.2%	0.238						
		5	20	27.3	0.0573	14.1%	0.304						
		6	19	104.2	0.0286	6.8%	0.360						
		7	17	203.6	0.0778	19.6%	0.087						
		8	23	219.8	0.0043	1.0%	0.760						
		9	20	182.2	0.0550	13.5%	0.304						
		10	16	82.8	-0.0449	-9.8%	0.029						
		11	18	25.3	0.0106	2.5%	0.837						
		12	17	20.1	0.0481	11.7%	0.241						
		Annual	**212**	**45.2**	**0.0157**	**3.7%**	**0.110**	**0.0201**	**4.7%**	**0.197**	**0.0198**	**4.7%**	**0.189**
	Wet	1	17	31.6	0.0000	0.0%	1.000						
		2	17	72.0	0.0339	8.1%	0.732						
		3	15	114.8	0.0954	24.6%	0.029						
		4	10	70.9	0.1652	46.3%	0.009						
		5	8	211.8	0.1800	51.3%	0.260						
		6	8	397.9	0.0485	11.8%	0.386						
		7	13	441.1	-0.0032	-0.7%	0.917						
		8	11	1,245.9	0.0440	10.7%	0.711						
		9	10	1,775.9	-0.0099	-2.3%	0.670						
		10	14	348.4	0.0609	15.1%	0.152						
		11	15	287.0	0.0353	8.5%	0.276						
		12	10	68.9	0.1311	35.3%	0.260						
		Annual	**148**	**206.4**	**0.0490**	**11.9%**	**0.003**	**0.0453**	**11.0%**	**0.080**	**0.0420**	**10.2%**	**0.080**

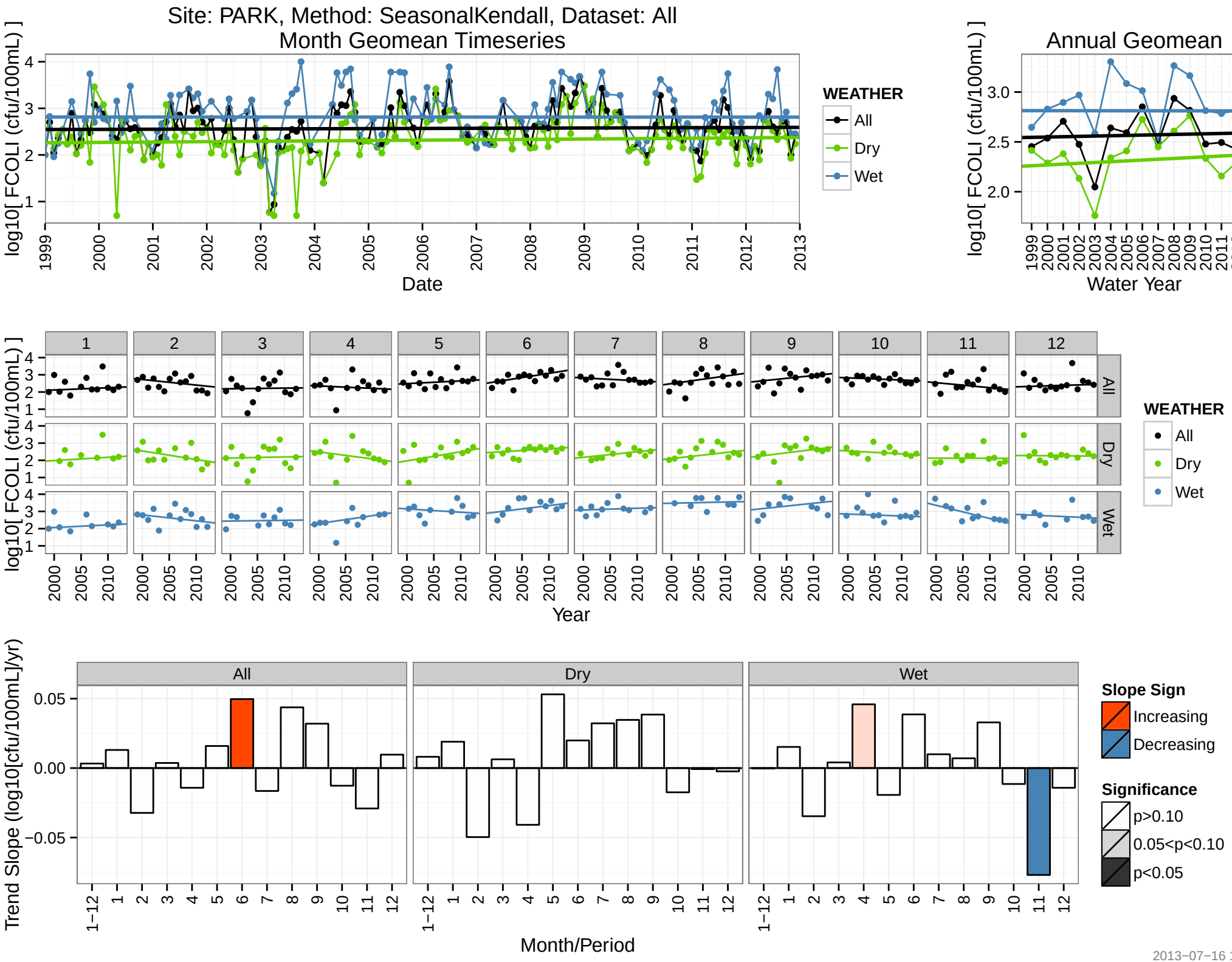
Dataset: Biweekly

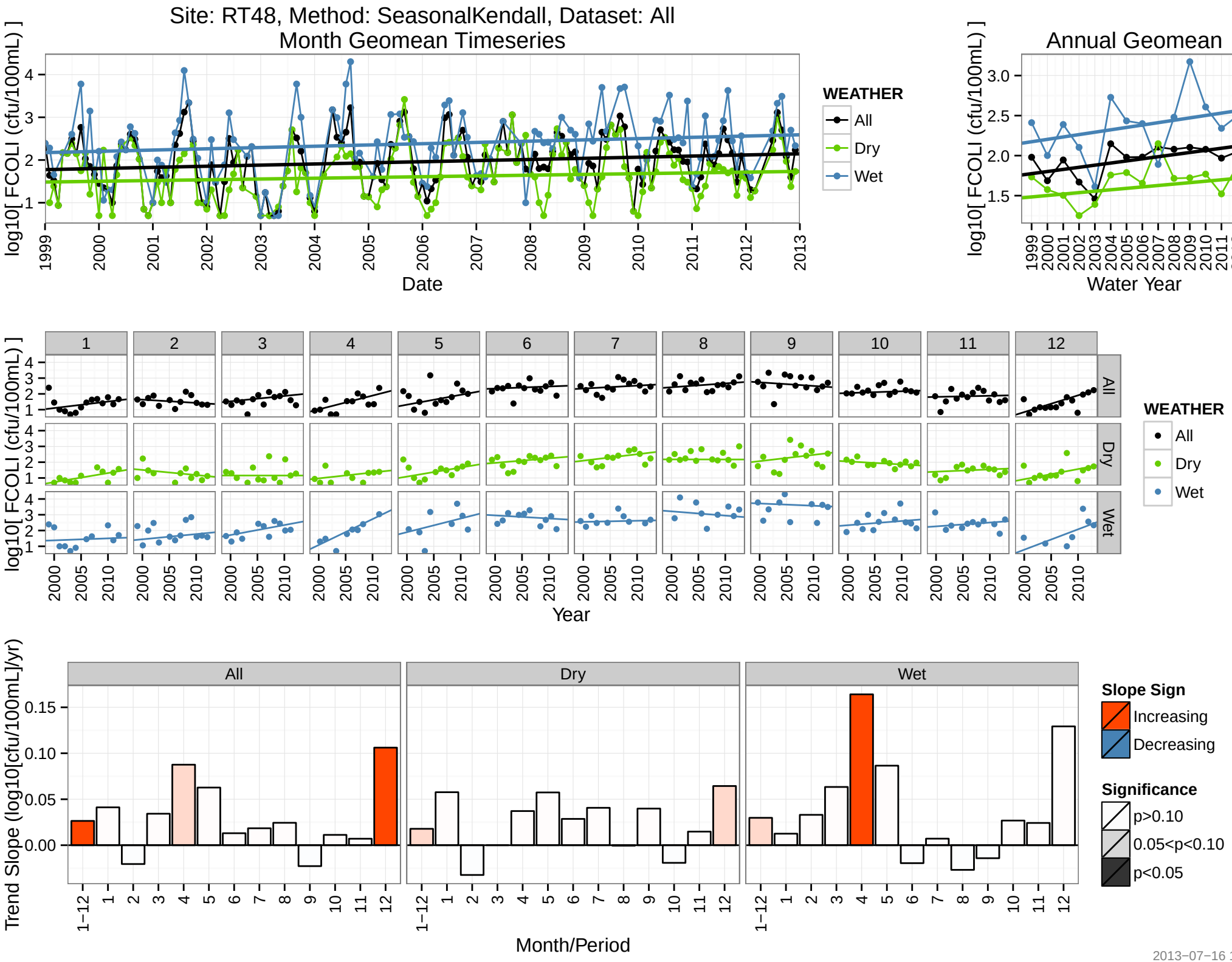
					Seasonal Kendall			Mann Kendall			Linear Regression		
Site	Weather	Month	No. Samples	Geometric Mean (cfu/100mL)	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value
VELASKO	All	1	34	38.3	-0.0188	-4.2%	0.584						
		2	31	41.8	-0.0595	-12.8%	0.324						
		3	40	32.0	0.0245	5.8%	0.584						
		4	26	28.6	0.0290	6.9%	0.087						
		5	30	80.7	0.0167	3.9%	0.381						
		6	29	193.1	0.0339	8.1%	0.228						
		7	33	362.5	-0.0043	-1.0%	1.000						
		8	32	260.0	0.0229	5.4%	0.584						
		9	30	311.2	-0.0131	-3.0%	0.189						
		10	30	85.5	-0.0101	-2.3%	0.743						
		11	31	71.4	-0.0340	-7.5%	0.584						
		12	28	40.8	0.0289	6.9%	0.443						
		Annual	**374**	**86.7**	**0.0038**	**0.9%**	**0.621**	**-0.0002**	**0.0%**	**0.988**	**-0.0019**	**-0.4%**	**0.827**
	Dry	1	16	18.0	0.0334	8.0%	0.206						
		2	13	16.7	-0.0303	-6.7%	0.301						
		3	24	17.0	-0.0035	-0.8%	0.913						
		4	15	14.4	0.0000	0.0%	1.000						
		5	20	62.2	0.0099	2.3%	0.583						
		6	18	125.0	-0.0181	-4.1%	0.583						
		7	18	225.8	0.0096	2.2%	0.640						
		8	23	174.0	0.0090	2.1%	0.903						
		9	20	203.8	-0.0061	-1.4%	0.945						
		10	14	48.6	-0.0044	-1.0%	0.858						
		11	18	31.5	-0.0247	-5.5%	0.582						
		12	18	28.1	-0.0208	-4.7%	0.631						
		Annual	**217**	**49.0**	**-0.0007**	**-0.2%**	**0.800**	**-0.0005**	**-0.1%**	**0.974**	**0.0004**	**0.1%**	**1.000**
	Wet	1	18	76.3	-0.0506	-11.0%	0.161						
		2	18	87.7	-0.0574	-12.4%	0.451						
		3	16	101.8	0.0394	9.5%	0.350						
		4	11	78.5	0.0832	21.1%	0.208						
		5	10	112.8	0.0315	7.5%	0.902						
		6	11	410.9	0.0679	16.9%	0.178						
		7	15	592.6	-0.0061	-1.4%	1.000						
		8	9	988.0	0.0112	2.6%	0.879						
		9	10	644.6	0.0109	2.5%	1.000						
		10	16	187.9	0.0320	7.6%	0.350						
		11	13	179.0	-0.0657	-14.0%	0.419						
		12	10	74.5	0.0126	2.9%	1.000						
		Annual	**157**	**183.6**	**0.0075**	**1.7%**	**0.652**	**0.0115**	**2.7%**	**0.533**	**0.0058**	**1.3%**	**0.661**
HIAWATHA	All	1	34	157.4	0.0450	10.9%	0.411						
		2	31	372.3	0.0270	6.4%	0.511						
		3	38	206.0	0.0989	25.6%	0.037						
		4	26	242.8	0.0316	7.5%	0.161						
		5	29	284.4	0.0229	5.4%	0.360						
		6	28	950.0	0.0586	14.4%	0.063						
		7	33	1,629.9	0.0261	6.2%	0.324						
		8	34	1,039.5	0.0398	9.6%	0.250						
		9	30	852.6	-0.0067	-1.5%	0.827						
		10	29	529.1	-0.0427	-9.4%	0.381						
		11	33	476.4	0.0079	1.8%	0.913						
		12	29	248.4	0.0191	4.5%	0.661						
		Annual	**374**	**454.4**	**0.0245**	**5.8%**	**0.005**	**0.0255**	**6.1%**	**0.091**	**0.0195**	**4.6%**	**0.080**
	Dry	1	17	87.1	0.0288	6.9%	0.755						
		2	12	148.2	0.0480	11.7%	0.276						
		3	23	104.4	0.0547	13.4%	0.125						
		4	15	113.3	0.0216	5.1%	0.451						
		5	20	200.8	0.0092	2.1%	0.732						
		6	19	600.4	0.0379	9.1%	0.161						
		7	19	1,142.3	0.0269	6.4%	0.373						
		8	23	658.2	0.0087	2.0%	0.760						
		9	21	538.3	-0.0049	-1.1%	0.945						
		10	15	380.2	-0.0398	-8.8%	0.474						
		11	17	260.0	-0.0198	-4.5%	0.492						
		12	17	190.2	-0.0355	-7.9%	0.582						
		Annual	**218**	**270.0**	**0.0143**	**3.4%**	**0.121**	**0.0235**	**5.6%**	**0.176**	**0.0238**	**5.6%**	**0.228**
	Wet	1	17	206.0	-0.0032	-0.7%	1.000						
		2	19	714.3	0.0016	0.4%	1.000						
		3	15	753.0	0.1360	36.8%	0.032						
		4	11	605.3	0.0497	12.1%	0.036						
		5	9	403.8	0.0705	17.6%	0.368						
		6	9	2,026.5	0.0970	25.0%	0.033						
		7	14	2,324.2	0.0334	8.0%	0.323						
		8	11	3,843.0	0.0000	0.0%	0.894						
		9	9	2,569.3	0.0167	3.9%	0.902						
		10	14	1,029.2	-0.0397	-8.7%	0.107						
		11	16	1,328.9	-0.0250	-5.6%	0.755						
		12	12	345.7	0.0424	10.3%	0.454						
		Annual	**156**	**939.2**	**0.0231**	**5.5%**	**0.066**	**0.0263**	**6.2%**	**0.104**	**0.0228**	**5.4%**	**0.381**

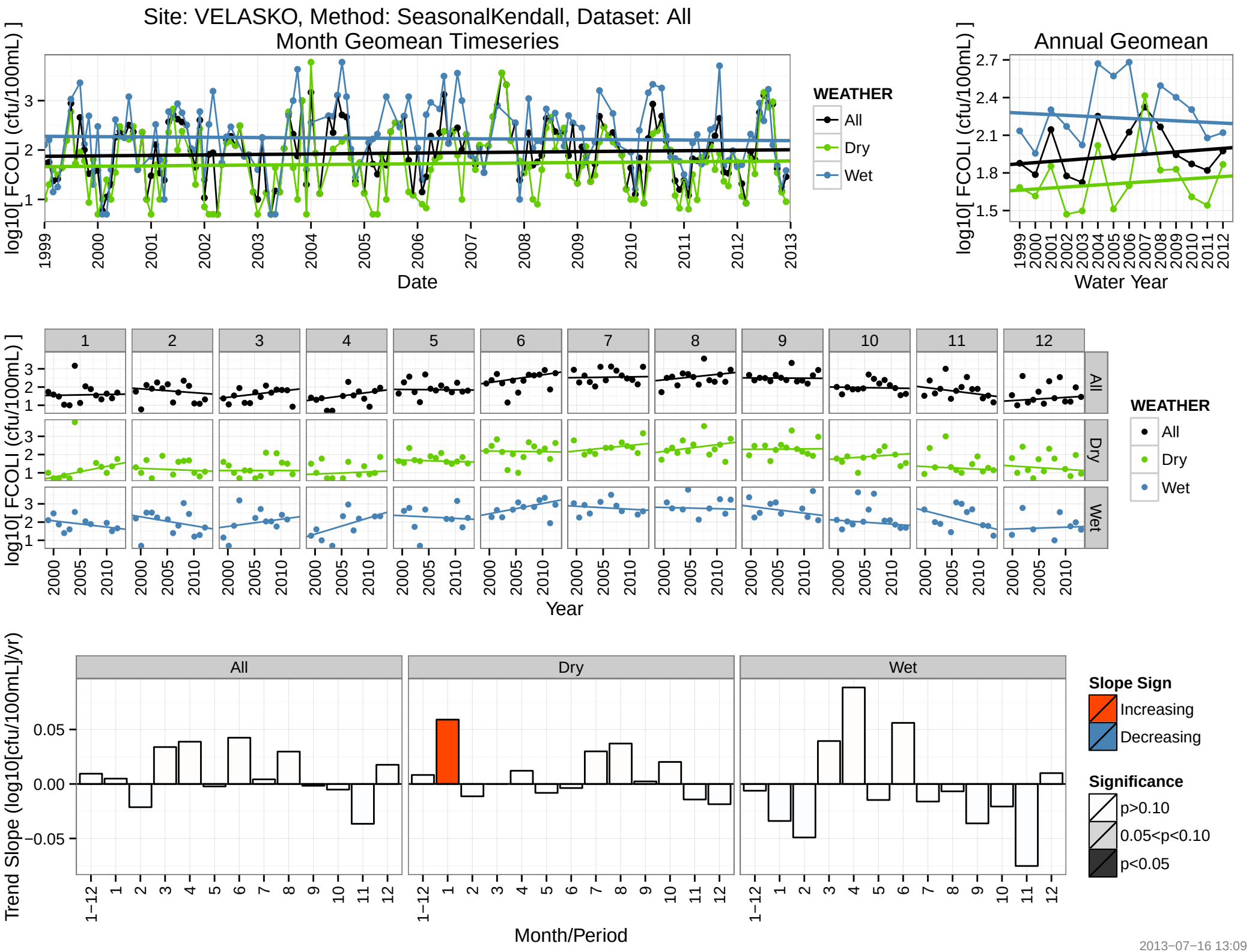
Dataset: Biweekly

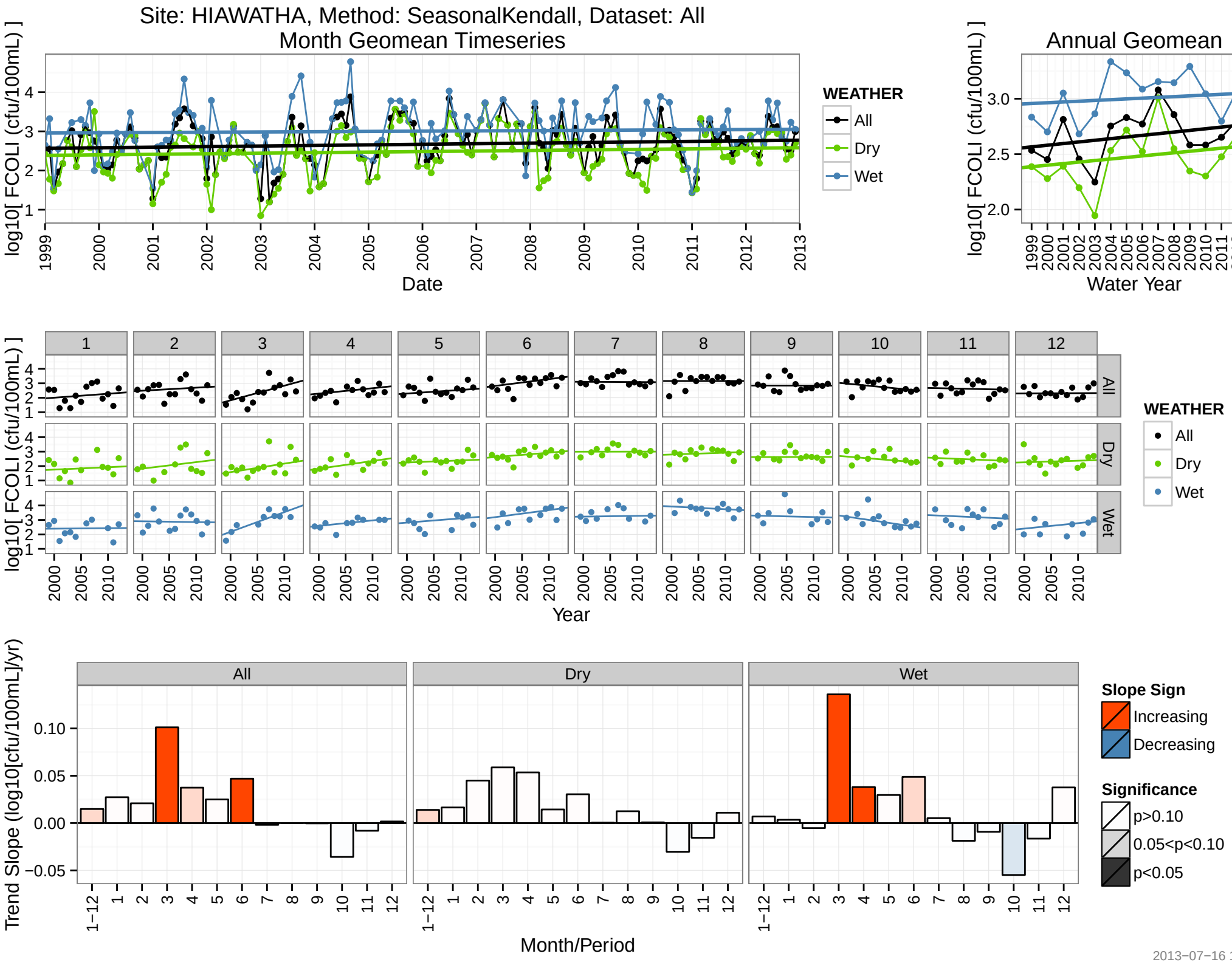
					Seasonal Kendall			Mann Kendall			Linear Regression		
Site	Weather	Month	No. Samples	Geometric Mean (cfu/100mL)	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value
DORWIN	All	1	31	38.1	0.0643	16.0%	0.274						
		2	30	25.7	0.0119	2.8%	0.913						
		3	38	29.6	0.0823	20.9%	0.021						
		4	26	31.9	0.0576	14.2%	0.112						
		5	31	68.5	0.0293	7.0%	0.155						
		6	29	192.4	0.0532	13.0%	0.004						
		7	33	290.6	0.0344	8.3%	0.080						
		8	35	371.6	0.0546	13.4%	0.016						
		9	29	244.4	0.0378	9.1%	0.012						
		10	30	107.0	0.0365	8.8%	0.274						
		11	32	52.3	0.0460	11.2%	0.324						
		12	27	42.8	0.0213	5.0%	0.324						
		Annual	**371**	**81.2**	**0.0441**	**10.7%**	**0.000**	**0.0464**	**11.3%**	**0.000**	**0.0464**	**11.3%**	**0.001**
	Dry	1	15	18.8	0.0973	25.1%	0.009						
		2	13	18.7	0.0113	2.6%	0.487						
		3	24	15.2	0.0508	12.4%	0.014						
		4	15	14.1	0.0304	7.3%	0.580						
		5	21	37.4	0.0267	6.3%	0.328						
		6	16	115.9	0.0694	17.3%	0.024						
		7	20	182.2	0.0333	8.0%	0.161						
		8	23	262.3	0.0512	12.5%	0.050						
		9	19	166.2	0.0108	2.5%	0.732						
		10	14	73.3	0.0138	3.2%	0.858						
		11	17	25.0	-0.0082	-1.9%	0.837						
		12	17	41.3	0.0060	1.4%	0.945						
		Annual	**214**	**50.0**	**0.0326**	**7.8%**	**0.000**	**0.0341**	**8.2%**	**0.014**	**0.0336**	**8.1%**	**0.012**
	Wet	1	16	60.3	-0.0208	-4.7%	0.858						
		2	17	44.6	0.0923	23.7%	0.051						
		3	14	104.0	0.0651	16.2%	0.348						
		4	11	111.4	0.1113	29.2%	0.074						
		5	10	161.6	0.0649	16.1%	0.266						
		6	13	417.3	0.0101	2.3%	0.585						
		7	13	467.3	0.0421	10.2%	0.474						
		8	12	1,168.7	-0.0047	-1.1%	1.000						
		9	10	474.4	0.1073	28.0%	0.076						
		10	16	124.4	0.0816	20.7%	0.087						
		11	15	160.2	0.0611	15.1%	0.436						
		12	10	67.4	0.0531	13.0%	0.133						
		Annual	**157**	**172.8**	**0.0610**	**15.1%**	**0.000**	**0.0684**	**17.1%**	**0.005**	**0.0627**	**15.5%**	**0.029**
KIRKPAT	All	1	34	384.1	-0.0616	-13.2%	0.101						
		2	31	428.0	-0.0284	-6.3%	0.511						
		3	40	269.0	0.0433	10.5%	0.381						
		4	26	301.3	0.0111	2.6%	0.855						
		5	31	415.5	-0.0253	-5.7%	0.274						
		6	29	715.7	0.0509	12.4%	0.049						
		7	33	1,167.3	-0.0127	-2.9%	0.511						
		8	35	1,116.2	0.0146	3.4%	0.661						
		9	29	1,056.8	-0.0030	-0.7%	1.000						
		10	30	691.5	-0.0714	-15.2%	0.101						
		11	34	1,054.1	0.0023	0.5%	1.000						
		12	29	623.0	0.0127	3.0%	0.827						
		Annual	**381**	**609.0**	**-0.0046**	**-1.1%**	**0.566**	**-0.0037**	**-0.8%**	**0.829**	**0.0044**	**1.0%**	**0.827**
	Dry	1	17	476.4	-0.0237	-5.3%	0.585						
		2	13	149.5	-0.0042	-1.0%	0.783						
		3	24	233.0	0.0434	10.5%	0.443						
		4	15	212.5	-0.0035	-0.8%	0.837						
		5	21	313.7	-0.0322	-7.1%	0.300						
		6	18	439.4	0.0937	24.1%	0.150						
		7	20	800.4	-0.0131	-3.0%	0.451						
		8	23	715.4	-0.0107	-2.4%	0.428						
		9	19	578.9	0.0045	1.0%	0.945						
		10	15	499.7	-0.0968	-20.0%	0.002						
		11	18	592.5	0.0054	1.2%	0.945						
		12	17	448.7	-0.0411	-9.0%	0.537						
		Annual	**220**	**404.3**	**-0.0086**	**-2.0%**	**0.214**	**-0.0025**	**-0.6%**	**0.907**	**0.0109**	**2.5%**	**0.661**
	Wet	1	17	389.8	-0.0667	-14.2%	0.043						
		2	18	1,014.7	-0.0393	-8.6%	0.537						
		3	16	421.2	-0.0279	-6.2%	0.213						
		4	11	506.7	0.0586	14.4%	0.118						
		5	10	539.2	-0.0359	-7.9%	0.266						
		6	11	1,362.0	0.0360	8.6%	0.059						
		7	13	2,517.9	0.0191	4.5%	0.675						
		8	12	3,882.0	-0.0069	-1.6%	0.584						
		9	10	3,150.9	0.0410	9.9%	0.208						
		10	15	1,155.3	-0.0136	-3.1%	0.858						
		11	16	2,821.1	-0.0373	-8.2%	0.310						
		12	12	885.8	0.0586	14.4%	0.536						
		Annual	**161**	**1,135.6**	**-0.0054**	**-1.2%**	**0.472**	**0.0032**	**0.7%**	**0.816**	**0.0054**	**1.2%**	**0.743**

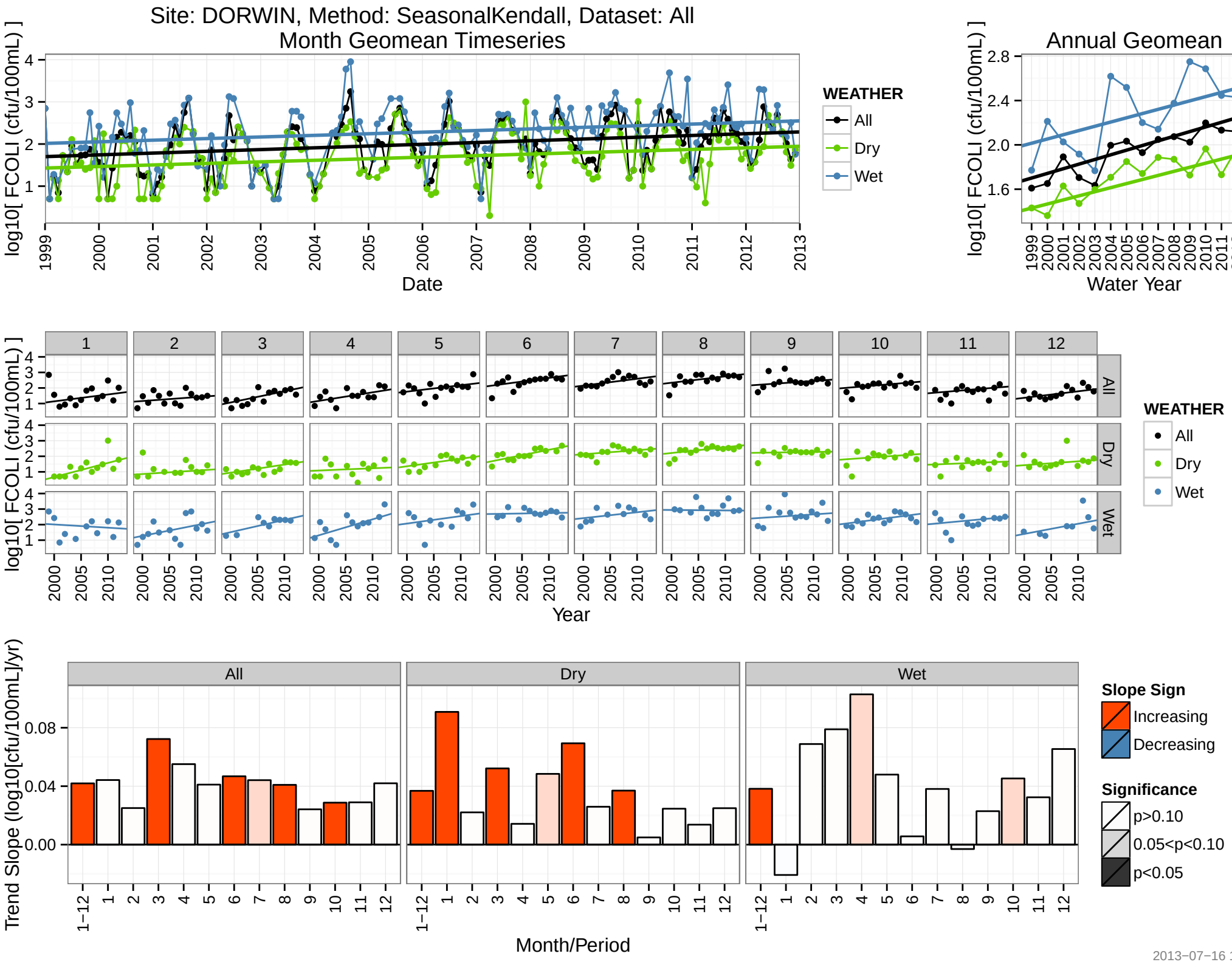

Trend Summary − Compare Methods
Dataset: All
All
Dry
Wet
LinearRegression
MannKendall
SeasonalKendall
KIRKPAT
DORWIN
HIAWATHA
VELASKO
RT48
PARK
Site
−0.02
0.00
0.02
0.04
Trend Slope (log10[cfu/100mL]/yr)
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:08

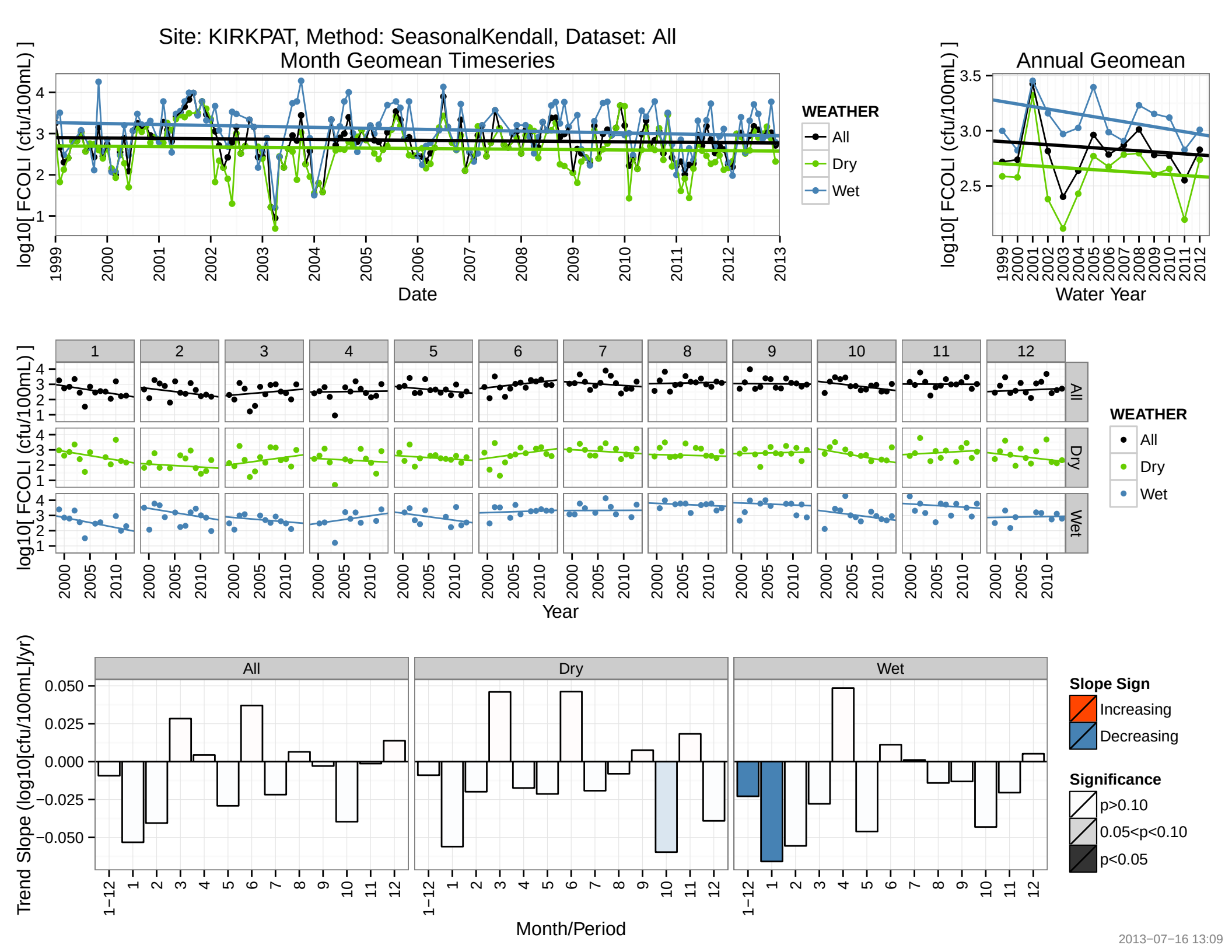

Site: PARK, Method: SeasonalKendall, Dataset: All
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:08


Site: RT48, Method: SeasonalKendall, Dataset: All
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
log10[FCOLI (cfu/100mL)]
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:09


Site: VELASKO, Method: SeasonalKendall, Dataset: All
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
log10[FCOLI (cfu/100mL)]
Water Year
log10[FCOLI (cfu/100mL)]
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:09


Site: HIAWATHA, Method: SeasonalKendall, Dataset: All
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:09


Site: DORWIN, Method: SeasonalKendall, Dataset: All
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
log10[FCOLI (cfu/100mL)]
Water Year
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:09


Site: KIRKPAT, Method: SeasonalKendall, Dataset: All
Month Geomean Timeseries
log10[FCOLI (cfu/100mL)]
Date
WEATHER
All
Dry
Wet
Annual Geomean
log10[FCOLI (cfu/100mL)]
Water Year
1
2
3
4
5
6
7
8
9
10
11
12
Year
Trend Slope (log10[cfu/100mL]/yr)
Month/Period
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−16 13:09

Dataset: All

					Seasonal Kendall			Mann Kendall			Linear Regression		
Site	Weather	Month	No. Samples	Geometric Mean (cfu/100mL)	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value
PARK	All	1	31	241.0	0.0131	3.1%	0.669						
		2	41	316.1	-0.0323	-7.2%	0.228						
		3	44	158.9	0.0037	0.9%	0.913						
		4	37	209.7	-0.0142	-3.2%	0.583						
		5	40	440.8	0.0159	3.7%	0.381						
		6	39	619.7	0.0497	12.1%	0.049						
		7	46	561.1	-0.0165	-3.7%	0.743						
		8	57	479.6	0.0437	10.6%	0.443						
		9	43	605.8	0.0320	7.6%	0.584						
		10	44	526.9	-0.0127	-2.9%	0.274						
		11	41	301.8	-0.0291	-6.5%	0.443						
		12	37	325.2	0.0097	2.3%	0.743						
		Annual	**500**	**368.5**	**0.0033**	**0.8%**	**0.736**	**0.0081**	**1.9%**	**0.601**	**0.0020**	**0.5%**	**0.827**
	Dry	1	16	209.0	0.0190	4.5%	0.711						
		2	19	197.1	-0.0497	-10.8%	0.244						
		3	28	141.4	0.0063	1.5%	0.661						
		4	22	189.6	-0.0408	-9.0%	0.169						
		5	24	219.6	0.0531	13.0%	0.127						
		6	23	341.7	0.0199	4.7%	0.272						
		7	29	260.3	0.0322	7.7%	0.193						
		8	43	272.5	0.0347	8.3%	0.246						
		9	28	268.3	0.0385	9.3%	0.360						
		10	21	309.7	-0.0174	-3.9%	0.276						
		11	25	155.9	-0.0007	-0.2%	1.000						
		12	20	222.6	-0.0023	-0.5%	0.951						
		Annual	**298**	**225.5**	**0.0081**	**1.9%**	**0.267**	**0.0130**	**3.0%**	**0.461**	**0.0069**	**1.6%**	**0.661**
	Wet	1	15	195.6	0.0152	3.6%	0.602						
		2	22	458.4	-0.0347	-7.7%	0.360						
		3	16	303.6	0.0041	0.9%	0.858						
		4	15	268.6	0.0459	11.2%	0.059						
		5	16	1,015.5	-0.0193	-4.4%	0.721						
		6	16	1,877.2	0.0386	9.3%	0.276						
		7	17	1,467.6	0.0100	2.3%	0.640						
		8	14	3,327.6	0.0070	1.6%	0.670						
		9	15	1,833.5	0.0329	7.9%	0.788						
		10	23	897.3	-0.0114	-2.6%	0.373						
		11	16	855.0	-0.0770	-16.2%	0.043						
		12	17	552.1	-0.0142	-3.2%	0.466						
		Annual	**202**	**786.2**	**-0.0002**	**0.0%**	**0.867**	**0.0073**	**1.7%**	**0.665**	**0.0116**	**2.7%**	**0.827**
RT48	All	1	39	24.0	0.0412	9.9%	0.298						
		2	37	35.3	-0.0205	-4.6%	0.502						
		3	41	38.9	0.0343	8.2%	0.228						
		4	29	25.8	0.0876	22.3%	0.099						
		5	34	65.6	0.0627	15.5%	0.360						
		6	36	210.7	0.0130	3.0%	0.760						
		7	37	281.4	0.0184	4.3%	0.584						
		8	43	377.4	0.0244	5.8%	0.511						
		9	40	456.3	-0.0227	-5.1%	0.443						
		10	44	171.9	0.0112	2.6%	0.443						
		11	42	63.6	0.0070	1.6%	0.827						
		12	35	25.9	0.1062	27.7%	0.010						
		Annual	**457**	**87.3**	**0.0264**	**6.3%**	**0.011**	**0.0246**	**5.8%**	**0.060**	**0.0124**	**2.9%**	**0.228**
	Dry	1	21	11.7	0.0577	14.2%	0.110						
		2	15	18.2	-0.0324	-7.2%	0.273						
		3	24	18.5	0.0000	0.0%	1.000						
		4	17	13.1	0.0371	8.9%	0.173						
		5	21	27.7	0.0574	14.1%	0.304						
		6	20	105.2	0.0286	6.8%	0.360						
		7	22	177.1	0.0407	9.8%	0.304						
		8	28	221.1	-0.0004	-0.1%	0.951						
		9	26	172.5	0.0398	9.6%	0.428						
		10	21	88.5	-0.0192	-4.3%	0.244						
		11	25	26.7	0.0148	3.5%	0.837						
		12	21	22.4	0.0644	16.0%	0.098						
		Annual	**261**	**46.2**	**0.0178**	**4.2%**	**0.064**	**0.0210**	**4.9%**	**0.155**	**0.0193**	**4.6%**	**0.155**
	Wet	1	18	32.9	0.0125	2.9%	0.938						
		2	22	71.4	0.0330	7.9%	0.855						
		3	17	94.1	0.0633	15.7%	0.119						
		4	12	70.4	0.1641	45.9%	0.009						
		5	13	233.7	0.0865	22.0%	0.536						
		6	16	554.5	-0.0195	-4.4%	0.721						
		7	15	470.4	0.0071	1.7%	0.858						
		8	15	1,507.4	-0.0268	-6.0%	0.754						
		9	14	2,303.9	-0.0141	-3.2%	0.530						
		10	23	359.8	0.0268	6.4%	0.451						
		11	17	256.8	0.0242	5.7%	0.640						
		12	14	87.0	0.1293	34.7%	0.230						
		Annual	**196**	**229.9**	**0.0298**	**7.1%**	**0.091**	**0.0353**	**8.5%**	**0.169**	**0.0243**	**5.8%**	**0.189**

Dataset: All

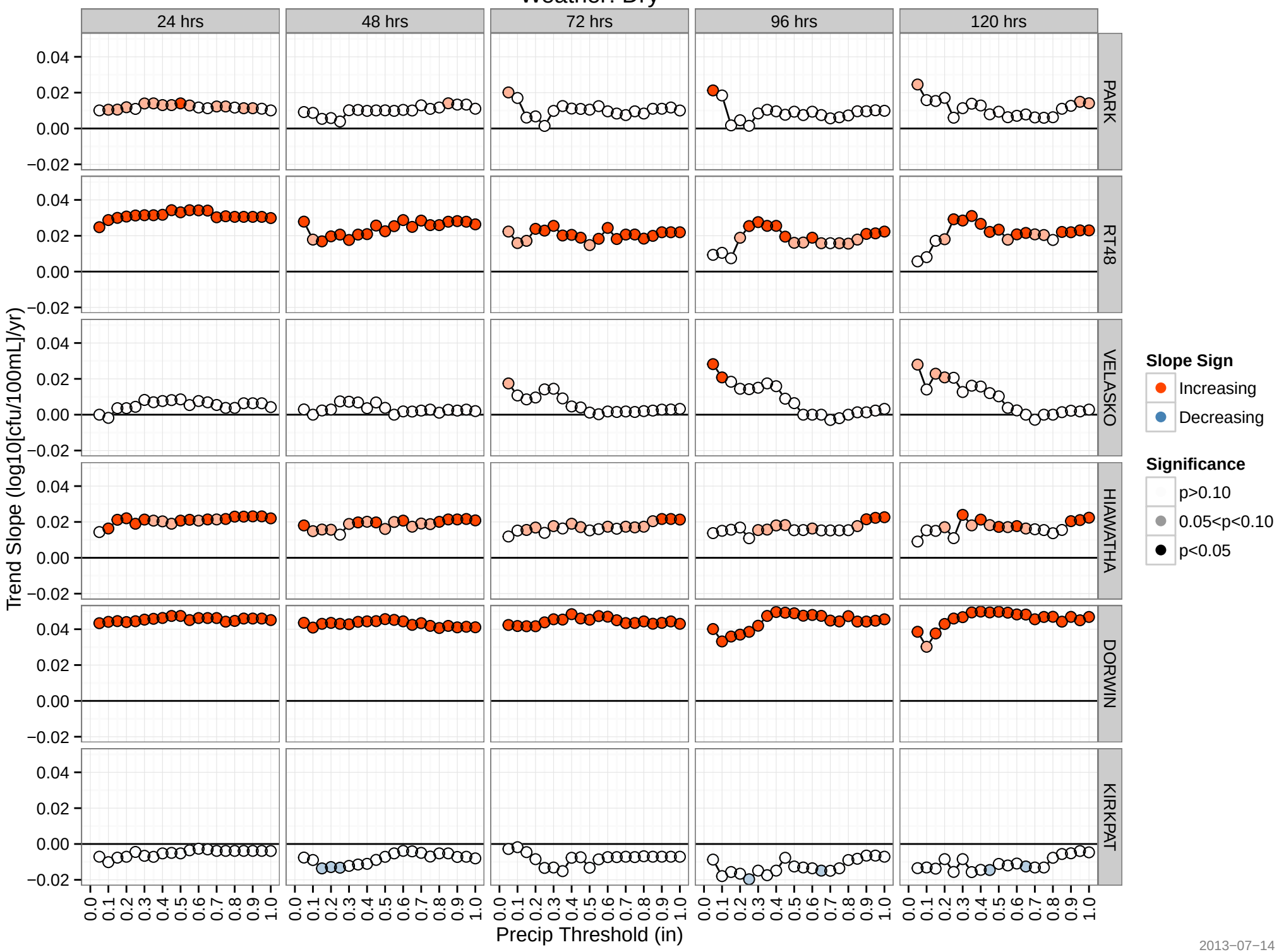
					Seasonal Kendall			Mann Kendall			Linear Regression		
Site	Weather	Month	No. Samples	Geometric Mean (cfu/100mL)	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value
VELASKO	All	1	40	41.4	0.0049	1.1%	1.000						
		2	40	48.9	-0.0213	-4.8%	0.584						
		3	46	34.6	0.0339	8.1%	0.381						
		4	37	27.1	0.0388	9.3%	0.142						
		5	41	88.4	-0.0022	-0.5%	0.827						
		6	39	213.0	0.0425	10.3%	0.125						
		7	57	397.3	0.0042	1.0%	0.827						
		8	47	325.1	0.0297	7.1%	0.381						
		9	56	351.8	-0.0016	-0.4%	0.913						
		10	48	103.6	-0.0052	-1.2%	0.913						
		11	43	71.8	-0.0366	-8.1%	0.324						
		12	37	40.8	0.0176	4.1%	0.661						
		Annual	**531**	**95.0**	**0.0094**	**2.2%**	**0.331**	**0.0066**	**1.5%**	**0.623**	**0.0068**	**1.6%**	**0.661**
	Dry	1	21	20.9	0.0591	14.6%	0.044						
		2	17	19.0	-0.0113	-2.6%	0.783						
		3	28	18.2	0.0000	0.0%	1.000						
		4	23	14.7	0.0121	2.8%	0.678						
		5	24	56.5	-0.0082	-1.9%	0.502						
		6	22	132.1	-0.0037	-0.9%	0.913						
		7	40	257.3	0.0299	7.1%	0.213						
		8	33	232.8	0.0371	8.9%	0.428						
		9	43	221.3	0.0023	0.5%	1.000						
		10	24	60.0	0.0202	4.8%	0.640						
		11	27	31.2	-0.0142	-3.2%	0.631						
		12	22	28.8	-0.0186	-4.2%	0.669						
		Annual	**324**	**53.7**	**0.0083**	**1.9%**	**0.470**	**0.0107**	**2.5%**	**0.546**	**0.0114**	**2.7%**	**0.443**
	Wet	1	19	82.1	-0.0340	-7.5%	0.350						
		2	23	87.3	-0.0491	-10.7%	0.428						
		3	18	103.4	0.0394	9.5%	0.350						
		4	14	66.1	0.0886	22.6%	0.127						
		5	17	157.2	-0.0147	-3.3%	0.858						
		6	17	540.1	0.0561	13.8%	0.101						
		7	17	603.1	-0.0161	-3.6%	0.592						
		8	14	800.8	-0.0068	-1.5%	0.917						
		9	13	561.7	-0.0362	-8.0%	0.592						
		10	24	168.1	-0.0207	-4.7%	0.428						
		11	16	159.9	-0.0753	-15.9%	0.161						
		12	15	66.2	0.0100	2.3%	1.000						
		Annual	**207**	**184.7**	**-0.0062**	**-1.4%**	**0.561**	**0.0069**	**1.6%**	**0.697**	**0.0058**	**1.3%**	**0.827**
HIAWATHA	All	1	40	150.8	0.0273	6.5%	0.476						
		2	40	343.4	0.0209	4.9%	0.661						
		3	43	214.9	0.1012	26.2%	0.016						
		4	36	267.6	0.0374	9.0%	0.100						
		5	39	330.6	0.0250	5.9%	0.443						
		6	36	1,007.4	0.0470	11.4%	0.049						
		7	45	1,545.2	-0.0019	-0.4%	1.000						
		8	50	1,340.9	0.0000	0.0%	1.000						
		9	44	834.3	-0.0003	-0.1%	1.000						
		10	47	588.1	-0.0358	-7.9%	0.274						
		11	44	448.3	-0.0081	-1.9%	0.743						
		12	38	247.3	0.0017	0.4%	1.000						
		Annual	**502**	**470.1**	**0.0149**	**3.5%**	**0.060**	**0.0187**	**4.4%**	**0.197**	**0.0145**	**3.4%**	**0.189**
	Dry	1	22	87.5	0.0165	3.9%	0.732						
		2	16	125.6	0.0449	10.9%	0.640						
		3	26	104.5	0.0588	14.5%	0.125						
		4	22	137.5	0.0535	13.1%	0.115						
		5	24	214.2	0.0144	3.4%	0.360						
		6	21	603.4	0.0304	7.3%	0.228						
		7	28	1,034.0	0.0005	0.1%	1.000						
		8	33	698.2	0.0125	2.9%	0.583						
		9	32	528.1	0.0008	0.2%	1.000						
		10	25	377.9	-0.0303	-6.7%	0.276						
		11	26	274.6	-0.0155	-3.5%	0.537						
		12	21	219.0	0.0109	2.5%	0.855						
		Annual	**296**	**276.0**	**0.0139**	**3.3%**	**0.085**	**0.0230**	**5.4%**	**0.184**	**0.0195**	**4.6%**	**0.228**
	Wet	1	18	209.8	0.0035	0.8%	1.000						
		2	24	767.2	-0.0053	-1.2%	0.951						
		3	17	883.1	0.1360	36.8%	0.012						
		4	14	566.2	0.0380	9.1%	0.039						
		5	15	668.0	0.0297	7.1%	0.592						
		6	15	2,320.4	0.0488	11.9%	0.098						
		7	17	2,296.1	0.0052	1.2%	0.928						
		8	17	5,527.0	-0.0187	-4.2%	0.181						
		9	12	2,184.5	-0.0092	-2.1%	0.917						
		10	22	992.3	-0.0549	-11.9%	0.064						
		11	18	1,313.4	-0.0164	-3.7%	0.876						
		12	17	299.3	0.0376	9.1%	0.402						
		Annual	**206**	**1,030.9**	**0.0069**	**1.6%**	**0.348**	**0.0201**	**4.7%**	**0.160**	**0.0172**	**4.0%**	**0.381**

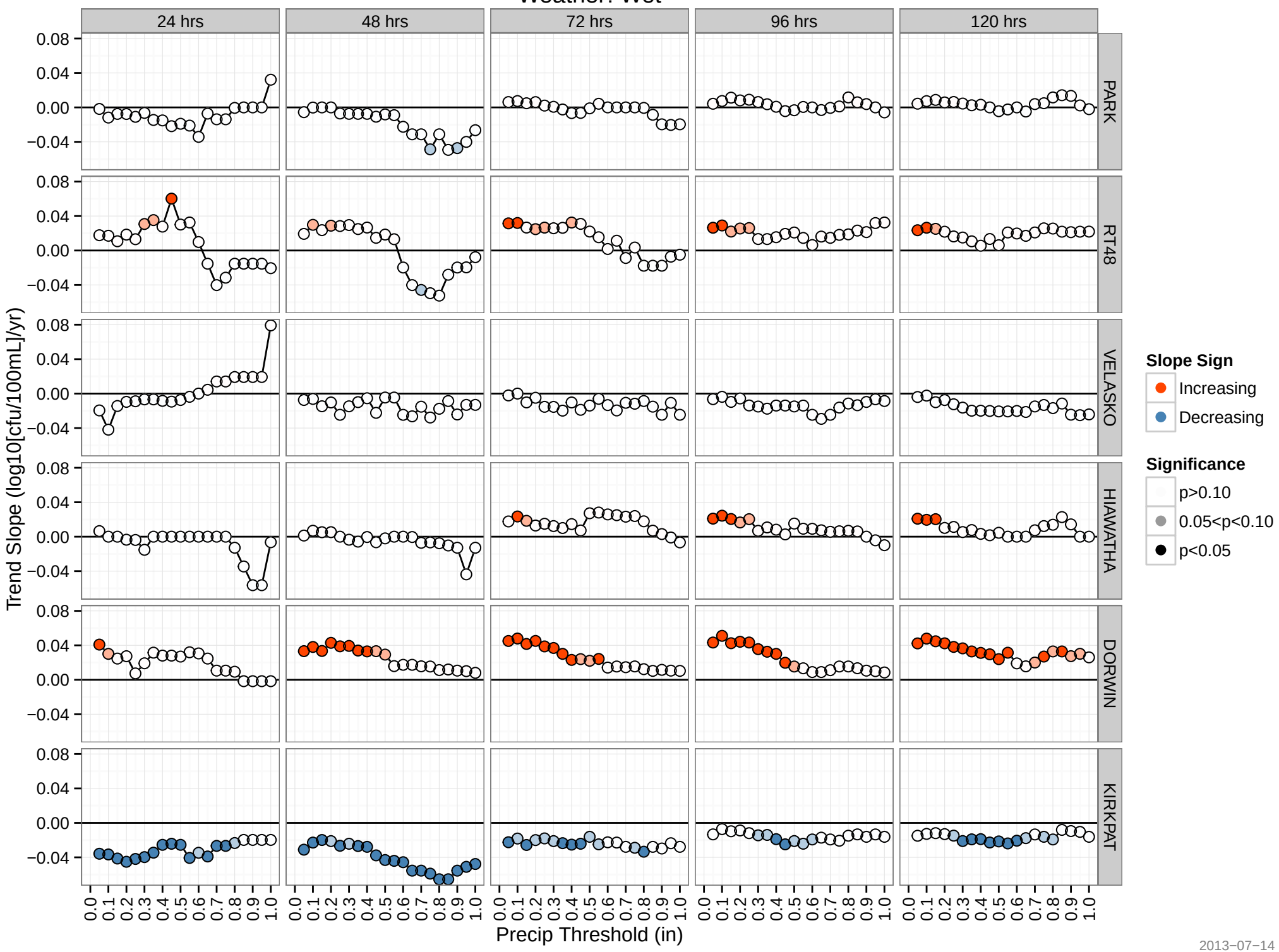
Dataset: All

					Seasonal Kendall			Mann Kendall			Linear Regression		
Site	Weather	Month	No. Samples	Geometric Mean (cfu/100mL)	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value	Slope (log[cfu/100mL]/yr)	Slope (%/yr)	p-value
DORWIN	All	1	46	36.4	0.0442	10.7%	0.381						
		2	46	22.6	0.0250	5.9%	0.443						
		3	51	26.5	0.0723	18.1%	0.016						
		4	47	33.3	0.0551	13.5%	0.127						
		5	55	90.2	0.0411	9.9%	0.155						
		6	49	237.1	0.0468	11.4%	0.004						
		7	56	261.2	0.0441	10.7%	0.063						
		8	59	362.8	0.0409	9.9%	0.021						
		9	56	269.9	0.0242	5.7%	0.324						
		10	58	137.2	0.0287	6.8%	0.049						
		11	52	54.0	0.0289	6.9%	0.228						
		12	41	47.9	0.0420	10.1%	0.125						
		Annual	**616**	**85.4**	**0.0419**	**10.1%**	**0.000**	**0.0421**	**10.2%**	**0.000**	**0.0392**	**9.5%**	**0.000**
	Dry	1	24	19.2	0.0908	23.3%	0.011						
		2	24	15.1	0.0221	5.2%	0.407						
		3	33	15.0	0.0522	12.8%	0.025						
		4	27	13.0	0.0142	3.3%	0.712						
		5	29	41.1	0.0484	11.8%	0.087						
		6	23	131.3	0.0694	17.3%	0.009						
		7	34	187.3	0.0259	6.2%	0.155						
		8	37	239.6	0.0370	8.9%	0.012						
		9	38	164.2	0.0049	1.1%	0.583						
		10	30	79.3	0.0246	5.8%	0.537						
		11	30	34.4	0.0137	3.2%	0.760						
		12	23	48.2	0.0249	5.9%	0.300						
		Annual	**352**	**51.6**	**0.0368**	**8.8%**	**0.000**	**0.0390**	**9.4%**	**0.000**	**0.0417**	**10.1%**	**0.001**
	Wet	1	22	61.7	-0.0208	-4.7%	0.876						
		2	22	44.3	0.0688	17.2%	0.112						
		3	18	108.2	0.0789	19.9%	0.348						
		4	20	88.1	0.1028	26.7%	0.086						
		5	26	202.2	0.0479	11.7%	0.436						
		6	26	533.5	0.0057	1.3%	0.945						
		7	22	425.9	0.0381	9.2%	0.276						
		8	22	1,006.8	-0.0030	-0.7%	0.945						
		9	18	483.4	0.0229	5.4%	0.760						
		10	28	220.2	0.0453	11.0%	0.063						
		11	22	140.1	0.0324	7.7%	0.451						
		12	18	93.8	0.0654	16.3%	0.266						
		Annual	**264**	**191.8**	**0.0382**	**9.2%**	**0.002**	**0.0532**	**13.0%**	**0.007**	**0.0499**	**12.2%**	**0.049**
KIRKPAT	All	1	40	388.4	-0.0532	-11.5%	0.125						
		2	40	387.2	-0.0405	-8.9%	0.189						
		3	46	267.2	0.0284	6.7%	0.443						
		4	36	286.4	0.0043	1.0%	0.951						
		5	41	499.6	-0.0291	-6.5%	0.228						
		6	39	810.6	0.0370	8.9%	0.189						
		7	43	1,190.3	-0.0218	-4.9%	0.743						
		8	46	1,263.8	0.0064	1.5%	0.913						
		9	40	1,170.2	-0.0029	-0.7%	1.000						
		10	43	822.6	-0.0396	-8.7%	0.381						
		11	44	1,116.8	-0.0013	-0.3%	1.000						
		12	38	623.7	0.0138	3.2%	0.743						
		Annual	**496**	**642.8**	**-0.0093**	**-2.1%**	**0.426**	**-0.0070**	**-1.6%**	**0.674**	**0.0036**	**0.8%**	**0.913**
	Dry	1	22	404.1	-0.0561	-12.1%	0.193						
		2	17	135.9	-0.0199	-4.5%	0.492						
		3	28	230.1	0.0460	11.2%	0.511						
		4	22	200.4	-0.0174	-3.9%	0.631						
		5	24	318.7	-0.0213	-4.8%	0.428						
		6	21	430.3	0.0462	11.2%	0.428						
		7	27	825.1	-0.0192	-4.3%	0.537						
		8	28	713.8	-0.0080	-1.8%	0.583						
		9	25	618.1	0.0076	1.8%	0.760						
		10	20	597.4	-0.0597	-12.8%	0.062						
		11	25	671.3	0.0183	4.3%	0.837						
		12	21	445.3	-0.0391	-8.6%	0.502						
		Annual	**280**	**408.1**	**-0.0089**	**-2.0%**	**0.182**	**-0.0051**	**-1.2%**	**0.804**	**0.0077**	**1.8%**	**0.661**
	Wet	1	18	406.7	-0.0659	-14.1%	0.043						
		2	23	862.1	-0.0556	-12.0%	0.200						
		3	18	431.0	-0.0279	-6.2%	0.276						
		4	14	461.4	0.0485	11.8%	0.175						
		5	17	746.1	-0.0461	-10.1%	0.371						
		6	18	1,788.0	0.0112	2.6%	0.585						
		7	16	2,483.1	0.0011	0.3%	0.928						
		8	18	4,257.7	-0.0141	-3.2%	0.386						
		9	15	3,097.9	-0.0131	-3.0%	0.640						
		10	23	1,051.3	-0.0431	-9.5%	0.244						
		11	19	2,878.2	-0.0205	-4.6%	0.409						
		12	17	755.0	0.0052	1.2%	1.000						
		Annual	**216**	**1,199.5**	**-0.0229**	**-5.1%**	**0.023**	**-0.0051**	**-1.2%**	**0.702**	**-0.0049**	**-1.1%**	**0.743**

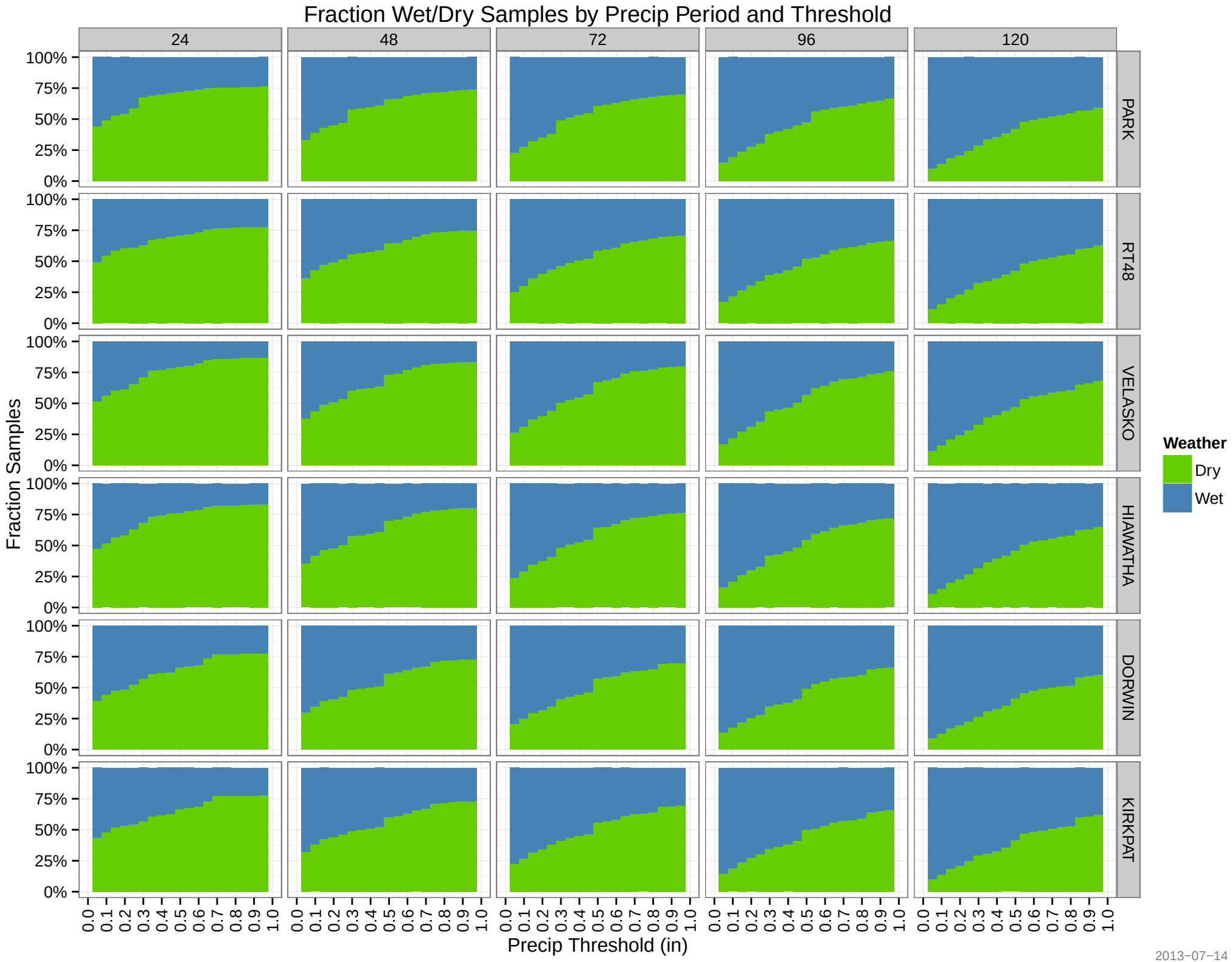
Appendix F: Trend Analysis Sensitivity

Summary: Sensitivity of seasonal Kendall trend test to antecedent precipitation period (1-5 days) and threshold (0.05-1 inch) for dry and wet weather samples. Tests performed using the Primary dataset (see Table 2 in main text). The slope magnitudes and significances of each test are shown. The last figure shows the fraction of dry and wet weather samples for each period and threshold at each site indicating the increase in dry weather and decrease in wet weather samples as the threshold increases.


Trend Sensitivity to Precip Period and Threshold
Weather: Dry
24 hrs
48 hrs
72 hrs
96 hrs
120 hrs
PARK
RT48
VELASKO
HIAWATHA
DORWIN
KIRKPAT
Trend Slope (log10[cfu/100mL]/yr)
0.04
0.02
0.00
−0.02
Precip Threshold (in)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Slope Sign
Increasing
Decreasing
Significance
p>0.10
0.05<p<0.10
p<0.05
2013−07−14 10:41



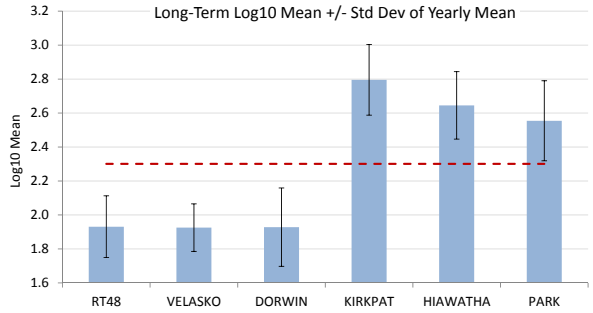
2013−07−14 10:41

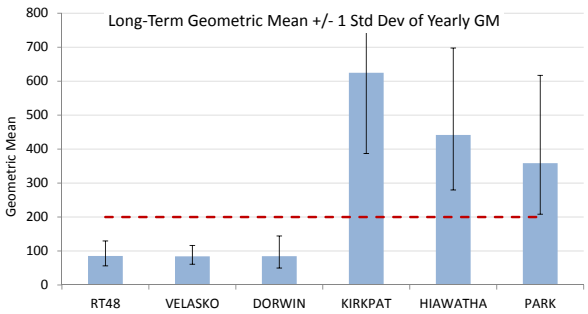

Fraction Wet/Dry Samples by Precip Period and Threshold
24
48
72
96
120
PARK
RT48
VELASKO
HIAWATHA
DORWIN
KIRKPAT
100%
75%
50%
25%
0%
Fraction Samples
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Precip Threshold (in)
Weather
Dry
Wet
2013−07−14 10:41

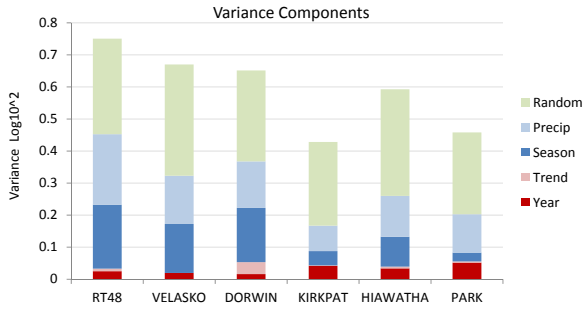
Appendix G: Variance Components

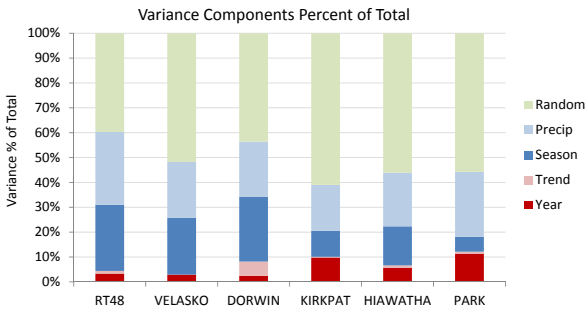
Summary: Sensitivity of variance component and power estimates to dataset (biweekly vs. all) and antecedent precipitation category (all samples, dry samples, wet samples). Samples are assigned to the wet category if the 48-hour antecedent precipitation exceeds 0.1 inches. The biweekly/all results relevant to measurement of compliance with the fecal coliform standard are discussed in the text.

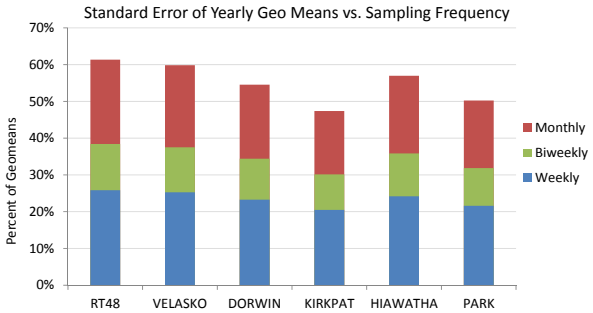
biweekly_all

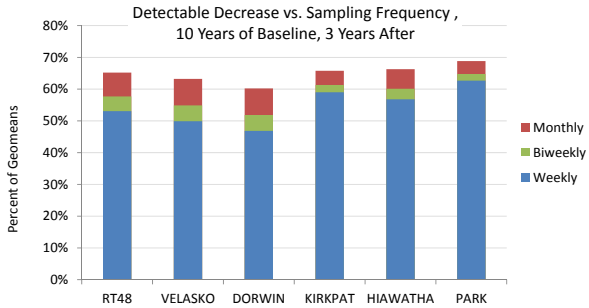


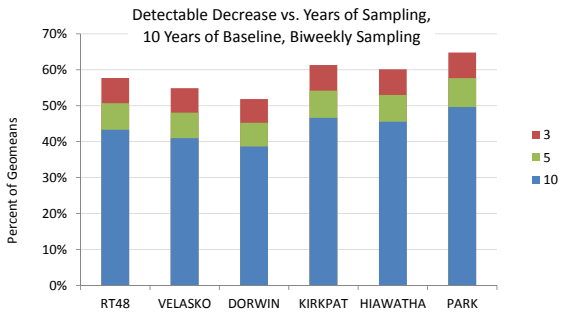


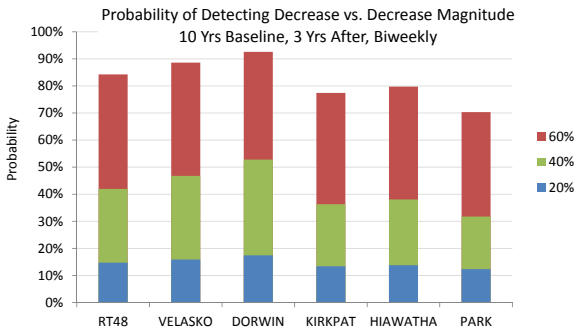


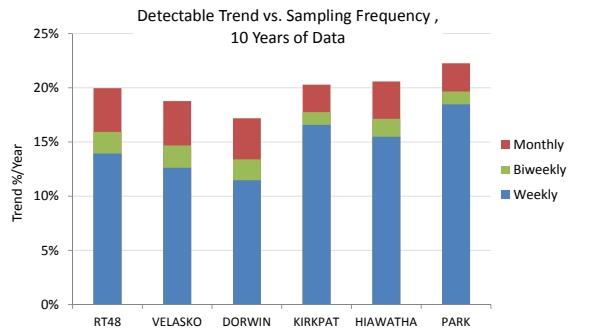


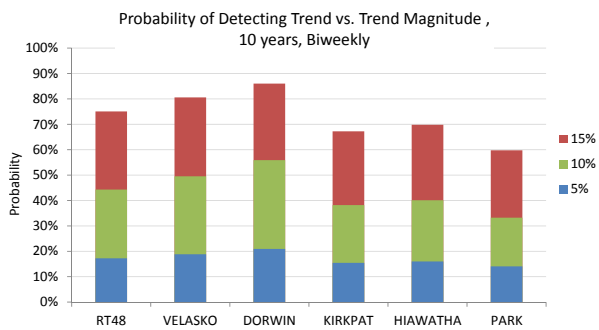




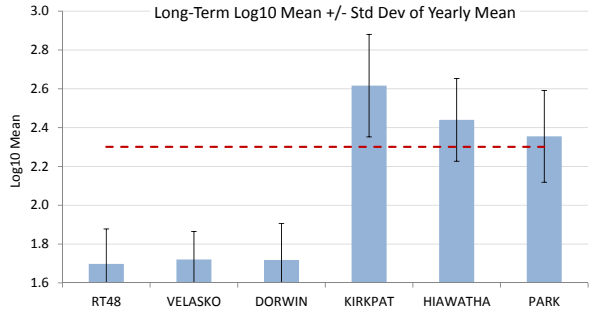


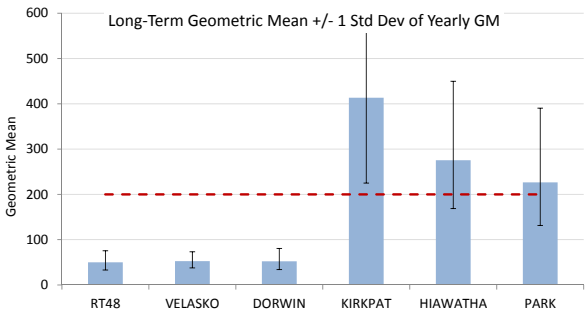


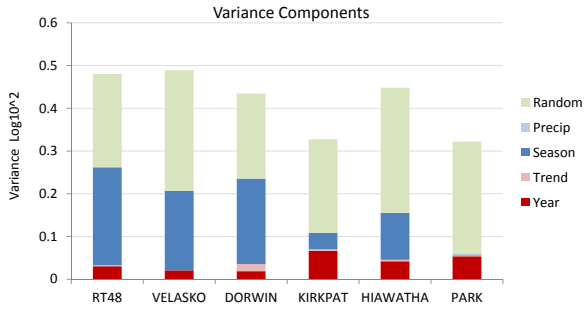


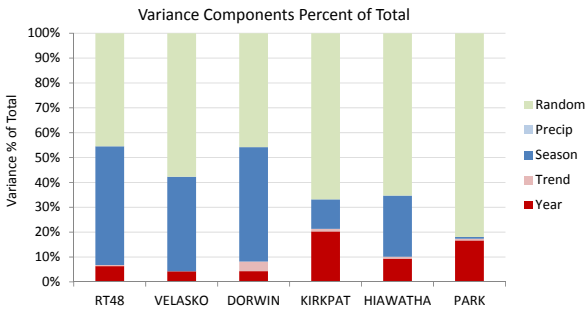


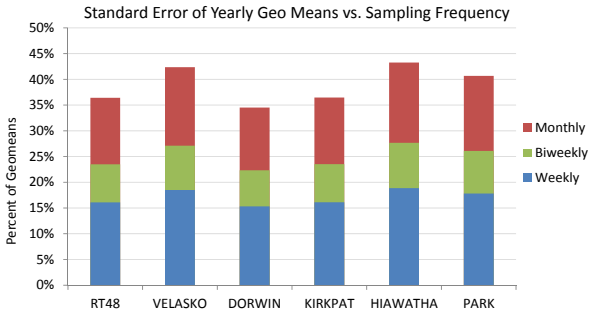
biweekly_dry

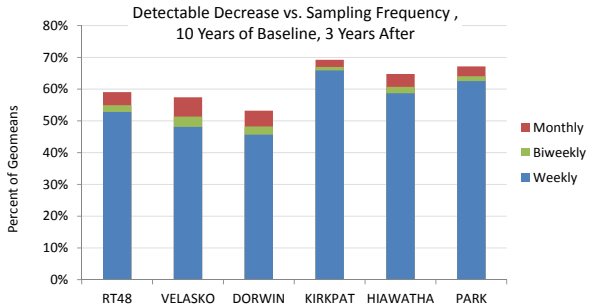


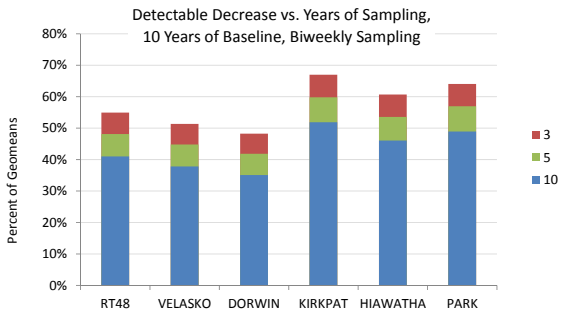


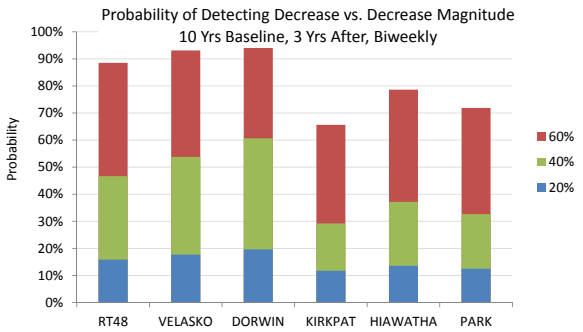


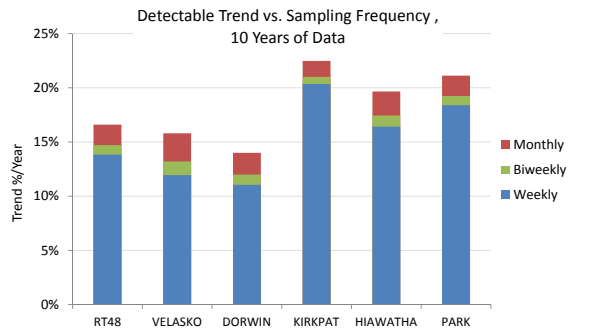


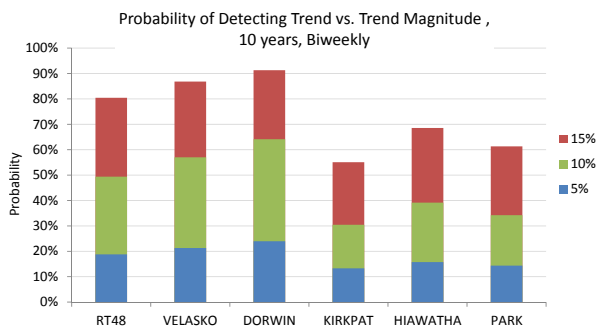




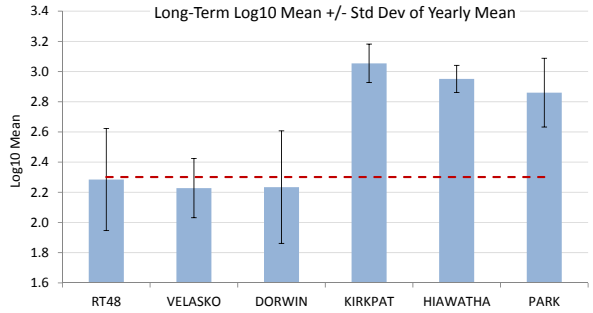


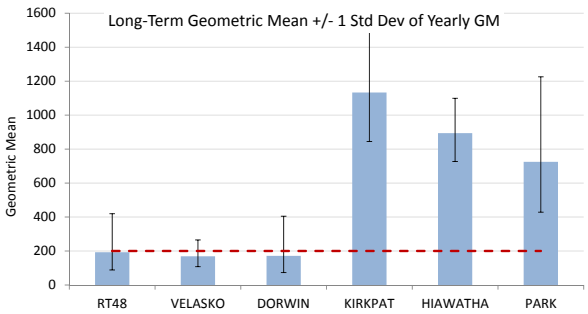


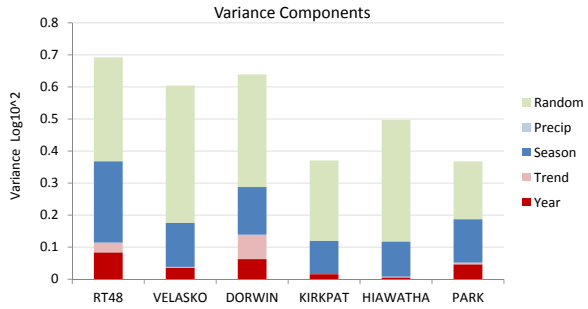


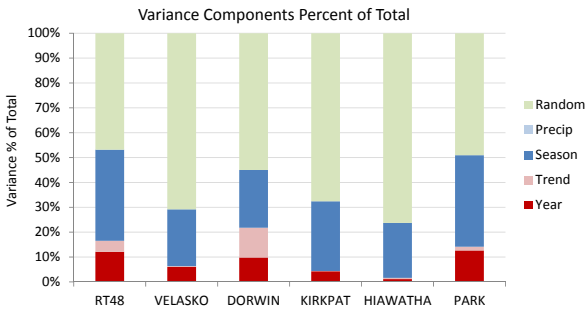


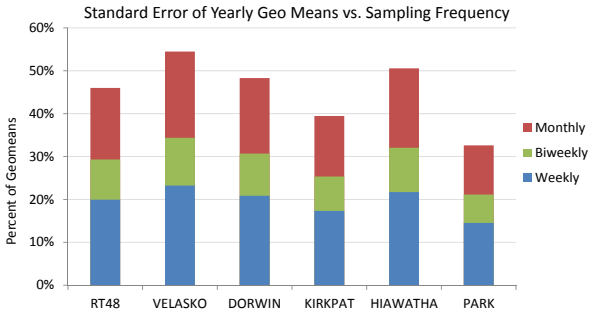
biweekly_wet

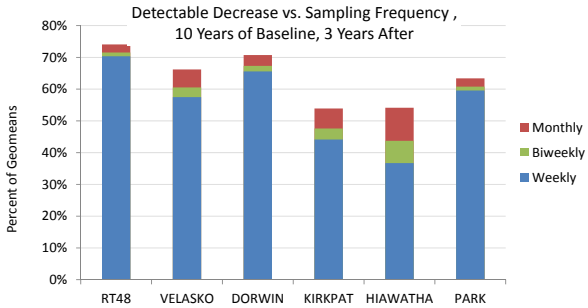


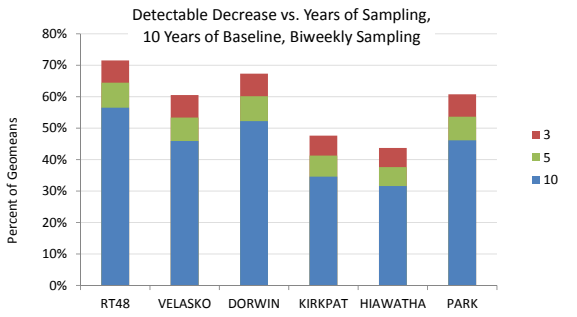


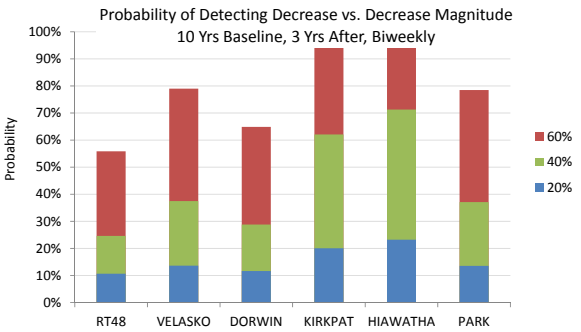


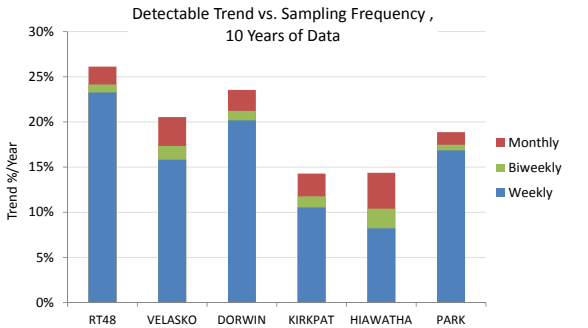


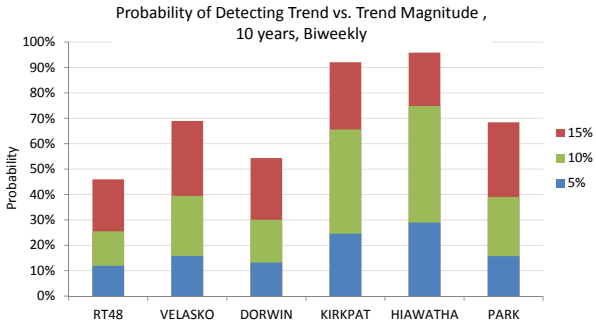




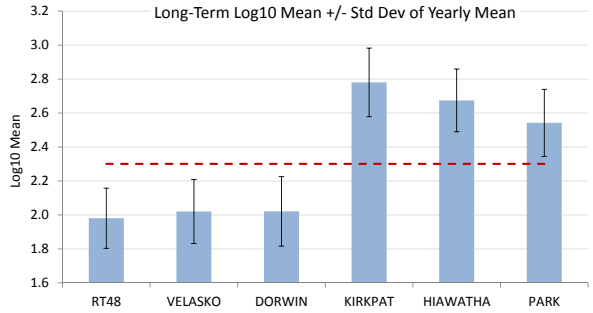


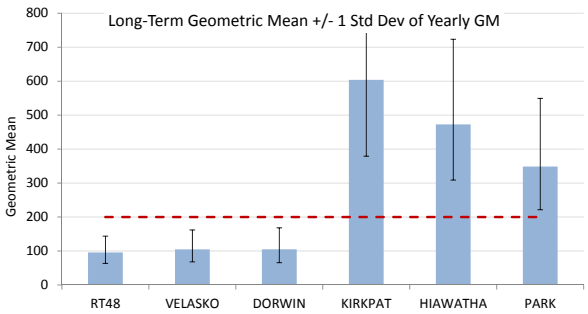


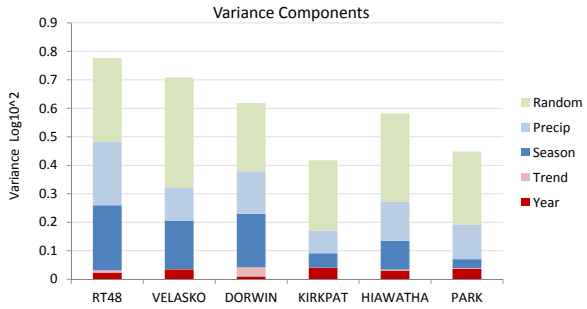


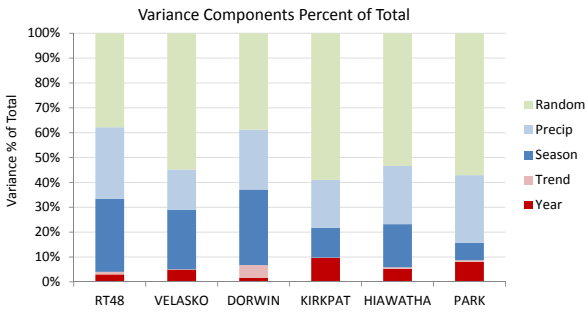


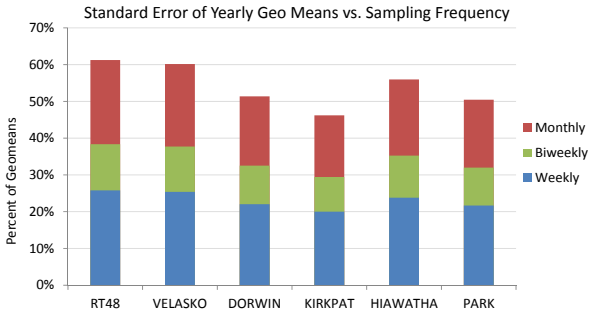
all_all

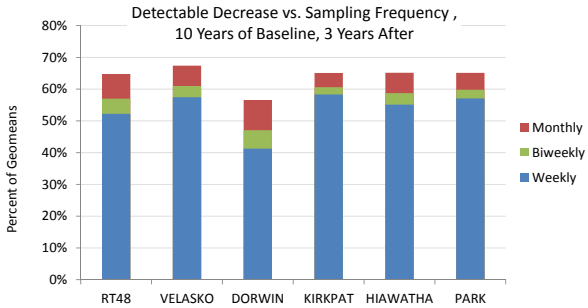

Long-Term Log10 Mean +/- Std Dev of Yearly Mean
Log10 Mean
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK

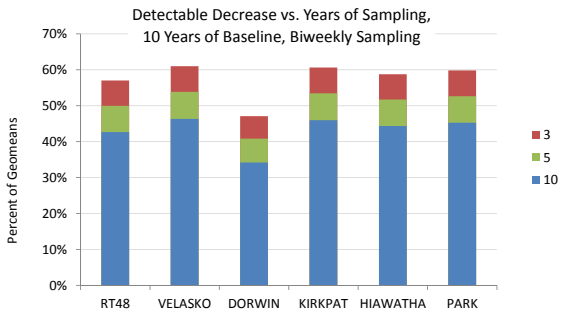

Long-Term Geometric Mean +/- 1 Std Dev of Yearly GM
Geometric Mean
800
700
600
500
400
300
200
100
0
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK

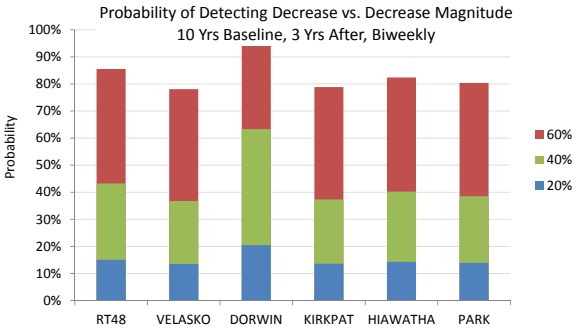

Variance Components
Variance Log10^2
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Random
Precip
Season
Trend
Year

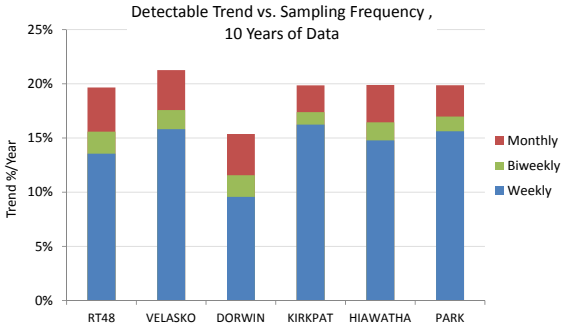

Variance Components Percent of Total
Variance % of Total
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Random
Precip
Season
Trend
Year

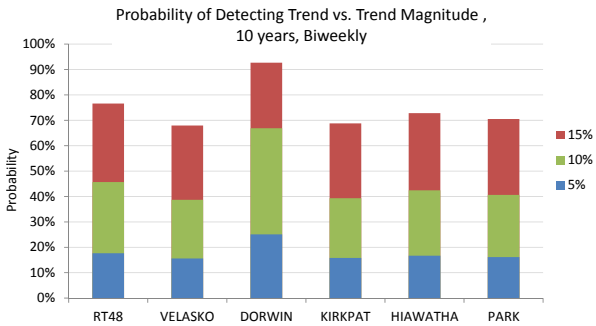

Standard Error of Yearly Geo Means vs. Sampling Frequency
Percent of Geomeans
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Monthly
Biweekly
Weekly


Detectable Decrease vs. Sampling Frequency ,
10 Years of Baseline, 3 Years After
Percent of Geomeans
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Monthly
Biweekly
Weekly

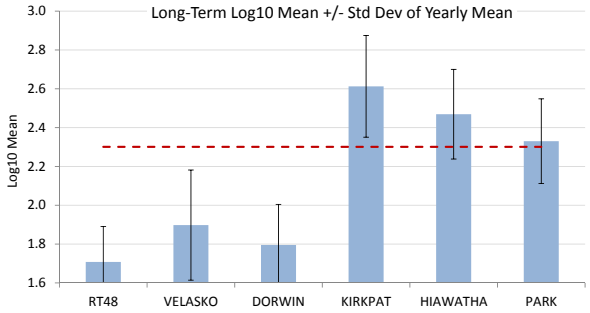

Detectable Decrease vs. Years of Sampling,
10 Years of Baseline, Biweekly Sampling
Percent of Geomeans
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
3
5
10

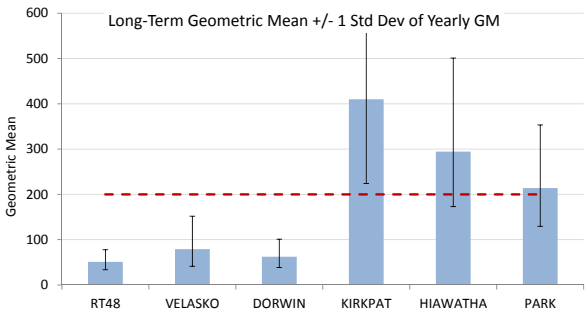

Probability of Detecting Decrease vs. Decrease Magnitude
10 Yrs Baseline, 3 Yrs After, Biweekly
Probability
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
60%
40%
20%

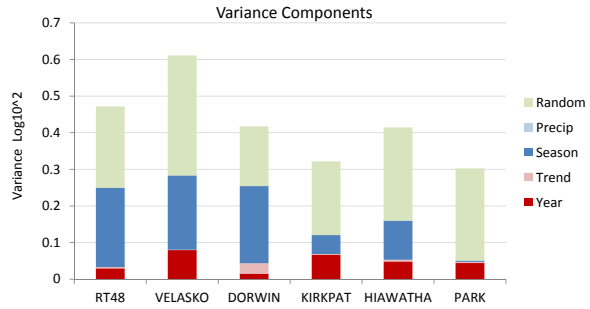

Detectable Trend vs. Sampling Frequency ,
10 Years of Data
Trend %/Year
25%
20%
15%
10%
5%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Monthly
Biweekly
Weekly

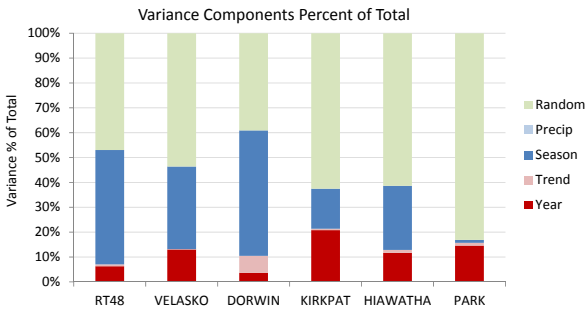

Probability of Detecting Trend vs. Trend Magnitude ,
10 years, Biweekly
Probability
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
15%
10%
5%

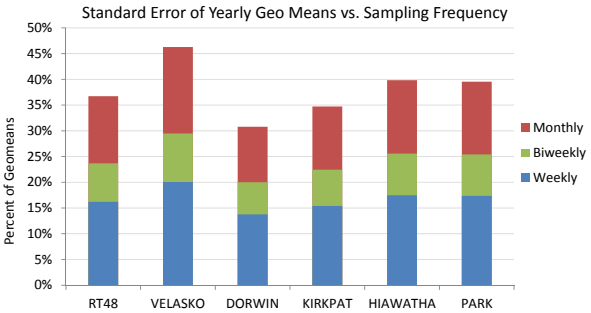
all_dry

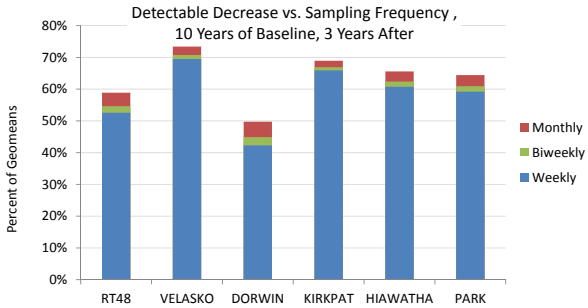

Long-Term Log10 Mean +/- Std Dev of Yearly Mean
Log10 Mean
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK

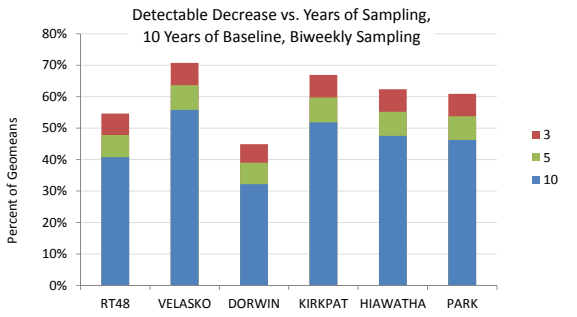

Long-Term Geometric Mean +/- 1 Std Dev of Yearly GM
Geometric Mean
600
500
400
300
200
100
0
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK

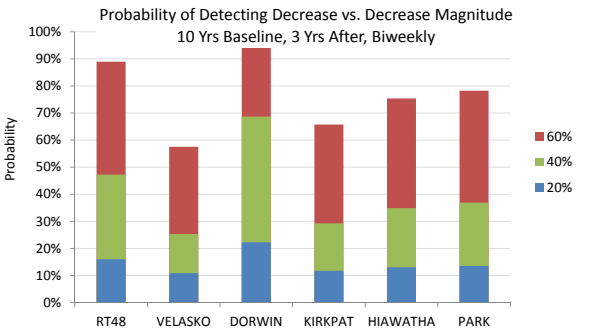

Variance Components
Variance Log10^2
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Random
Precip
Season
Trend
Year

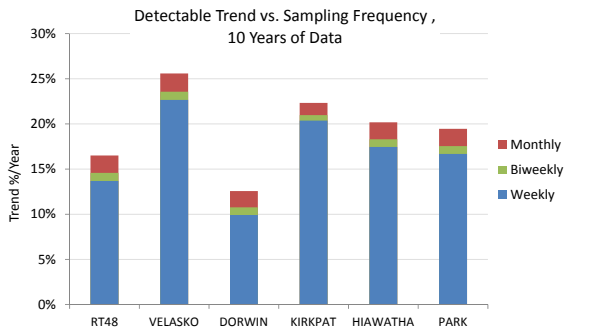

Variance Components Percent of Total
Variance % of Total
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Random
Precip
Season
Trend
Year

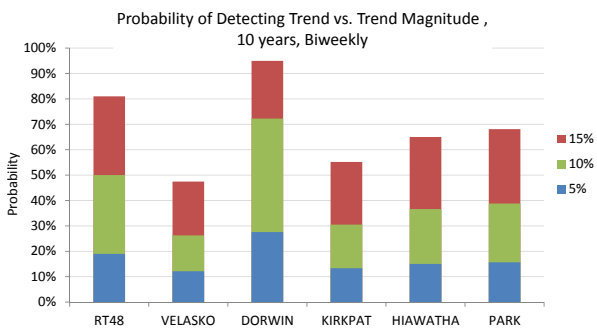

Standard Error of Yearly Geo Means vs. Sampling Frequency
Percent of Geomeans
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Monthly
Biweekly
Weekly


Detectable Decrease vs. Sampling Frequency ,
10 Years of Baseline, 3 Years After
Percent of Geomeans
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Monthly
Biweekly
Weekly

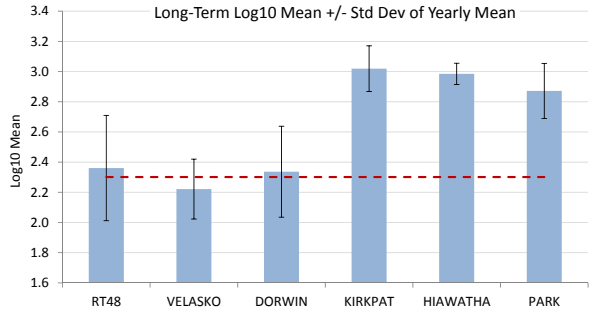

Detectable Decrease vs. Years of Sampling,
10 Years of Baseline, Biweekly Sampling
Percent of Geomeans
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
3
5
10

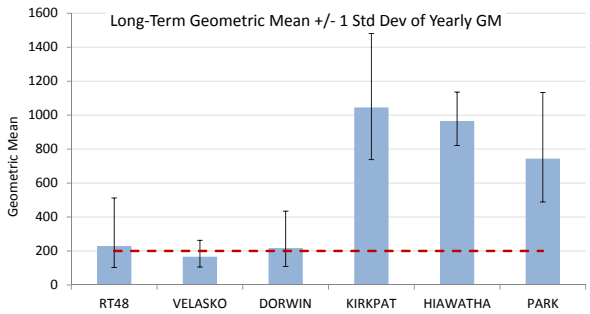

Probability of Detecting Decrease vs. Decrease Magnitude
10 Yrs Baseline, 3 Yrs After, Biweekly
Probability
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
60%
40%
20%

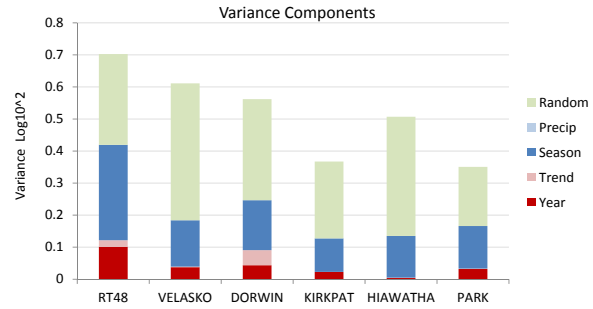

Detectable Trend vs. Sampling Frequency ,
10 Years of Data
Trend %/Year
30%
25%
20%
15%
10%
5%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Monthly
Biweekly
Weekly

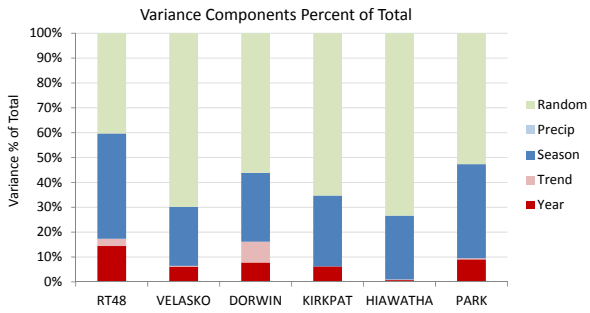

Probability of Detecting Trend vs. Trend Magnitude ,
10 years, Biweekly
Probability
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
15%
10%
5%

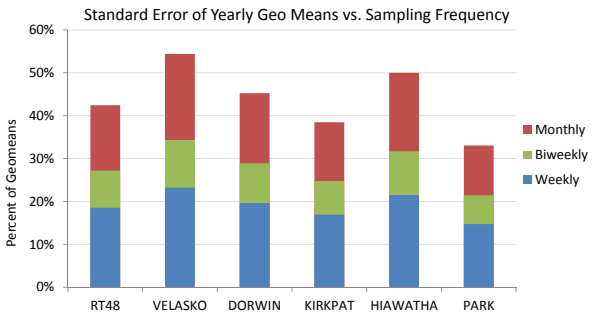
all_wet

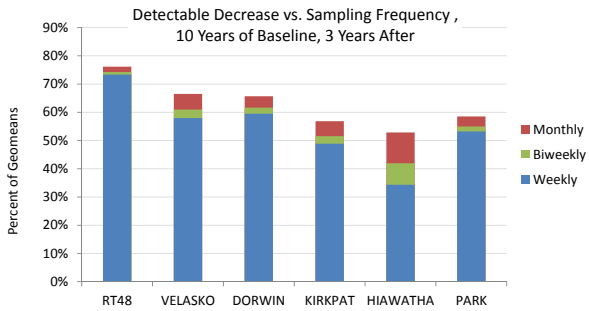

Long-Term Log10 Mean +/- Std Dev of Yearly Mean
Log10 Mean
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK

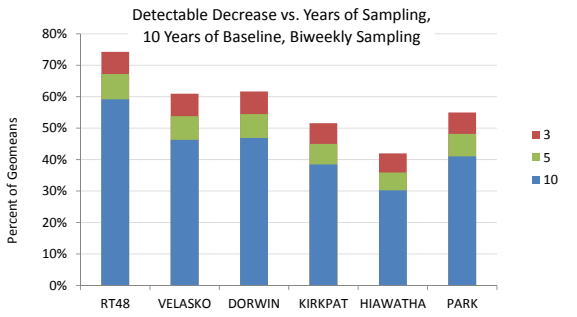

Long-Term Geometric Mean +/- 1 Std Dev of Yearly GM
Geometric Mean
1600
1400
1200
1000
800
600
400
200
0
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK

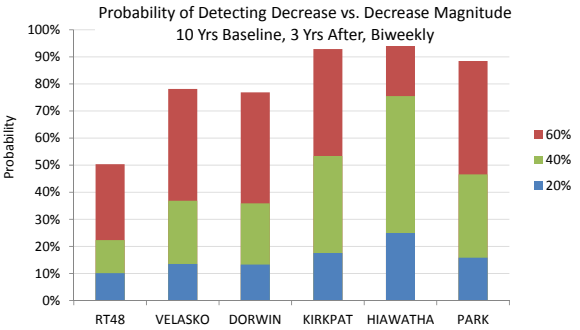

Variance Components
Variance Log10^2
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Random
Precip
Season
Trend
Year

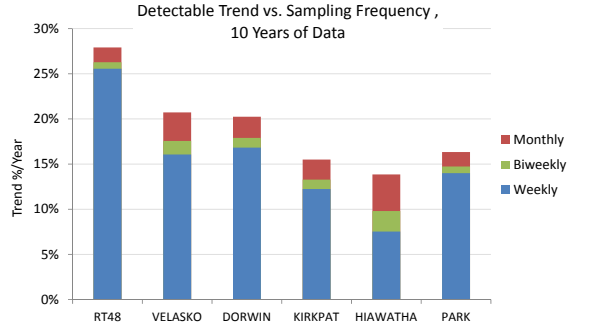

Variance Components Percent of Total
Variance % of Total
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Random
Precip
Season
Trend
Year

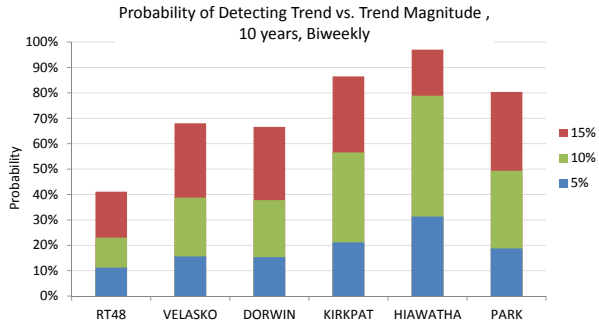

Standard Error of Yearly Geo Means vs. Sampling Frequency
Percent of Geomeans
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Monthly
Biweekly
Weekly


Detectable Decrease vs. Sampling Frequency ,
10 Years of Baseline, 3 Years After
Percent of Geomeans
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Monthly
Biweekly
Weekly


Detectable Decrease vs. Years of Sampling,
10 Years of Baseline, Biweekly Sampling
Percent of Geomeans
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
3
5
10


Probability of Detecting Decrease vs. Decrease Magnitude
10 Yrs Baseline, 3 Yrs After, Biweekly
Probability
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
60%
40%
20%


Detectable Trend vs. Sampling Frequency ,
10 Years of Data
Trend %/Year
30%
25%
20%
15%
10%
5%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
Monthly
Biweekly
Weekly


Probability of Detecting Trend vs. Trend Magnitude ,
10 years, Biweekly
Probability
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
RT48
VELASKO
DORWIN
KIRKPAT
HIAWATHA
PARK
15%
10%
5%