# 2015 Lower Russian River and Estuary Water Quality Monitoring

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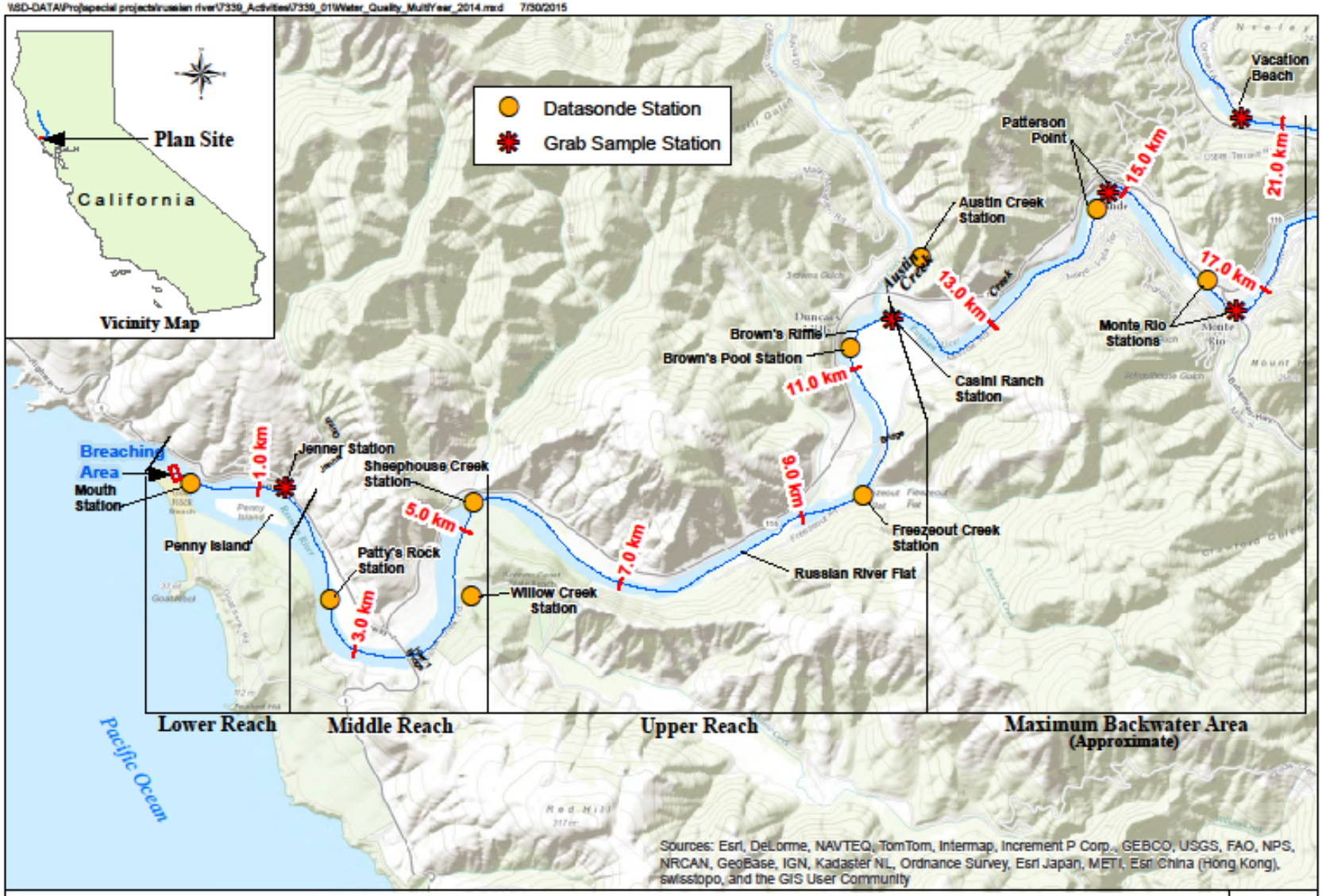
SONOMA COUNTY WATER AGENCY

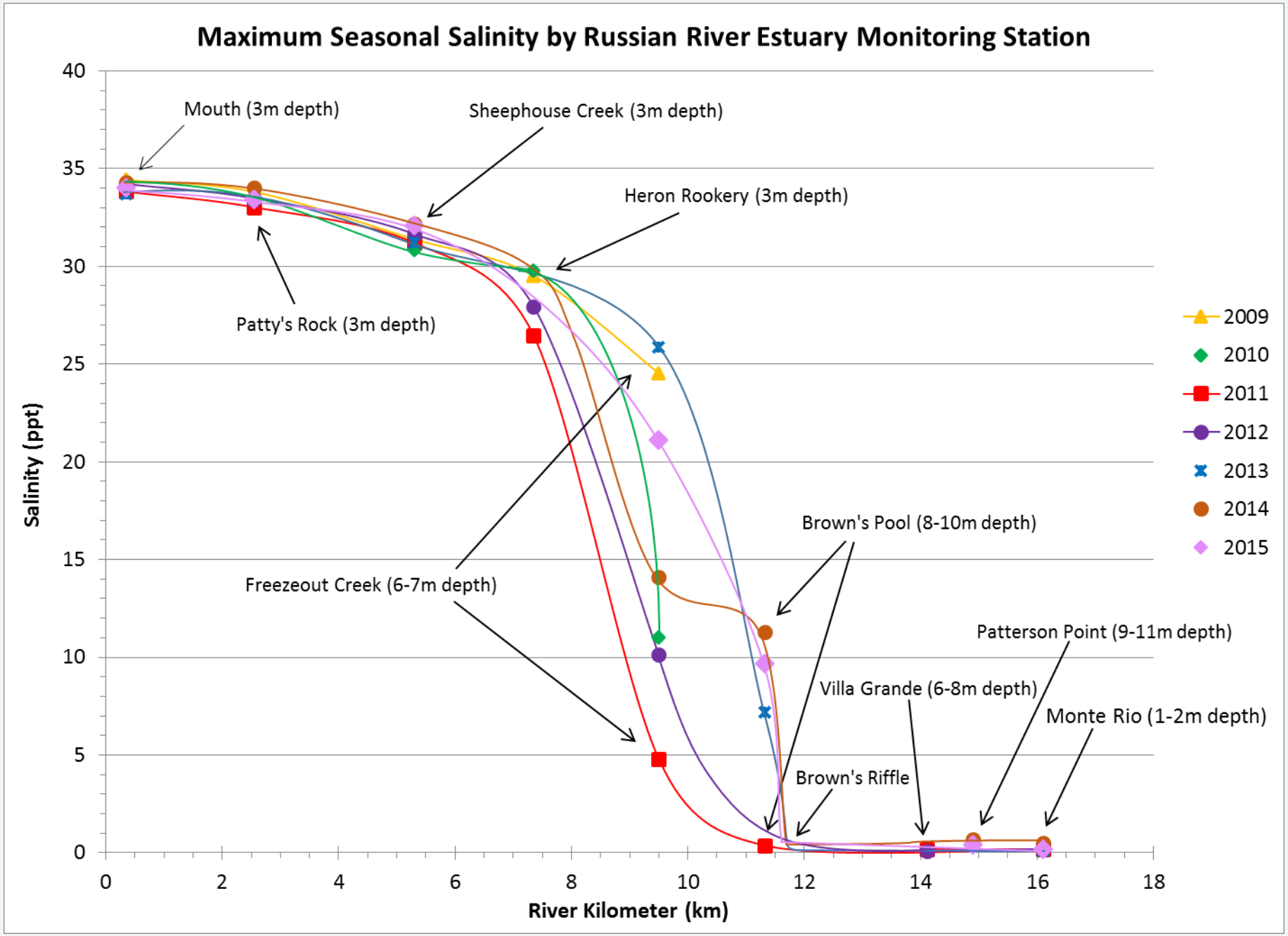
www.sonomacountywater.org

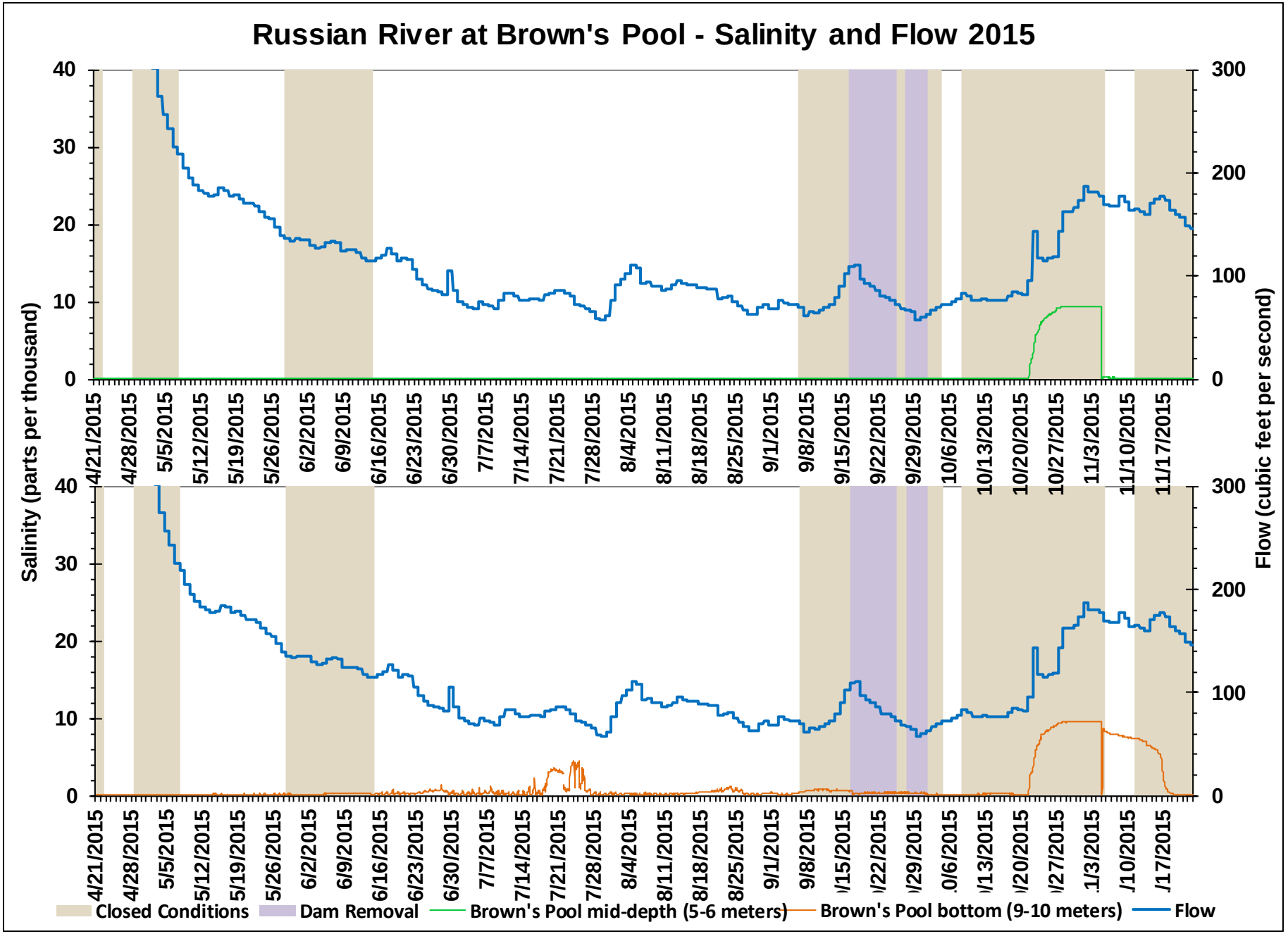


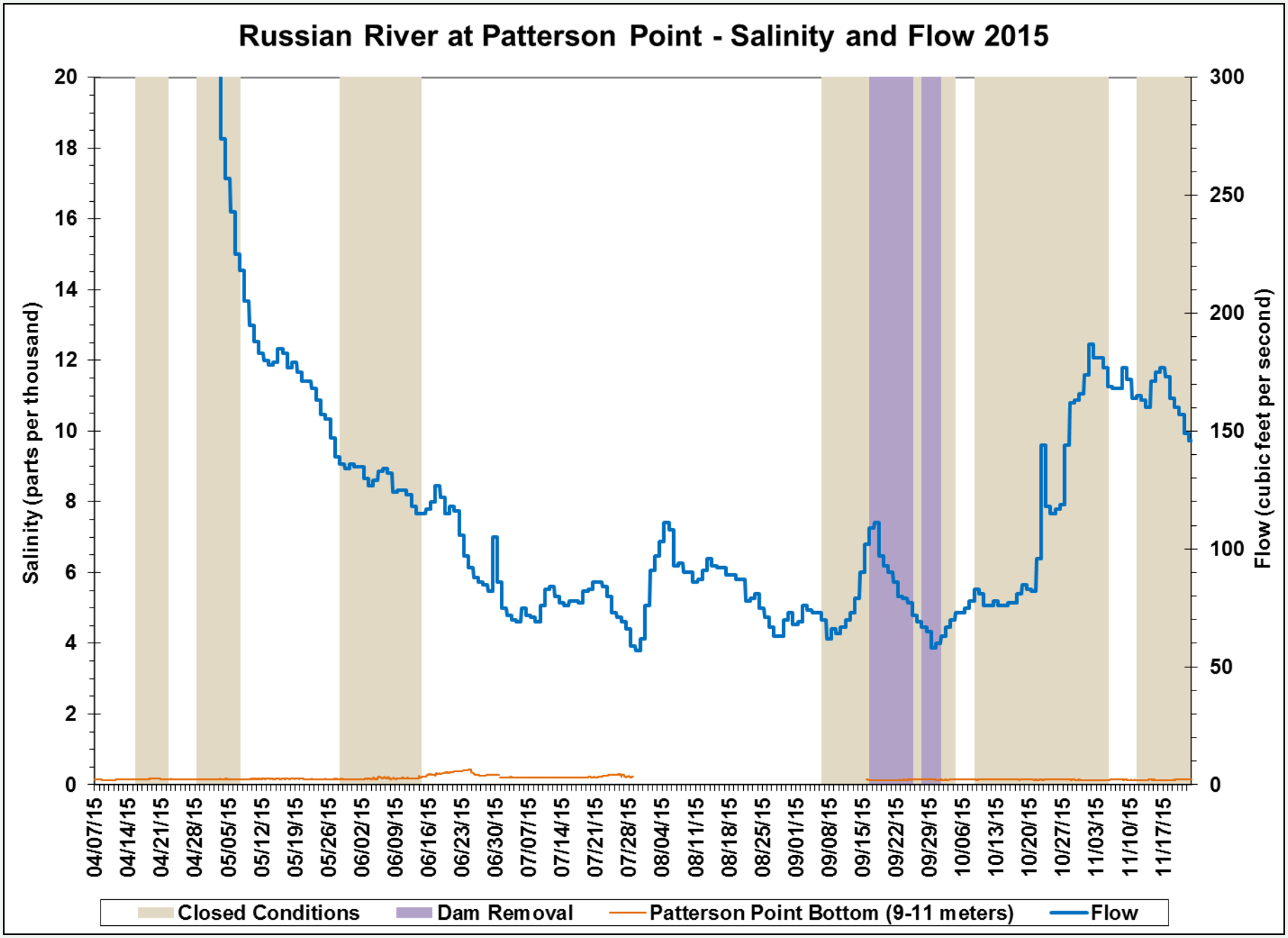

**Russian River Estuary**
**Water Quality Monitoring Stations**

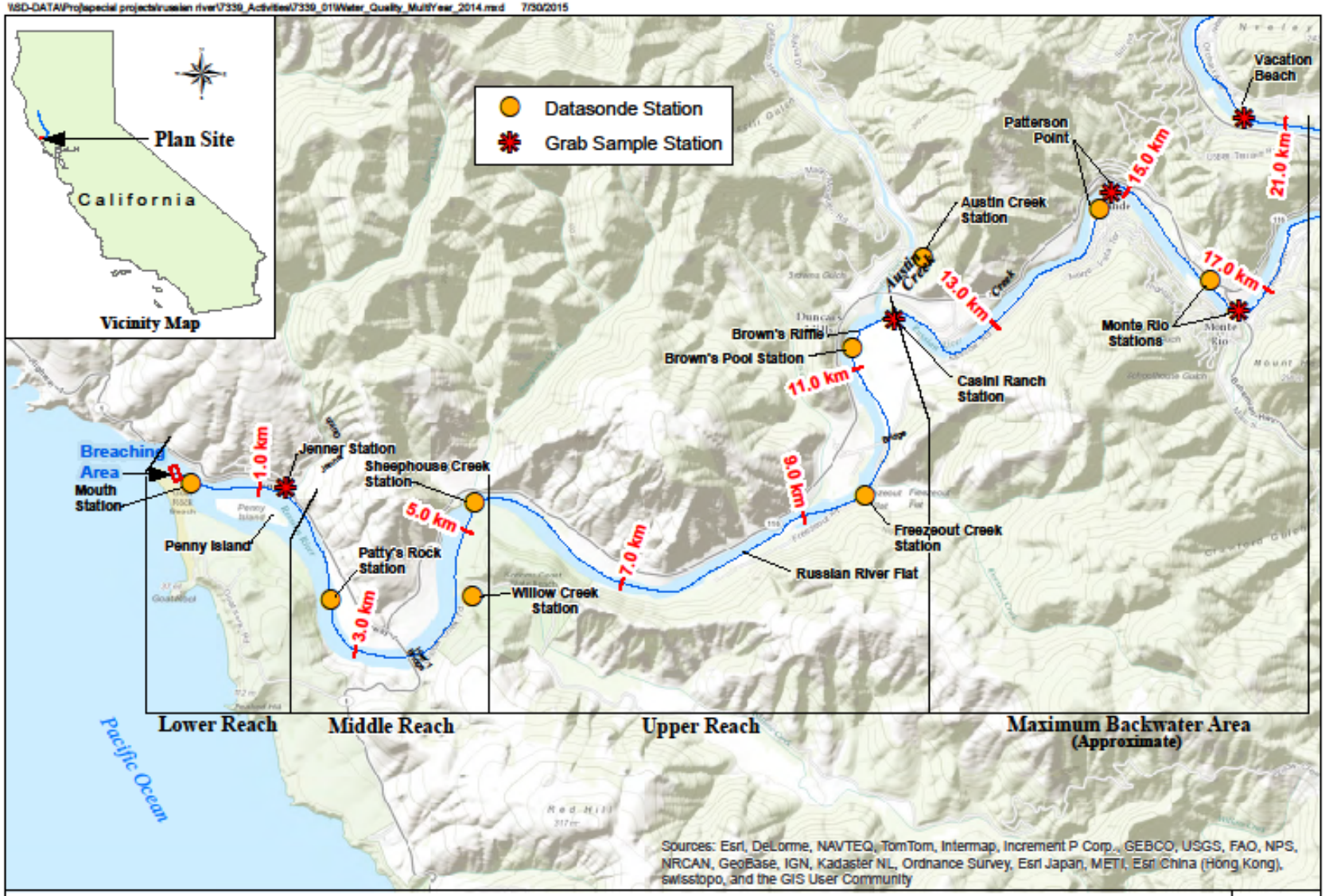
**Figure 1**

This Map is for general reference only.


Maximum Seasonal Salinity by Russian River Estuary Monitoring Station
Salinity (ppt)
River Kilometer (km)
0
5
10
15
20
25
30
35
40
0
2
4
6
8
10
12
14
16
18
Mouth (3m depth)
Sheephouse Creek (3m depth)
Heron Rookery (3m depth)
Patty's Rock (3m depth)
Freezeout Creek (6-7m depth)
Brown's Pool (8-10m depth)
Patterson Point (9-11m depth)
Villa Grande (6-8m depth)
Monte Rio (1-2m depth)
Brown's Riffle
2009
2010
2011
2012
2013
2014
2015

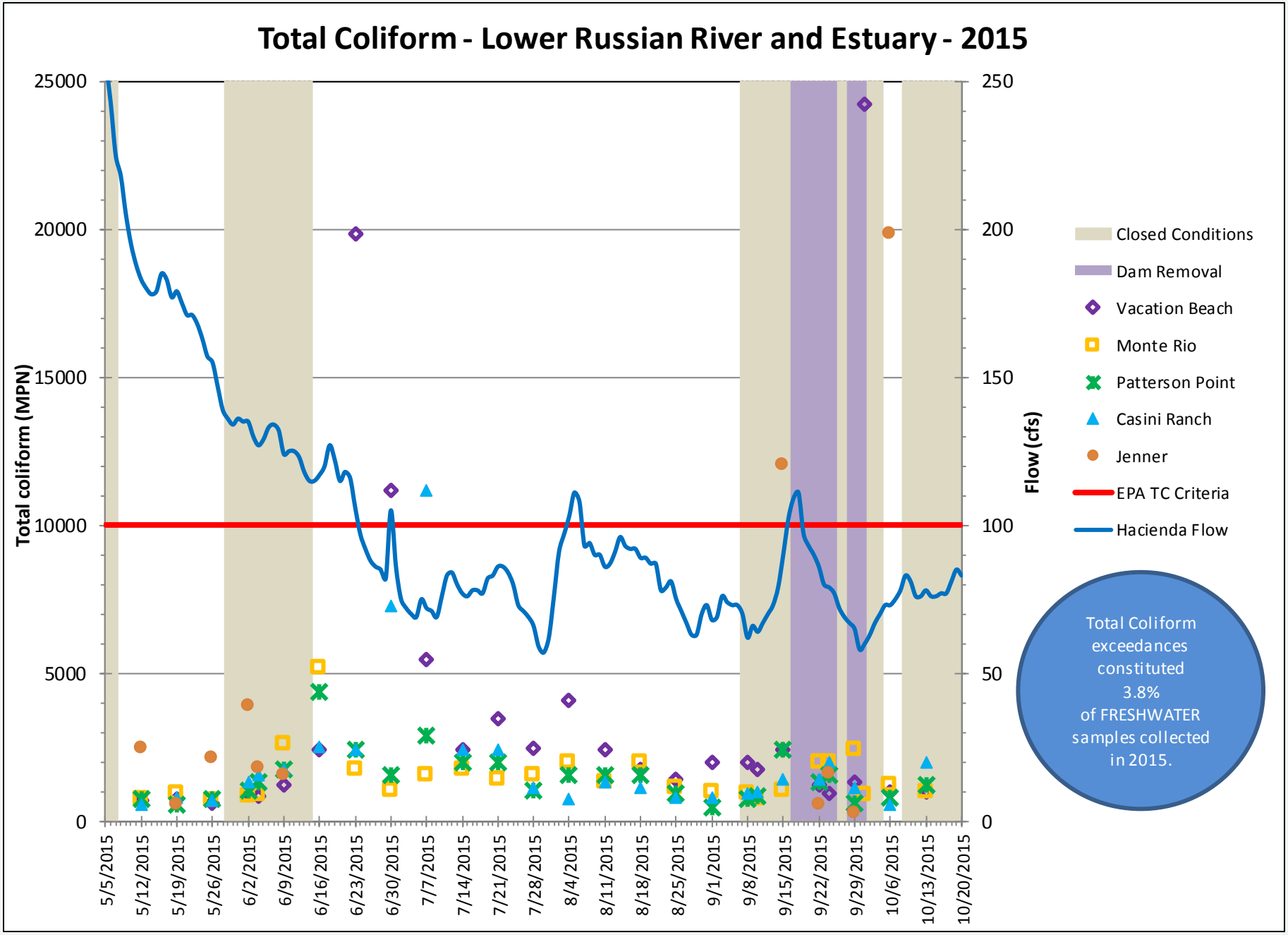

Russian River at Brown's Pool - Salinity and Flow 2015
Salinity (parts per thousand)
Flow (cubic feet per second)
40
30
20
10
0
300
200
100
0
4/21/2015
4/28/2015
5/5/2015
5/12/2015
5/19/2015
5/26/2015
6/2/2015
6/9/2015
6/16/2015
6/23/2015
6/30/2015
7/7/2015
7/14/2015
7/21/2015
7/28/2015
8/4/2015
8/11/2015
8/18/2015
8/25/2015
9/1/2015
9/8/2015
9/15/2015
9/22/2015
9/29/2015
10/6/2015
10/13/2015
10/20/2015
10/27/2015
11/3/2015
11/10/2015
11/17/2015
Closed Conditions
Dam Removal
Brown's Pool mid-depth (5-6 meters)
Brown's Pool bottom (9-10 meters)
Flow

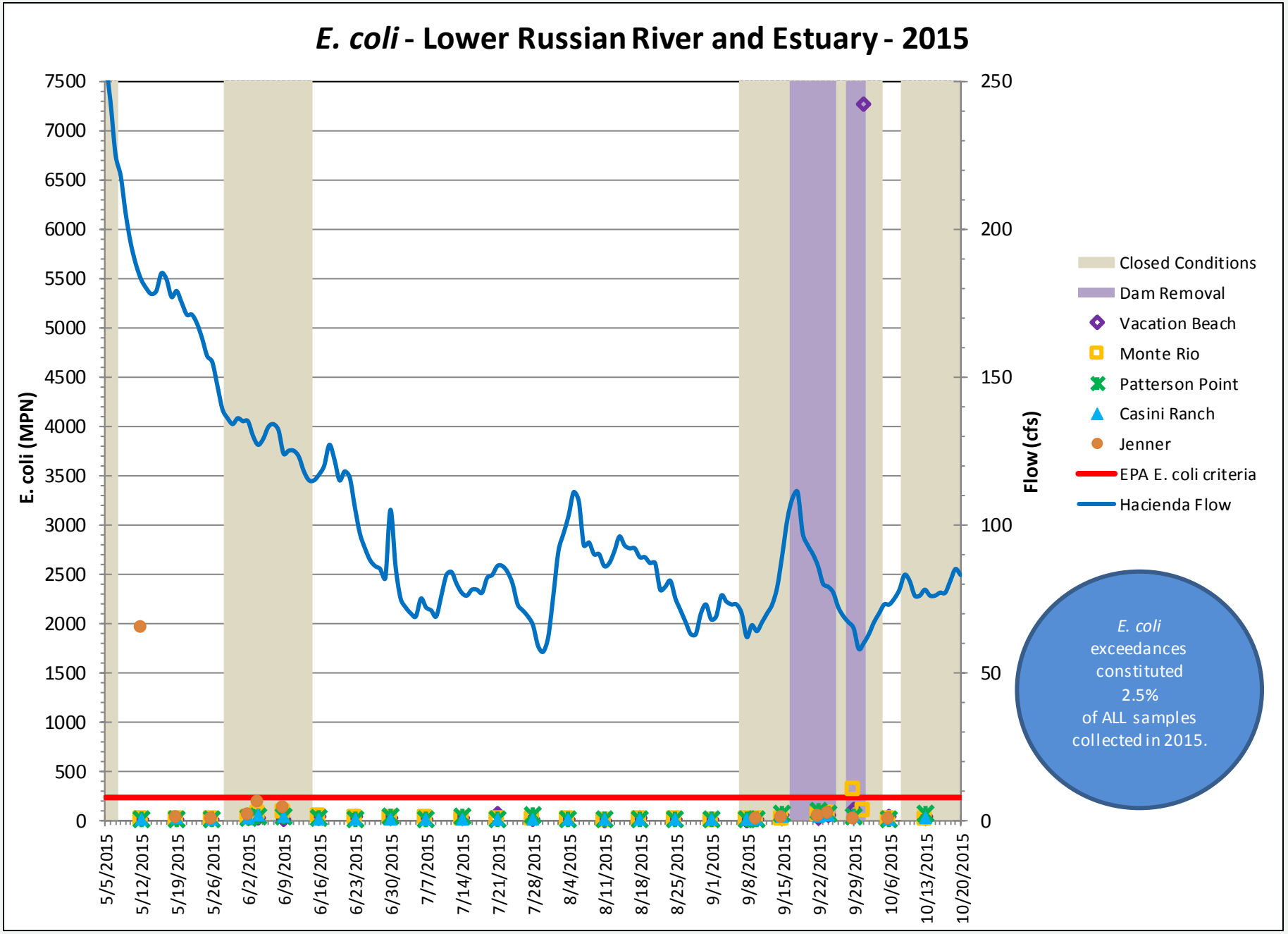

Russian River at Patterson Point - Salinity and Flow 2015
Salinity (parts per thousand)
Flow (cubic feet per second)
0
2
4
6
8
10
12
14
16
18
20
0
50
100
150
200
250
300
04/07/15
04/14/15
04/21/15
04/28/15
05/05/15
05/12/15
05/19/15
05/26/15
06/02/15
06/09/15
06/16/15
06/23/15
06/30/15
07/07/15
07/14/15
07/21/15
07/28/15
08/04/15
08/11/15
08/18/15
08/25/15
09/01/15
09/08/15
09/15/15
09/22/15
09/29/15
10/06/15
10/13/15
10/20/15
10/27/15
11/03/15
11/10/15
11/17/15
Closed Conditions
Dam Removal
Patterson Point Bottom (9-11 meters)
Flow

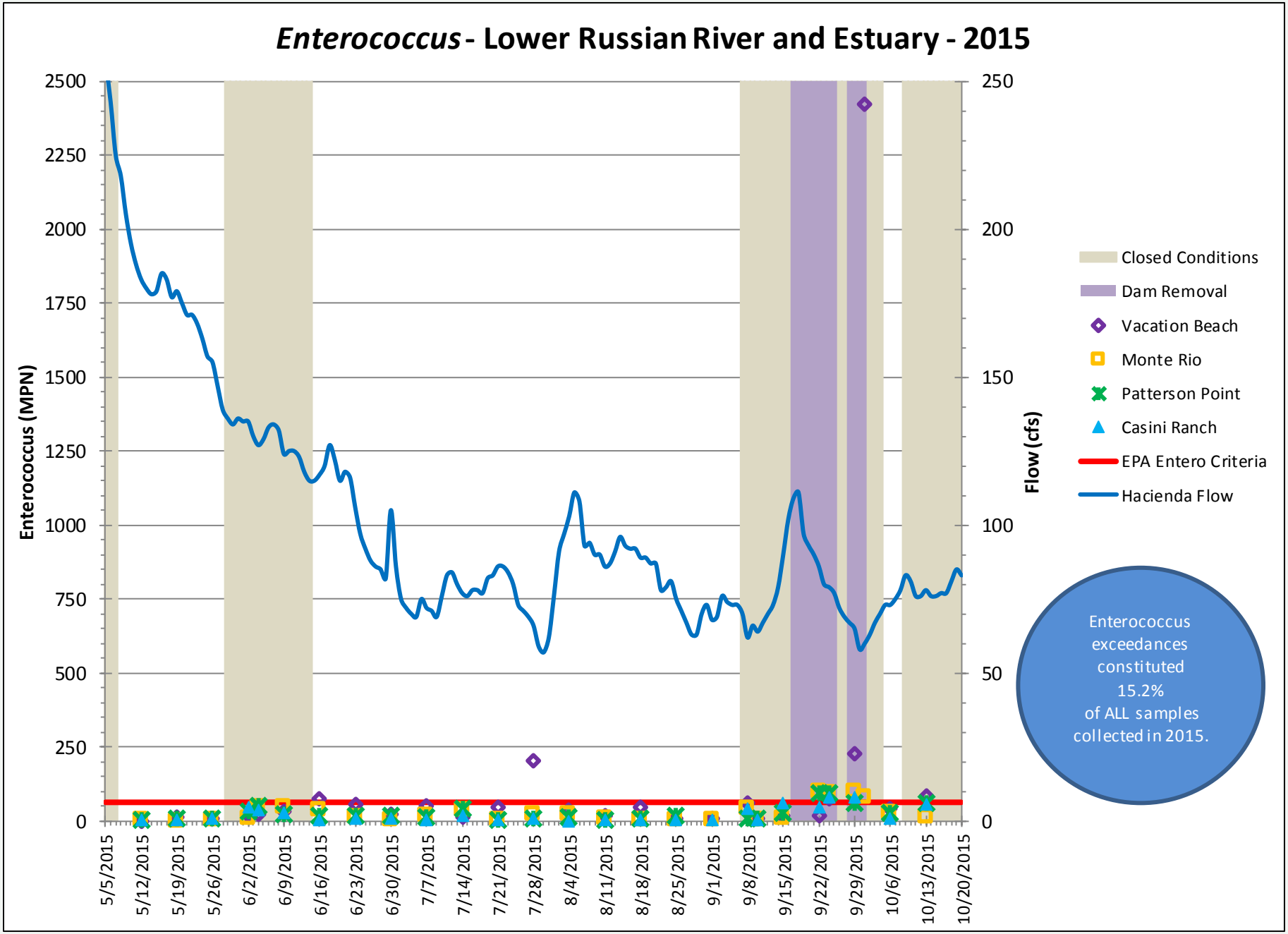



**Russian River Estuary**
**Water Quality Monitoring Stations**

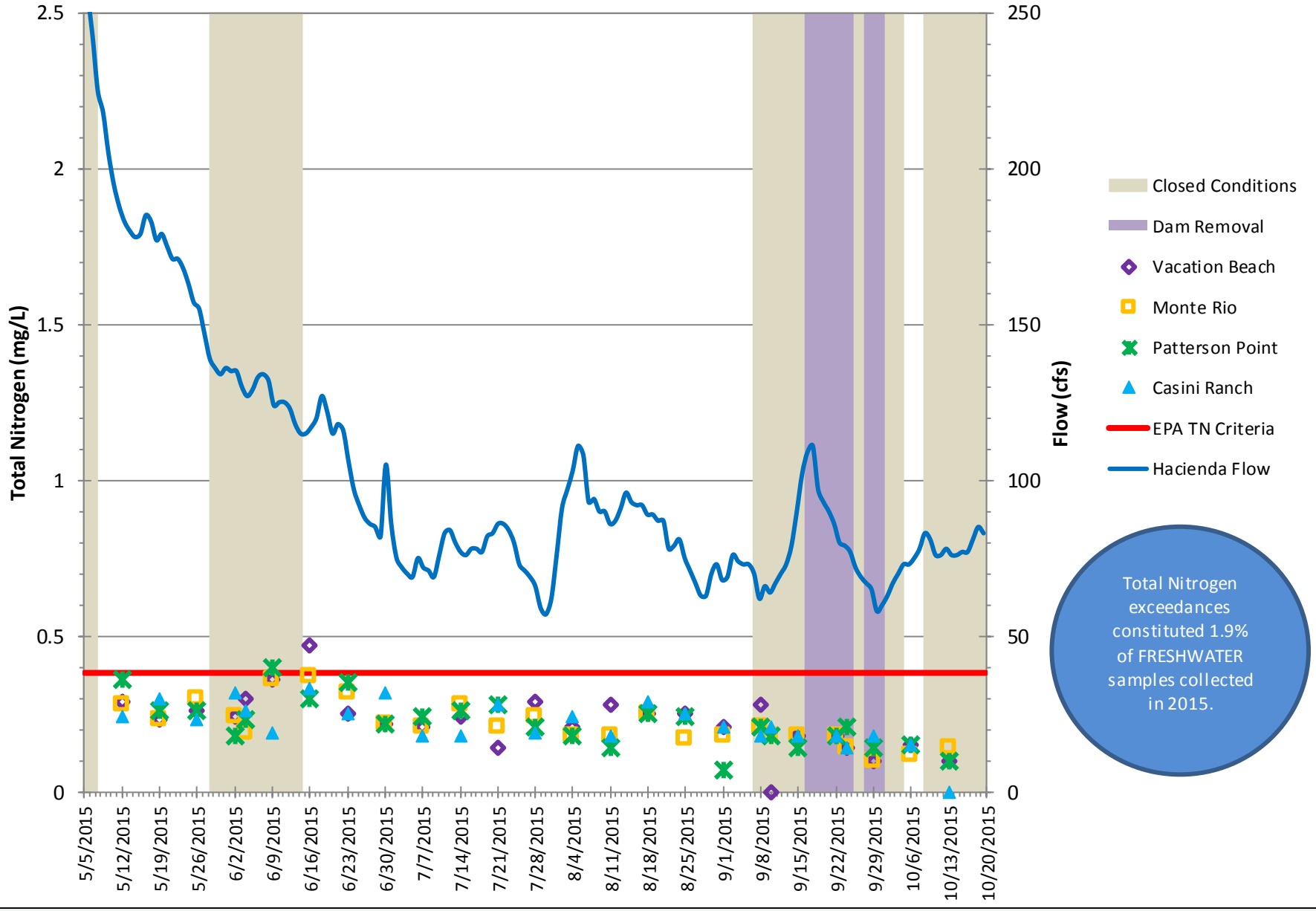
**Figure 1**


Total Coliform - Lower Russian River and Estuary - 2015
Total coliform (MPN)
Flow (cfs)
25000
20000
15000
10000
5000
0
250
200
150
100
50
0
5/5/2015
5/12/2015
5/19/2015
5/26/2015
6/2/2015
6/9/2015
6/16/2015
6/23/2015
6/30/2015
7/7/2015
7/14/2015
7/21/2015
7/28/2015
8/4/2015
8/11/2015
8/18/2015
8/25/2015
9/1/2015
9/8/2015
9/15/2015
9/22/2015
9/29/2015
10/6/2015
10/13/2015
10/20/2015
Closed Conditions
Dam Removal
Vacation Beach
Monte Rio
Patterson Point
Casini Ranch
Jenner
EPA TC Criteria
Hacienda Flow
Total Coliform exceedances constituted 3.8% of FRESHWATER samples collected in 2015.


E. coli - Lower Russian River and Estuary - 2015
E. coli (MPN)
Flow (cfs)
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
250
200
150
100
50
0
5/5/2015
5/12/2015
5/19/2015
5/26/2015
6/2/2015
6/9/2015
6/16/2015
6/23/2015
6/30/2015
7/7/2015
7/14/2015
7/21/2015
7/28/2015
8/4/2015
8/11/2015
8/18/2015
8/25/2015
9/1/2015
9/8/2015
9/15/2015
9/22/2015
9/29/2015
10/6/2015
10/13/2015
10/20/2015
Closed Conditions
Dam Removal
Vacation Beach
Monte Rio
Patterson Point
Casini Ranch
Jenner
EPA E. coli criteria
Hacienda Flow
E. coli exceedances constituted 2.5% of ALL samples collected in 2015.

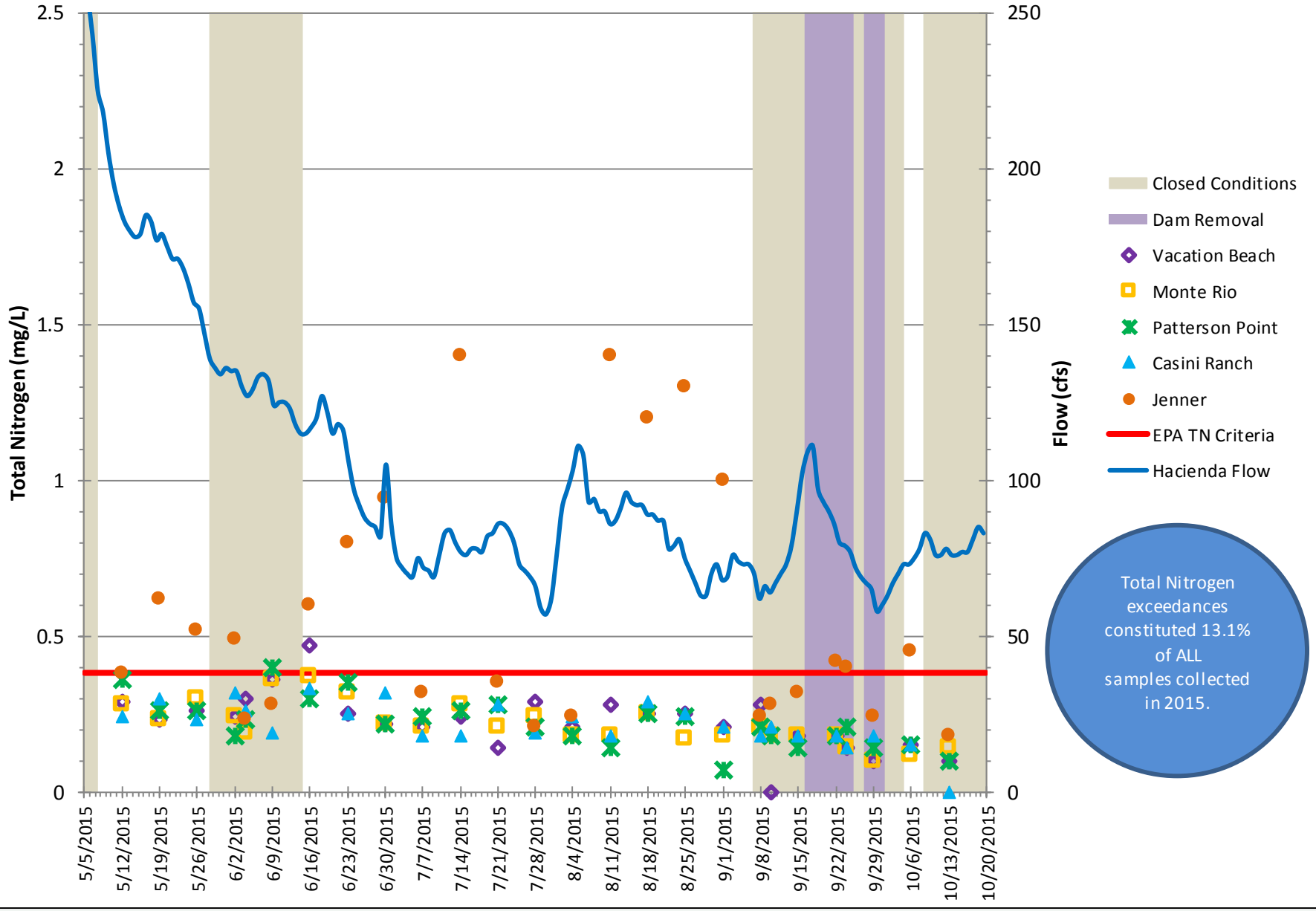

*Enterococcus* - Lower Russian River and Estuary - 2015
Enterococcus (MPN)
Flow (cfs)
2500
2250
2000
1750
1500
1250
1000
750
500
250
0
250
200
150
100
50
0
5/5/2015
5/12/2015
5/19/2015
5/26/2015
6/2/2015
6/9/2015
6/16/2015
6/23/2015
6/30/2015
7/7/2015
7/14/2015
7/21/2015
7/28/2015
8/4/2015
8/11/2015
8/18/2015
8/25/2015
9/1/2015
9/8/2015
9/15/2015
9/22/2015
9/29/2015
10/6/2015
10/13/2015
10/20/2015
Closed Conditions
Dam Removal
Vacation Beach
Monte Rio
Patterson Point
Casini Ranch
EPA Entero Criteria
Hacienda Flow
Enterococcus exceedances constituted 15.2% of ALL samples collected in 2015.

# Total Nitrogen - Lower Russian River and Estuary - 2015

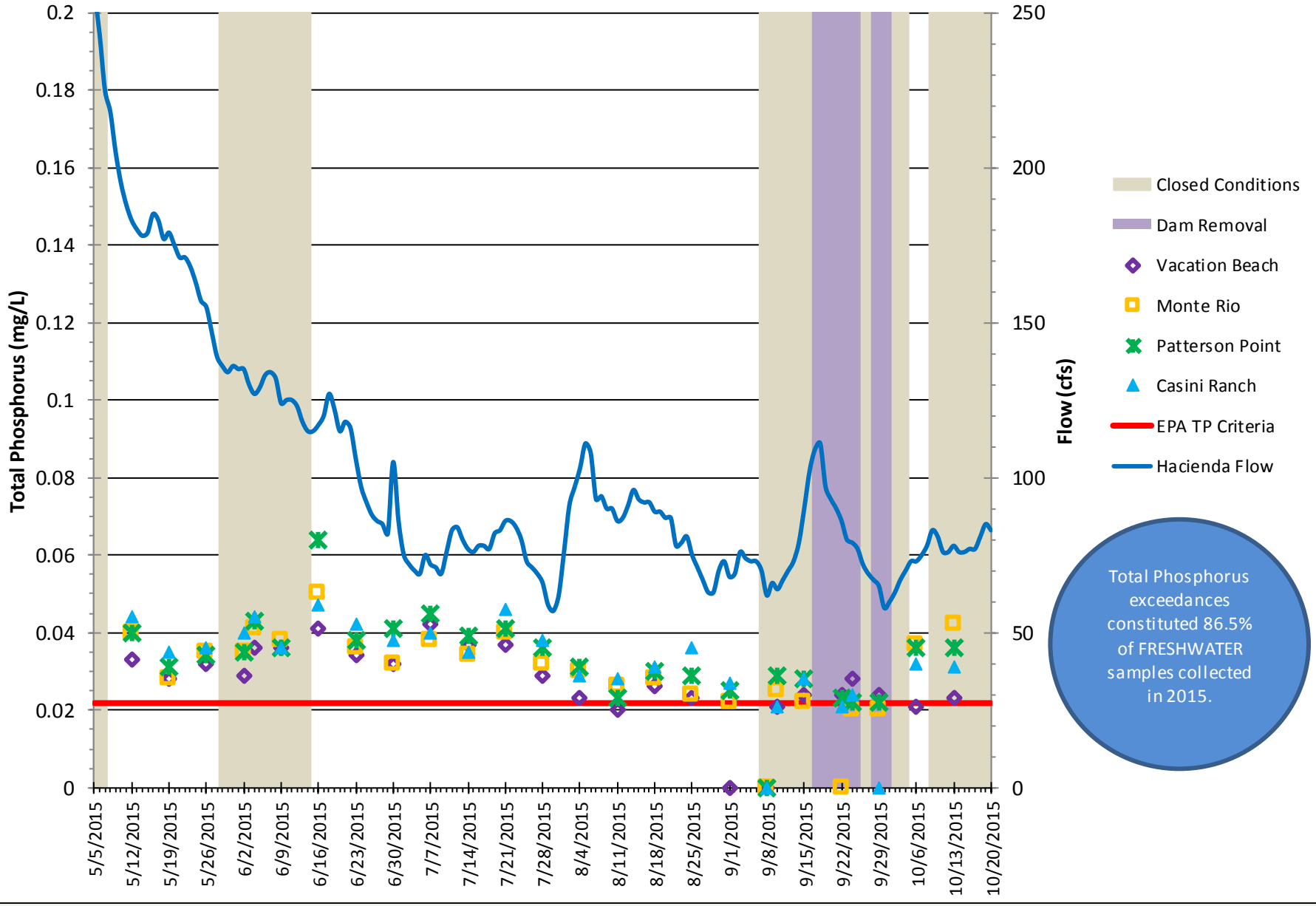



Total Nitrogen exceedances constituted 1.9% of FRESHWATER samples collected in 2015.

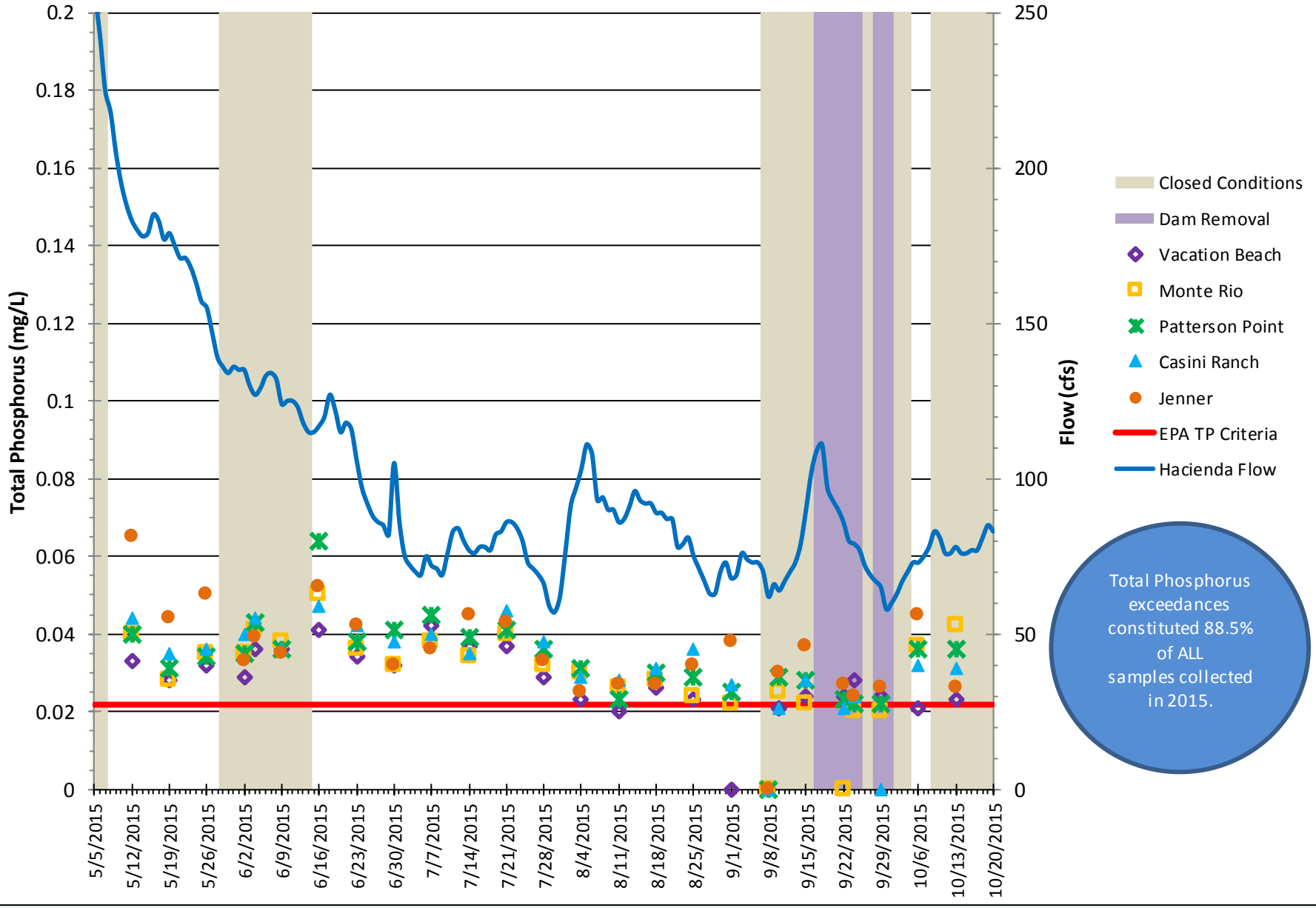
# Total Nitrogen - Lower Russian River and Estuary - 2015

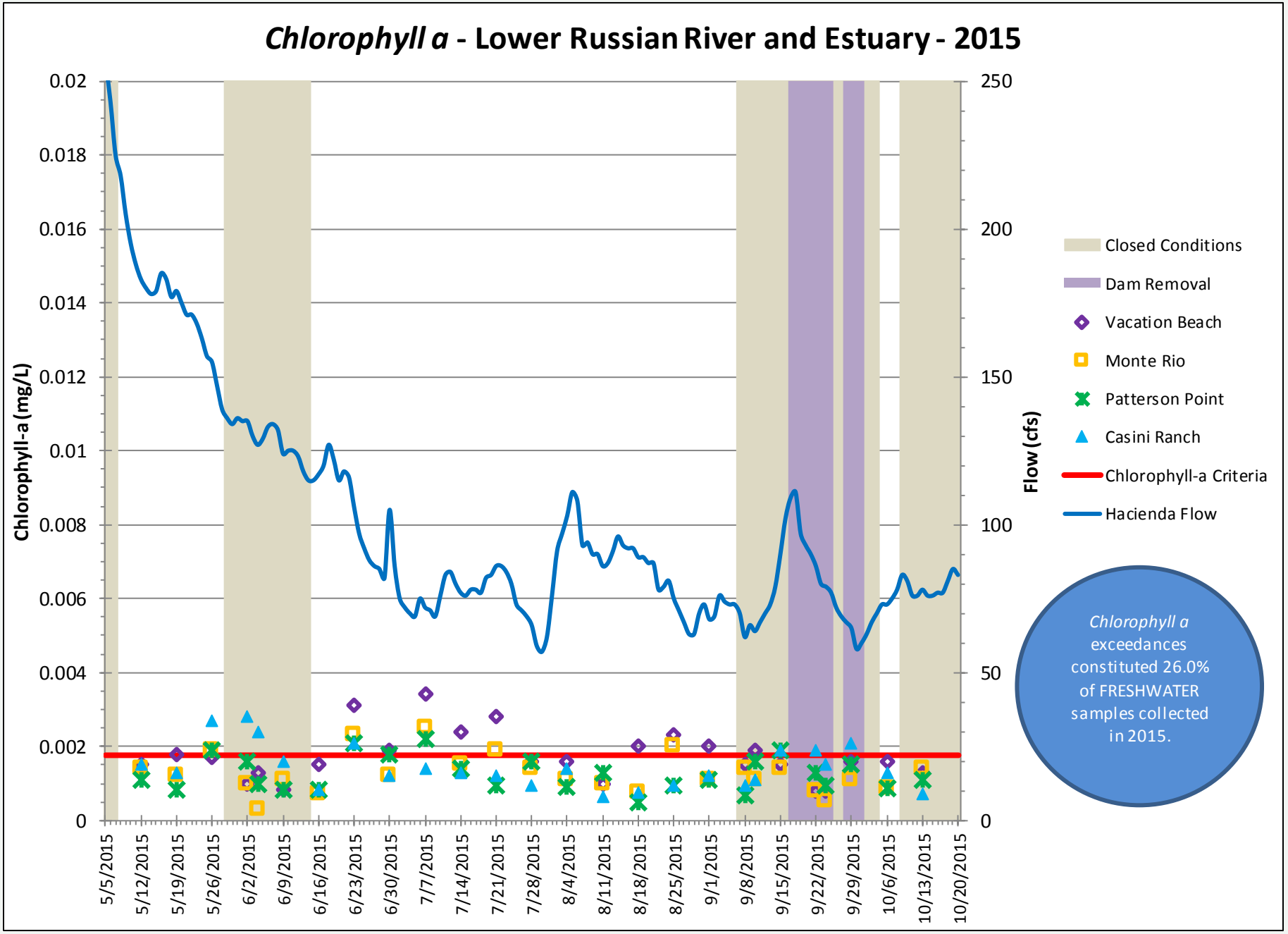


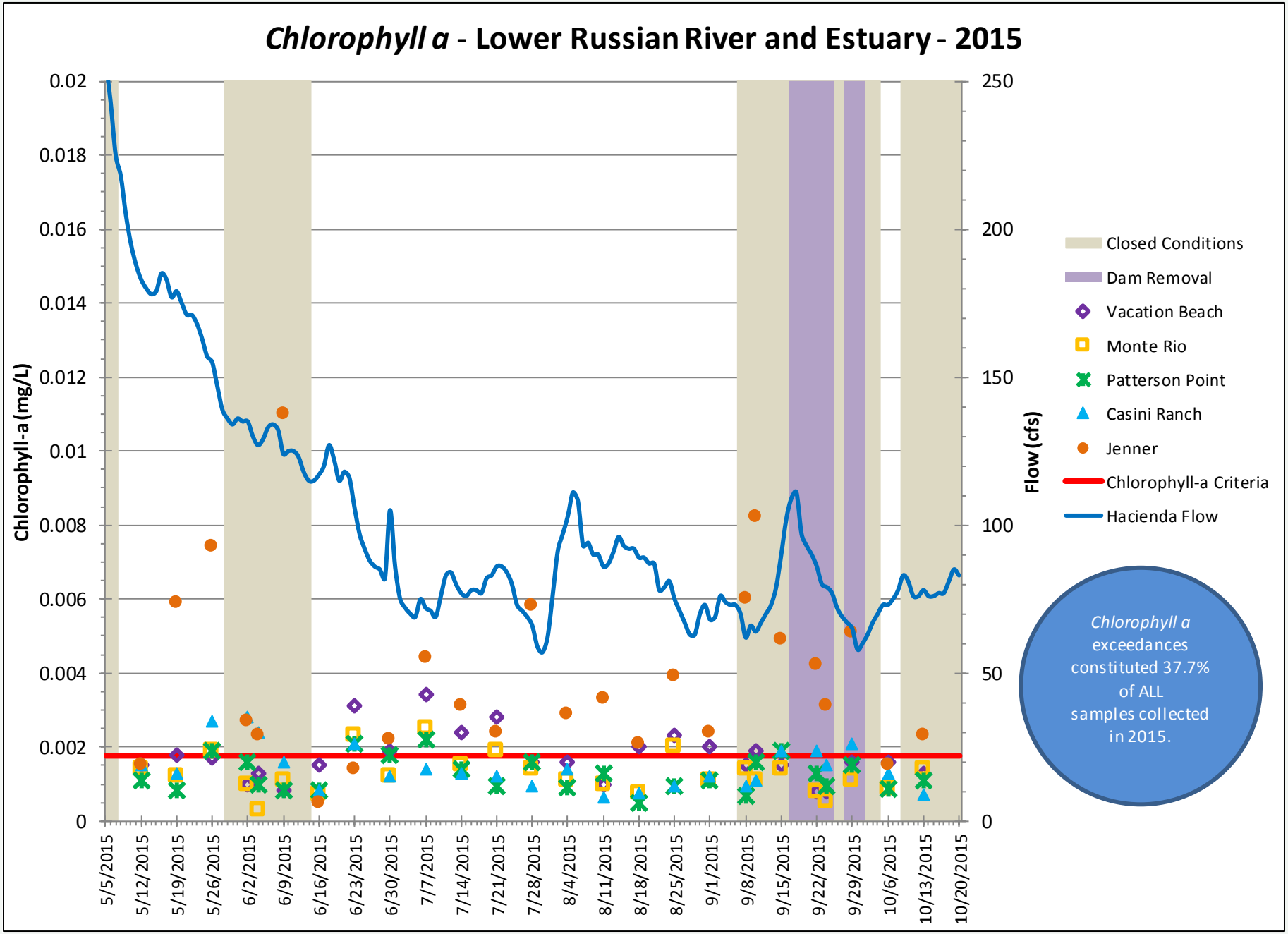
# Total Phosphorus - Lower Russian River and Estuary - 2015



# Total Phosphorus - Lower Russian River and Estuary - 2015




Chlorophyll a - Lower Russian River and Estuary - 2015
Chlorophyll-a (mg/L)
Flow (cfs)
0.02
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
250
200
150
100
50
0
5/5/2015
5/12/2015
5/19/2015
5/26/2015
6/2/2015
6/9/2015
6/16/2015
6/23/2015
6/30/2015
7/7/2015
7/14/2015
7/21/2015
7/28/2015
8/4/2015
8/11/2015
8/18/2015
8/25/2015
9/1/2015
9/8/2015
9/15/2015
9/22/2015
9/29/2015
10/6/2015
10/13/2015
10/20/2015
Closed Conditions
Dam Removal
Vacation Beach
Monte Rio
Patterson Point
Casini Ranch
Chlorophyll-a Criteria
Hacienda Flow
Chlorophyll a exceedances constituted 26.0% of FRESHWATER samples collected in 2015.


*Chlorophyll a* - Lower Russian River and Estuary - 2015
Chlorophyll-a (mg/L)
Flow (cfs)
0.02
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
250
200
150
100
50
0
5/5/2015
5/12/2015
5/19/2015
5/26/2015
6/2/2015
6/9/2015
6/16/2015
6/23/2015
6/30/2015
7/7/2015
7/14/2015
7/21/2015
7/28/2015
8/4/2015
8/11/2015
8/18/2015
8/25/2015
9/1/2015
9/8/2015
9/15/2015
9/22/2015
9/29/2015
10/6/2015
10/13/2015
10/20/2015
Closed Conditions
Dam Removal
Vacation Beach
Monte Rio
Patterson Point
Casini Ranch
Jenner
Chlorophyll-a Criteria
Hacienda Flow
*Chlorophyll a* exceedances constituted 37.7% of ALL samples collected in 2015.

# 2016 Estuary and MBA Monitoring

- Deploy datasondes in Estuary and MBA
- Collect weekly grab samples for:
  - Nutrients
  - Bacteria
  - Chlorophyll a (algae)
- Algae monitoring

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