2012 Estuary Water Quality Monitoring Program

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SONOMA COUNTY WATER AGENCY

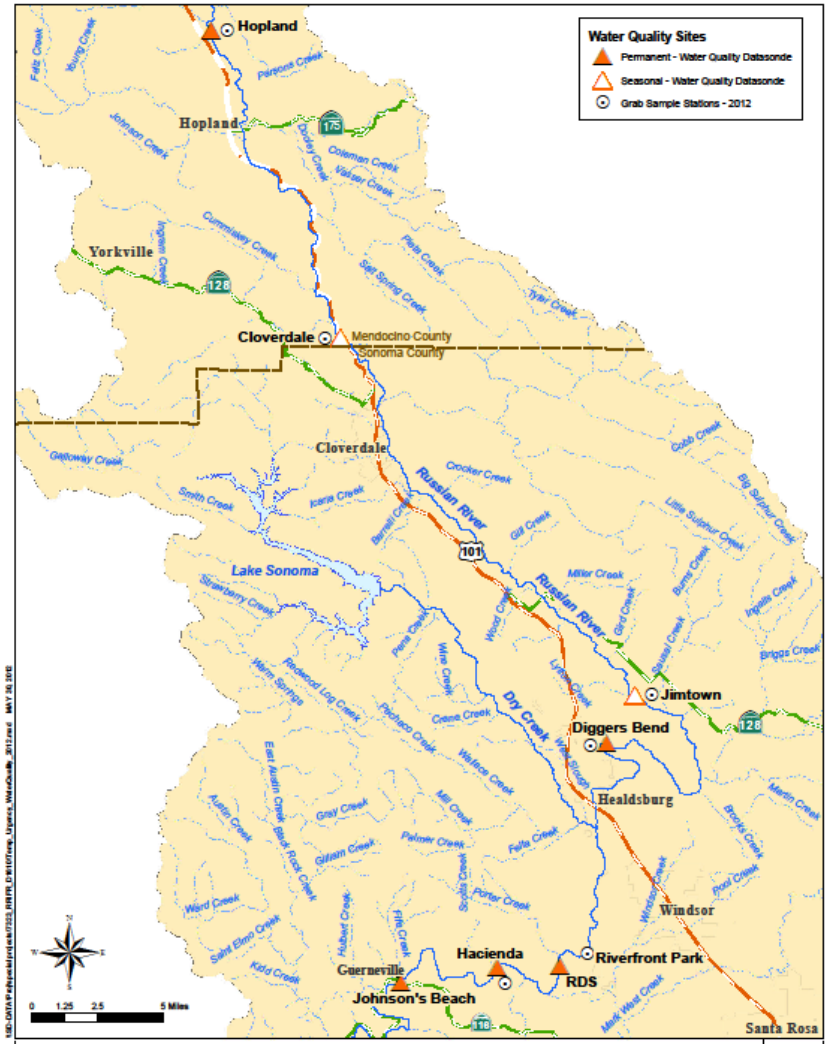
Goals & Objectives

- Monitor changes to water quality in response to reduced inflows during TUC
- Monitor changes to water quality related to closure of barrier beach, including
  - Perched conditions and muted tides
  - implementation of lagoon outlet channel
  - and conversion to freshwater lagoon.

Grab Sampling Effort

- Weekly in the Upper River (6 stations)
- Bi-Monthly in Estuary (5 stations) when minimum flows above D1610
- Weekly in Estuary when minimum flows below D1610 (125 cfs)
- Nutrients and *Chlorophyll a* compared to EPA recommended Freshwater Criteria for rivers and streams (Agg. Ecoregion III)
- *E. coli* and *enterococcus* compared to CDPH Draft Guidance for Freshwater Beaches
- Specific criteria and guidelines have not been established for estuaries yet.

Map of Mainstem Stations

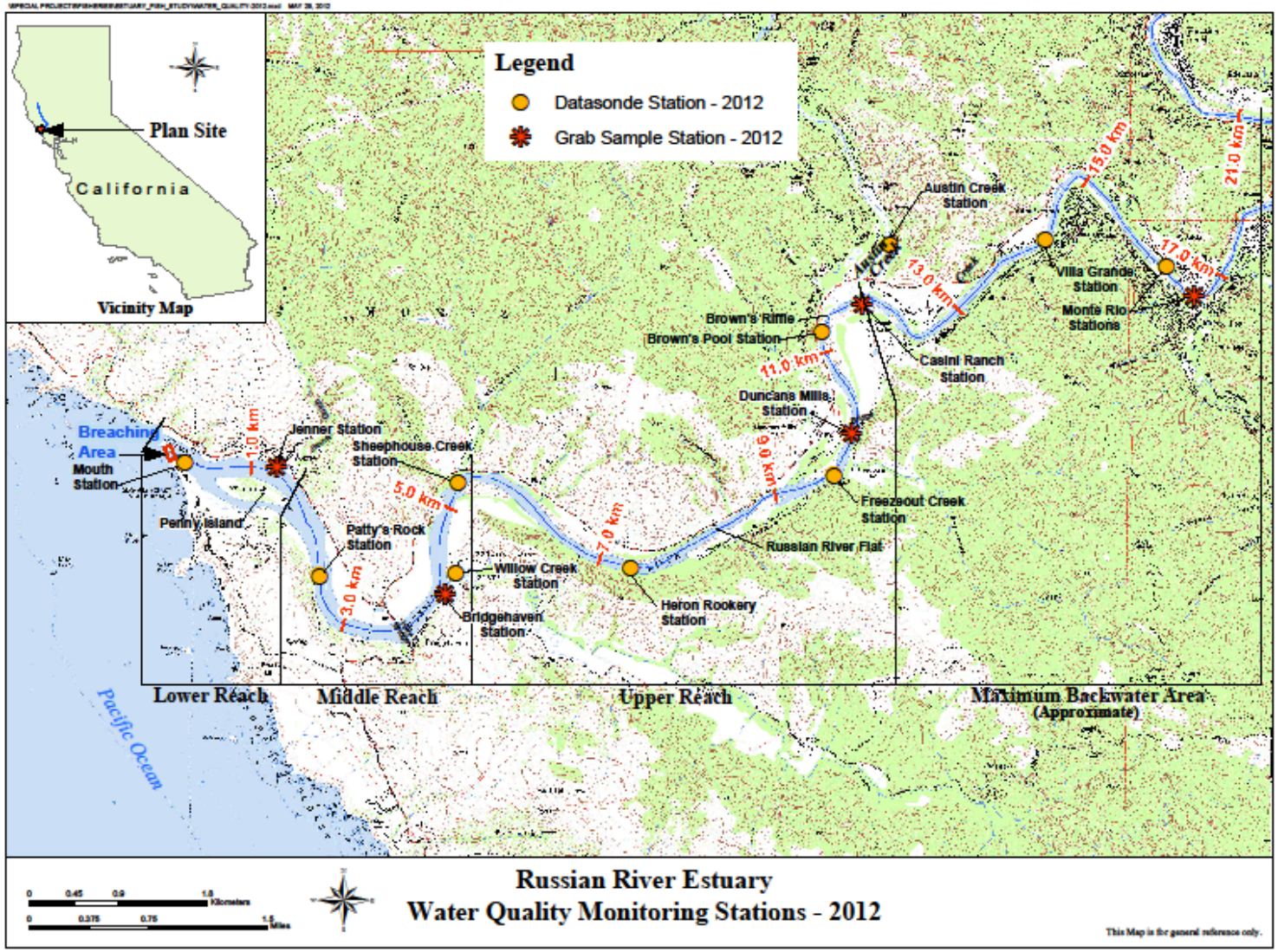


Russian River Mainstem
Water Quality Monitoring Stations - 2012

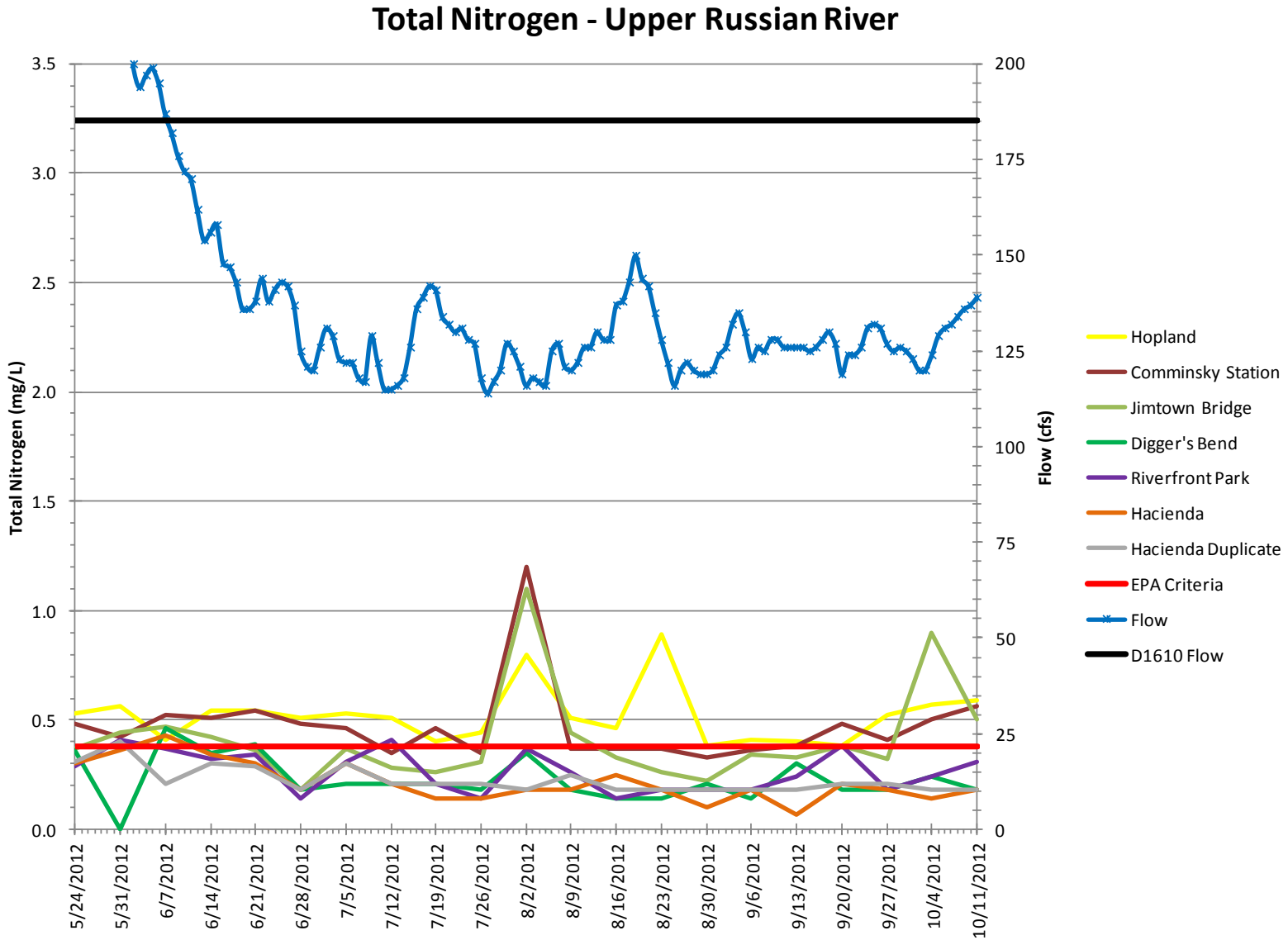
This Map is for general reference only.

Figure 1

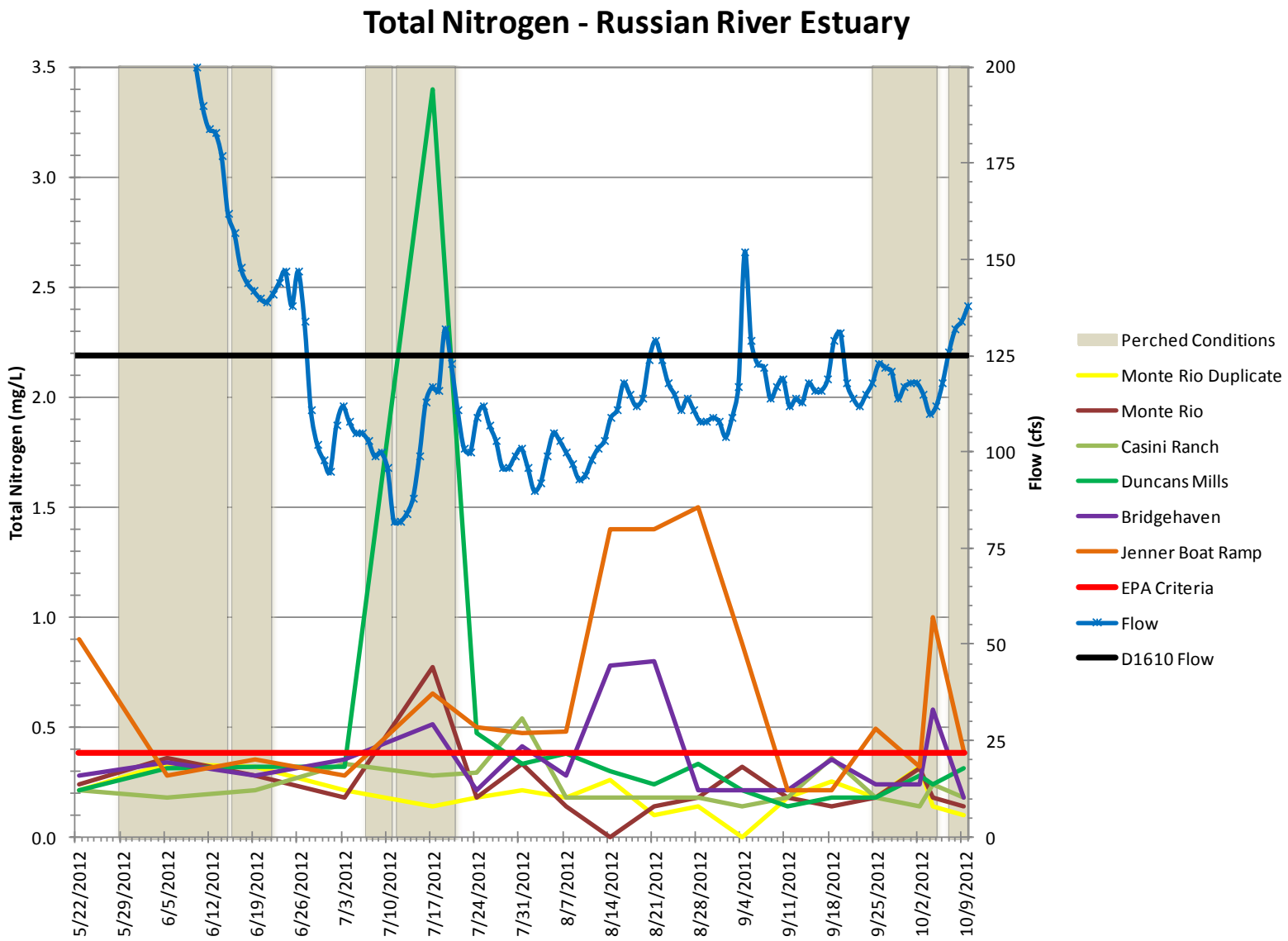
Map of Estuary Stations



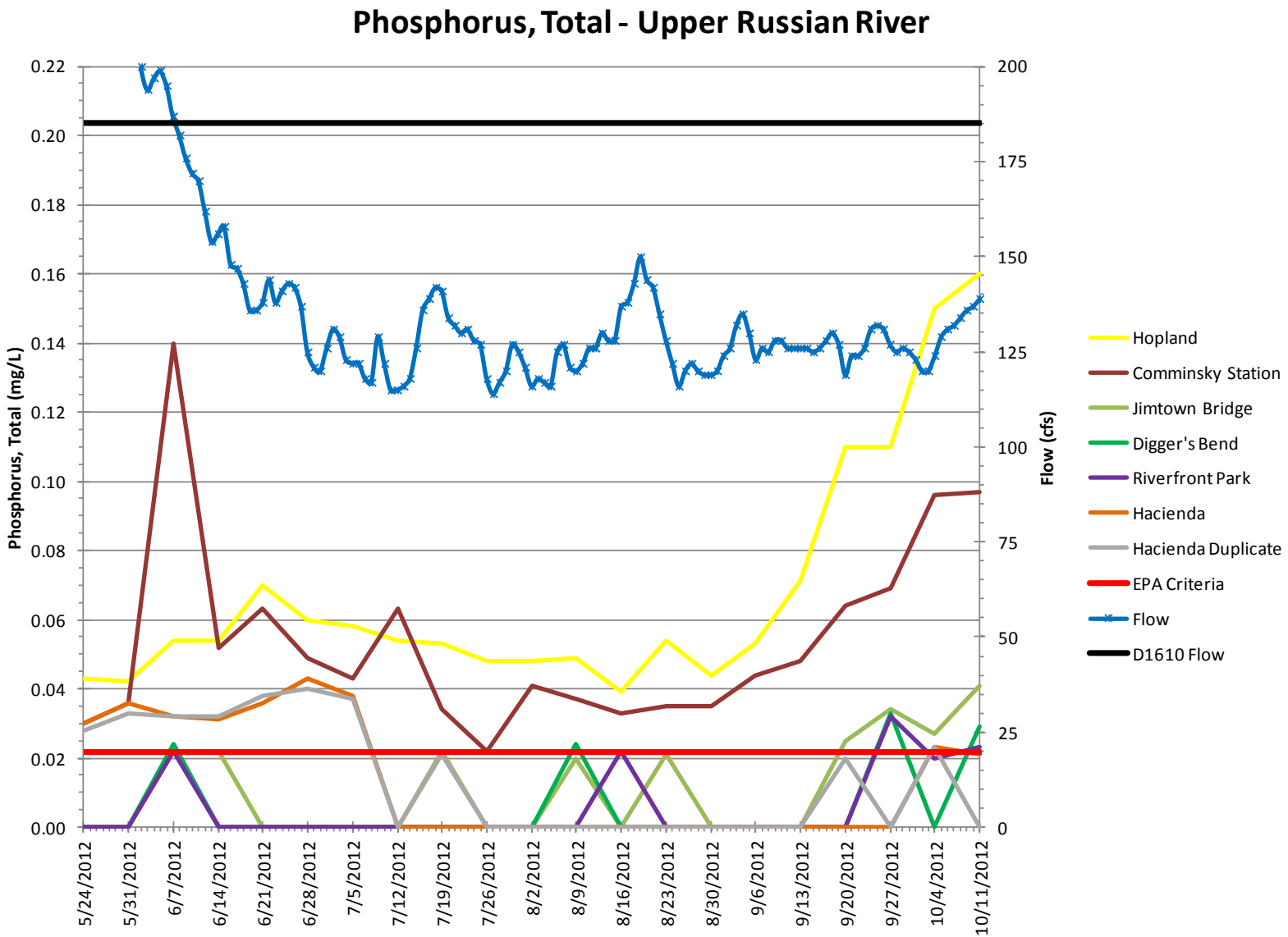
Mainstem Total Nitrogen



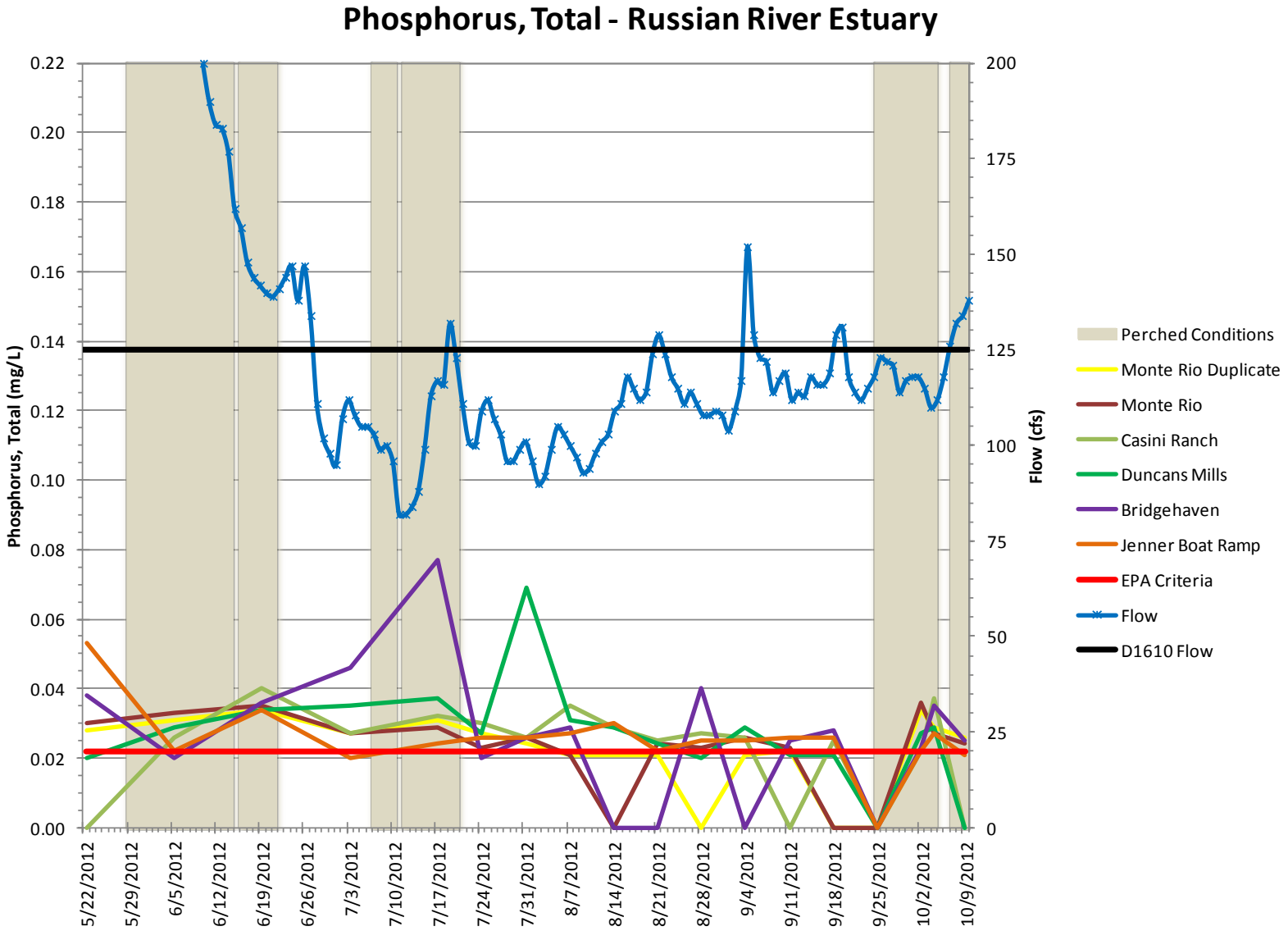
Estuary Total Nitrogen



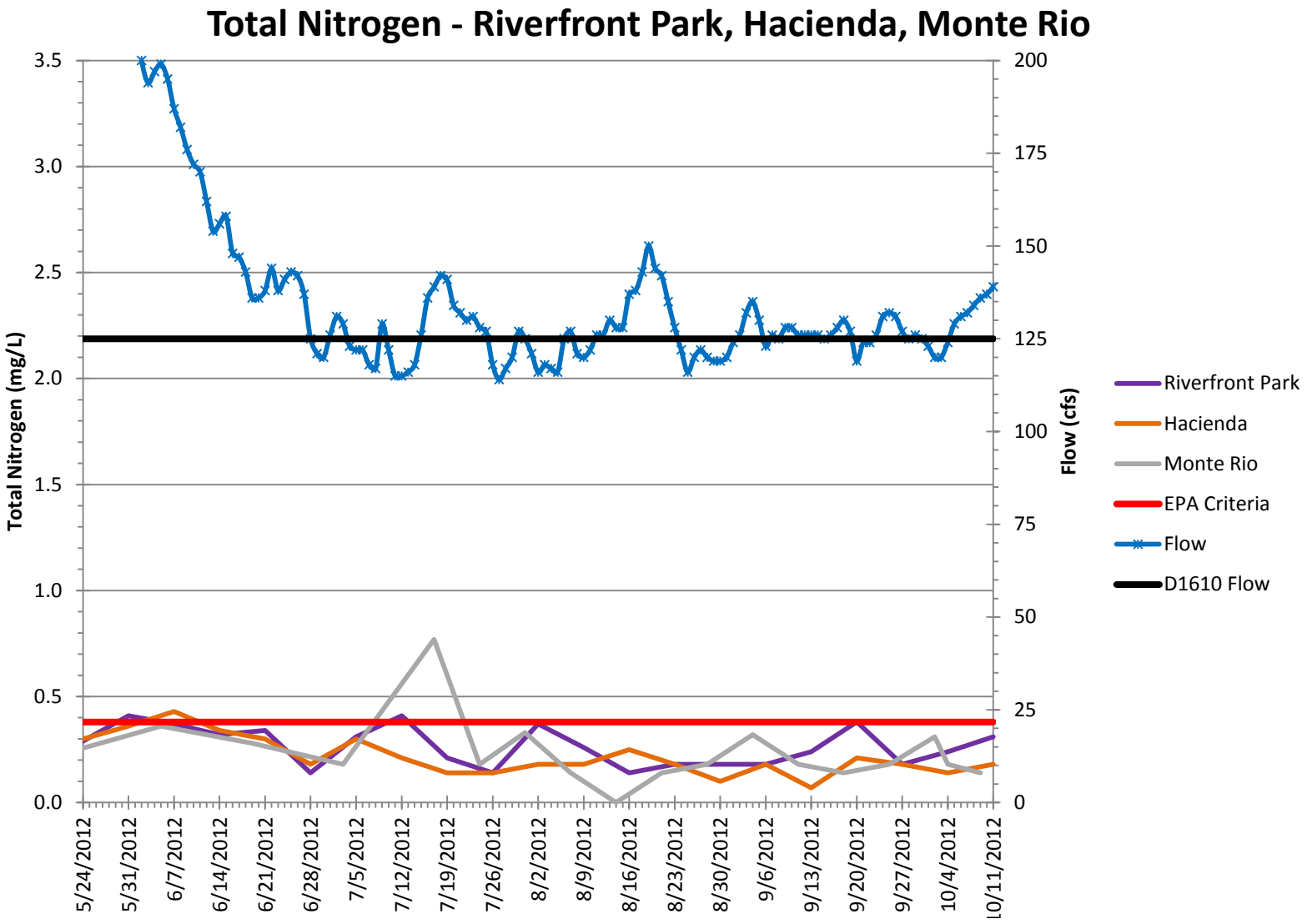
Mainstem Total Phosphorus



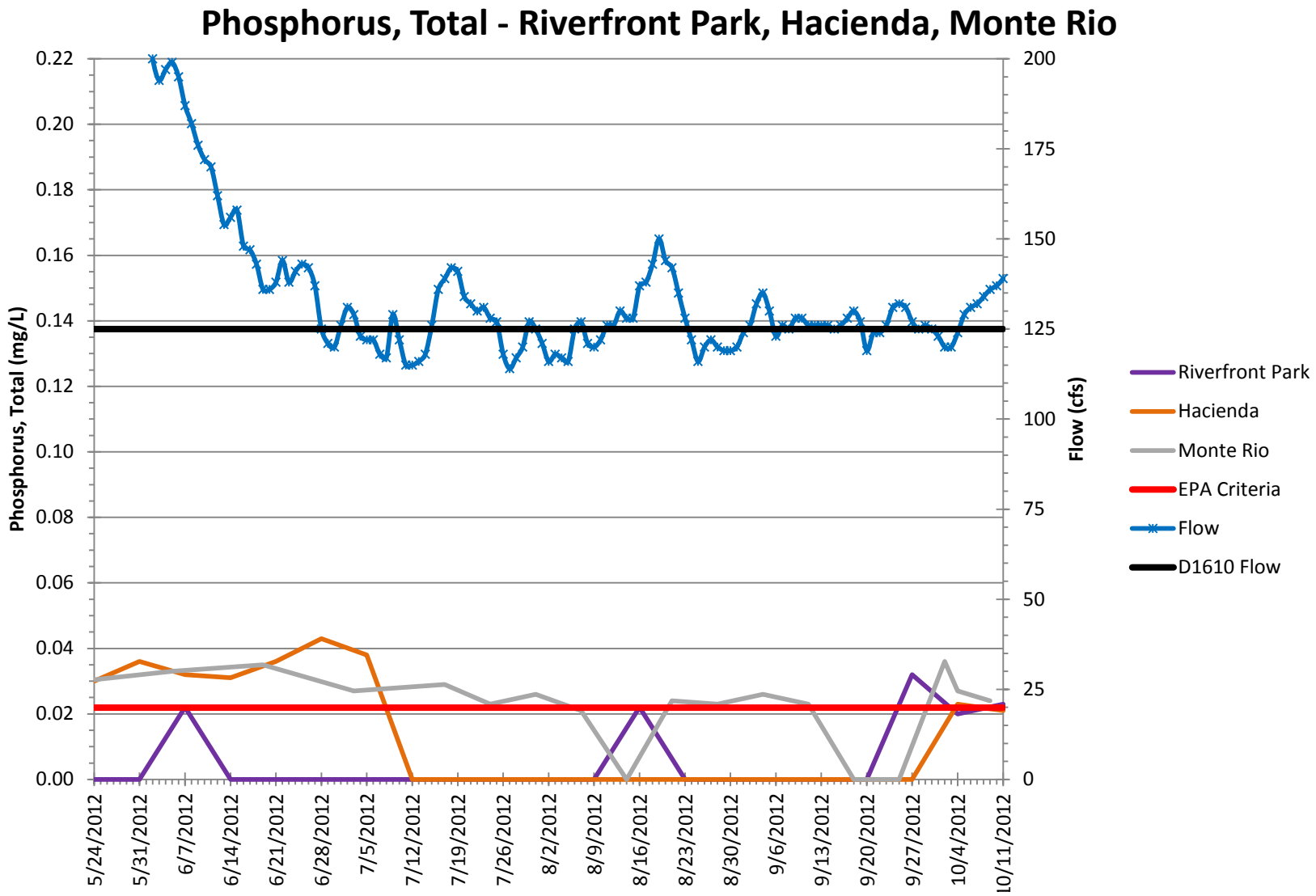
Estuary Total Phosphorus



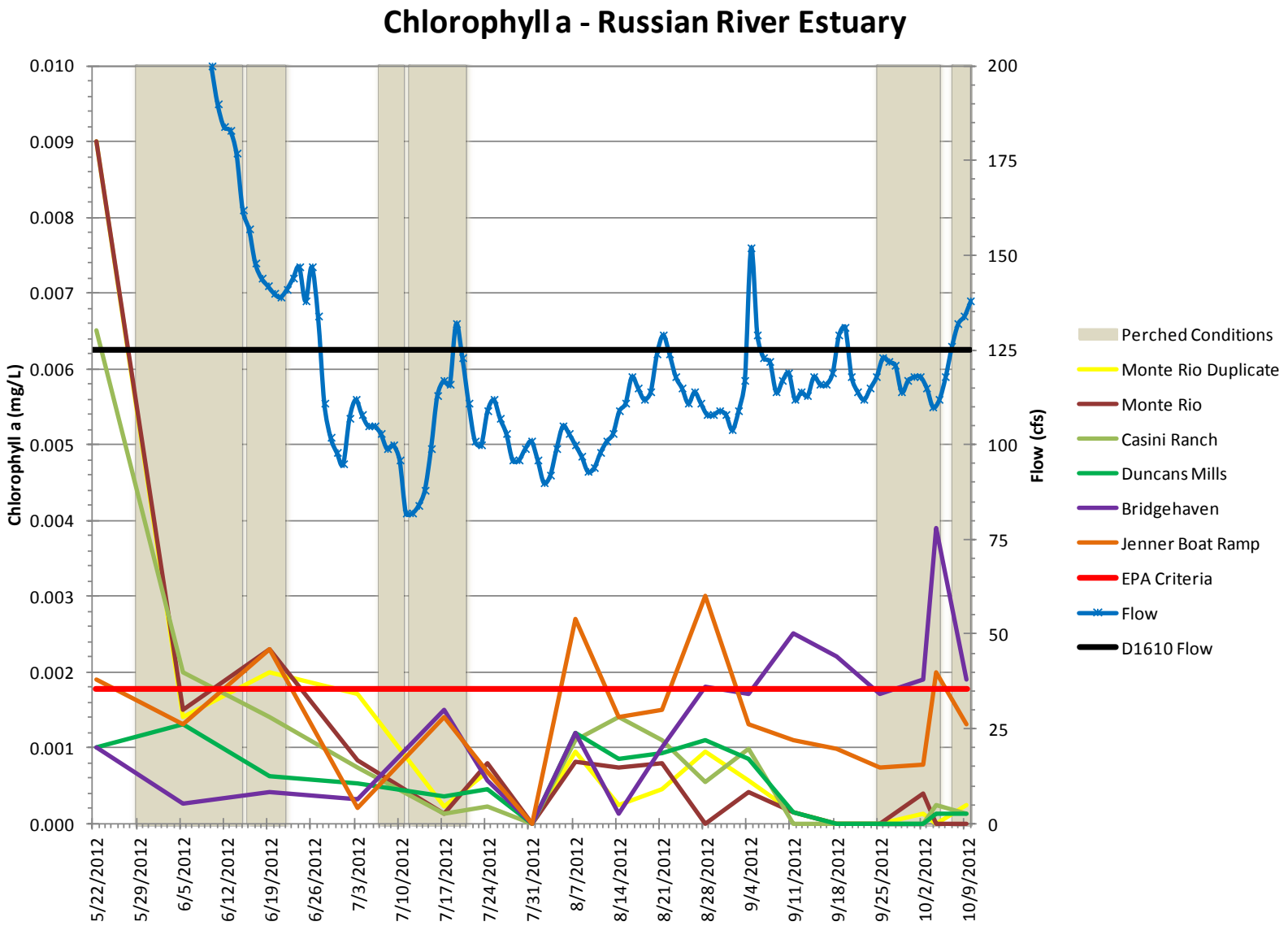
Lower River Total Nitrogen



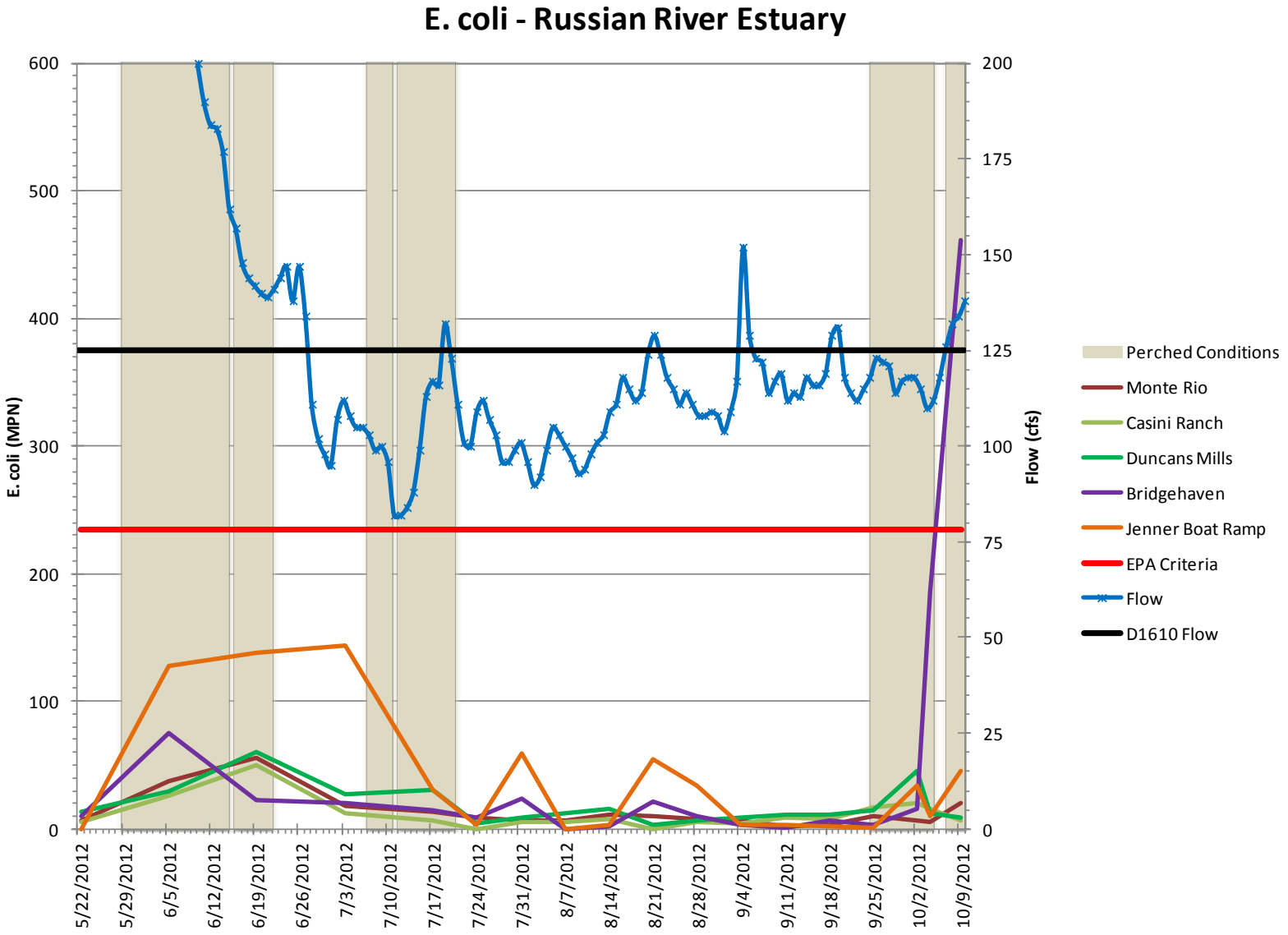
Lower River Total Phosphorus



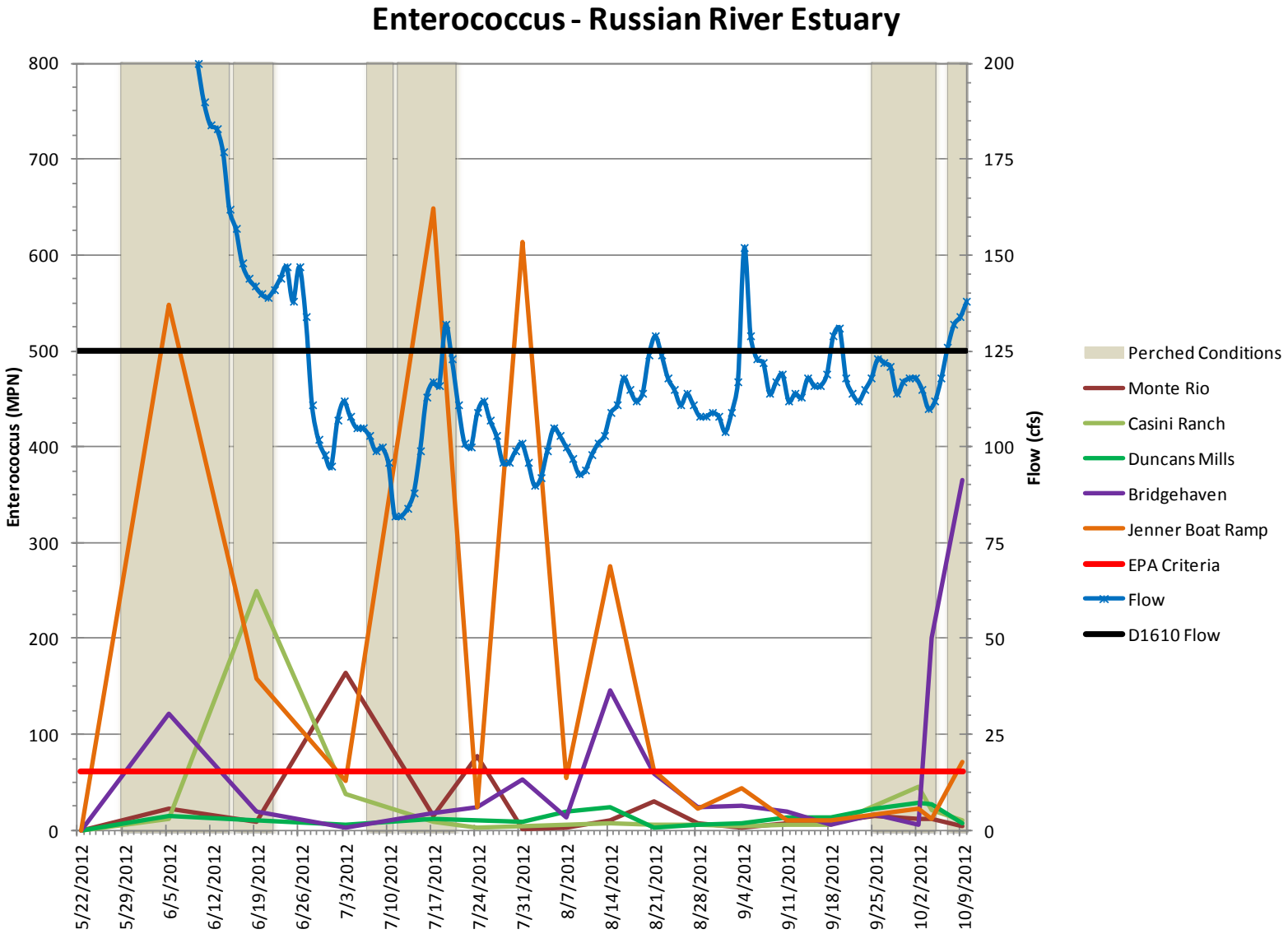
Estuary *Chlorophyll a*



Estuary *E. coli*



Estuary *Enterococcus*



2013 Monitoring Effort

- Continue long-term monitoring of all reaches of estuary including Maximum Backwater Area
- Install long-term monitoring station at Brown's Pool and continue to track potential salinity migration upstream of Duncans Mills
- Collect grab samples weekly at the five estuary sites
- Integrate data with results of other Agency, UC Davis Bodega Marine Lab, North Coast RWQCB, and USGS studies

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