

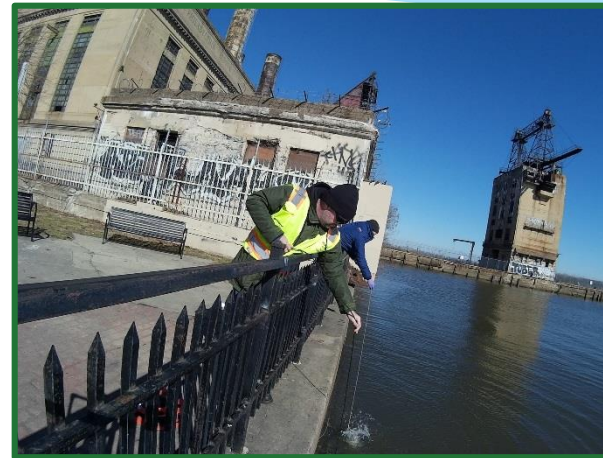
Delaware River Basin Commission

Additional Review of Existing DO Data

Water Quality Advisory Committee

May 14, 2019

John Yagecic, P.E.



Additional Review of Existing DO data

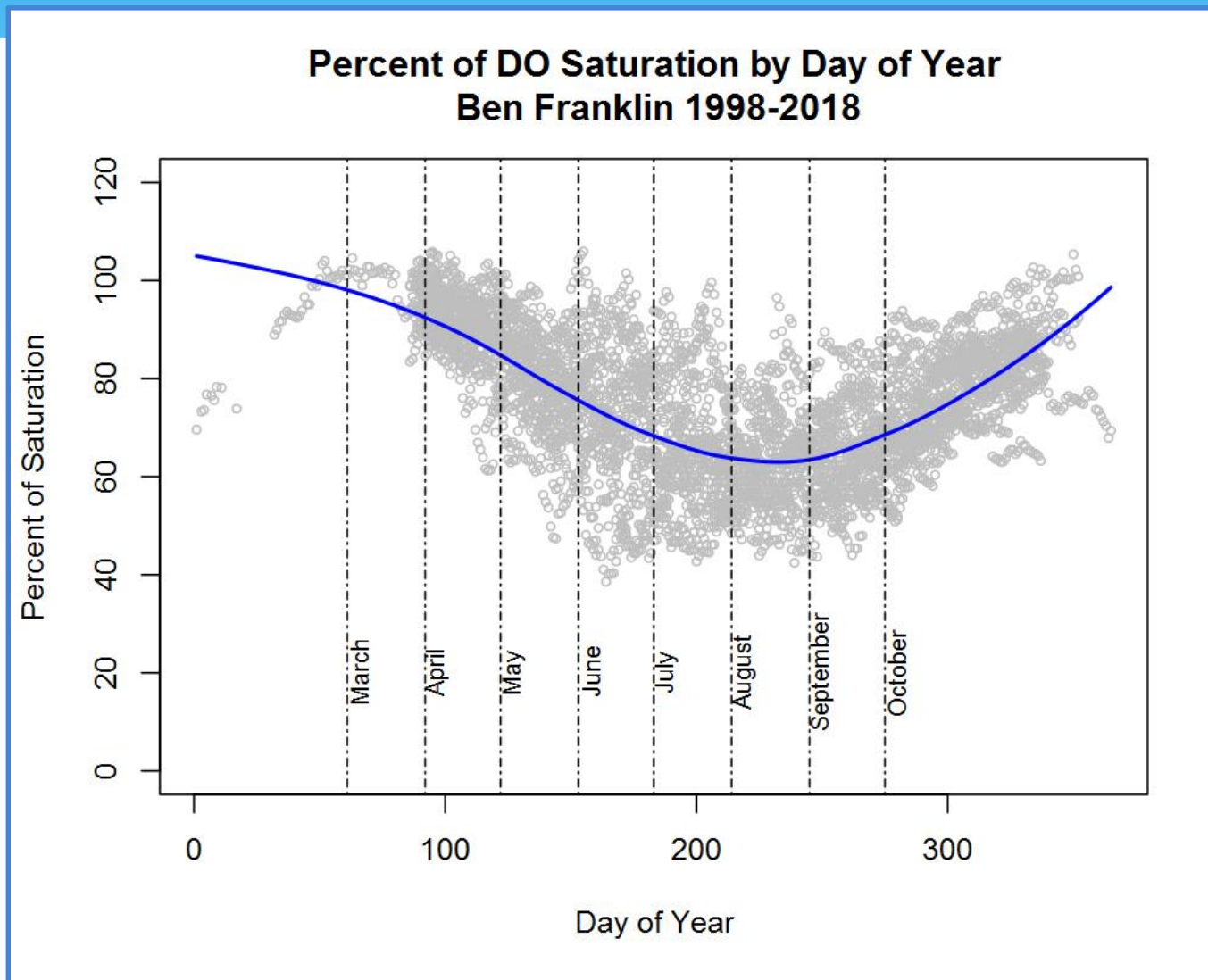
Objective

- * More in depth review of existing DO data at USGS monitors
- * Better understand DO & how close we might be to candidate criteria
 1. % of DO Saturation by Day of year at USGS monitors
 2. Proportion exceedances at candidate criteria
 3. Proportion exceedances by Day of Year
 4. Impact of flow on DO at fixed temperature bands

Caveats

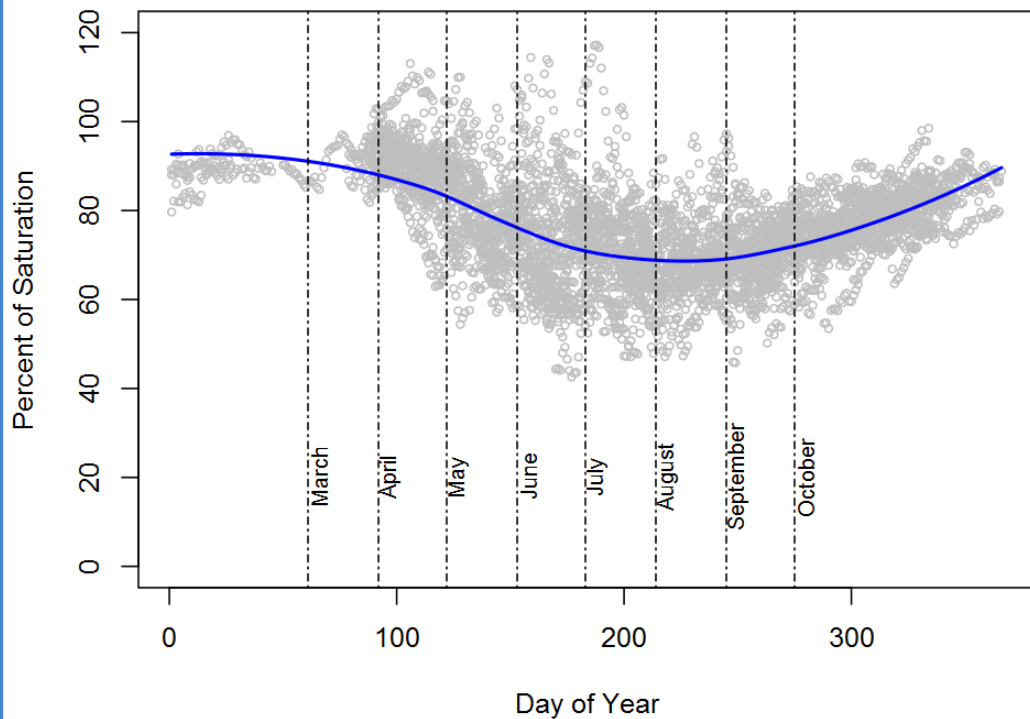
- * Existing WWTP treatment levels
- * Existing conditions (1998-2018 data)
- * Not an indication of what is achievable

Percent of DO Saturation by Day of Year

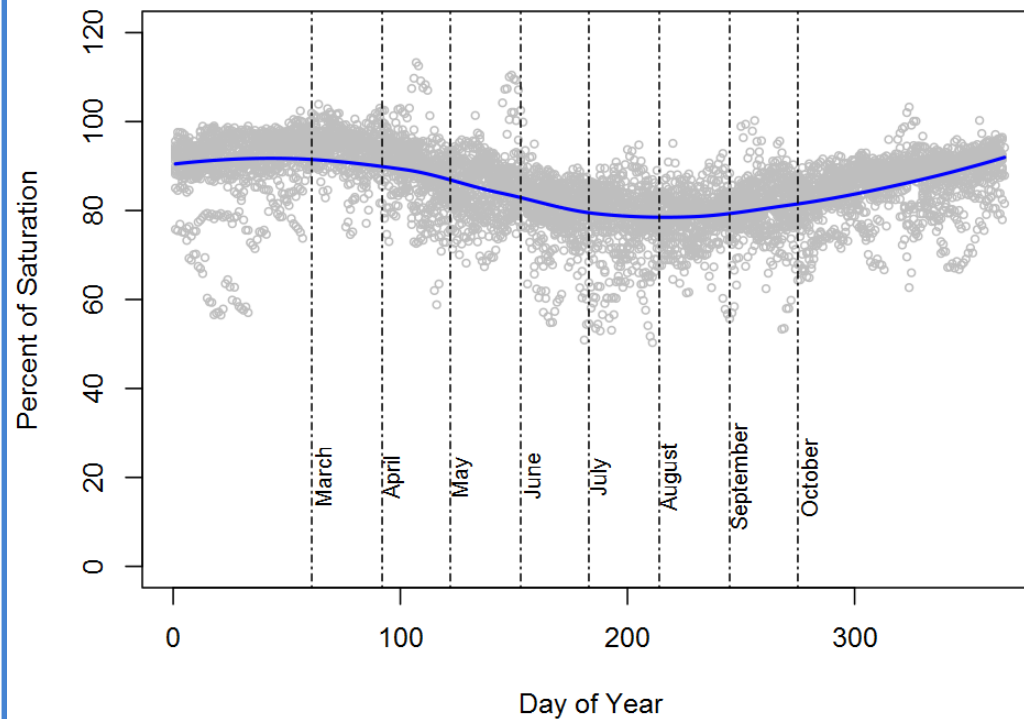


Percent of DO Saturation by Day of Year

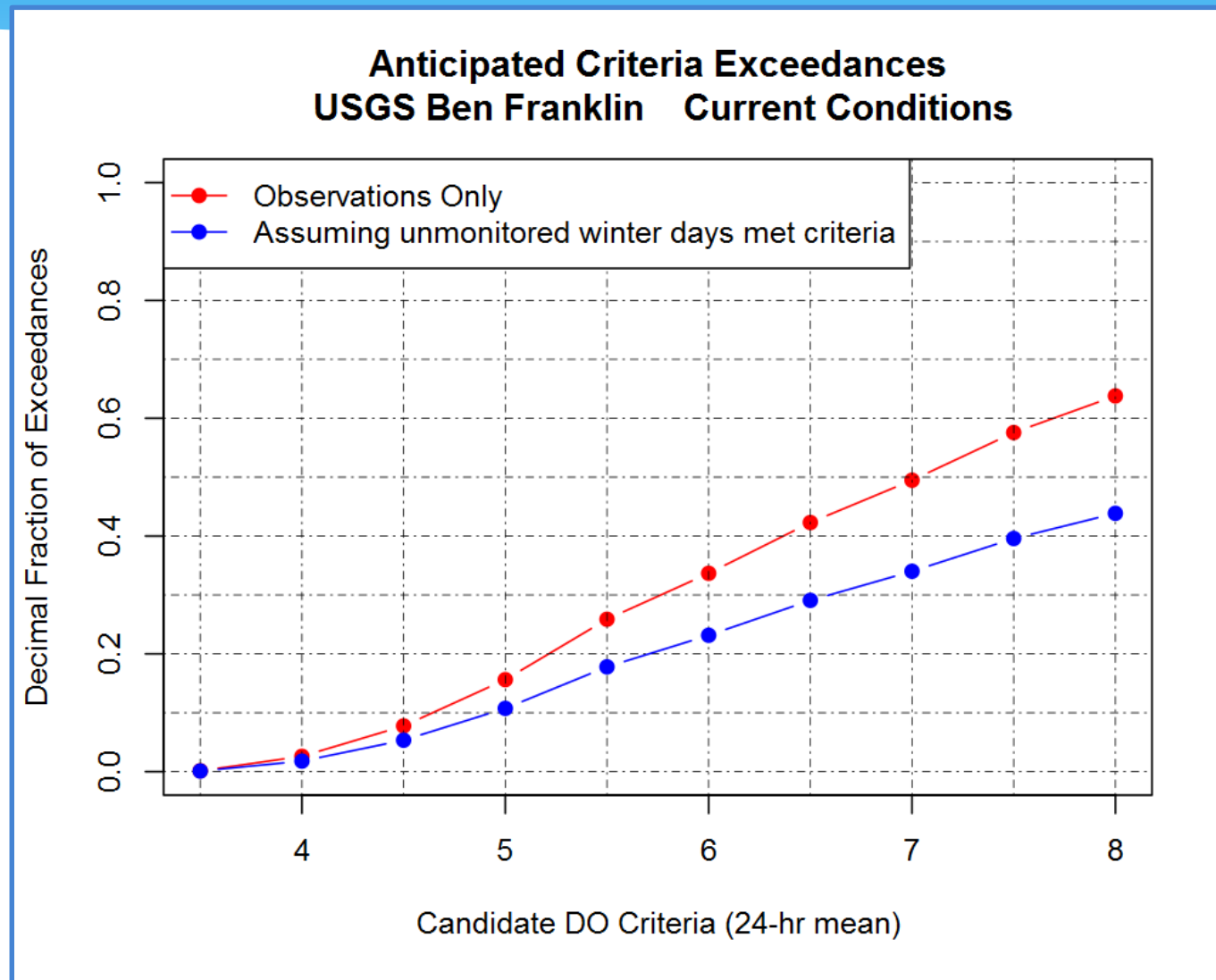
**Percent of DO Saturation by Day of Year
Chester 1998-2018**



**Percent of DO Saturation by Day of Year
Reedy Island 1998-2018**

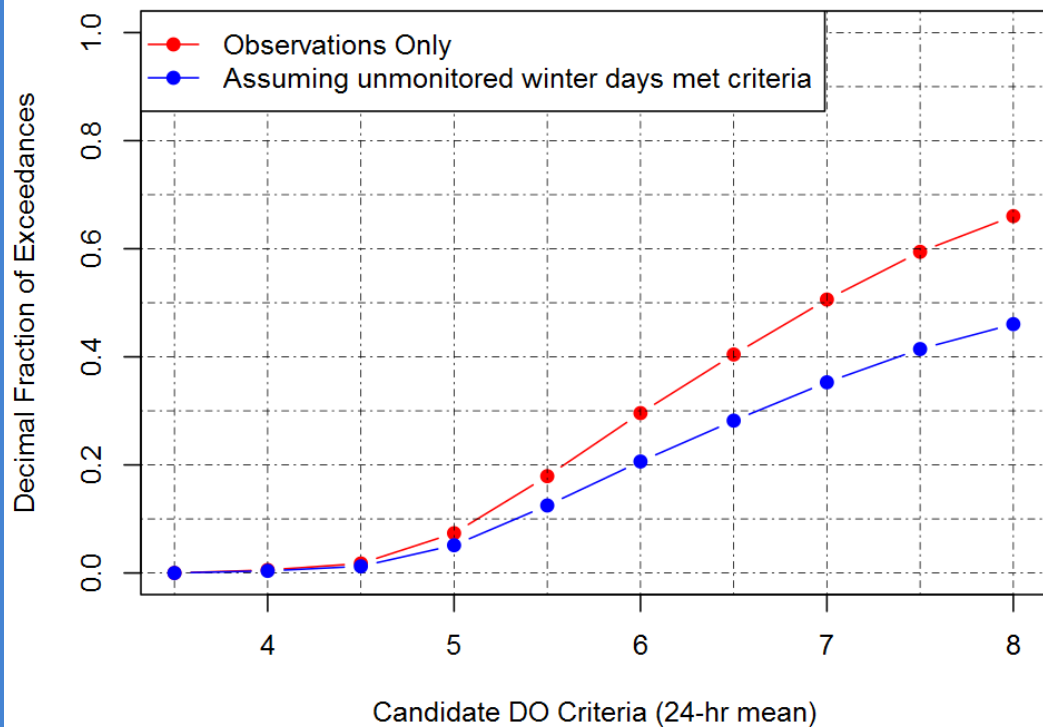


Exceedances per Candidate Criteria

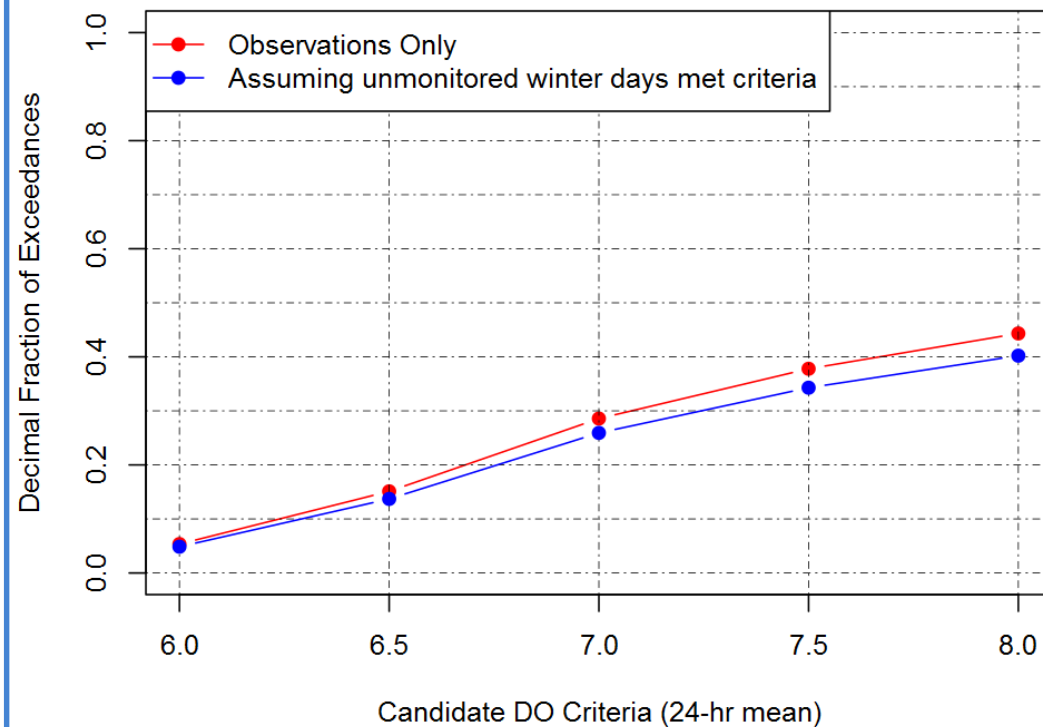


Exceedances per Candidate Criteria

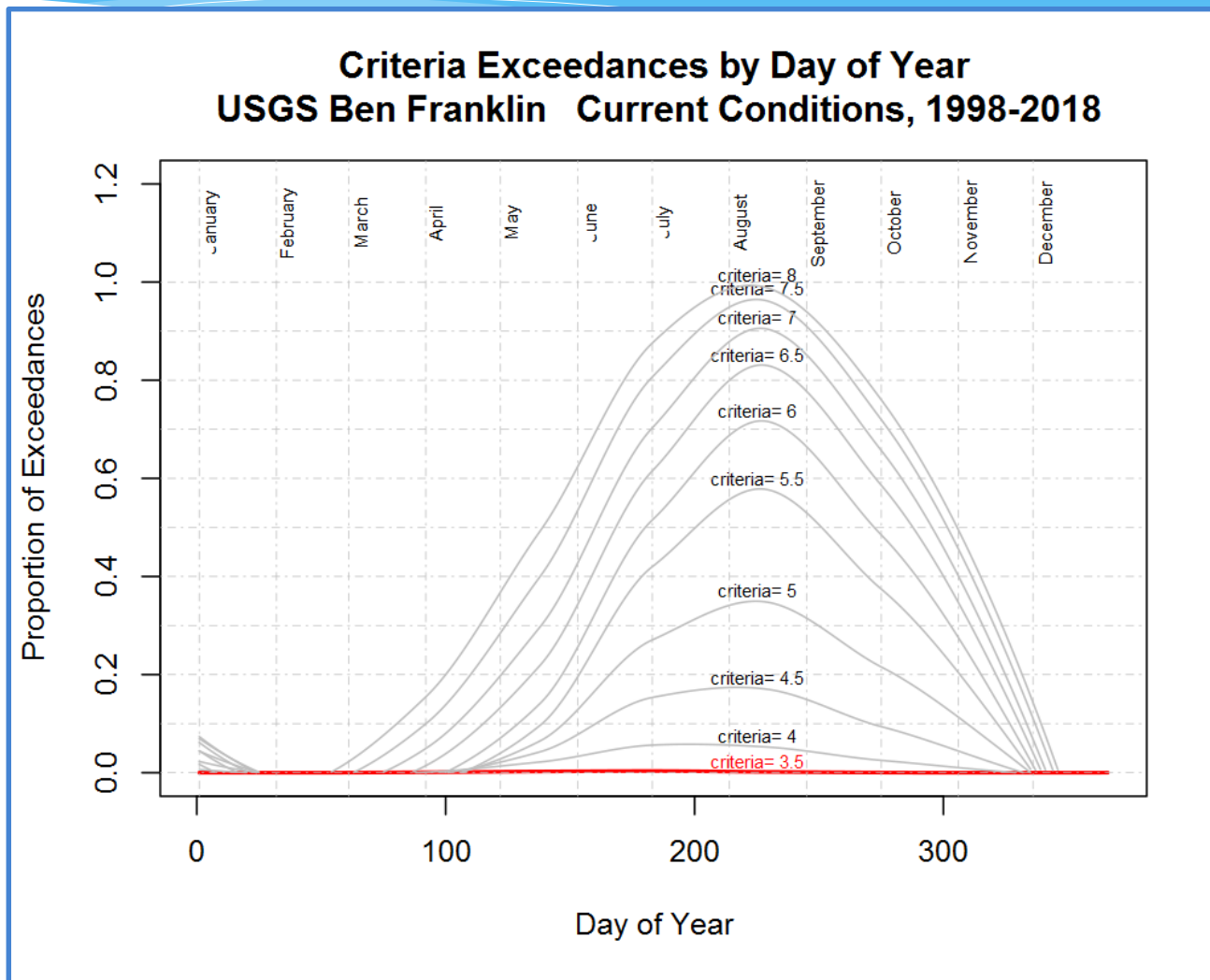
**Anticipated Criteria Exceedances
 USGS Chester Current Conditions**



**Anticipated Criteria Exceedances
 USGS Reedy Island Current Conditions**

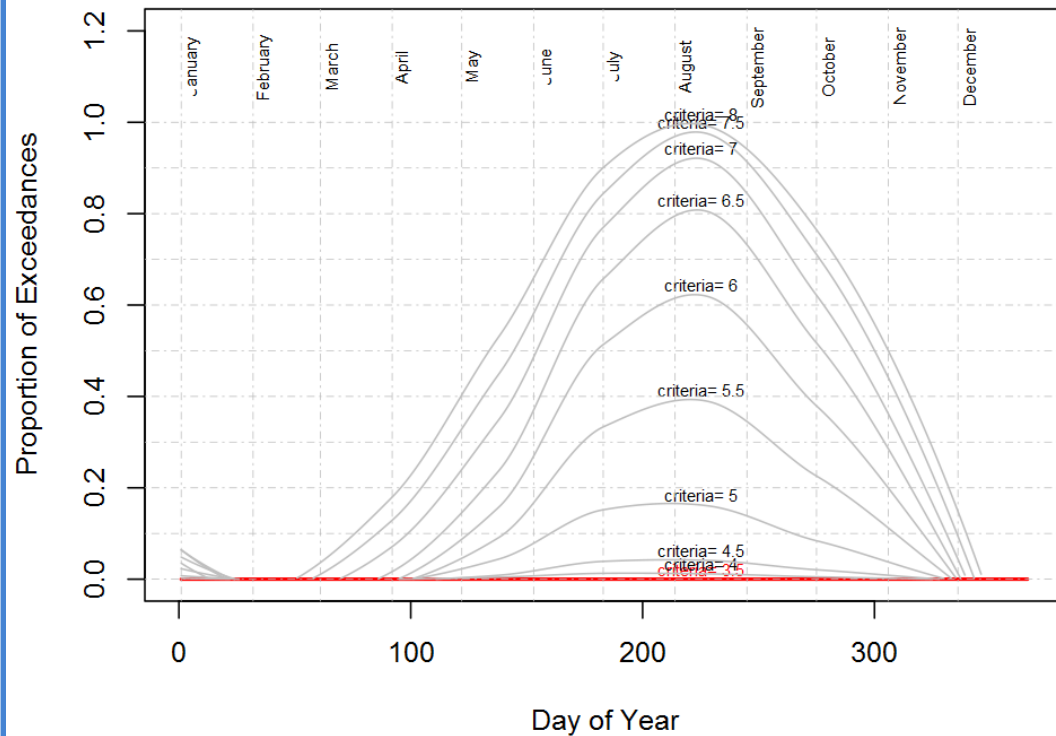


Exceedances by Day of Year for Candidate Criteria

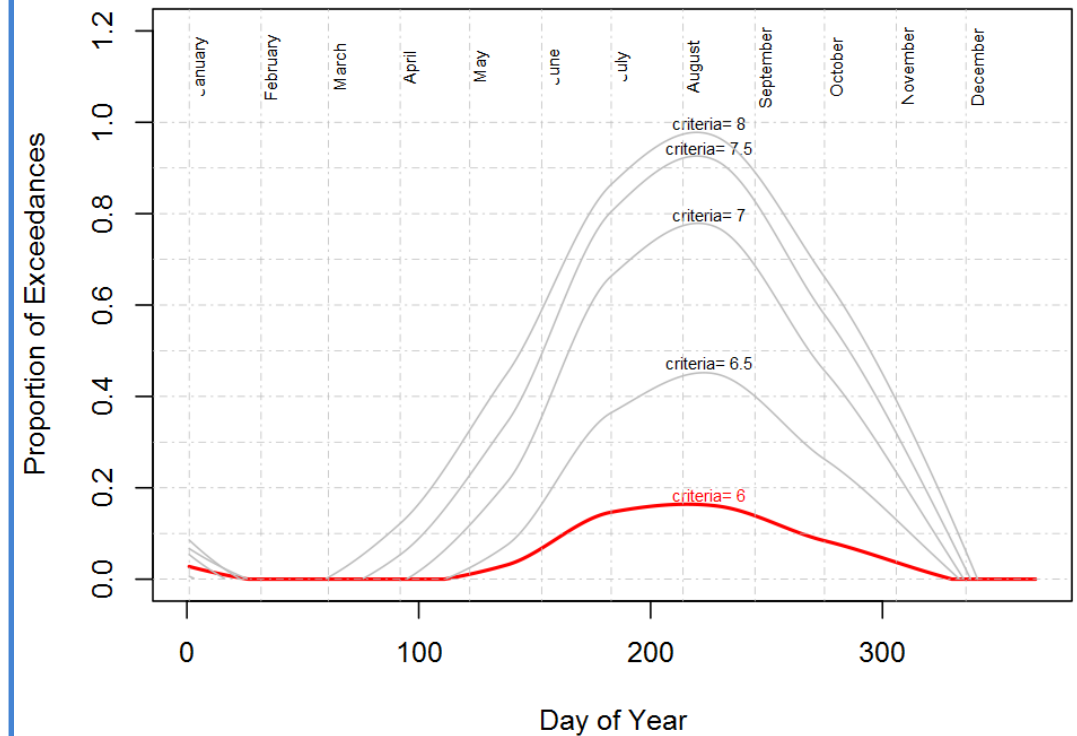


Exceedances by Day of Year for Candidate Criteria

**Criteria Exceedances by Day of Year
USGS Chester Current Conditions, 1998-2018**

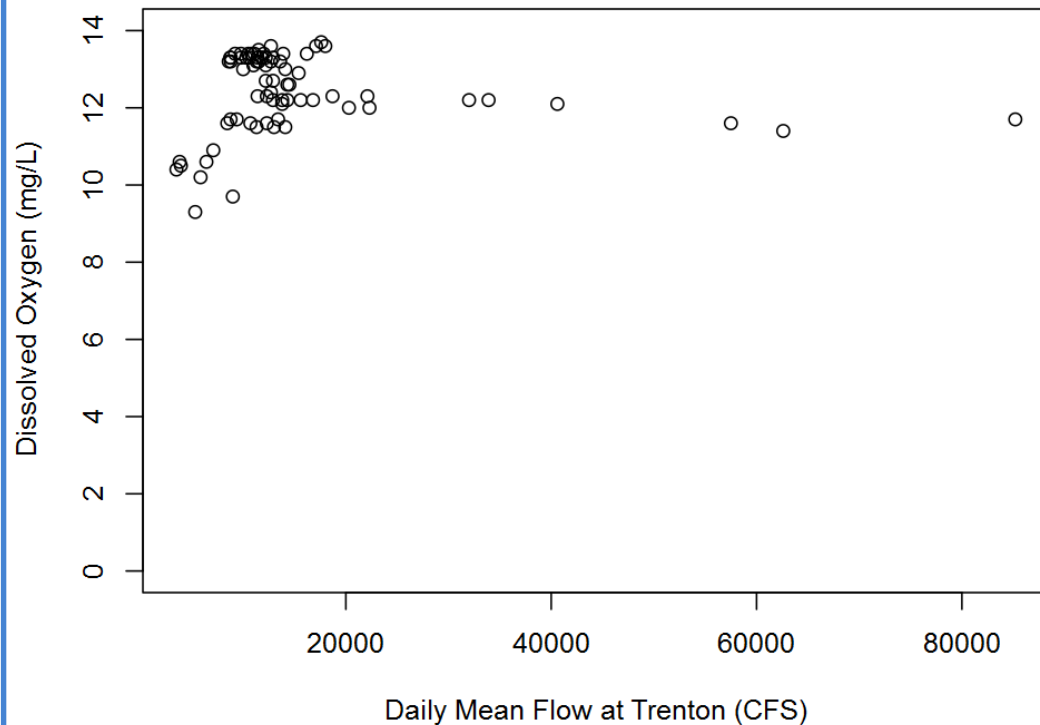


**Criteria Exceedances by Day of Year
USGS Reedy Island Current Conditions, 1998-2018**

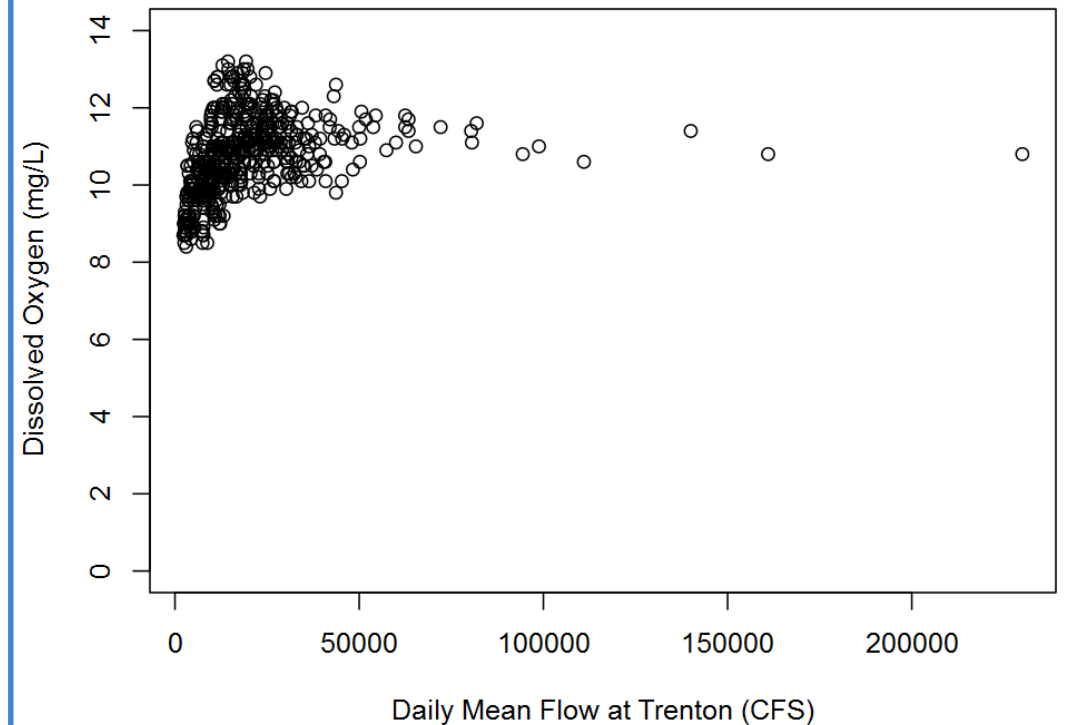


Impact of Flow at Trenton on DO at Ben Franklin by Temperature Band

**Delaware River at USGS Ben Franklin DO versus Flow at Trenton
0 to 5 Degrees C, 1998 through 2018**

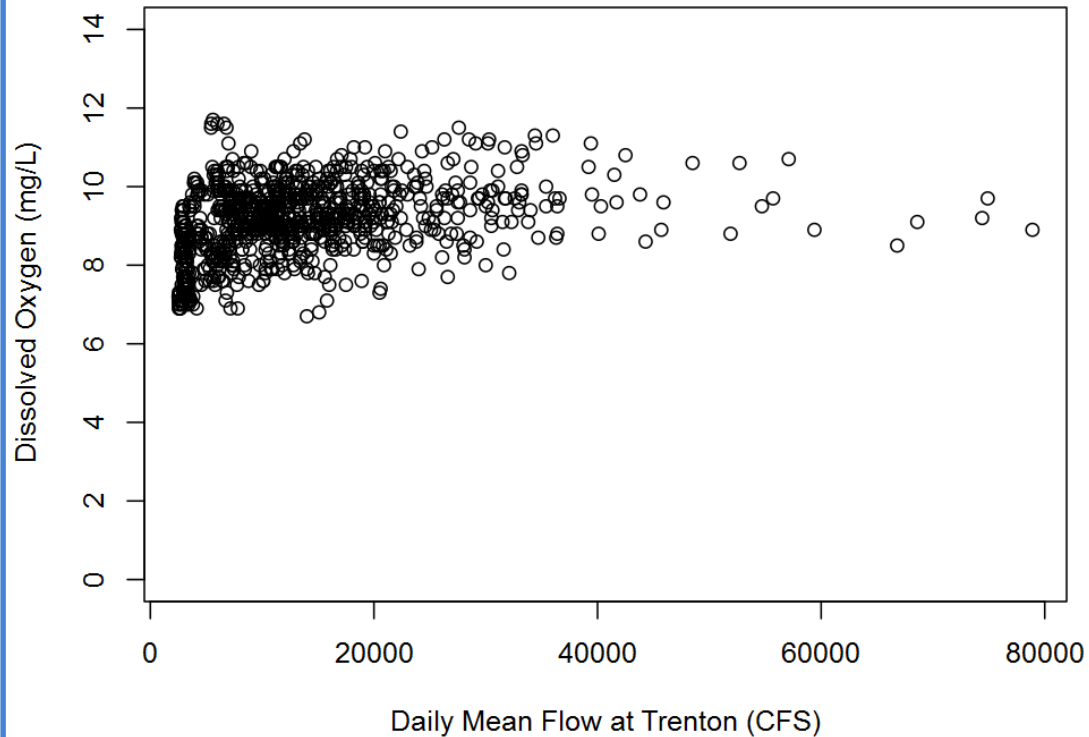


**Delaware River at USGS Ben Franklin DO versus Flow at Trenton
5 to 10 Degrees C, 1998 through 2018**

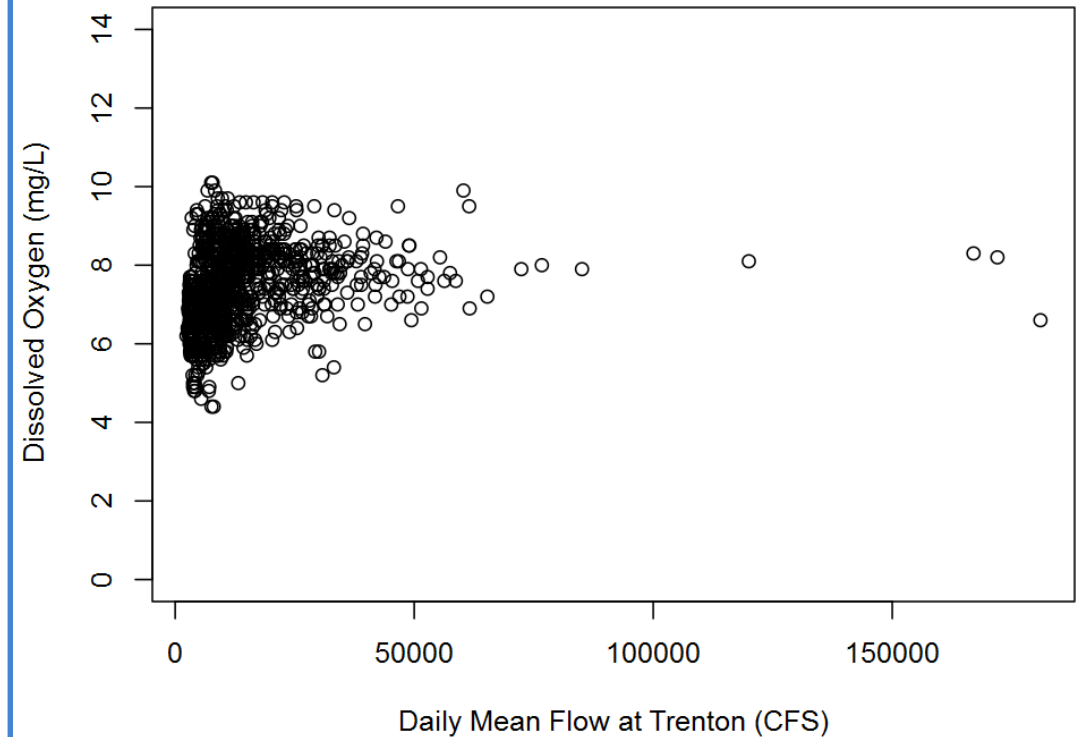


Impact of Flow at Trenton on DO at Ben Franklin by Temperature Band (continued)

Delaware River at USGS Ben Franklin DO versus Flow at Trenton
10 to 15 Degrees C, 1998 through 2018

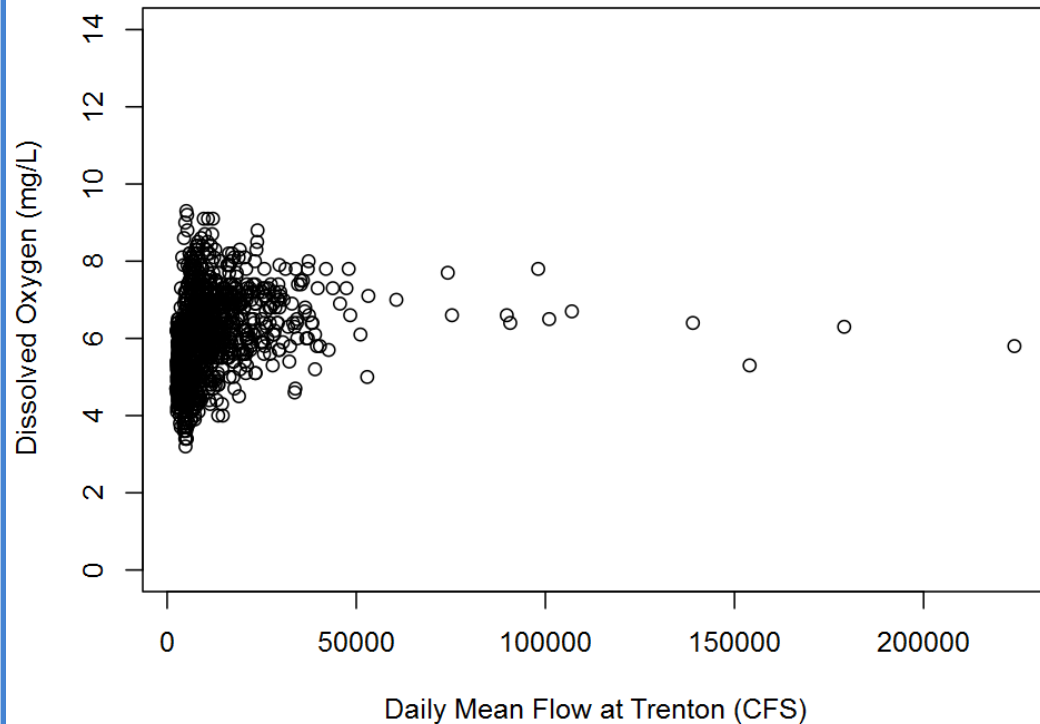


Delaware River at USGS Ben Franklin DO versus Flow at Trenton
15 to 20 Degrees C, 1998 through 2018

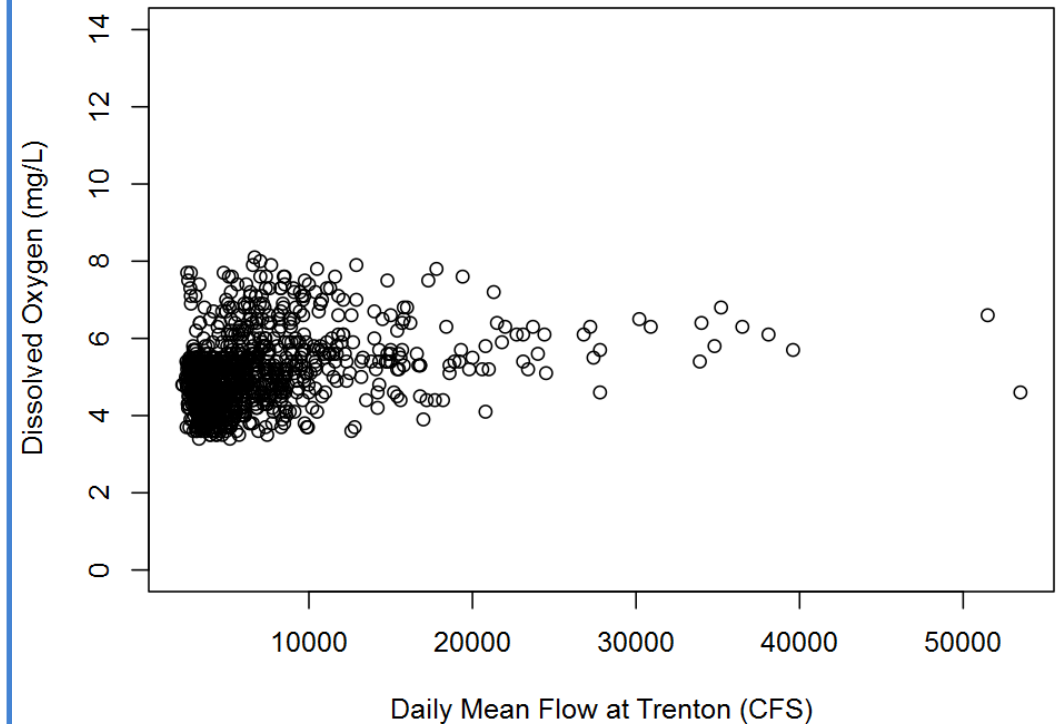


Impact of Flow at Trenton on DO at Ben Franklin by Temperature Band (continued)

**Delaware River at USGS Ben Franklin DO versus Flow at Trenton
20 to 25 Degrees C, 1998 through 2018**



**Delaware River at USGS Ben Franklin DO versus Flow at Trenton
25 to 30 Degrees C, 1998 through 2018**



Questions & Discussion?

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