

UNRBA
Monitoring Program
PFC Meeting
October 2016



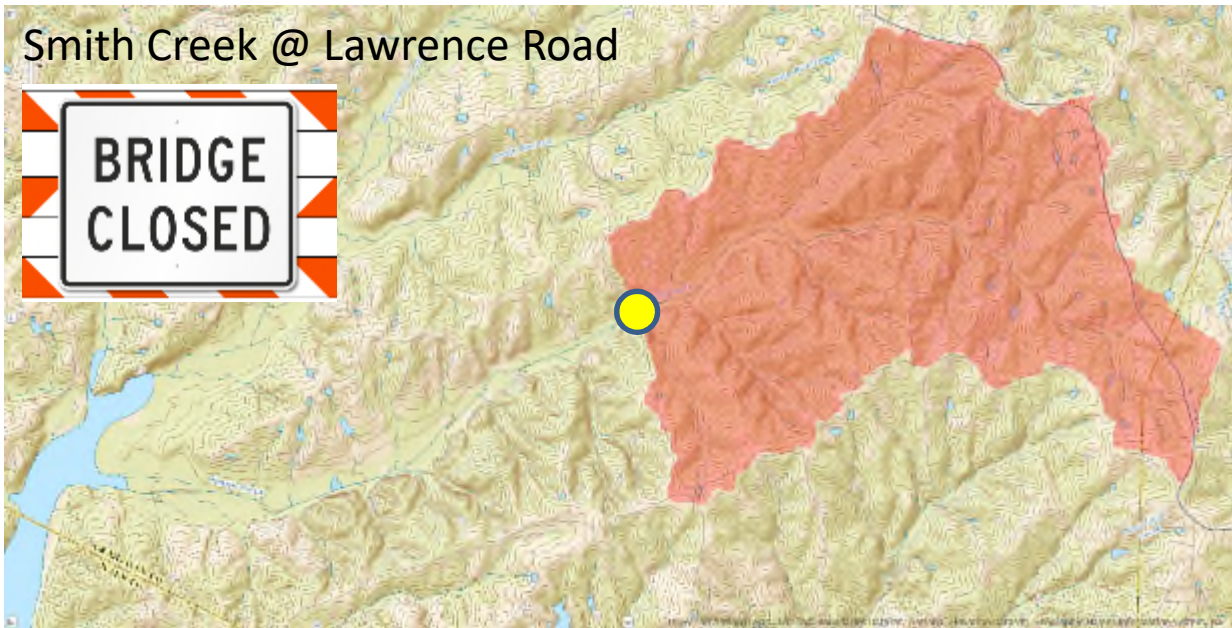


Routine Monitoring – Data generation status

Date	Sample Collection	Sample Analysis	Data Review	Posted to Database
Aug-Dec 2014	✓	✓	✓	✓
Jan-Dec 2015	✓	✓	✓	✓
Jan-2016	✓	✓	✓	✓
Feb-2016	✓	✓	✓	✓
Mar-2016	✓	✓	✓	✓
Apr-2016	✓	✓	✓	✓
May-2016	✓	✓	✓	✓
Jun-2016	✓	✓	✓	✓
Jul-2016	✓	✓	✓	✓
Aug-2016	✓	✓		
Sep-2016	✓	✓		
Oct-2016	✓			
Nov-2016				
Dec-2016				

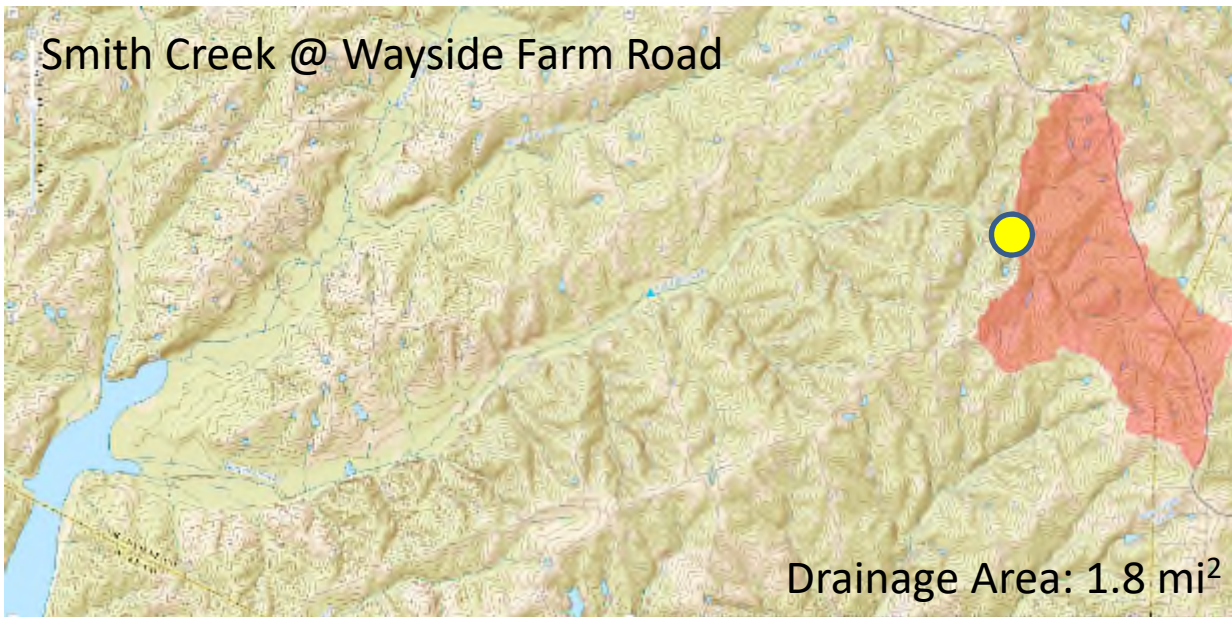


Smith Creek @ Lawrence Road



- Lake loading site on Smith Creek, draining to Beaverdam Impoundment.
- Bridge being replaced
- March completion date

Smith Creek @ Wayside Farm Road



- Only other access point in the drainage area.
- Represents 1.8 mi²
- Less than 0.25% of Falls drainage area.

Recommend not moving sampling location and simply waiting for completion of bridge replacement in March.

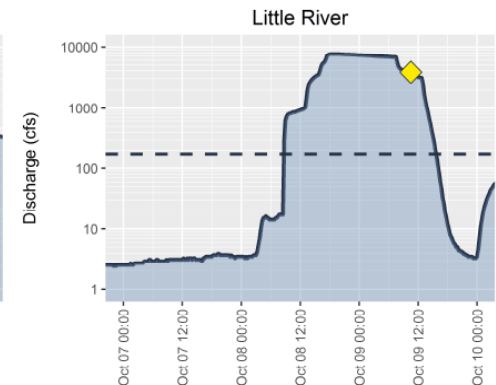
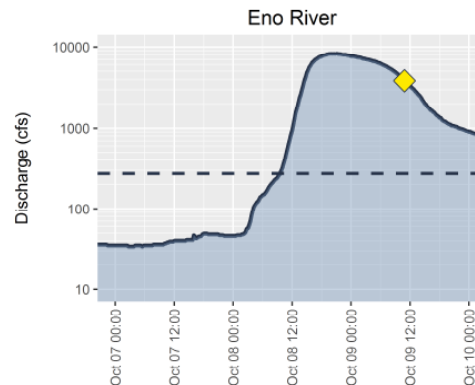
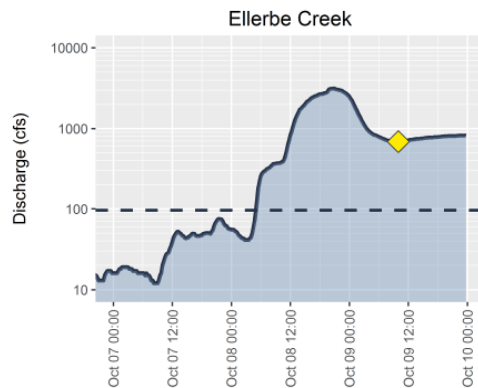
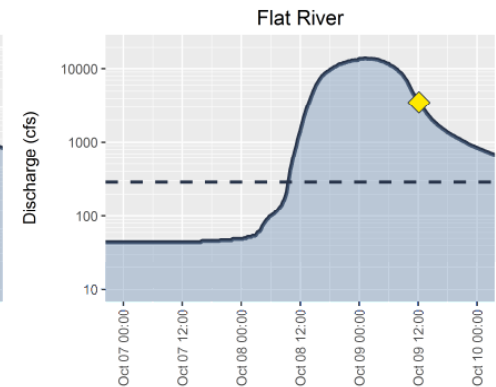
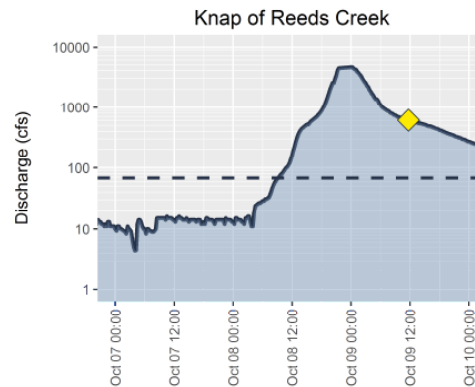


Special Studies Updates



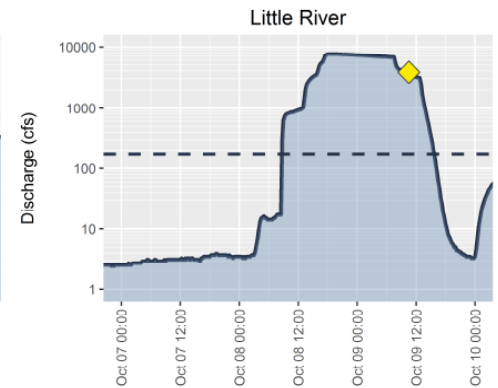
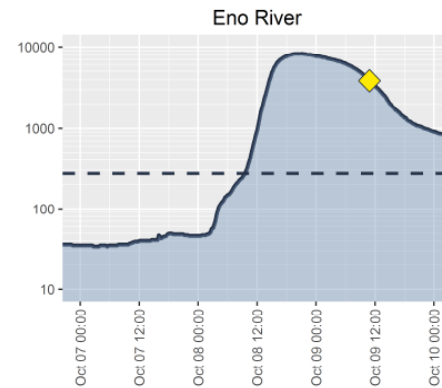
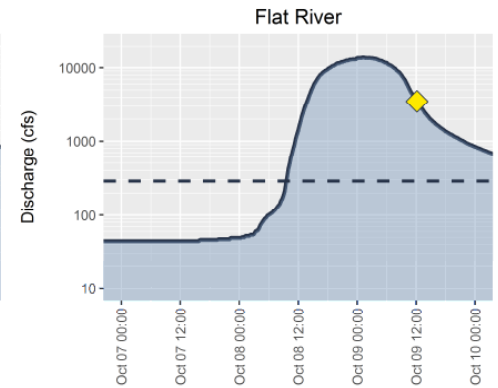
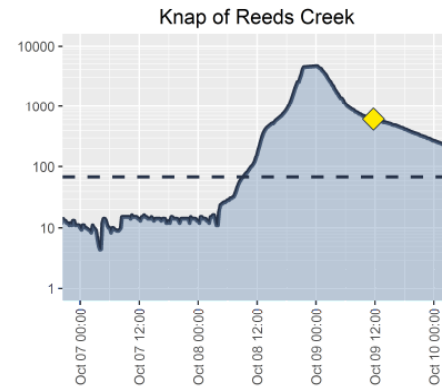
High Flow Sampling

- **September 19:** “big 5”
- **October 9** (Hurricane Matthew): “big 5” plus Little Lick, Lick, Upper and Lower Barton, Honeycutt.





High Flow Sampling



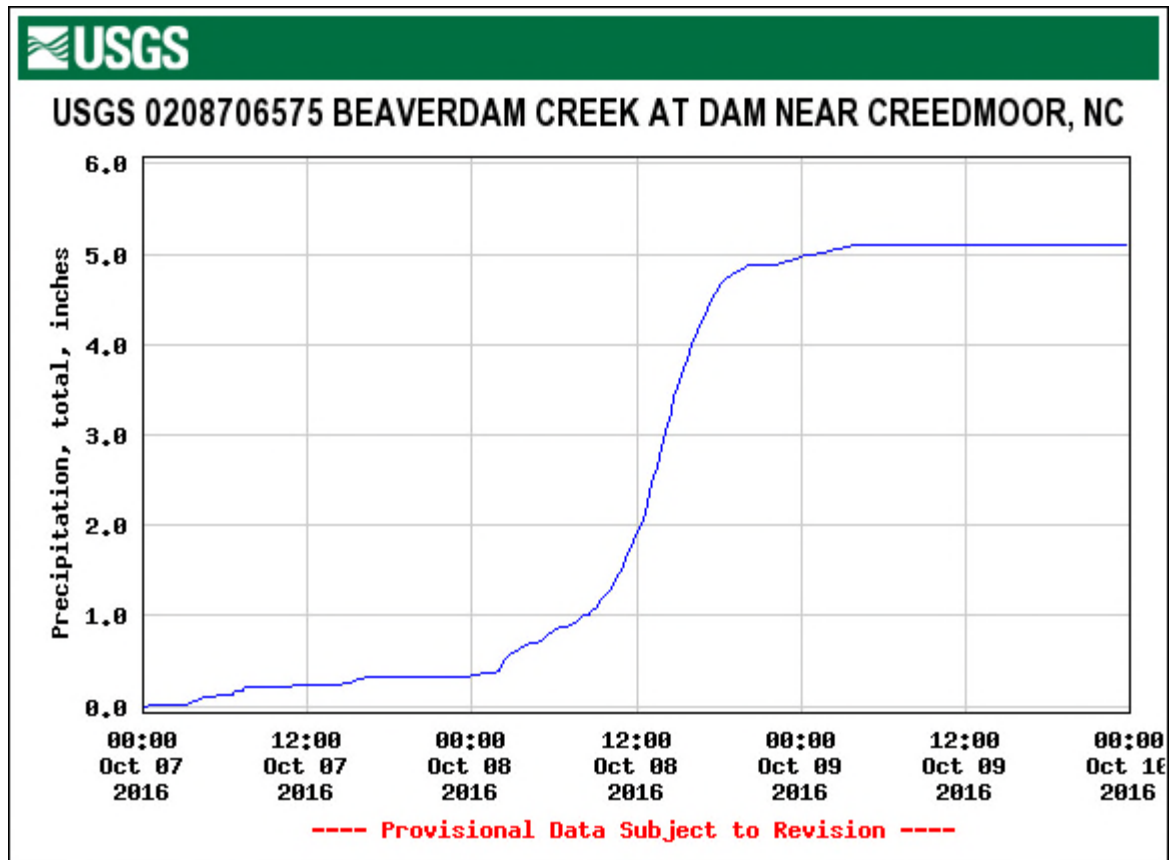


Constriction Point Study



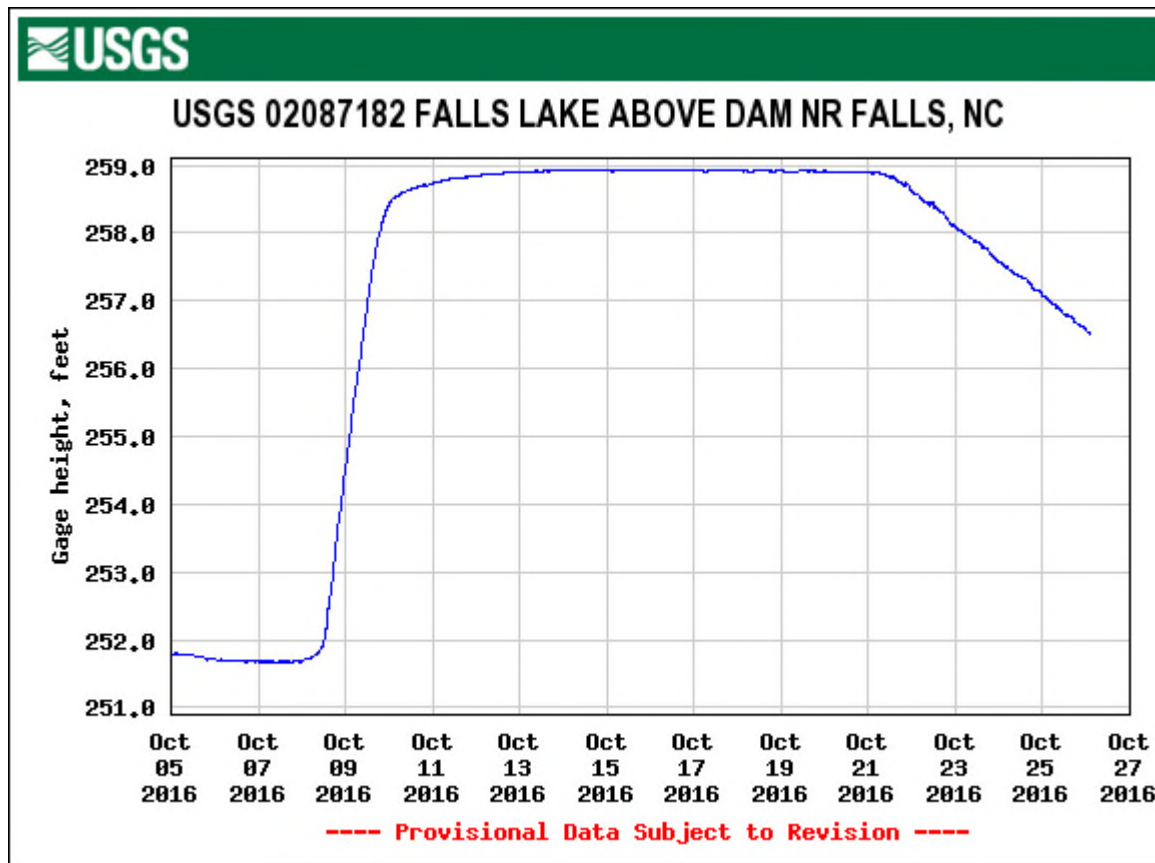


Constriction Point Study





Constriction Point Study



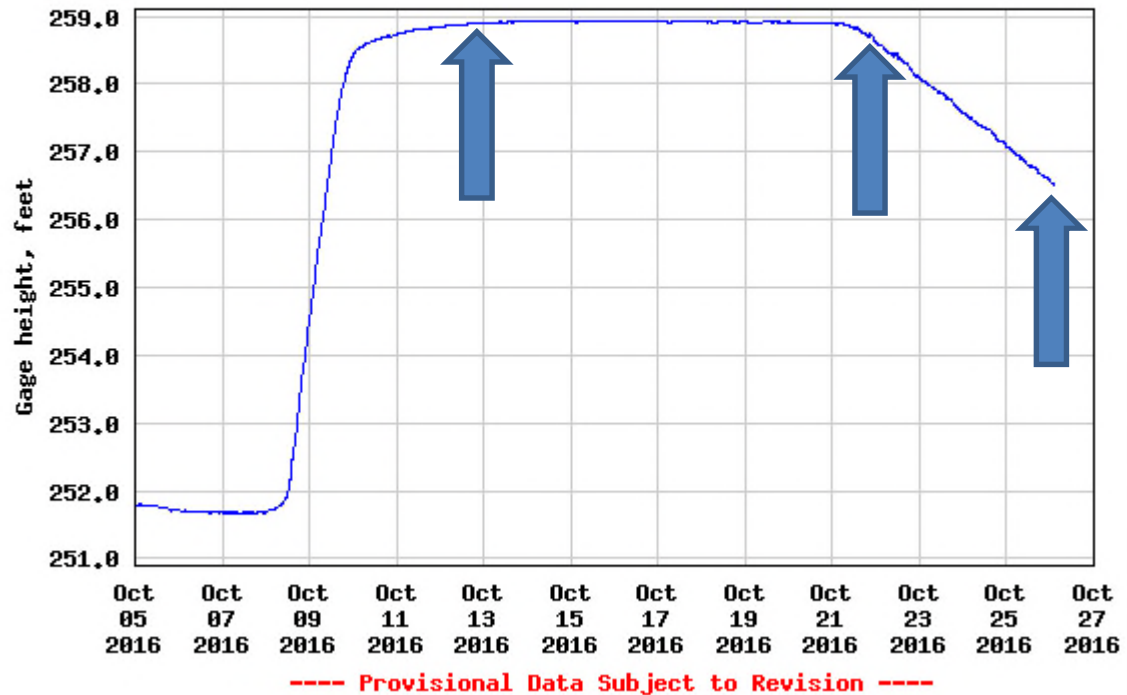






Falls Lake
State
Recreation
Area

USGS 02087182 FALLS LAKE ABOVE DAM NR FALLS, NC



- Discharge through constriction
- Chlorophyll *a*
- TSS & VSS
- Ammonia, NO_x, TKN, TP
- TOC
- Temperature & DO profiles

Constriction Point Study

- Final constriction study, funded in FY2016
- First constriction study was reported in FY2016 Annual Report
- Results of this study will be presented in the FY2017 Annual Report
- Data will be used for model calibration and validation





UNRBA Monitoring Program Interim Report

UNRBA Monitoring FY 2017

October 2016

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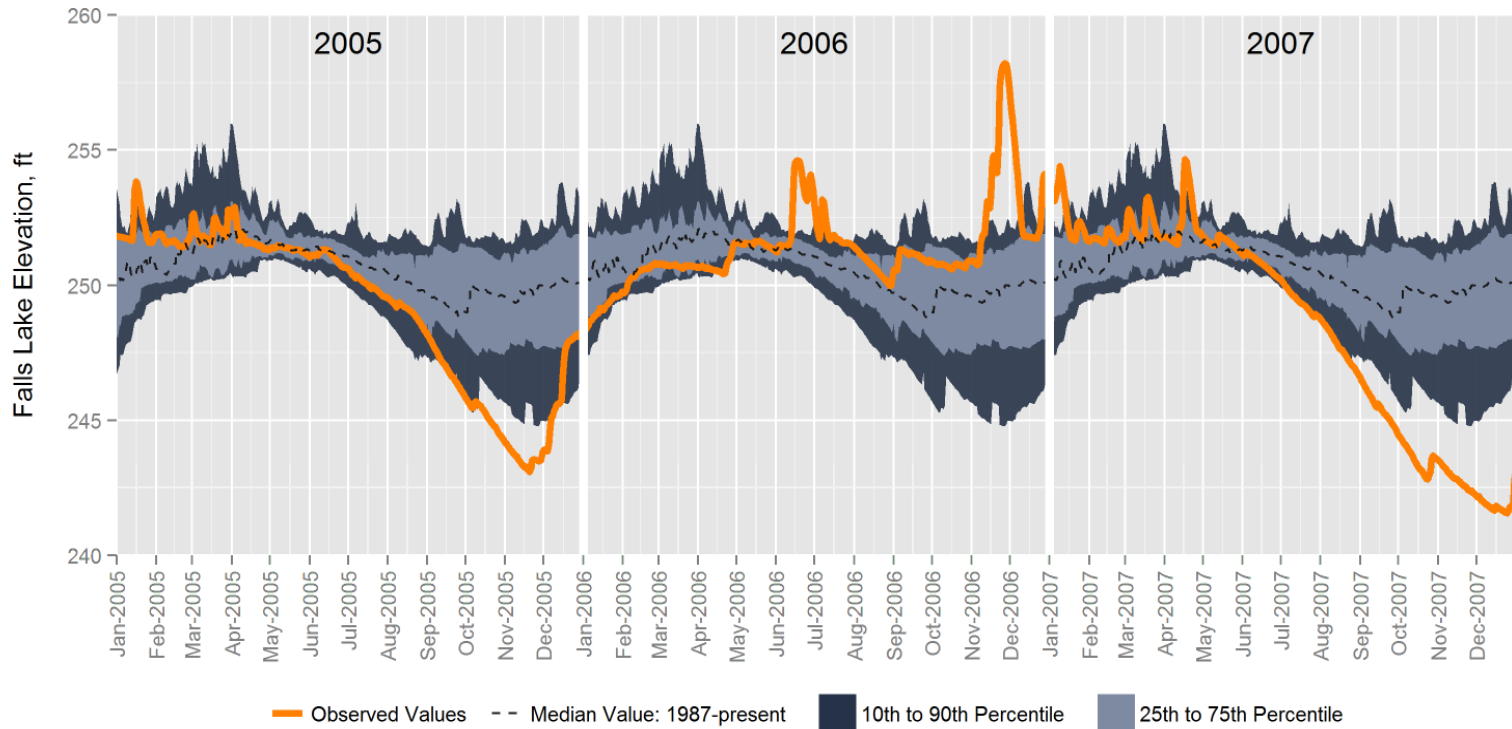


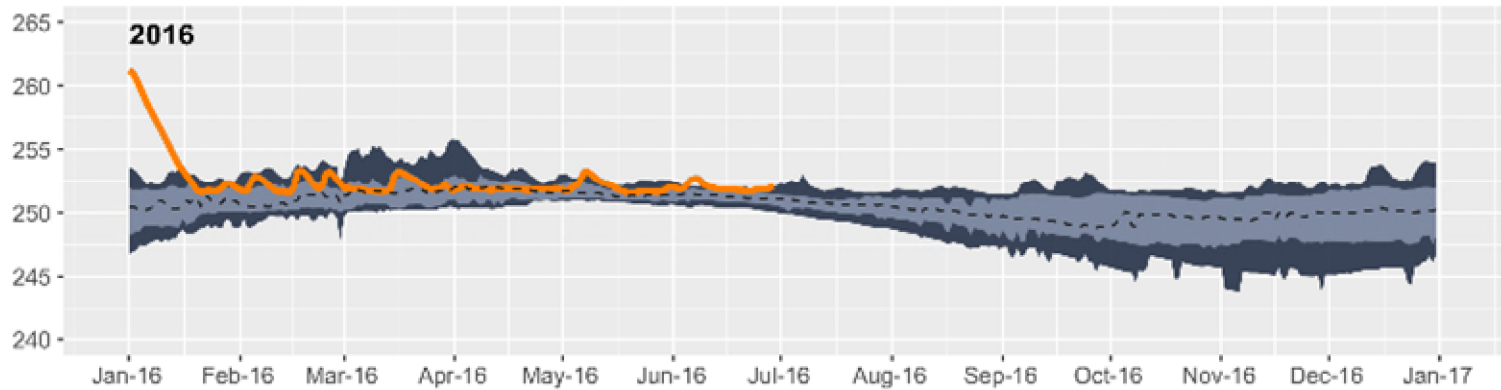
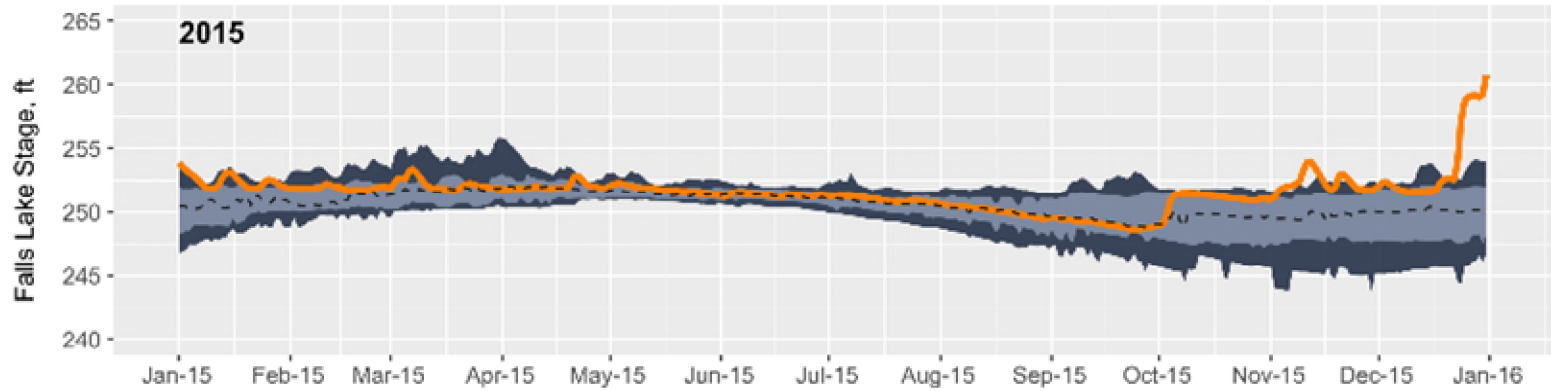
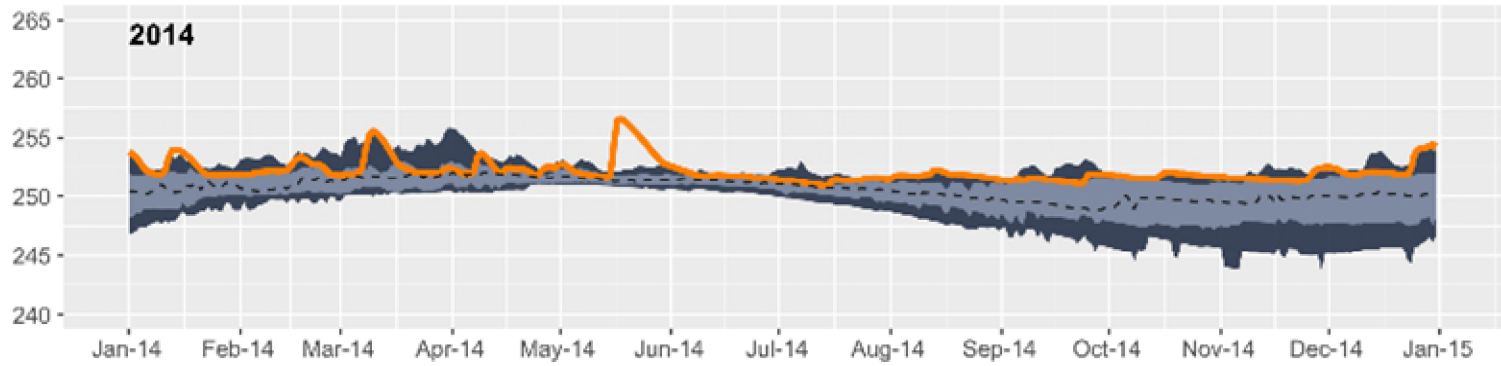
Interim Report

- Emailed to PFC last Thursday
- Updates the previous annual report with data collected between January and June 2016
- Focuses on data collected by the UNRBA; data from key external sources are available on an annual basis only.



1. Hydrologic conditions.





— Stage
 25th to 75th Percentile
 10th to 90th Percentile
 - - - Median Stage Values



2. State Standard Exceedances (January – June 2016)

No tributary **Chlorophyll *a*** observations above 40 ug/L were seen in this period. (Seven sites previously had a combined 22 observations above 40 ug/L, for 4% of all tributary samples exceeding the standard).

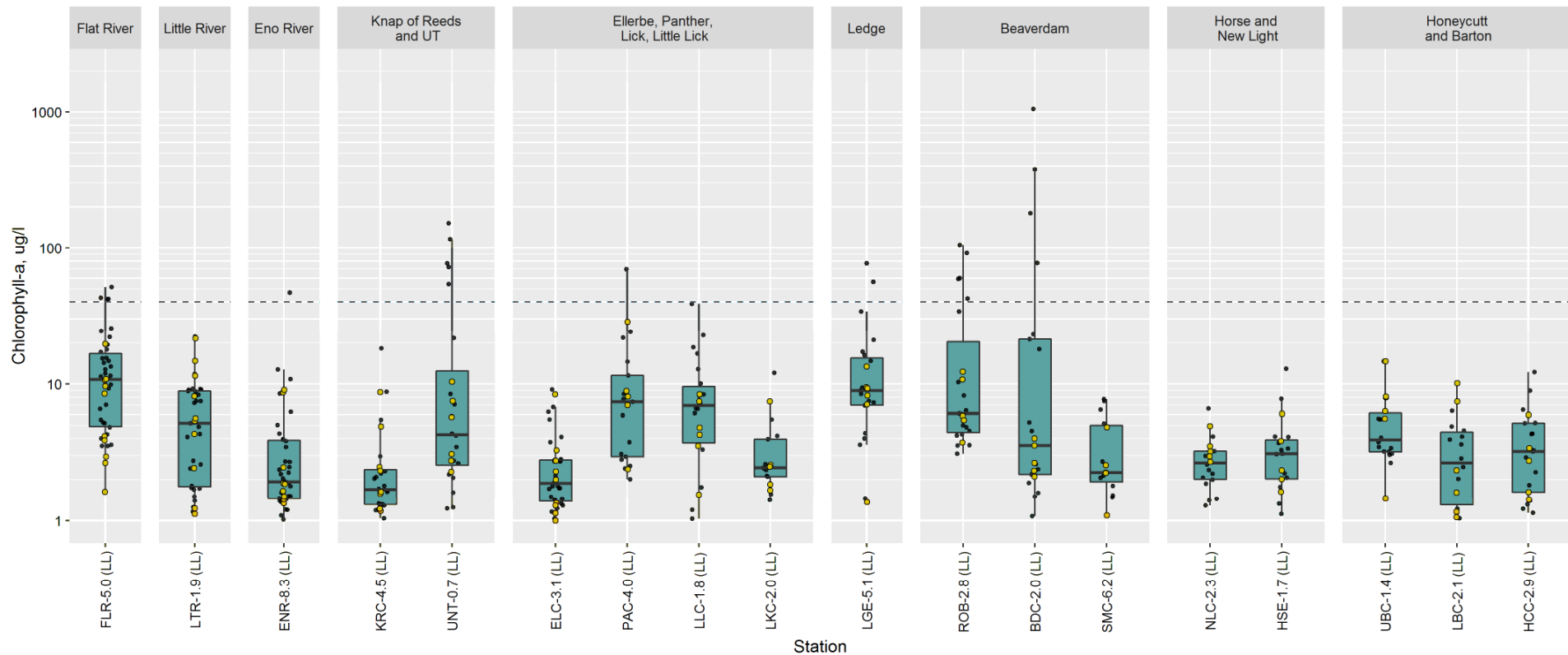
Only one pH value was outside of the acceptable range of 6 – 9.

Four sites have one or two observations each of DO below 4 mg/L and these values occur at times of low flow conditions.

For more information, the report summarizes exceedances over the full monitoring period.



3. Concentrations generally fall within ranges set by previous samples. Data are shown in the same way as the previous report, but with new data highlighted.



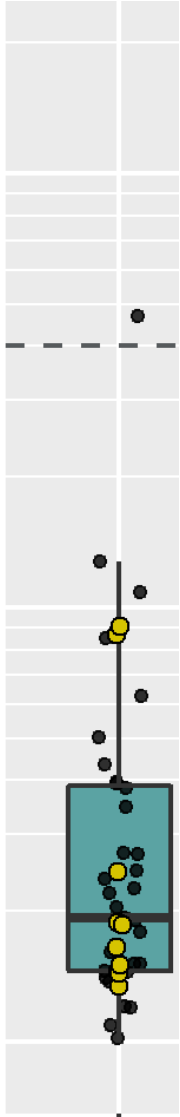
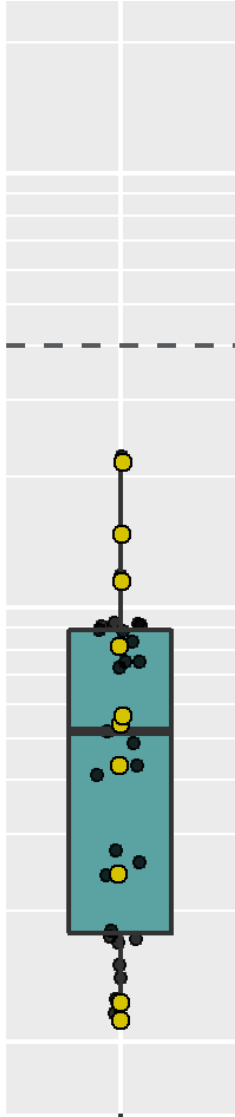
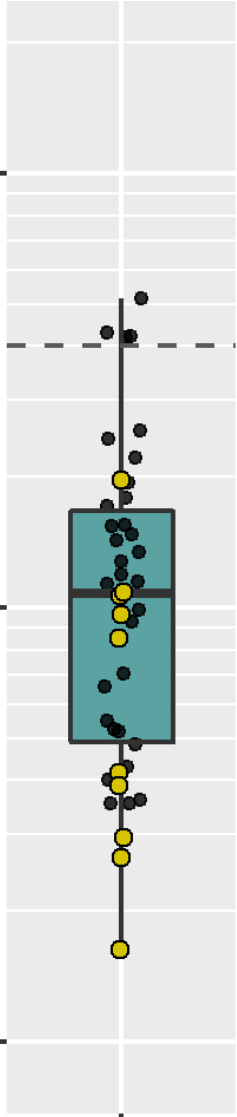
Chlorophyll-a, ug/l

100
10
1

FLR-5.0 (LL)

LTR-1.9 (LL)

ENR-8.3 (LL)





Interim Report – Summary & Recommendations

- The UNRBA-generated database includes over 20,000 unique data entries and is publically available from the URNBA website.
- No mid-year changes to the monitoring program are recommended at this time.
- The PFC may wish to consider if it would be beneficial to streamline or eliminate the written mid-year report in future years to re-allocate resources to other needs. Reporting could be presented to the PFC during regular meetings.





Sediment study update

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