UNRBA Monitoring Program

PFC Meeting

November 4, 2014

August 6, 2014

Update on the Monitoring Program

Unrba

Cardno ENTRIX
Shaping the Future

Monitoring Program Updates

- Lake Monitoring Update and Cost Revision
- Jurisdictional and Lake Loading Monitoring Program Updates
  - Monitoring Station Adjustments and Conditions
  - Stagnant Flow Discussion
  - Proposed changes to monitoring procedures
- Special Studies for FY 2015
  - Review of list of options for additional studies in FY 2015
  - Discuss recommended studies Table (handout)

Unrba

Cardno ENTRIX
Shaping the Future

Falls Lake Monitoring Update

- DWR sampled Falls Lake on October 28th and collected samples for the UNRBA requested parameters and at the new location near the mouth of Ledge Creek
- Environment 1 provided sample bottles, chain of custody forms, and coolers for the SUVA and color samples
- Budget Update:
  - Contract noted that Lake monitoring costs ranged from $36,000 to $104,000 depending on how much data collection was taken on by DWR
  - Costs revised to be $23,175 reflecting DWR's agreement to collect most parameters and new sampling location
    - Fee includes Environmental 1 analyses of SUVA and color for 10 months at 12 lake locations, providing labeled sample bottles, COC forms, coolers, and sample pick up; Cardno review of data and inclusion in UNRBA database and summary of DWR and Env1 lake data in annual report

Unrba

Cardno ENTRIX
Shaping the Future

Watershed Monitoring Program Update

- All Jurisdictional stations were monitored in October
  - Worked through site access issues, thank you DOT and Mayor of Stem!
  - Intermittent conditions at some locations
  - Adjusted the location of two stations (Camp Creek and Horse Creek)
- All Lake Loading stations were monitored in October
- No visible flow at a number of lake loading stations in September and October (no samples were collected at locations where no flow was observed)
  - Conducted field visits to look for alternative monitoring locations
  - Reviewed lake level, rainfall, and reservoir release data
  - Discuss options: additional data collection needed?
- Conducted field audit of Environment 1

Unrba

Cardno ENTRIX
Shaping the Future

No Visible Flow – Beaverdam at Horseshoe Rd.

Unrba

Cardno ENTRIX
Shaping the Future

No Visible Flow – Unnamed Creek at Northside Rd.

Unrba

Cardno ENTRIX
Shaping the Future

No Visible Flow – Robertson Creek at Brassfield Rd.

Unrba

Cardno ENTRIX
Shaping the Future

Rainfall at Falls Lake Dam

Table 2: Rainfall at Falls Dam by year for period of record for USGS PPT data. Partial data available for 2007 and 2014

Year	September ppt	Jan through September ppt
2008	7.76	23.11
2009	4.47	27.37
2010	6.38	22.49
2011	7.82	24.54
2012	6.78	28.84
2013	4.04	30.45
2014	4.85	32.42

Unrba

Cardno ENTRIX
Shaping the Future

Water Levels at Falls Lake Dam 2008-2014

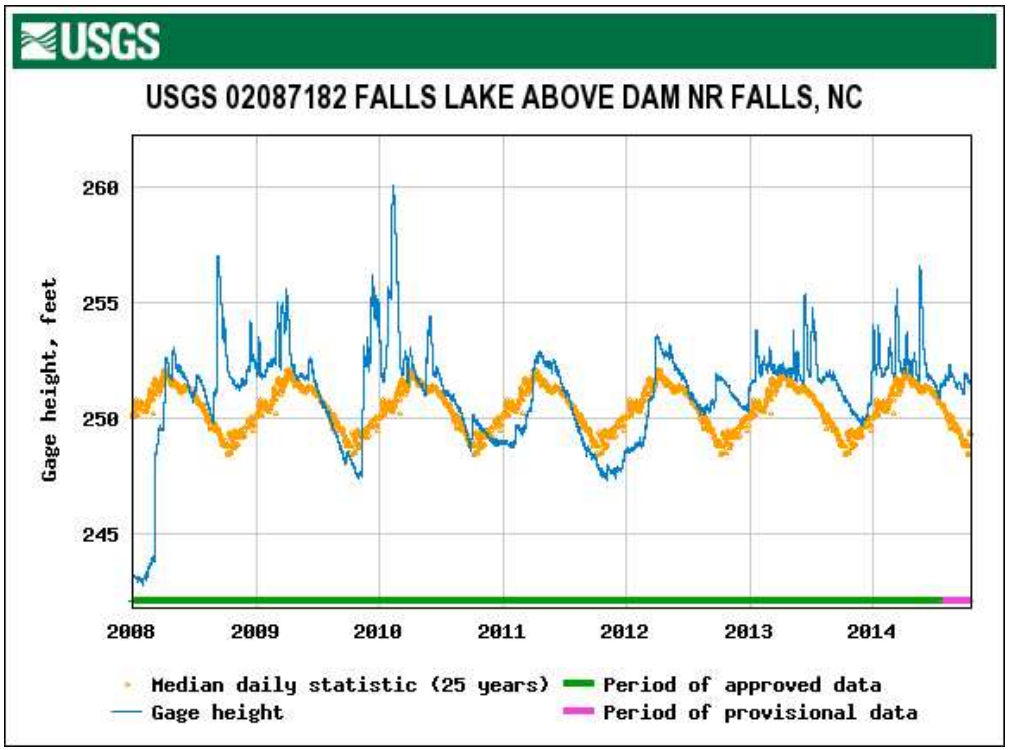

Figure 1: Falls Lake daily water height and median daily value from January 2008 through October 2014

Unrba

Cardno ENTRIX
Shaping the Future

Water Levels at Falls Lake Dam – 2014 Conditions

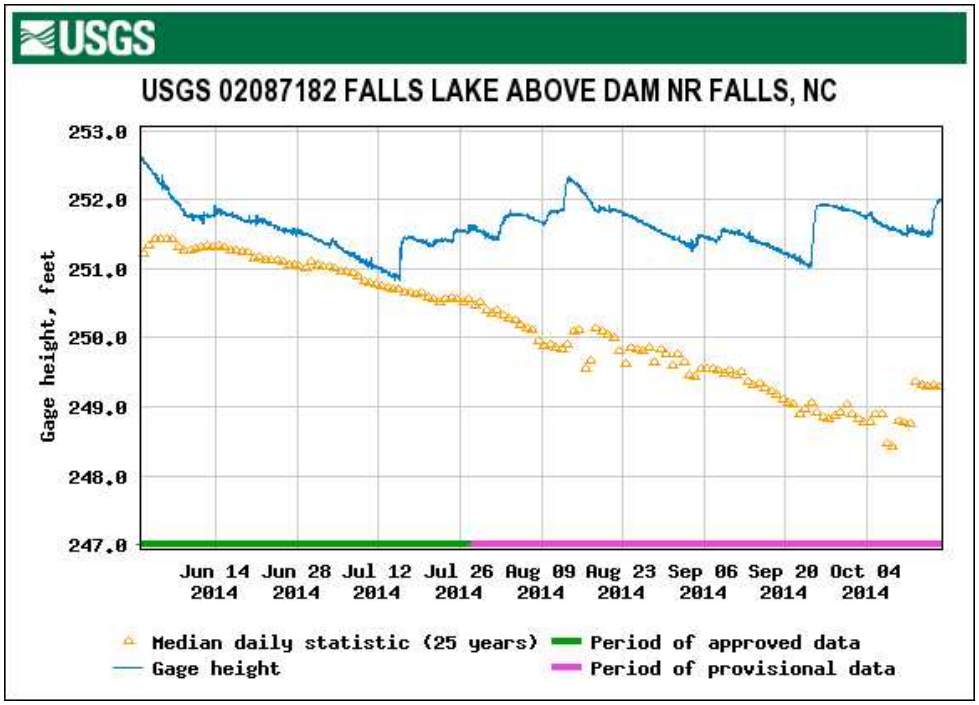

Figure 1: Falls Lake elevations since June 1, 2014

Unrba

Cardno ENTRIX
Shaping the Future

No Visible Flow – Monitoring Program Implications

- Proposed Changes to Monitoring Protocols:
  - Place drops of colored food dye or rhodamine dye in stream and watch for 2 minutes to determine if advective flow is present
  - Obtain samples even when no flow is observed – tag these samples as stagnant flow samples in UNRBA database
  - Review data after 3-5 months and determine whether to continue collecting samples when no advective flow is present
  - At each sampling event measure from a marked location on the bridge down to the top of the water column. Make this measurement at each location where stagnant flow has been observed.

Unrba

Cardno ENTRIX
Shaping the Future

Additional UNRBA Studies for FY 2015

- Review Available Budget ($125,000 – with no contingency funding)
- See Handout with proposed studies for funding in FY 2015

Unrba

Cardno ENTRIX
Shaping the Future

Unrba

Cardno ENTRIX

Shaping the Future