

UNRBA
Monitoring Program
Board of Directors Meeting
June 2016



FY2017 Monitoring Contract Scope and Budget Development



Recommendations for Routine Monitoring Data Acquisition

EFFORT	RECOMMENDATION FOR FY2017	
Lake Loading Stations	18 stations sampled monthly No change in stations from FY2016 Suspend second round of monthly samples from “Big 5” 16 parameters to be measured Suspend analysis of DOC, CBOD5, Pt-Co color	
Jurisdictional Stations	20 Stations sampled monthly No change in stations from FY2016 10 parameters to be measured Reduce analysis of TOC to quarterly	
In-Lake Monitoring (data acquisition by others)	DWR Monitoring	12 Stations sampled monthly
	City of Durham	2 Stations sampled weekly April-October
	NSCU CAEE	Evaluating program data for potential inclusion



Recommendations for Routine Monitoring Data Management, Analysis, QA/QC, Reporting and Communication

EFFORT	RECOMMENDATION FOR FY 2017
Data Management	Protocol unchanged from FY2016
QA/QC	Protocol unchanged from FY2016
Data Analysis	Protocol unchanged from FY2016 Additional hours/budget due to increasing data volume
Reporting	Protocol unchanged from FY2016 Additional hours/budget due to increasing data volume
Meetings & Client Communication	Protocol unchanged from FY2016 Additional hours/budget due to address emerging issues
Monitoring Plan Management	Protocol unchanged from FY2016



Recommended Routine Monitoring Budget Summary

Task	<u>FY 2016</u> <u>Budget</u>	<u>% of total</u> <u>Cardno</u> <u>budget</u>	<u>Proposed</u> <u>FY 2017</u> <u>Budget</u>	<u>% of total</u> <u>Cardno</u> <u>budget</u>
Lake Loading Stations (change from 2x to 1x sampling per month at 5 largest tributaries; no CBOD, DOC, Pt-Co color in FY 2017)	\$ 224,100	27%	\$ 147,821	21%
Jurisdictional Boundary Stations (quarterly TOC in FY 2017)	\$ 75,900	9%	\$ 61,238	9%
DWR Lake Monitoring	\$ 14,000	2%	\$ 13,234	2%
Data Management	\$ 33,900	4%	\$ 33,010	5%
Data Analysis	\$ 59,800	7%	\$ 73,700	10%
Reporting	\$ 27,100	3%	\$ 33,695	5%
Communication, Project Management, ad hoc issues/events	\$ 40,900	5%	\$ 64,432	9%
UNRBA Meetings (including site tours)	\$ 24,800	3%	\$ 26,864	4%
QA/QC of lab activities	\$ 24,000	3%	\$ 20,806	3%
QAPP Updates	\$ 14,500	2%	\$ 11,310	2%
Monitoring Plan Updates	\$ 36,000	4%	\$ 34,416	5%
Totals	\$ 575,000	71%	\$ 520,527	75%

Budget reduction from FY 2016 to FY 2017: **\$54,473**



Recommendations for Special Studies

SPECIAL STUDY	INITIATED IN	RECOMMENDATION
Storm Event Sampling	FY2015	Suspend
High Flow Sampling	FY2015	Modify and Augment
Falls Lake Sediment Sampling	FY2015	Complete current effort then suspend
Bathymetry and Sediment Mapping	New	One-time effort for FY2017
Regulatory Alternatives Support	FY2015	Provide as part of Client Communication in Routine Monitoring
Falls Lake Constriction Point Study	FY2016	Suspend
Measure VSS at Lake Loading and In-lake stations	FY2016	Incorporate into Routine Monitoring
Light Extinction Data Evaluation	FY2016	Completed
Basic Evaluation of Model Performance	FY2016	Completed by end of FY2016
Recreational Use Assessment	FY2016	Suspend (but re-visit)



New Proposed Special Study

Bathymetry and Sediment Mapping

- Bathymetry (underwater topography) is essential for lake response modeling
 - Existing bathymetry from the USACE is dated and incomplete
- Knowledge of sediment distribution in the lake can be coupled with nutrient flux data to improve understanding of nutrient loading from sediments
- Bathymetric and sediment data can be obtained simultaneously with Sonar equipment
- The Modeling Team will provide input to ensure collection of suitable information



Recommended Special Studies Budget Summary

Task	<u>FY 2016</u> <u>Budget</u>	<u>% of total</u>	<u>Proposed</u>	<u>% of total</u>
		<u>Cardno</u> <u>budget</u>	<u>FY 2017</u> <u>Budget</u>	<u>Cardno</u> <u>budget</u>
Storm Event Sampling	\$ 62,000	8%		0%
Sediment Evaluation	\$ 20,000	2%		0%
Bathymetry and sediment mapping			\$ 80,000	12%
High Flow Sampling (8 fixed sites, 2 events)	\$ 16,000	2%		0%
High Flow Sampling (5+ sites, 10+ events)		0%	\$ 90,000	13%
Regulatory Process Support		0%		0%
Constriction Point Sampling	\$ 70,000	9%		0%
VSS Measurement	\$ 8,000	1%		0%
Historic Light Extinction Data	\$ 4,000	0%		0%
Model Performance Evaluation	\$ 40,000	5%		0%
Recreational Uses	\$ 20,000	2%		0%
Totals	\$ 240,000	29%	\$ 170,000	25%

Budget reduction from FY 2016 to FY 2017: **\$70,000**



Summary of Monitoring Program Efforts & Budget

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
FY2017 Contribution from UNRBA Members	\$ 800,000
Projected Unencumbered FY2016 Carry-Forward	\$ 20,000
FY2017 Routine Monitoring	\$ (520,527)
FY2017 Special Studies	\$ (170,000)
FY2017 Subject Matter Experts	\$ (40,000)
Budget Available for Modeling Contract in FY2017	\$ 89,473



Cardno Rate Adjustment

- Through the end of FY2016, Cardno has maintained the same billing rates we have had in place with the UNRBA for several years
- Rates used in the FY2017 budget were adjusted to cover cost-of-living and associated business cost increases
- Overall, the increased rates represent about 4 percent of the overall FY2017 contract budget, and about 6.8% of the Cardno labor budget
- In spite of the increases, the UNRBA is afforded rates that are deeply discounted from Cardno's standard billing rates, because of its preferred client status.

