



NEW Water Update Meeting

2017 Budget Workshop

September 9, 2016

Today's Agenda

- 2017 Proposed Budget
- R2E2 Update
- Silver Creek and Adaptive Management Update

*Protecting our most
valuable resource,
water*

Collaborative Regional Leadership, Sustainability, and Education

Engage the community and strengthen our workforce	Deliver environmental improvements	Support a vital, growing economy
Advance community and workplace health & safety	Prevent and mitigate pollution	Ensure equitable rates
Promote and utilize collaboration and partnerships	Recover resources and extract inherent value	Assure system reliability and capacity
Recruit, develop, and retain a high quality workforce	Sustain an excellent record of regulatory compliance	Manage risk across the entire utility
	Achieve regional water quality improvements	Assess and communicate the value of clean water: costs, opportunities, and successes

2016 Budget Update (through July)

- Overall user fee revenue at 102% of budget
- Overall operating expense at 91% of budget
- Expect to finish year slightly ahead of revenue and slightly under expense budgets
- Finished 2015 at 105% of user fee revenue and 97% of expense budget

2017 Priorities

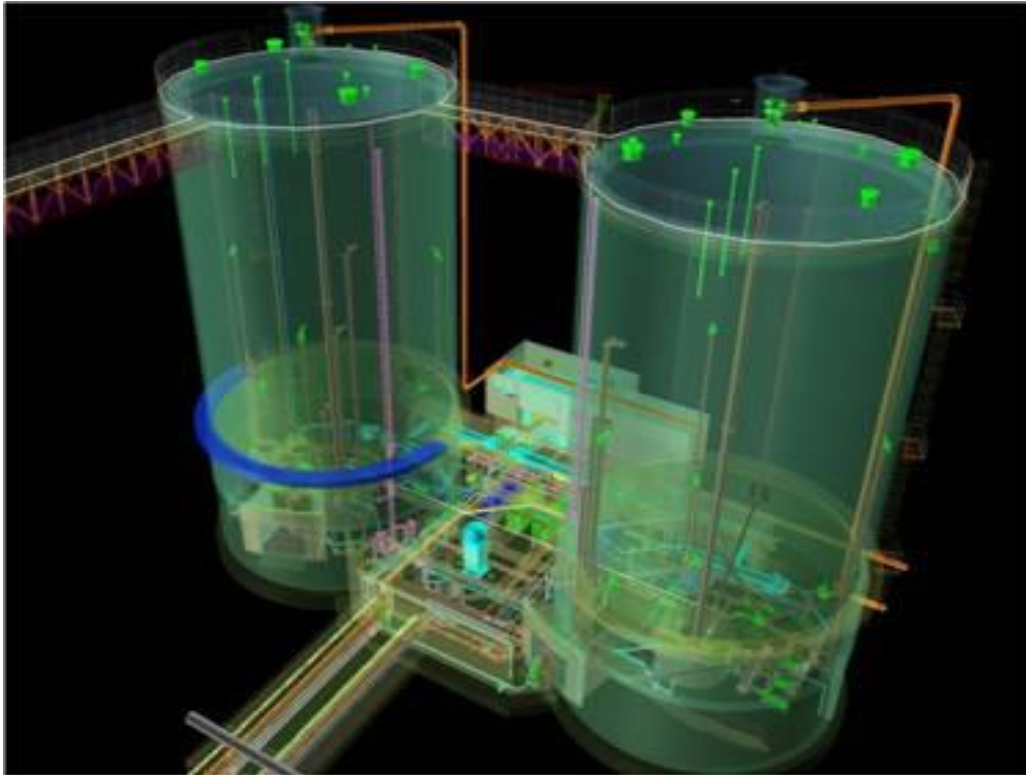
- On-time and on-budget completion of R2E2 construction
- Enhance safety and health management systems
- Develop guidance for full-scale Adaptive Management Program
- Phase 1 of asset condition and criticality assessment
- Develop and build support for desired NEW Water culture
- Investigate additional resource recovery opportunities

NEW Water 2017 Budget Drivers

- Implement Adaptive Management Pilot
- Increase Fixed Charge to 45% of Capital budget
- Begin condition & criticality assessments
- Critical staff additions



R2E2 Rate Stabilization Reserve

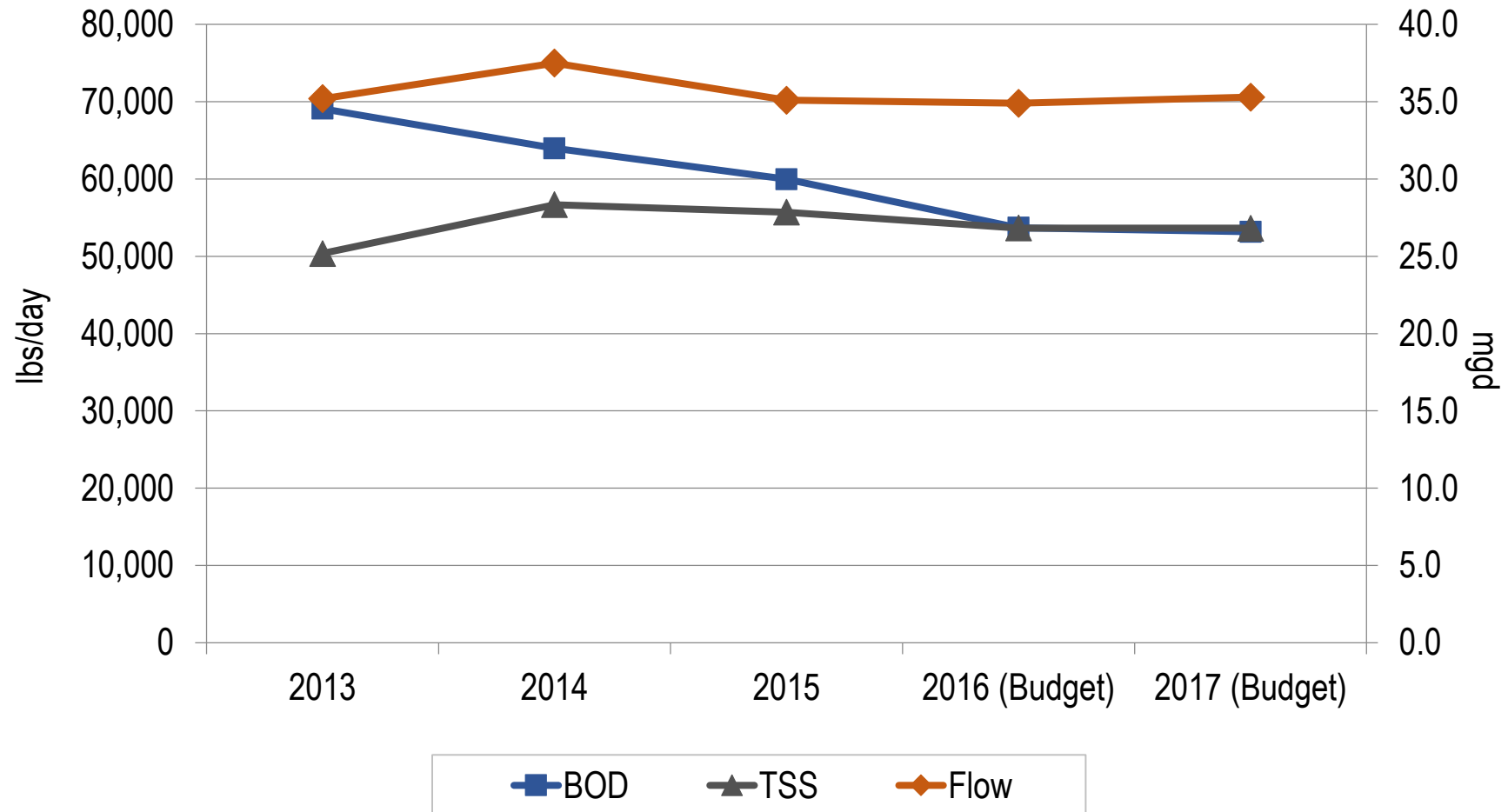


- \$5,544,966 in reserve as of 12/2015
- Budgeted \$5,450,000 addition in 2016
- No further addition to reserve planned in 2017
- Reserve to be used on R2E2 project (Contracts 34 and 35)



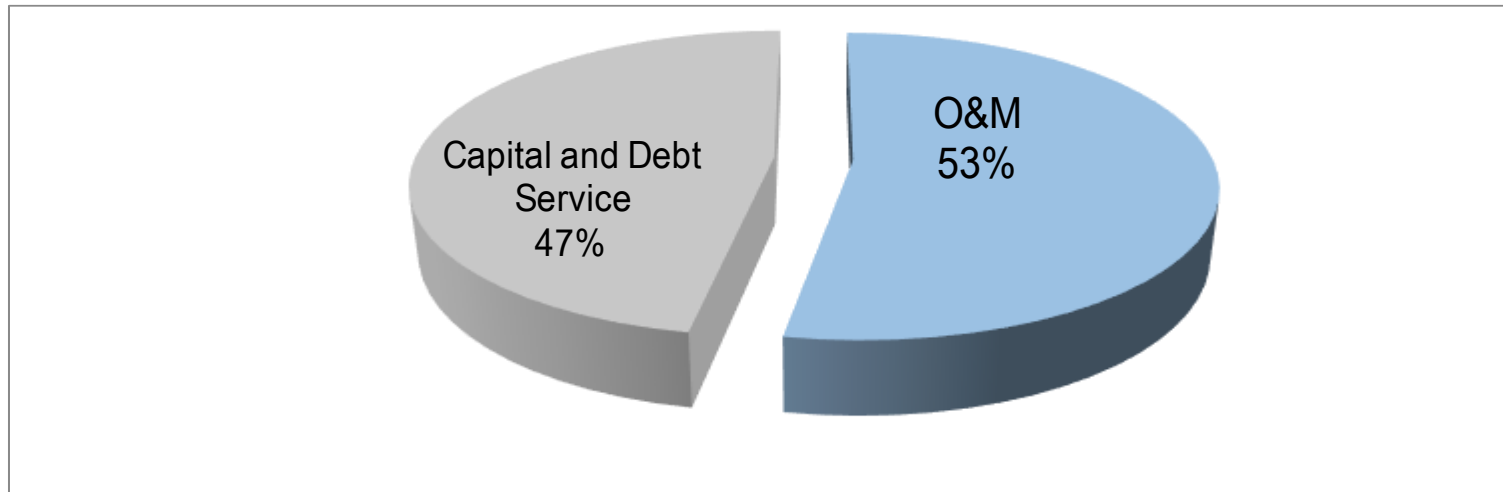
Proposed 2017 Budget

Flows and Loads

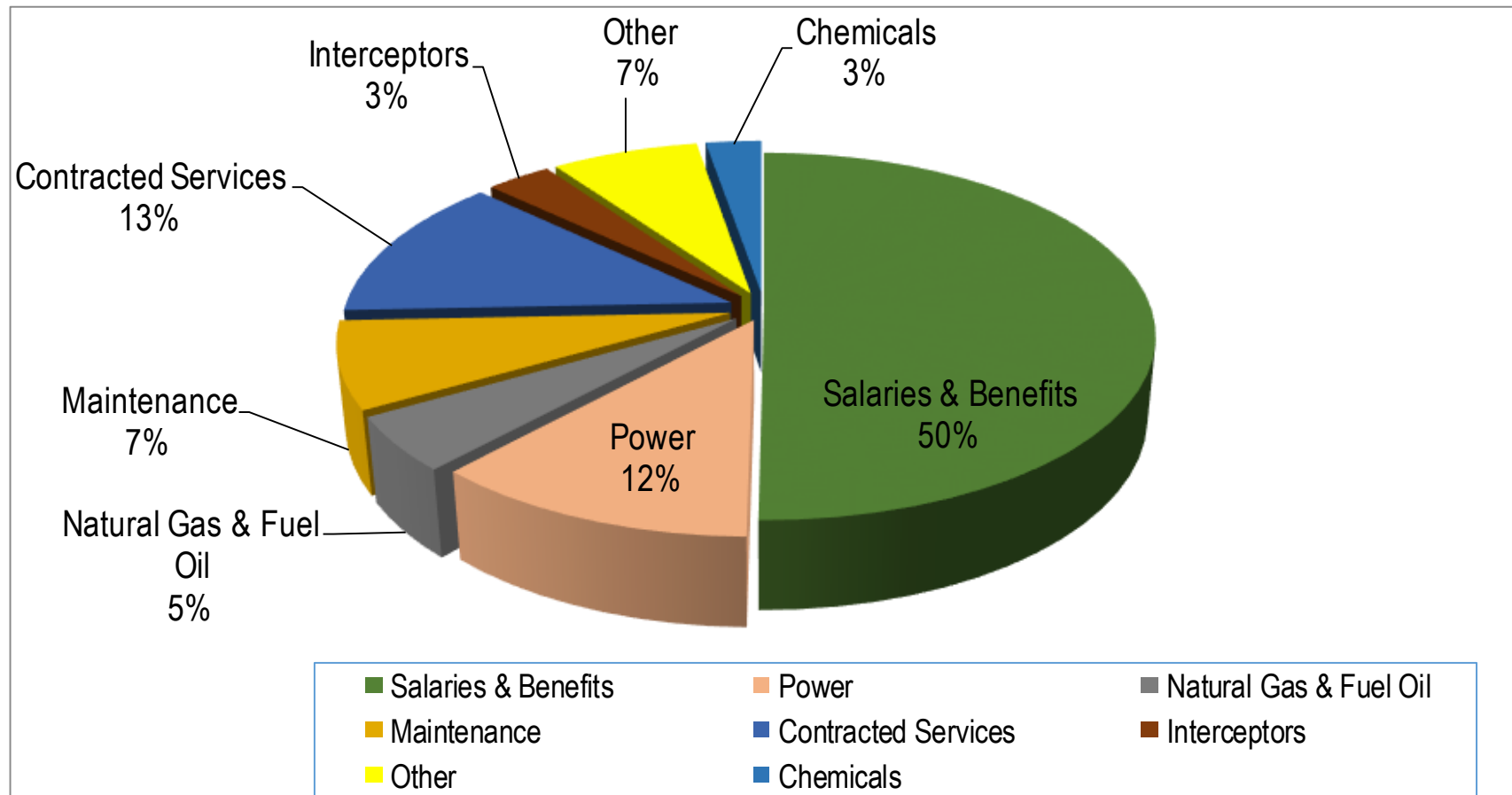


2017 Proposed Expenses

Budget Category	2016 Budget	2016 Projected	2017 Budget
Operations & Maintenance (O&M)	\$19,652,749	\$19,214,532	\$20,680,032
Debt Service and Annual Capital	\$18,414,983	\$18,508,515	\$18,421,054
Total Expenses	\$38,067,733	\$37,723,047	\$39,101,086



2017 O&M Expense Distribution



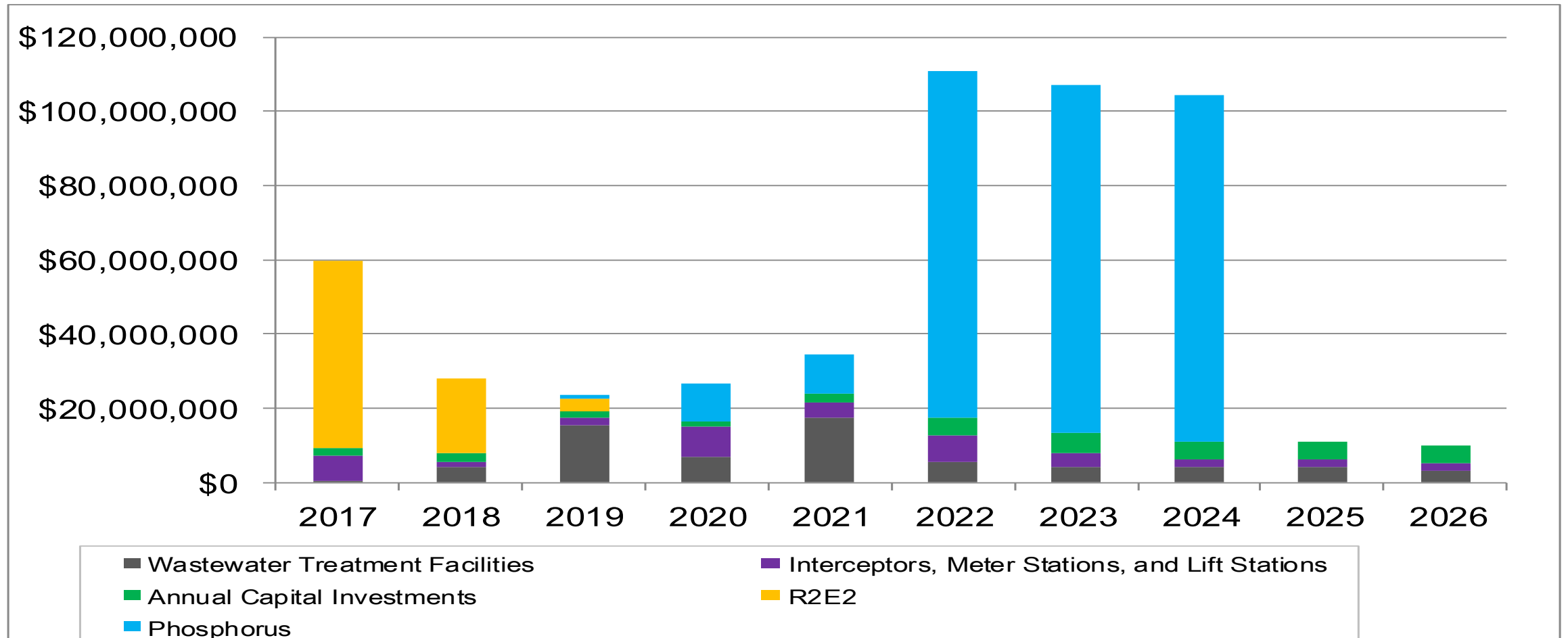
WPDES Permit Compliance Strategy

- Existing permit expires 6/30/2019
- Agreement with WDNR allows for Adaptive Management (AM) for Phosphorus (P) & TSS beginning in 2019
- AM could defer major capital improvements for P & TSS until 2039
- AM will likely be an O&M expense, rather than capital

2017 Major Capital Projects

- R2E2 Construction - \$130.9M
- Dutchman Creek Interceptor Rehab & Replacement - \$2.6M
- Scott Bayshore Interceptor Replacement - \$900K
- DPF Primary Substation & Emergency Generator (Design) - \$3.5M
- Bayview Interceptor Replacement - \$4.1M
- Charles Street Interceptor (Design) - \$1.7M

Proposed Long-Term Capital Projects



Capital Expenditures for 2018-2021

- R2E2 construction - \$23M
- GBF influent pumping improvements - \$8M
- DPF primary substation and emergency generator - \$4M
- DPF service water system replacement - \$3M
- GBF & DPF clarifier rehabilitation - \$9M
- GBF aeration blower improvements - \$7M
- Phase 2 of interplant forcemain - \$4M

Capital Expenditures for 2018-2021 (cont.)

- GBF primary clarifier odor control - \$3M
- Begin interceptor tunnel rehabilitation - \$10M
- GBF & DPF headworks improvements - \$9M
- East Tower Drive interceptor rehabilitation (Phase 1) - \$3M
- Annual Capital - \$2M per year
- Total expected four-year capital expenditures - \$112M

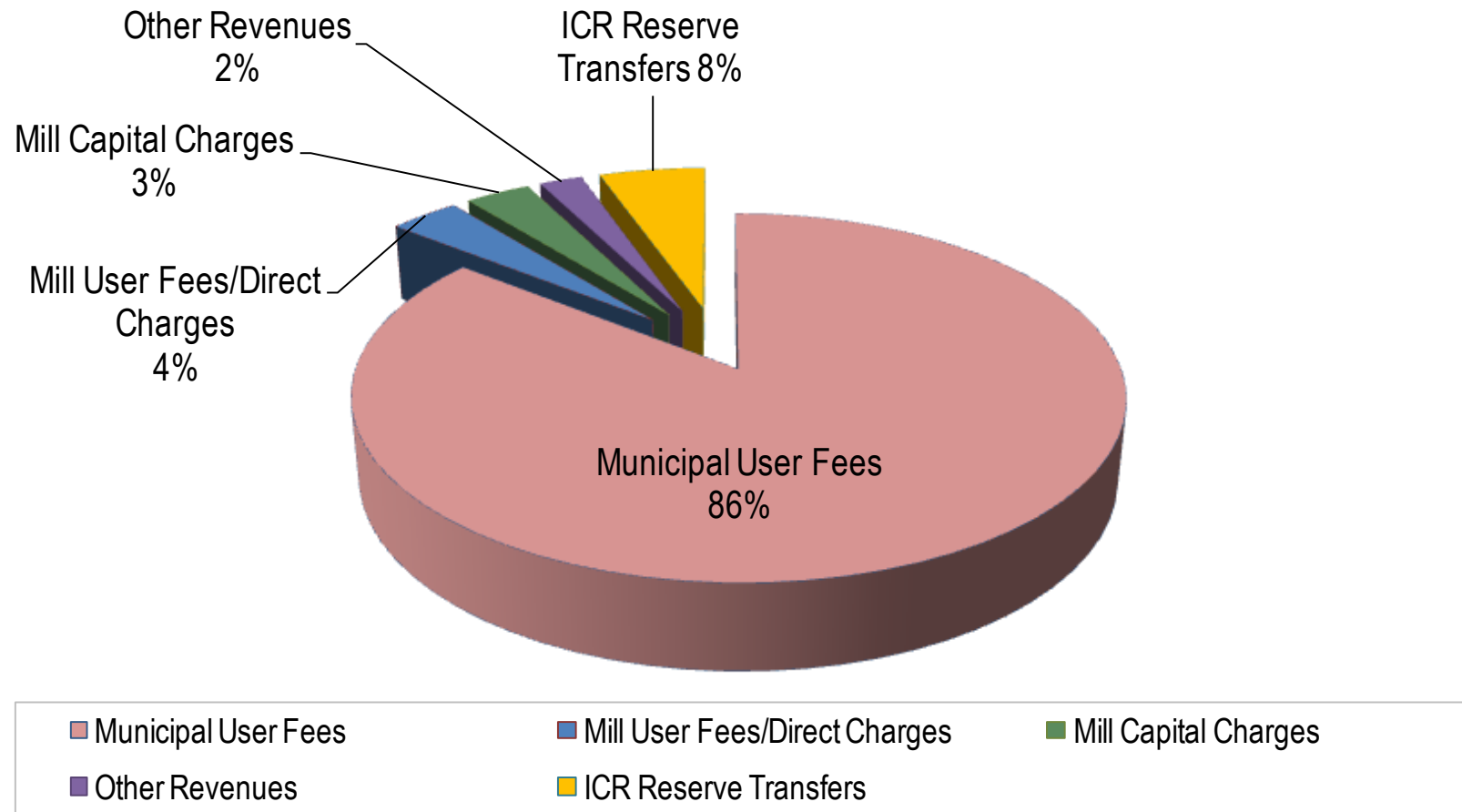
Impact of 2016 Cost of Service Allocation Update on Unit Charge Rates (Municipal)

- Volume: -8.3%
- Biochemical Oxygen Demand: +5.2%
- Total Suspended Solids: +0.7%
- Phosphorus: -9.0%
- Total Kjeldahl Nitrogen: +15.6%
- Fixed Charge: +0.3%

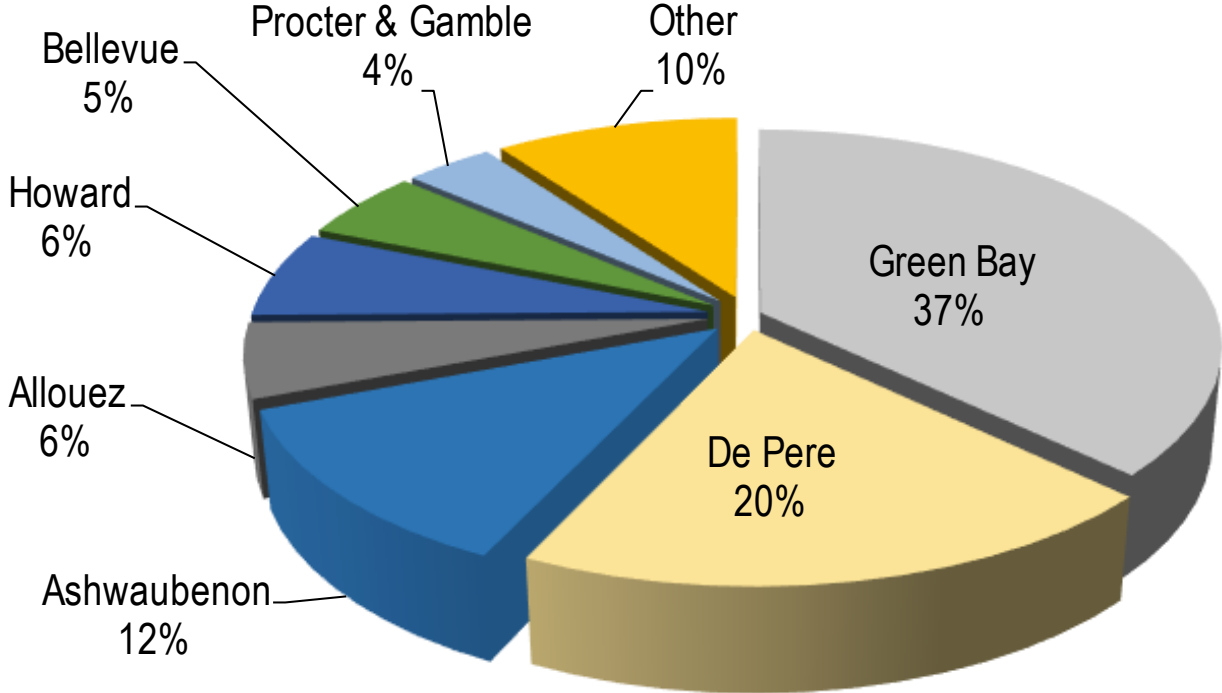
2017 Municipal Rate

Parameter	2016 Rate	2017 Rate	% Change
Total Combined Rate (1,000 gals)	\$3.07421	\$3.19110	3.8%
Volume (1,000 gals)	\$0.79357	\$0.72335	-8.9%
Biochemical Oxygen Demand (lbs)	\$0.43068	\$0.41690	-3.2%
Suspended Solids (lbs)	\$0.41292	\$0.36496	-11.6%
Phosphorus (lbs)	\$0.60597	\$0.58856	-2.9%
Total Kjeldahl Nitrogen (lbs)	\$0.64043	\$0.75860	18.4%
Fixed Charge	\$0.54580	\$0.78838	44.4%

2017 Revenue Sources



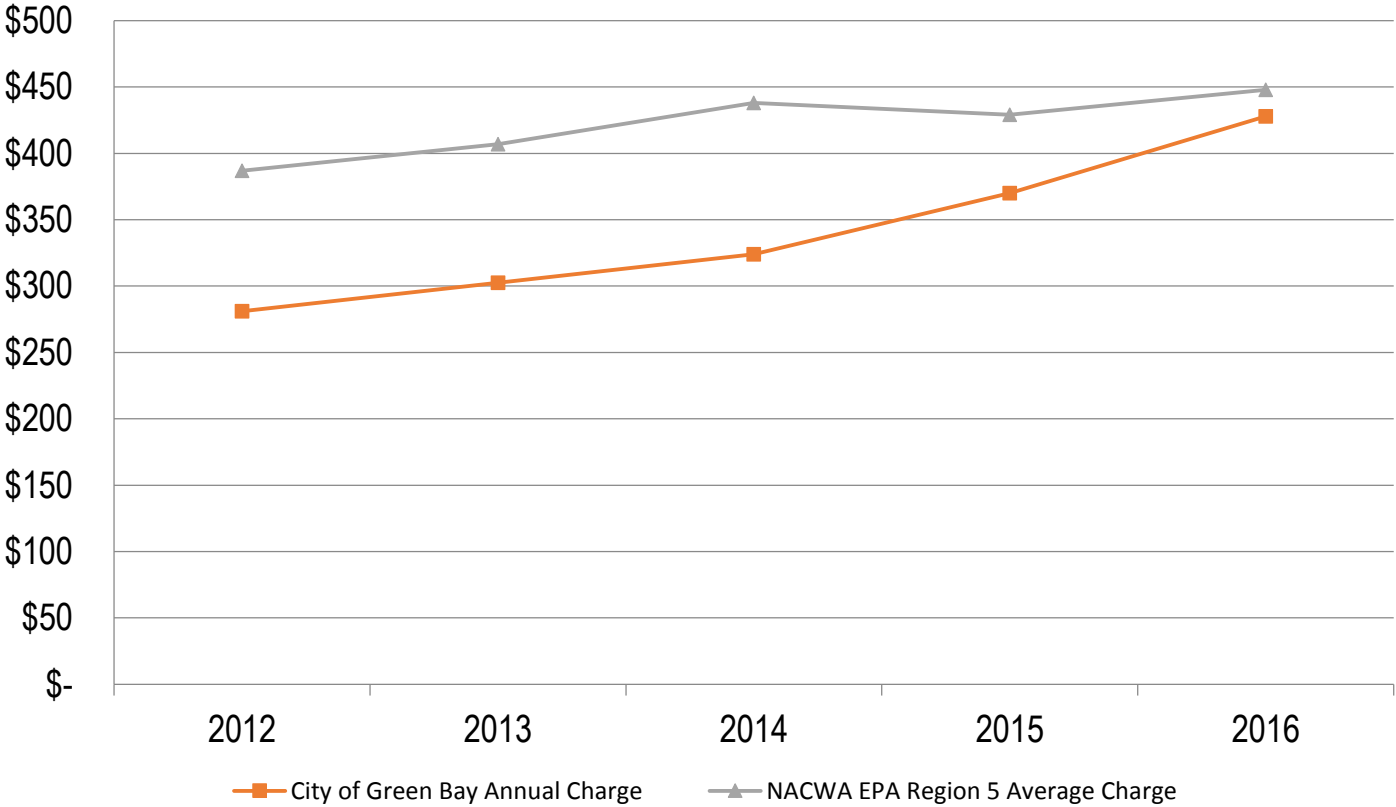
2017 Revenue Breakdown by Customer



Other includes: Villages of Hobart, Luxemburg, Pulaski, and Suamico; Towns of Lawrence, Ledgeview, and Scott; and Sanitary Districts Dyckesville, New Franken, and Pittsfield

NEW Water Sewer Service Charge Comparison

How NEW Water Compares to Others: Rates



2017 Budget Summary

- Recommend a 2.7% increase in budgeted total expenses
- O&M expenses increased by 5.2% over 2016 budget
- WPS 0% electricity rate increase
- 0% increase in capital cost over 2016 budget
- Offsetting most interceptor debt service using ICR reserve

Next Steps

- Letter to customers explaining rate increase
- All customer meeting on September 9
- One-on-one meetings for customers not able to attend the all customer meeting
- Second budget workshop (*September 29*)
- Customer meeting(s)
- Budget hearing and adoption (*December 7*)
- Customer notification





R2E2 Update

R2E2 Contract 34 Update

- Project to construct Anaerobic Digestion & Solids Facility
- Work completed
 - placement of solids facility ground & second floor slabs
 - placement of digester skirt walls
 - biogas building basement level
 - septage unloading roadway & unloading
 - septage screening equipment install & training
 - aeration basin NP2 modifications
- Work underway
 - fluidized bed reactor construction
 - solids facility equipment placement
 - construction of digester cones
 - aeration basin SP2 & NP4 modifications

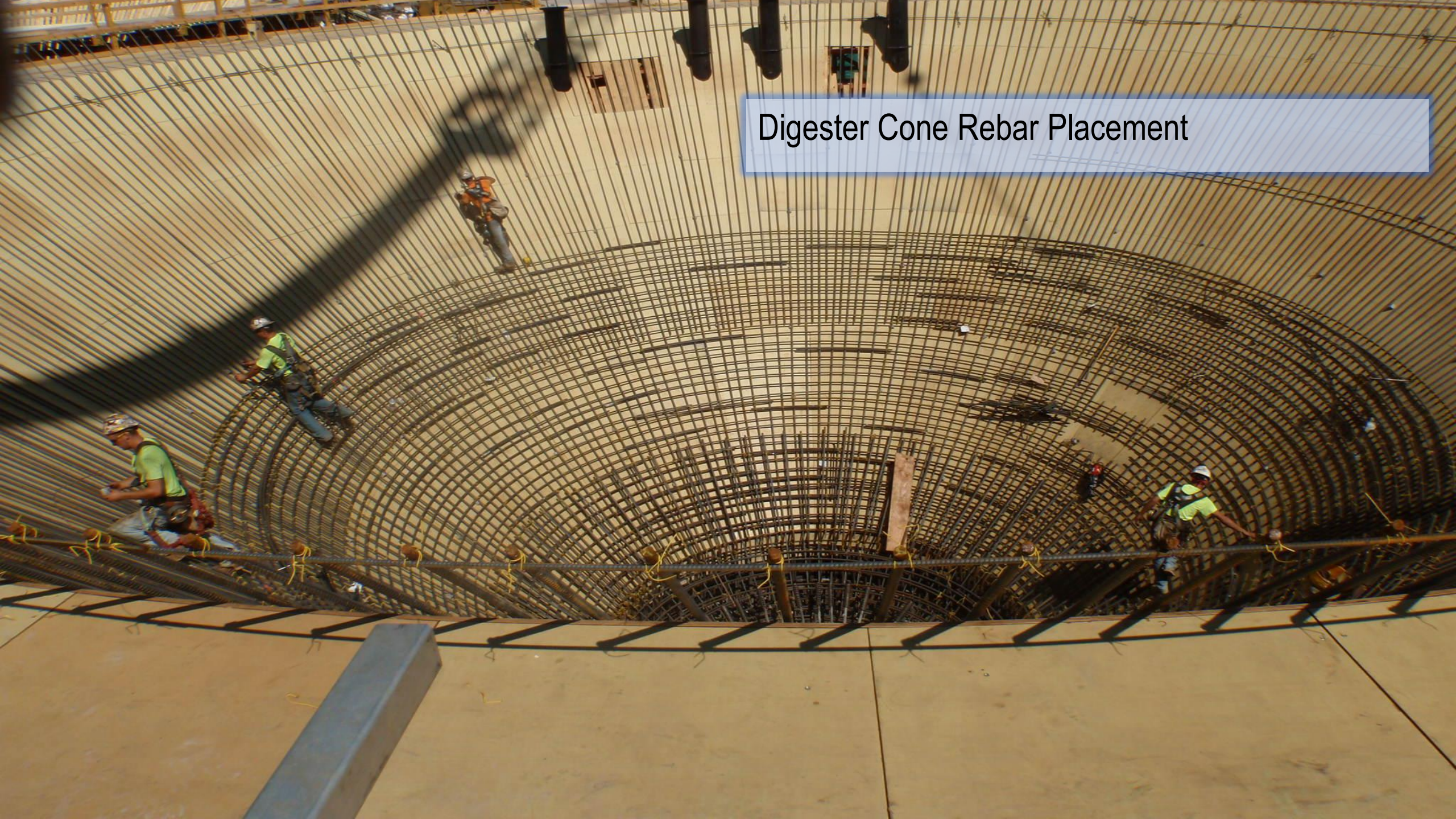




R2E2 Contract 34 Update

- Net change order amount = credit of approximately \$700,000
 - Change Order No. 6 - \$114,170 – various items
 - Change Order No. 8 - \$378,337 – electrical safety modifications
- Completed approximately \$42M of the \$131M construction contract through August '16
- Expensed approximately \$3.2M of the \$10.5M engineering services through July '16
 - \$1.7M amendment for Training, O&Ms, Start-up Support, and Phase 3 of Application Engineering & Programming

Digester Cone Rebar Placement



Digester Equipment Gallery Area Construction



Solids Facility Construction



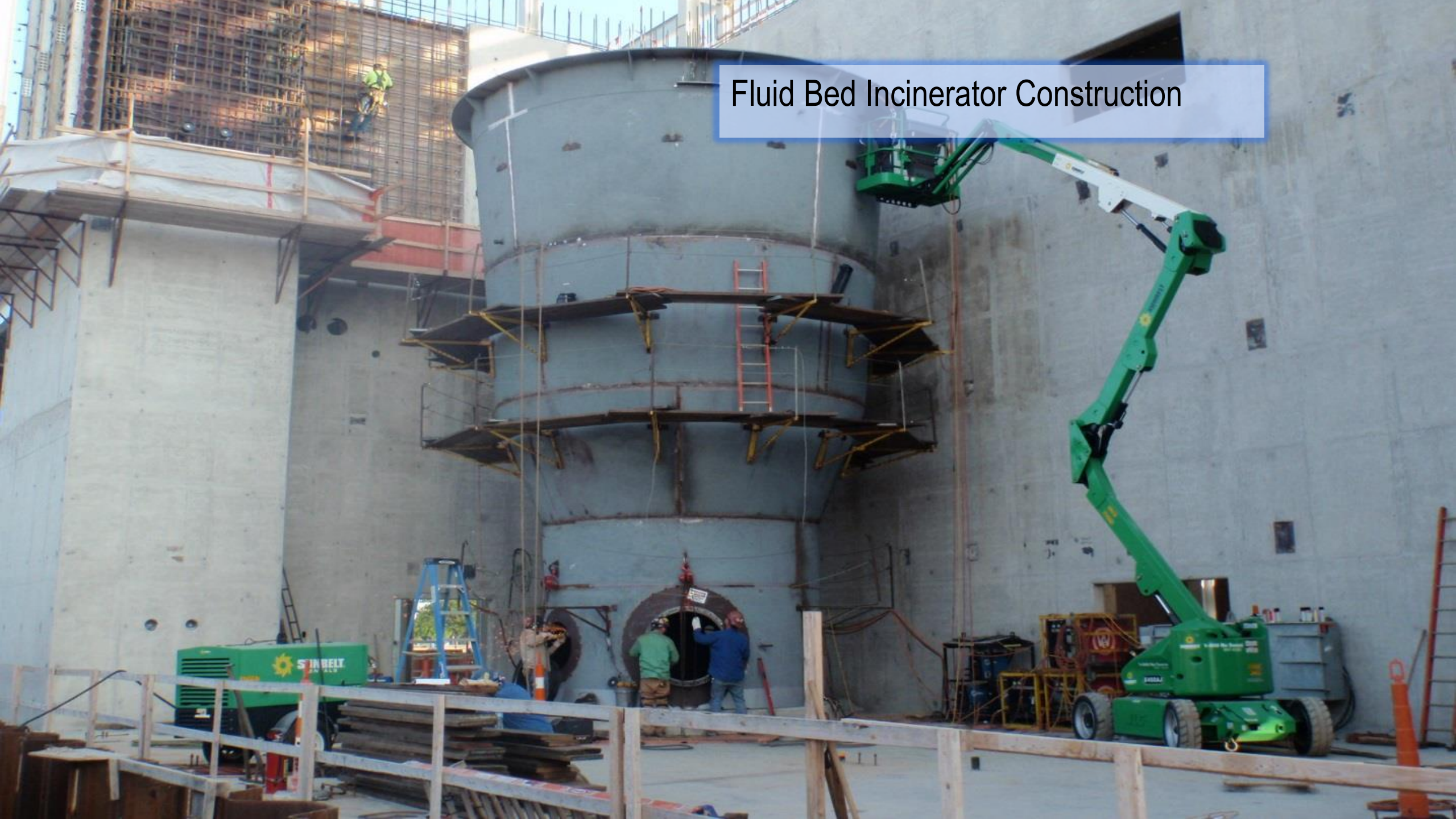
Solids Facility Equipment Placement – Biogas Engine



Solids Facility Equipment Placement – Sludge Dryer



Fluid Bed Incinerator Construction



Septage Screening Equipment





Contract 34 Proposed Timeline

- 2016
 - Complete solids building enclosure, start mechanical and electrical installation
 - Start construction of fluid bed incinerator and placement of sludge dryer
 - Digester cone and skirt wall / base slab / gallery construction
 - Biogas building construction
 - New septage receiving complete
- 2017
 - Digester wall construction, covers placed, mechanical & electrical installation
 - Continue solids facility process mechanical & electrical installation
 - Continue construction of fluid bed reactor and air pollution control equipment
 - Ash dewatering cells construction
 - Biogas storage & treatment mechanical installation
 - Solids facility testing/training/startup
- 2018
 - Digestion & biogas facilities testing/training/startup
 - Nutrient extraction system testing/training/startup
 - August 2018 – Final Completion



Adaptive Management Update

- Silver Creek Pilot Project Update
- Adaptive Management After Silver Creek

Silver Creek Pilot Project – 2016



- Water quality monitoring
- Field planning
- Cost share agreements
- Best Management Practices (BMPs) installation
 - Filter strips (buffers)
 - Critical area plantings
 - Grassed waterways
 - Cover Crops
 - Etc.

Grassed Waterway Project #1



Grassed Waterway Project #1



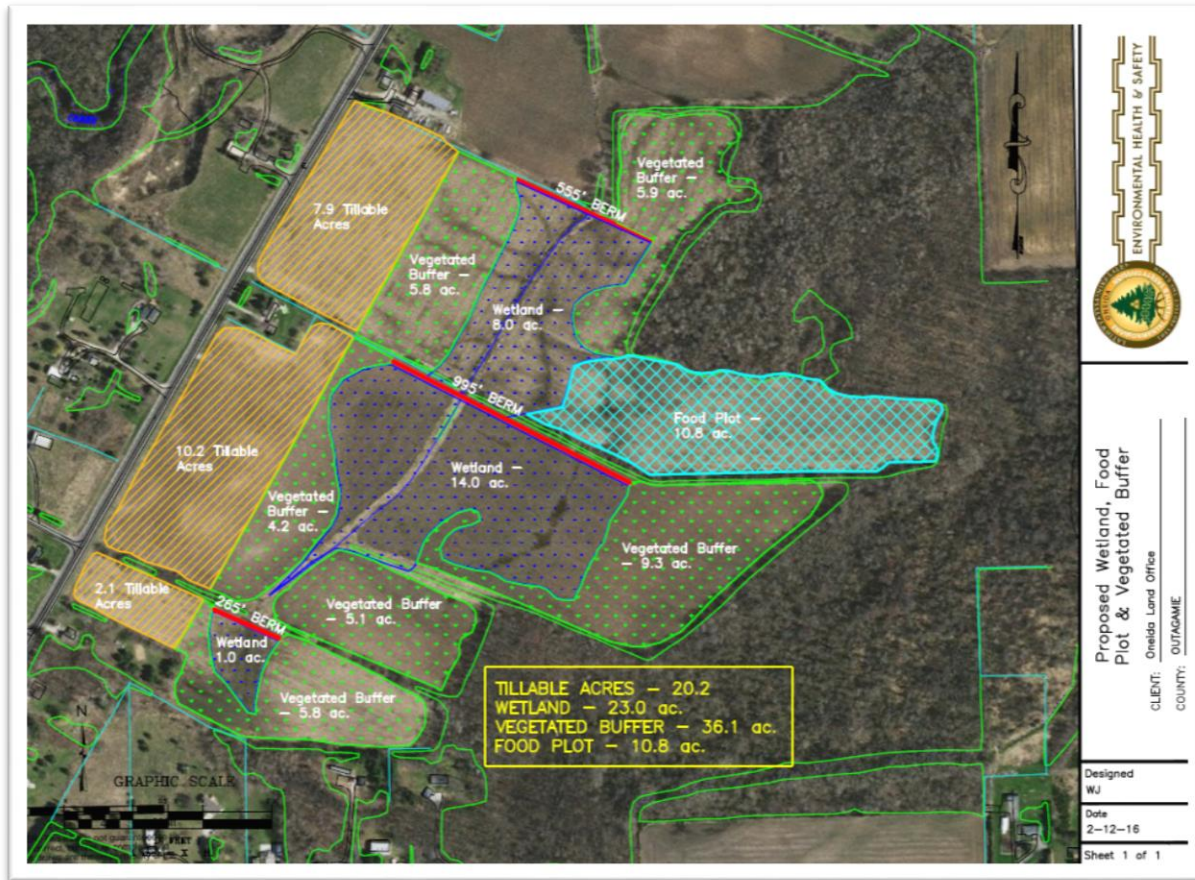
Grassed Waterway Project #2



Grassed Waterway Project #3

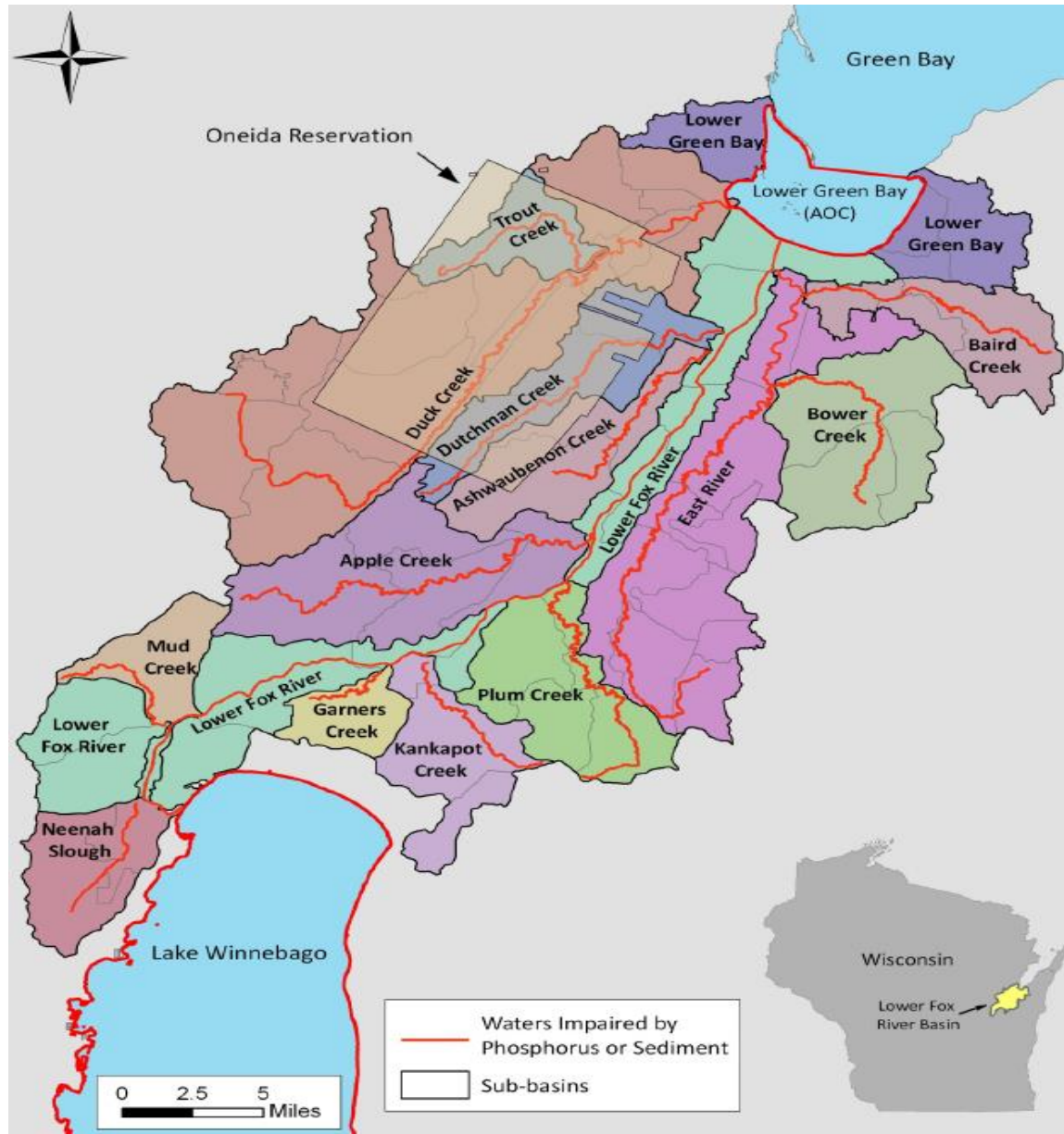


Plans for the Rest of 2016



- Continue installation of BMPs
- Cover crop planting
- Grazing operation established
- Wetland restoration
- Landowner and grower appreciation luncheon
- Stakeholder meeting
- Begin planning for 2017 growing season

Adaptive Management – After Silver Creek?



➤ Which sub-watershed for full scale AM?

➤ Are there sub-basins not eligible?

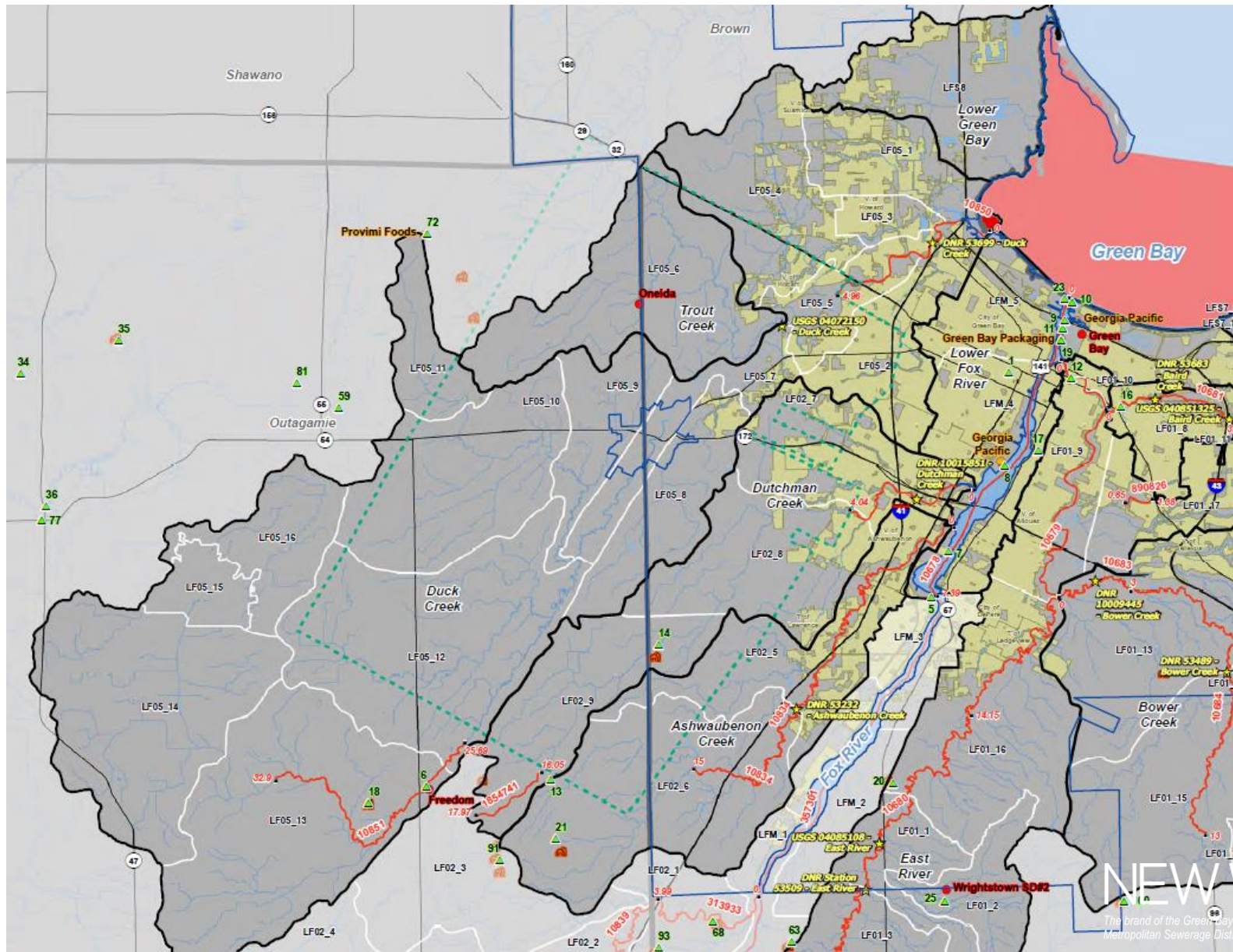
Map From: 2010 Total Maximum Daily Load and Watershed Management Plan

Comparable Reductions

<u>Load Reductions</u>	<u>P lbs/yr</u>	<u>TSS lbs/yr</u>
GBMSD De Pere	622	
Green Bay MSD	<u>8,710</u>	
Total	9,332	

<u>Reductions sub-basin</u>	<u>P lbs/yr</u>	<u>TSS lbs/yr</u>
1) Duck Creek	39,920 (63.2%)	13,997,690 (55%)
2) East River	34,156 (70.1%)	12,565,366 (63.5%)
3) Plum Creek	24,376 (77.2%)	8,480,587 (70.4%)
4) Apple Creek	22,531 (64.2%)	6,524,559 (51.2%)
5) Bower Creek	19,813 (71.3%)	6,378,322 (61.8%)
Lower Fox Main	123,076 (51.1%)	12,852,706 (53.6%)
<u>Total Lower Fox Basin</u>	<u>325,402 (59.2%)</u>	<u>96,910,671 (54.9%)</u>

How Big Do We Go?





Questions / Issues

- Where can NEW Water work on a full scale Adaptive Management Project – which sub watershed?
- Where and how will our work be measured – at the sub watershed, NEW Water or Bay?
- Are there municipalities or industry that will join us?
- Timeframes –permit, compliance (20 years?)



Needs

- Ag Partnership capacity-1 staff per 20,000 acres cropland. Will partners gear up?
- Permanent conservation practices.
- Sustainable –conservation accepted and maintained?
- Cost – biggest bang– prioritization of fields.
- Grants.
- Formula of land use for a sustainable watershed? Ag, wetlands, streets, industry, wildlife, people? 30 - 40% cover or natural areas.
- Build watershed partnerships: Industry, AG, Storm Water, Wastewater, Community leaders.