



MEMORANDUM

Date: May 13, 2019

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator 

Re: **Major Performance Measures for the Wastewater Reclamation Department**

The attached May 10, 2019 memorandum from the Regional Wastewater Reclamation Department Director Jackson Jenkins outlines a number of major performance measures used by the utility to evaluate performance. I am enclosing this information for the Board's use in the upcoming Budget Hearing for Wastewater Reclamation scheduled for the afternoon session on Wednesday, May 15, 2019.

CHH/lab

Attachment

c: Carmine DeBonis, Jr., Deputy County Administrator for Public Works
Tom Burke, Deputy County Administrator for Administration
Michelle Campagne, Director, Finance and Risk Management
Jackson Jenkins, Director, Regional Wastewater Reclamation Department



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JACKSON JENKINS
DIRECTOR

May 10, 2019

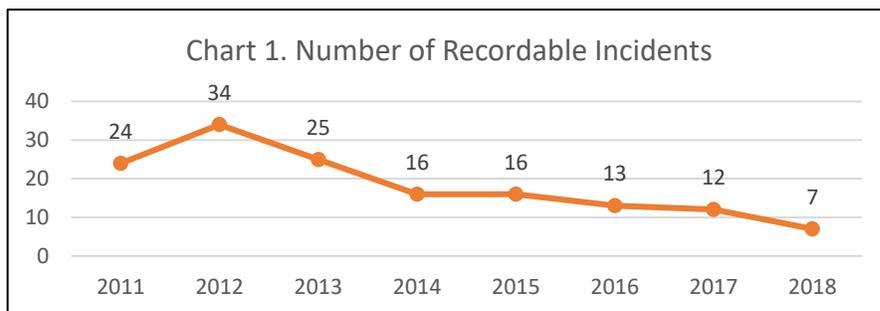
TO: C.H. Huckelberry, County Administrator
FROM: Jackson Jenkins, Director, Regional Wastewater Reclamation Department 
SUBJECT: Major Performance Measures for Our Utility

As we prepare for the Board of Supervisors budget hearings for Fiscal Year 2019/20, I thought it would be prudent to briefly share some performance measurements for the major areas of our utility.

1. Safety Incidents

Safety is one of our top priorities and we are dedicated to providing all employees with a safe and healthy work environment. Among our many safety practices, we begin each meeting with a *Safety Share*, conduct Annual Safety Training, and have Internal Procedures outlining safety expectations and responsibilities. As a utility with a focus on safety, we benefit from reduced direct costs such as workers' compensation payouts, legal fees, and medical costs as well as reduced indirect costs such as lost production, lost productivity, and the priceless loss of quality of life. It is also one of the key ways we can show that we care about our employees.

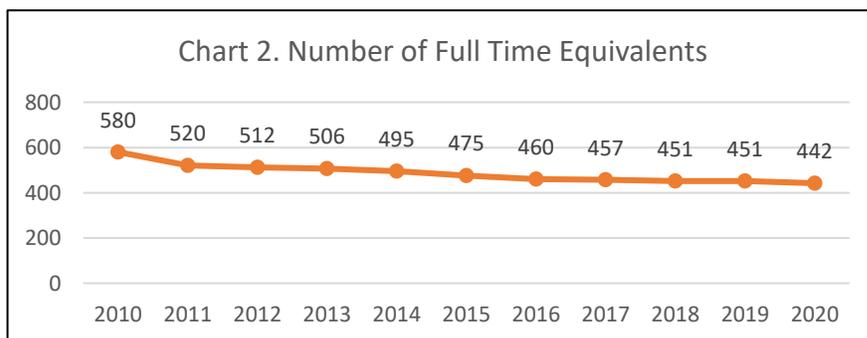
Chart 1 depicts a **79% reduction in recordable safety incidents** we have experienced since 2012.



2. Personnel Services

Safety is a main priority because our people are our number one resource. On average, Personnel Services encompasses 40% of our Operations and Maintenance Budget. Many personnel costs can be external and beyond the Department's control; therefore, we have taken proactive approaches to monitor personnel costs under our control such as the number of Full Time Equivalents and Overtime.

Chart 2 outlines the **26% reduction in full time equivalents** we have experienced since 2010. This reduction in number of personnel – with no loss in the level of service provided – is evidence of our continued efforts to right-size our utility and ensure our resources are allocated appropriately. Continuous improvement is our philosophy in everything we do and finding efficiencies in our day-to-day activities is paramount to our organization.



3. Our Customers

As public servants, we concentrate on fiscal responsibility and outstanding performance in order to provide the most efficient and cost effective service possible for the citizens of our community. The following Charts outline various performance measurements relating to our customers.

Chart 3 depicts a **284% increase in enrollment in the Sewer Outreach Subsidy Program**. Through extensive outreach, process improvements, and multi-jurisdictional collaboration, program applicants have experienced improvements in the appointment-setting and application processes. These improvements ensure that customers are aware a subsidy is available to them and have a simple to understand and transparent path to access it.

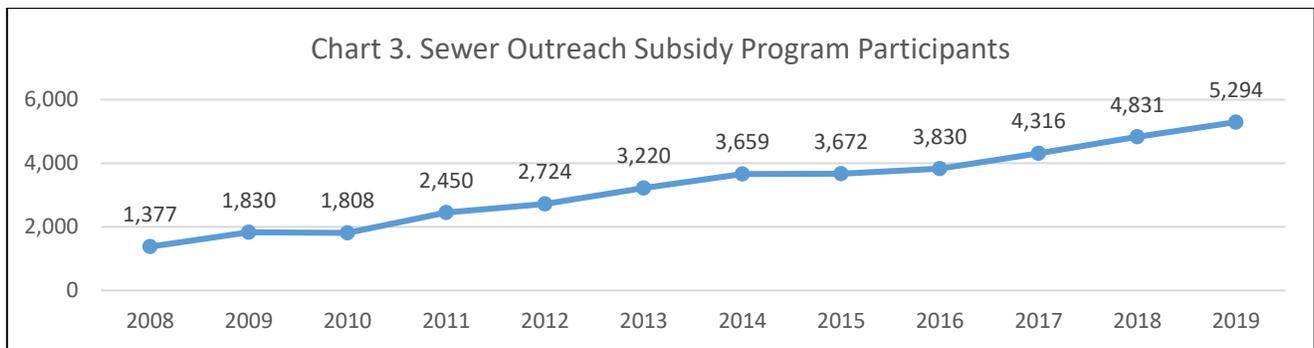
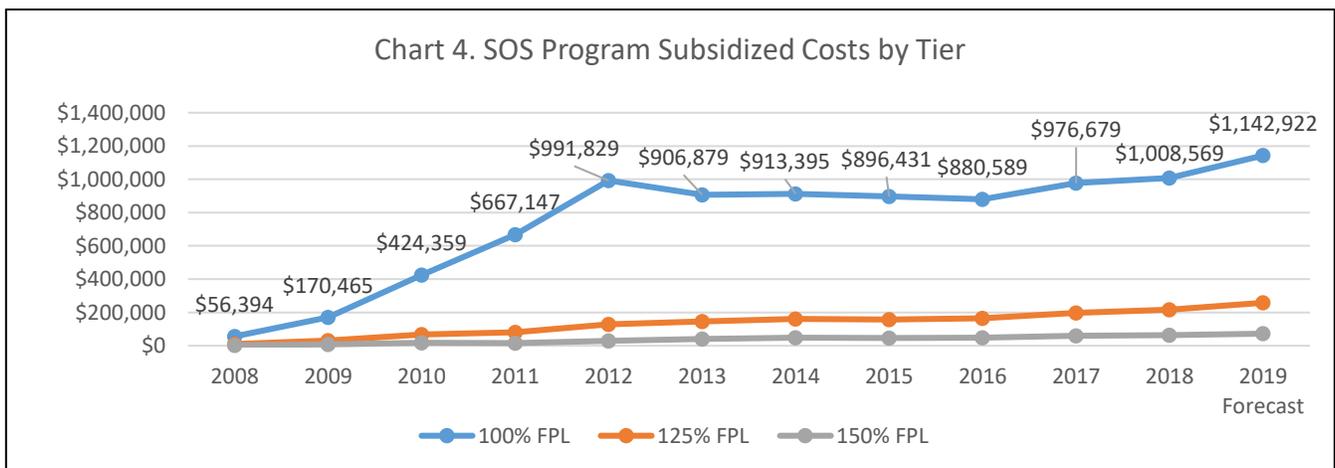


Chart 4 outlines the subsidized costs for each subsidy tier since the Program's inception in 2007. **Total subsidized costs have increased 22%** since full ramp-up of the Program in 2012. As you can see, customers whose household income is at 100% of the Full Poverty Level or less make up the majority of the Program's subsidized costs, further confirming our successful outreach efforts to those needing it most.



4. Our Services

Our mission is to protect the public health, safety, and the environment by providing quality service, environmental stewardship, and renewable resources. Most customers never give much thought to what happens once wastewater disappears down their drain, the intricacies of wastewater operations and maintenance, or the complexities involved in providing this service. We have implemented several community relations efforts to educate and engage the public on the important work we do each day to make life better for the residents of Pima County. The following Charts outline the areas of our business that regularly generate customer communication.

Chart 5 outlines a **40% reduction in the number of odor complaints**. Our Odor Control Program utilizes a two-tiered approach to odor control in the conveyance system and in specific areas near the water reclamation facilities.

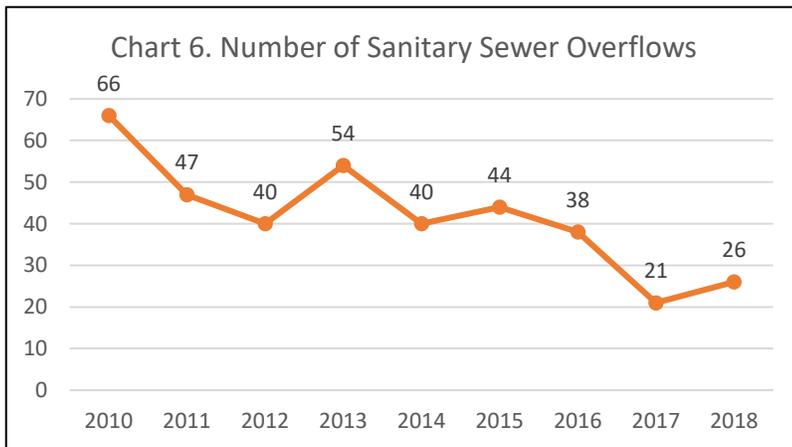
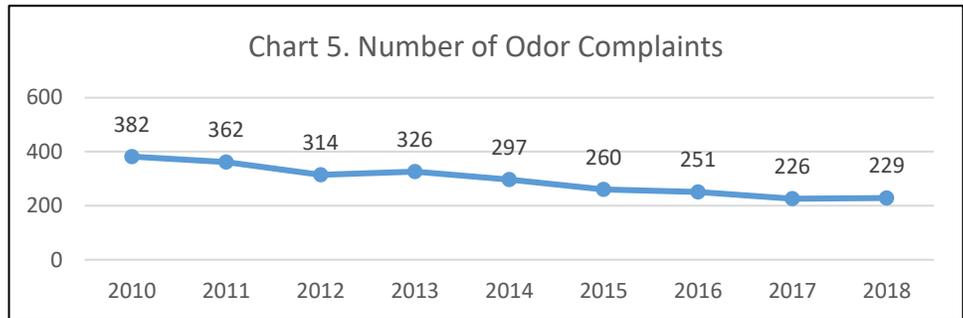
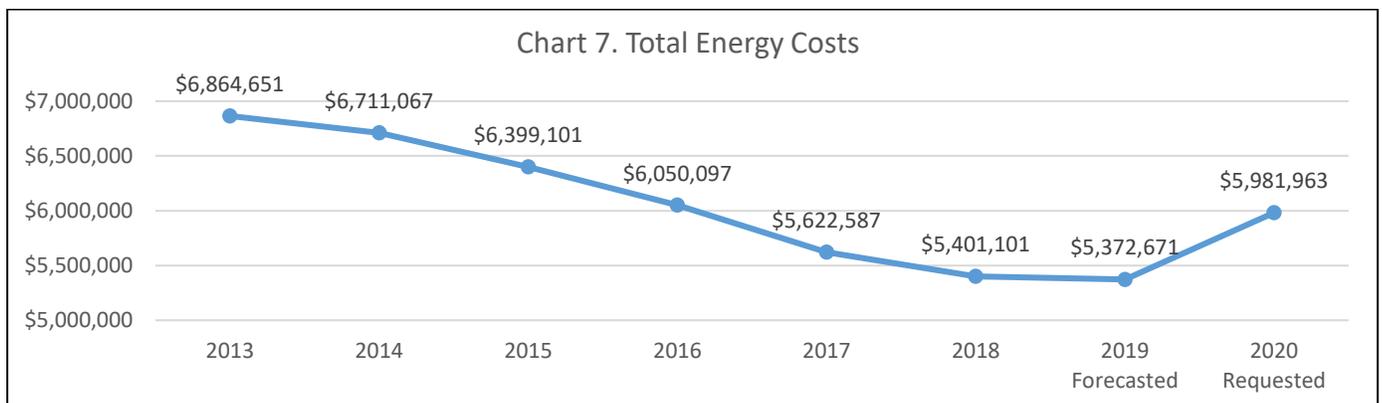


Chart 6 portrays a **60% reduction in Sanitary Sewer Overflows (SSOs)**. This reduction is attributed to combined efforts throughout the Department including the Annual Grease Campaign, the Area Rod Program, and IWC restaurant inspections and pollution prevention training. According to the Environmental Protection Agency, the national average for SSOs on an annual basis is 4.5 SSOs per 100 miles of pipeline. RWRD has approximately 3,500 miles of conveyance pipeline and, based on that average national value, we might expect to have 158 SSOs per year.

5. Sustainability

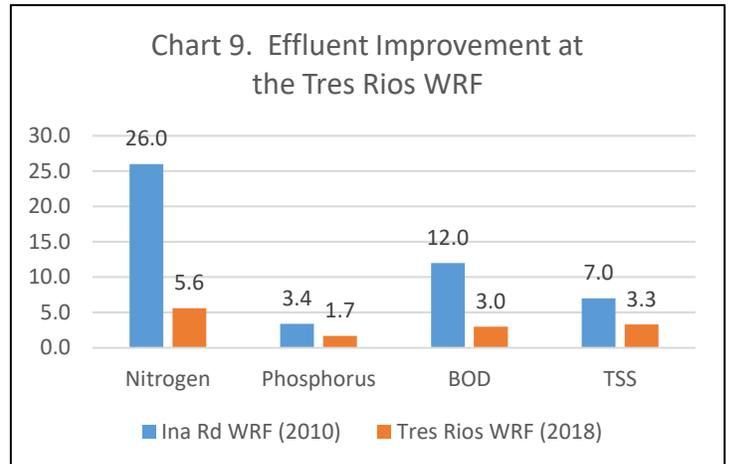
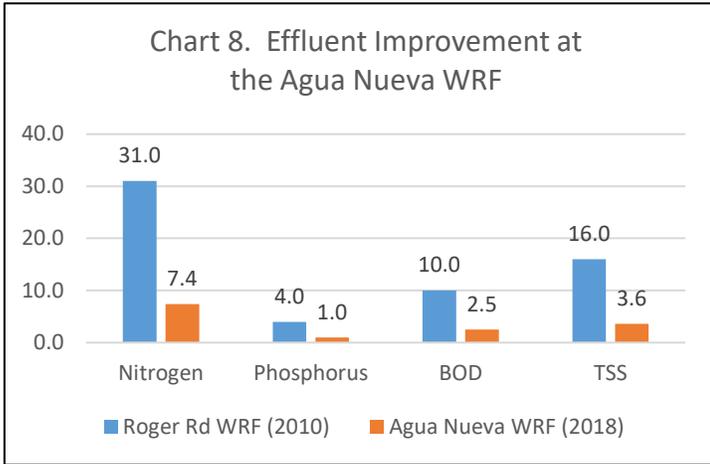
We are dedicated to achieving our mission in a manner that supports economic development, social well-being, and environmental protection to ensure the needs of current generations are met without compromising the ability of future generations to meet their own needs. We do this by **minimizing our carbon footprint** and focus our efforts on **renewable energy, energy efficiency, and water conservation**.

Chart 7 outlines a **13% reduction in total energy** (electricity, natural gas, and solar) costs over the past several years, even while these utilities have raised their costs to customers. Total energy costs are projected to increase in Fiscal Year 2019/20 due to several factors impacting our operations such as more stringent permits, changes in equipment from diesel to electric, and new equipment used to assist with continued odor control and new technology projects. The Department continues to focus on incorporating renewable energy sources whenever possible to reduce long-term operating costs and increase energy security.



Water is one of our most vital resources and we are committed to ensuring an adequate, safe water supply for ecosystems and current and future generations.

The following charts portray the **improved water quality** at the Tres Rios and Agua Nueva Water Reclamation Facilities through nutrient reduction. This has allowed the Santa Cruz River to **support riparian and aquatic life**.



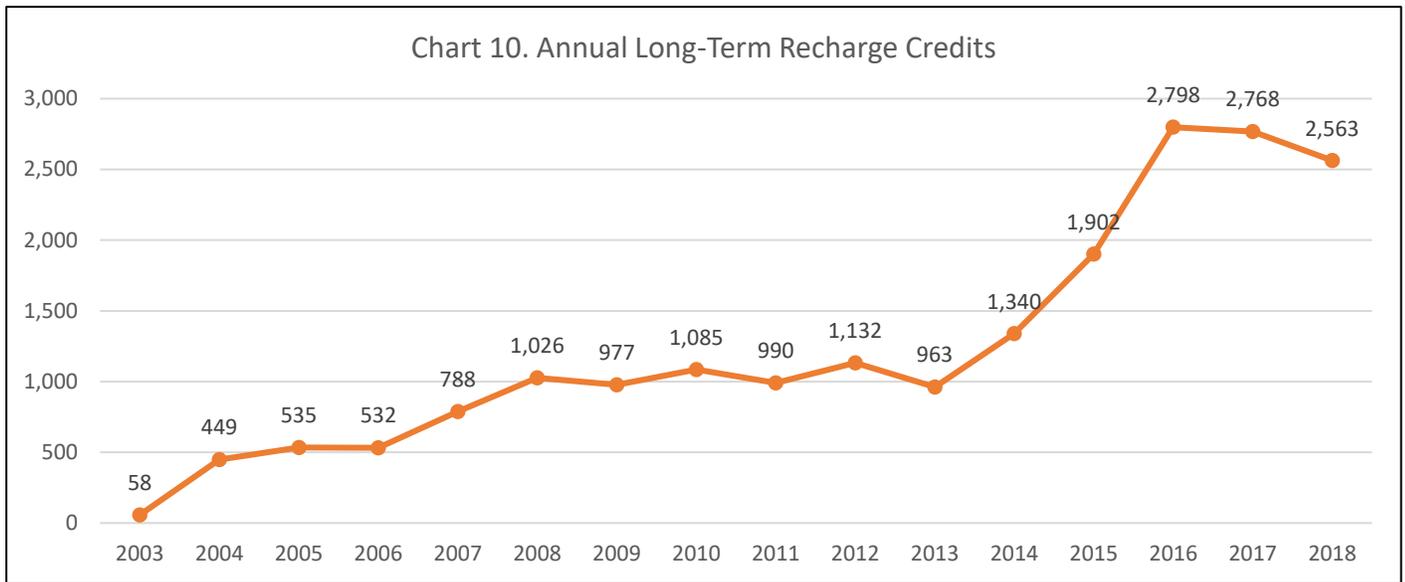
In November 2017, the Sonoran Institute research team discovered the federally endangered Gila topminnow had returned to the stretch of the Santa Cruz River near Tucson. The return of the endangered Gila topminnow was the highlight of the most recent report on the Santa Cruz River, [A Living River: Charting Santa Cruz River Conditions](#). “In December 2013, Pima County invested over \$600 million to upgrade the wastewater treatment process, dramatically improving water quality in the river. This improved water quality can now better support a rare aquatic environment along the river. It also enhances a river park that helps reconnect our community to our rich river heritage.”



Source: A Living River: Charting Santa Cruz River Conditions

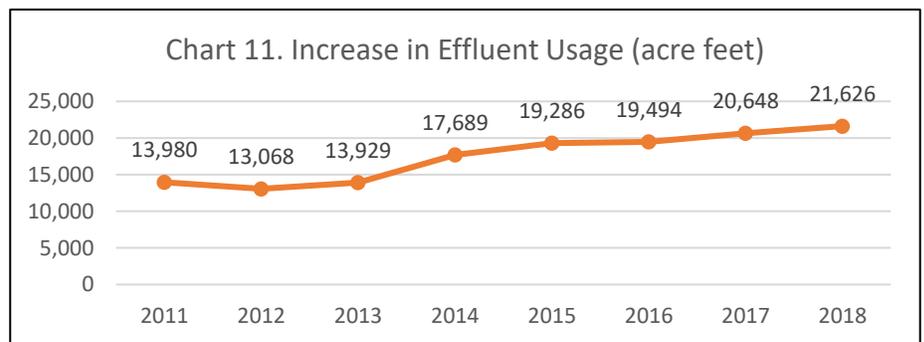
Additionally, effluent is utilized for environmental restoration and riparian enhancements at various projects including Paseo de las Iglesias, Arroyo Chico, Marana High Plains, and the Roger Road Ponds.

Charts 10 and 11 show additional benefits of our improved water quality. Chart 10 outlines the **166% increase to Pima County earned long-term recharge credits from replenishing the groundwater supply and recharging the aquifer** since 2013.



In addition to these recharge credits, we sell over 1,000 acre feet of effluent to Robson Quail Creek in Green Valley each year.

Chart 11 portrays the nearly **50% increase in effluent usage in the region**. Because of the higher quality of water, Tucson Water and other providers have increased their direct use of effluent.



6. Economic Development

Our Capital Improvement Program encompasses many projects each year that can save and create jobs, spur private sector investment, and enlarge the property tax base by facilitating the expansion of existing businesses as well as attracting new ones.

One example is a **Sewer Service Agreement** between Pima County and land developers. Pima County constructs system expansion and some of the project costs are covered through additional connection fees as the area lands are developed. The **Twin Peaks-Blue Bonnet** sewer project is an example of one such project. This \$13M project is constructing approximately 3 miles of sewer along a major thoroughfare adjacent to large swaths of undeveloped property. The first phase of this project was completed in December 2018 and the last phase is currently under construction.

Sewer augmentation projects improve the existing capacity in areas that we already serve. The following projects are ongoing or were completed over the past several years:

- **Fairgrounds Gravity Sewer:** Provides additional capacity in and around the Pima County Fairgrounds complex. Over the years, development of additional features at this location have been considered and sewer service concerns are always critical elements. This project also will allow RWRD to remove the existing Fairgrounds Water Reclamation Facility from service, which will improve aesthetics near the Fairgrounds property.
- **Speedway Area Capacity Augmentation:** Provides additional capacity for the area north of Speedway Boulevard and West of Warren Avenue. This area, in the vicinity of the University of Arizona, has seen extensive growth in the past and the University is planning additional expansion in the near future.
- **Broadway Boulevard Augmentation:** Improves flow, reduces odor, and provides additional capacity to the Park Place Mall area;
- **Aerospace Parkway Sewer Extension Project:** Provides additional capacity for the future development in the Aerospace Corridor and areas east of Nogales Highway and Hughes Access Road;
- **22nd St Augmentation:** Provides additional capacity for the area upstream of 22nd Street and Swan Road;
- **North Rillito Interceptor Relief Sewer:** Provides additional capacity within the North Rillito Interceptor downstream of Columbus Boulevard; and
- **Southeast Interceptor:** Provides additional capacity along Euclid Avenue between 18th Street and 36th Street. The project added additional capacity to serve the expanding southeast Tucson area and attract economic growth. It also included portions of the planned Greenway Project, improved drainage within the Greyhound Wash, and rebuilt portions in Barrio Viejo, Barrio Santa Rosa, and areas within South Tucson.

7. Innovation

We are consistently looking for innovations that could improve our processes, especially if they are combined with environmental and financial benefits.

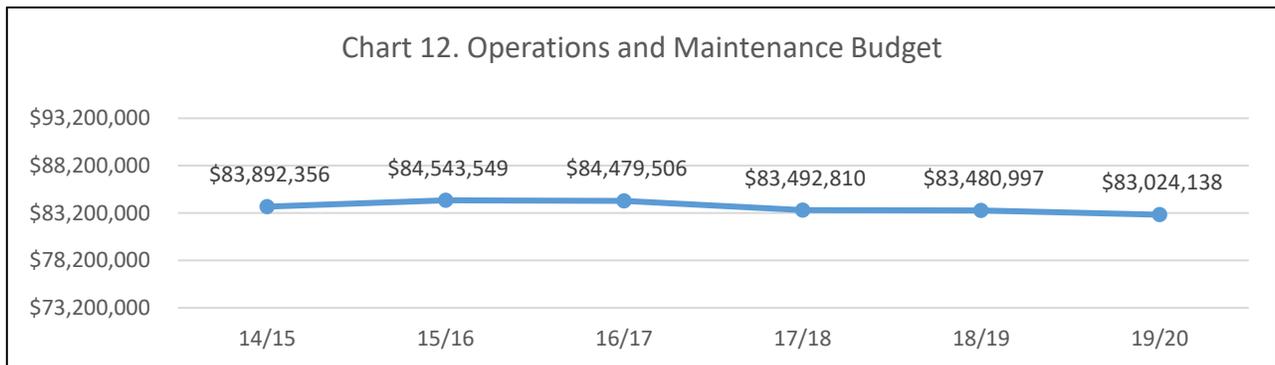
- We partnered with the University of Arizona on a National Science Foundation research project to evaluate a novel nutrient removal technique at the Tres Rios WRF. The project involved the piloting of anaerobic ammonia oxidation, or **Anammox**, as an innovative process for treating side stream ammonia flows for improved performance and reduced energy costs. Implementation of Anammox at the Tres Rios WRF could result in additional energy savings and is expected to be completed by the spring of 2020.
- We have evaluated the **CLEARAS** (Clear Algal Solutions) system for nutrient removal with a potential for revenue generation through the sale of algal biomass and the BioSCRU process for generating Class A biosolids.
- Negotiations are underway with WEST corporate member SUEZ for a long-term pilot project of **MABR** (Membrane Aerated Biofilm Reactor) as a treatment method for reduced aeration demand and energy cost of operation.
- This month we will take possession of a new instrument from WEST corporate member **Agilent** for work on an EPA sponsored project to evaluate the presence of microplastics in wastewater, biosolids, and effluent.

8. The Costs to Provide Our Services

The budget preparation process is an annual opportunity for managers across the Department to request the financial resources needed to accomplish the goals of their Unit. It is also an opportune time to communicate amongst the Divisions the important work they are doing, the financial support required to do so, and revisit our top priorities.

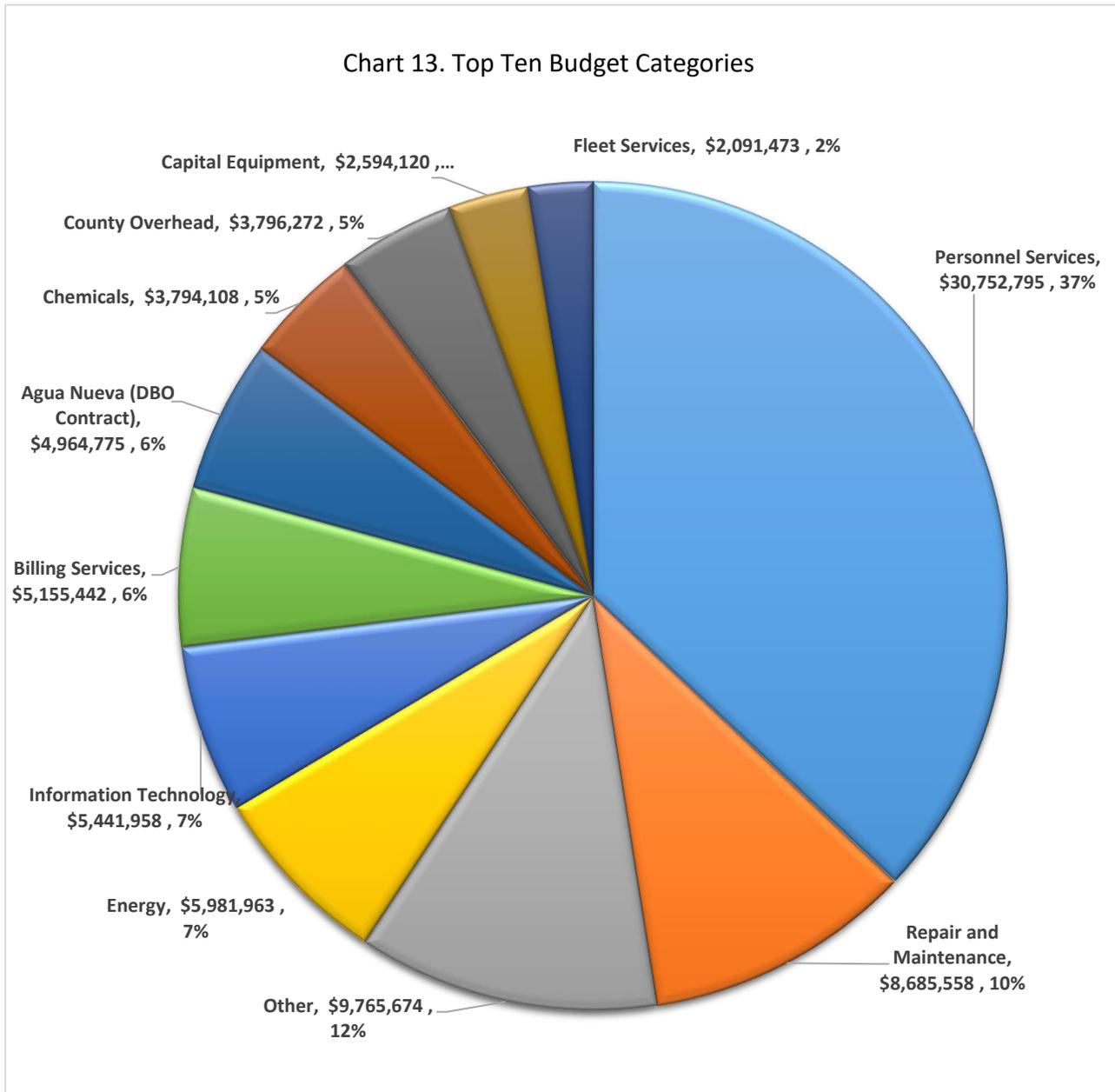
For those that requested increased funding to accomplish those priorities, detailed conversations have occurred over several months to include the purpose, associated costs, and a demonstrated diligent effort to find savings in other areas of their budget.

Despite cost increases from other utilities, employee costs, and other external cost increases due to inflation, we have maintained our Operations and Maintenance budget at **approximately a one percent difference over the past six years.**



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Chart 13 depicts the ten general categories of the Fiscal Year 2019/20 operations and maintenance budget request.



*Billing costs from FRMD and ITD Overhead costs were removed from the County Overhead. They are included in their respective categories.

Conclusion

We remain committed to identifying opportunities for streamlining our work and reducing waste. The Fiscal Year 2019/20 budget request has been carefully reviewed based on the operational needs of our utility and continue to relate to the essential elements of our Mission, Vision, and Pillar statements. Additionally, the 2019 Financial Plan prepared by the Department of Finance and Risk Management reflects our positive financial standing and another year with no increase needed in the sewer user fee. On Thursday, April 25, 2019, the 2019 Financial Plan was **unanimously** approved by the Regional Wastewater Reclamation Advisory Committee.

C.H. Huckelberry, County Administrator

Re: Major Performance Measures for Our Utility

May 10, 2019

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I hope you find this brief summary of our business beneficial as you consider our budget request for Fiscal Year 2019/20. Please do not hesitate to contact me if I can provide further details on any area of our business.

c: Carmine DeBonis, Deputy County Administrator for Public Works
Yves Khawam, Assistant Deputy County Administrator for Public Works
Eric Wieduwilt, Deputy Director, Technical Services and Engineering Division – RWRD
Jaime Rivera, Deputy Director, Conveyance Division – RWRD
Jeff Prevatt, Deputy Director, Treatment Division – RWRD
Jennifer C. Coyle, Special Assistant to the Director, Administration Division – RWRD
Barbara Escobar, Program Manager – CRAO
Mike Gerstenberger, Special Assistant to the Director – RWRD
Richard Miranda, Program Manager – RWRD
Judy Scrivener, Administrative Services Manager – RWRD
Marla Berry, Program Manager, Sr. – RWRD