Chair’s Message

The Regional Wastewater Reclamation Advisory Committee reviewed, evaluated and provided input on a variety of significant issues and projects this past fiscal year, with a focus on the Regional Wastewater Reclamation Department’s (RWRD) financial outlook. This Annual Report recaps some of the issues and projects that the Committee was involved in during Fiscal Year 2011/2012.

A major topic that the Committee was involved with this year was the Sewer Connection Fee Methodology revision. RWRD gave several updates to the Committee to inform them of the study that was being conducted to research alternative methods to charge sewer connection fees. The Committee held a public meeting in April to discuss the proposed new sewer connection fee method and to evaluate the possible impact on the Department’s future revenue and other financial impacts. RWRD also reviewed the method to calculate cost of service, after completion of the Regional Optimization Master Plan (ROMP), to set the sewer connection fees associated with the water meter size methodology. The Pima County Board of Supervisors unanimously approved the change in sewer connection fee methodology at their meeting on May 15, 2012.

In addition to staying informed on the ROMP program progress and budget, the Committee also heard several presentations and held discussions on the Biosolids/Biogas Master Plan. RWRD has been evaluating a number of options on how to effectively manage the biosolids/biogas in the future and discussed their findings with the Committee. The final draft report was presented to the Committee in July for further evaluation and review.

The Committee looks forward to continuing its close working relationship with the Department on future projects and the continuation of monitoring the progress of the ROMP program.

Ann Marie Wolf, Chair

John Lynch, Vice-Chair

Water and Energy Sustainability Center (WESC)

The Water and Energy Sustainability Center (WESC) is the second component of the Regional Optimization Master Plan to be completed and placed into service. The new facility opened its doors in December 2011 when Regional Wastewater Reclamation staff began moving in. The Regional Wastewater Reclamation Advisory Committee members were given a complete tour of the lab complex and held the January and February monthly meetings in the largest of the new Training and Development classrooms. The Committee members were also invited to attend the dedication ceremony in April.

The 41,000 square foot facility houses a state-of-the-art laboratory complex, office space for the Compliance & Regulatory Affairs, Industrial Waste Control, and Training and Development Offices. Training rooms include computer labs for computer skill classes and machinery equipment labs to teach repair and maintenance skills to the treatment and conveyance operators. The lab is a state certified facility and can offer analytical processes to other public entities such as universities and local, state and federal government agencies. Testing may also be performed for the Water Lab Alliance and Emergency Response Laboratory Network.

The center’s dedication ceremony was held on April 22nd – Earth Day – to demonstrate the important role the Regional Wastewater Reclamation Department plays in protecting the environment. Many sustainable features were designed and built into the facility. The energy-saving measures are expected to result in a 39 percent reduction in annual energy costs.

Water & Energy Sustainability Center Dedication Ceremony
Fiscal year 2011/12 has been very active in the Regional Optimization Master Plan (ROMP) Program.

Major construction continued at the Ina Road Upgrade and Expansion Project which remains on schedule to meet the October 17, 2013 substantial completion date with the overall project becoming 76 percent complete by year end. Expenditures on the project for the fiscal year totalled $108.7 million.

Construction progress at the Water Reclamation Campus Treatment Plant Project has been dramatic. By year end the overall project was 51 percent complete and was several months ahead of the substantial completion date of August 14, 2014. Expenditures on the project for the fiscal year totalled $71.4 million.

The new Central Compliance Laboratory and Training Center has been completed and became fully operational with the move-in of the Compliance and Regulatory Affairs Office staff, Laboratory staff and Training staff. The project was completed on schedule and under budget.

The 5-mile ROMP Plant Interconnect Project has been previously completed and is currently conveying a significant portion of the wastewater from the Roger Road Wastewater Reclamation Facility (WRF) service area to the Ina Road WRF. This project was also completed ahead of schedule and under budget.

Significant activities occurred in the Biosolids/Biogas Master Plan Study. The study concluded with final recommendations to continue the current cost-effective practice of land application of biosolids for beneficial reuse and pilot the conversion to Class A biosolids to plan for any regulatory changes and to determine any future markets for the Class A product. The study also recommended to proceed with a project to clean all biogas to pipeline quality and to market it.

A major activity during the year was to update the overall ROMP Program Budget. As a result the original ROMP Budget of $720 million was officially reduced to $660 million.

Actual ROMP expenditures during the fiscal year totalled $193.6 million. Overall expenditures in the ROMP Program from inception through June 30, 2012 totalled $337.5 million.

The overall ROMP Program work-in-place was 63 percent complete. The Program remains ahead of schedule and well within the established budget.

This past year, the Regional Wastewater Reclamation Department (RWRD) worked on important issues, such as the Regional Optimization Master Plan (ROMP) program, the Sewer Connection Fee Methodology Revision and the Financial Plan, among many other items. The Regional Wastewater Reclamation Advisory Committee participated in several important discussions involving these issues.

In January, I updated the Committee with an in-depth report on the ROMP program. This is the biggest program ever undertaken by RWRD, and also for Pima County, which is currently under budget and continues to remain on schedule. We are making great progress with each component of the ROMP program. The Water and Energy Sustainability Center opened in December 2011, the Water Campus Project is over 5 months ahead of schedule, and the Ina Road Project is also on schedule. I’m pleased to say that approximately 3,000 jobs have been created due to ROMP.

Another topic that the Committee was highly involved with was the Sewer Connection Fee Methodology revision process. The proposed methodology involved changing sewer connection fee calculations from a fixture unit equivalent (FUE) basis to a water meter size basis. The Committee was kept apprised of each step of this process and held a public meeting in April to receive public comment on this issue. I appreciated the Committee’s interest in this matter and the feedback received on the new method. Several discussions were held between the Committee and RWRD staff to clarify and address concerns, questions and discuss any suggestions they had. The Pima County Board of Supervisors supported and approved this method, and it took effect July 1, 2012.

Each year there is a review of the Financial Plan primarily to decide if the current structure of fees covers the necessary expenditures of the RWRD and that the fees will sustain the Department for the work that needs to be done. The Committee provided assistance with the review of the draft Financial Plan for Fiscal Year 2012/2013 and supported RWRD’s 2012 Financial Plan. RWRD’s budget was approved by the Board of Supervisors in June, and the outlook for the FY 2012/2013 budget is favorable.

RWRD dealt with several important matters this year to maintain the Department’s mission to protect the public’s health, safety and environment, and with the Committee’s assistance, will continue to address those issues in the coming year. I appreciate the Committee’s ongoing support and look forward to another eventful year!
Sewer Connection Fee Revisions

The Regional Wastewater Reclamation Department (RWRD) conducted a review in 2011 on how sewer connection fees are assessed in other jurisdictions throughout the country. Eric Wieduwilt, Deputy Director for RWRD, introduced the proposed changes to the sewer connection fee methodology to the Committee at the February and March 2012 meetings. He stated RWRD had made a recommendation to the County Administrator to change from the Fixture Unit Equivalent (FUE) method to one based on water meter size. The benefits to adopting the water meter size method include:

- Widespread use and acceptance throughout the industry
- Simple to understand and implement
- Easy to calculate/estimate fees for planning purposes
- Improved administrative efficiency.

In addition to the review on connection fee methods, the Department also conducted a financial evaluation of the cost to provide treatment and conveyance capacity to newly connected residential and commercial customers. If the proposed sewer connection fee methodology is adopted by the Board of Supervisors (BOS), the result would be a lower connection fee to most new users applying for sewer connection permits.

The Committee held a Public Meeting to discuss the proposed sewer connection fee structure on April 12, 2012. The meeting was well attended by the public, including representatives from developers, home builders and multi-housing associations. The Committee heard discussion on how the proposed change could affect RWRD’s revenue and overall Financial Plan in the future years. While the expected impact to revenue is projected to be minimal, the Committee was concerned whether the change could result in higher user fees to make up the difference in lower revenues from reduced connection fees.

During the call to the audience, there were six individuals who stood and spoke in favor of the proposed change. Each speaker felt that the proposed changes in sewer connection fees would help stimulate construction in Pima County and ultimately have a positive impact on the economy.

The Committee expressed a desire to review further detail on the projected impact to RWRD’s Financial Plan and re-iterated their position that this proposed change not affect sewer user rates.

The Committee passed a motion with a 5 – 3 vote to recommend to the BOS to approve the proposed sewer connection fee structure, and if needed, the Committee reserved the option of making an amendment to this motion at their April 19th meeting if they had concerns after hearing more detail on the 2012 Financial Plan.

At the subsequent meeting on April 19th, the Committee heard further detail from Mr. Tom Burke, Director of Finance and Risk Management, on the 2012 Financial Plan. After the discussion at this meeting, the Committee was able to vote to support RWRD’s 2012 Financial Plan and to write a letter to the BOS in support of the proposed sewer connection fee structure. The connection fee ordinance was considered and approved at the BOS meeting on May 15, 2012. The Committee plans on staying informed on the sewer connection fee changes and the impact to the Department’s revenue at future meetings. The Committee will stay alert to any changes that could impact sewer user fees and make recommendations if needed.
Biosolids/Biogas Master Plan Update

This past year, the Regional Wastewater Reclamation Department (RWRD) has been exploring various options on how to cost effectively utilize biosolids and biogas. The RWRAC received several presentations on this issue and continues to receive updates on the ongoing process.

Effluent is an often sought-after product of the wastewater treatment process. However, biosolids, a major by-product of wastewater treatment, is viewed as a disposal problem. Biosolids result from the treatment of organic matter and some inorganic materials, such as sand and grit, in the wastewater treatment process. During the treatment process, these organic and inorganic materials are referred to as “sludge,” or “biosolids.”

Biosolids that are beneficially utilized through land application are typically provided to farmers, allowing them to supplement commercial fertilizer. Biosolids that meet the Class B pathogen treatment and pollutant criteria – in accordance with the EPA standard – can be land applied with formal site restrictions and strict record-keeping requirements. Through land application, RWRD beneficially utilizes its biosolids and saves money by not having to pay expensive landfill disposal costs.

For the time being, the application of biosolids on agricultural lands appears to be the most cost-effective and beneficial method of disposal. It costs Pima County approximately $85 per dry ton to haul its biosolids to agricultural lands; this is one of the lowest costs in the nation. In comparison, for example, to some communities in California that pay over $300 per ton to dispose of their biosolids.

Although there has been some loss of agricultural lands in Pima County, there is still enough nearby farmland to allow RWRD to continue this type of disposal method. However, should area agricultural lands dramatically decrease, RWRD is considering the use of biosolids on properties owned by the County.

Biosolids produced by RWRD today are classified as a Class B product. Class B biosolids are significantly less expensive to produce than Class A biosolids, although there are far more restrictions and regulatory requirements surrounding the disposal of a Class B product. In the future, federal or state regulations may mandate the transition to the production of Class A biosolids. RWRD is preparing to respond to this possibility. However, significant research and marketing efforts would be required to “sell” biosolids (both figuratively and literally) to businesses and residents. It is important to be aware that a mandate to treat biosolids to a Class A standard would impact sewer user fees.

Biogas, another by-product of the wastewater treatment process, is produced through the anaerobic digestion of sludge (biosolids) in the wastewater treatment process. Biogas generated by the anaerobic treatment process is comprised primarily of methane gas, carbon dioxide, siloxanes, and other contaminants. Biogas can be used to generate power in a co-generation facility, or it can be cleaned to a very high level through the removal of carbon dioxide, siloxanes and other impurities. Once cleaned, it becomes biomethane and can be added to natural gas pipelines that provide gas to a number of different customers. When cleaned to pipeline quality, biogas also can be compressed and turned into compressed natural gas (bioCNG) for use as fuel in automobiles and other vehicles.

Pima County has a number of options for putting the biogas generated at both the Roger Road and Ina Road facilities to beneficial use. Because the facility replacing the existing Roger Road Wastewater Reclamation Facility (WRF) will not treat sludge, the biosolids generated at the new facility will be piped to and treated at the upgraded and expanded Ina Road WRF. In addition, biosolids from the Green Valley WRF will be hauled and treated at the Ina Road WRF. This influx of biosolids will increase the amount of biogas that will be generated at the Ina Road WRF.

RWRD carefully considered the economics of upgrading and operating the existing co-generation facility, as well as the economics of constructing and operating a new co-generation facility. In both scenarios, it was determined that commercial rate power purchased from Tucson Electric Power (TEP) was a more cost effective-option than an on-site power generation facility.

Even with the addition of biosolids from the new Roger Road WRF and the Green Valley WRF, there would not be enough biogas to fully power the expanded and upgraded Ina Road WRF. Under this circumstance, it would require the purchase of electricity from TEP to supplement on-site generated electricity. However, if RWRD were to forgo generating its own electricity and purchase all required power from TEP, it would benefit from cost-saving tariffs enjoyed by large users.

After analyzing the potential alternatives, RWRD recommended that Pima County enter a contract with a private sector firm to design, build, finance, own and operate a facility that would clean RWRD’s biogas to pipeline standards. That company would be responsible for selling the cleaned product - biomethane - to interested parties. In return, the company would pay RWRD for the raw biogas it provides. These payments could help defer costs associated with the operation and maintenance of Pima County’s publicly owned treatment works.
The Committee reviewed the ordinance that governs its activity and purpose early in the year and re-committed its focus to review financial data for the Regional Wastewater Reclamation Department (RWRD) and make recommendations to the Board of Supervisors (BOS). Each month the Finance and Risk Management Department provided an update on RWRD's revenues and expenditures compared to the adopted budget for Fiscal Year 2011/12 of $72.9 million in Operating and Maintenance (O&M) expenses. The approved Capital Improvement Program budget for the fiscal year was $238.6 million.

The Committee had several opportunities to review the Financial Plan that was prepared by the Finance and Risk Management Department. At the March 2012 meeting, Mr. Tom Burke, Director of Finance and Risk Management Department, discussed the Financial Plan and answered the Committee's questions. The Financial Plan detailed the 5-year cash flow for RWRD, and addressed the issue of how the Department is planning to cover future debt service payments. Mr. Burke returned to the April 2012 meeting to further discuss the Department's financial status. In particular, the Committee wanted to address the sewer user fee rates and how they were being evaluated for upcoming years. The Committee is sensitive to the sewer user rates and wanted to have assurances that future expenditures and the revision in the sewer connection fee methodology would not have a negative impact on sewer user rates.

In March 2010, the BOS adopted four automatic sewer user rate fee increases to be effective annually through July 1, 2013. On July 1, 2011, the sewer user rates increased for residential users to a flow volume rate of $2.912 per ccf (a ccf equals one hundred cubic feet) and the monthly service fee increased to $11.14. Based on these rates, the FY 2011/12 average residential monthly sewer user charge was $34.44 on a sewer flow volume of 8 ccfs.

At the April 2012 meeting, the Committee voted unanimously to support the 2012 Financial Plan. In June, the BOS adopted RWRD's FY 2012/13 budget. For the new fiscal year, the Department will have a budget of $75.5 million for O&M expenses.

The Committee heard several presentations regarding the Regional Wastewater Reclamation Department’s (RWRD) Capital Improvement Plan (CIP); the most comprehensive of those occurring on November 17, 2011 and March 15, 2012. Outside of the Regional Optimization Master Plan (ROMP), Pima County RWRD manages various other capital programs and projects. The five ongoing CIP programs include Conveyance Rehabilitation, Conveyance Augmentation, Utility Modification, Conveyance Odor Control, and Treatment Rehabilitation. These five programs were established as a method to address any ongoing maintenance or system upgrades required over time. The programs do not have an end date but rather are intended to continue with the life of the system. Funding for these programs is provided mainly by sewer revenue obligations.

Two other significant programs run by the Department are the Security Master Plan and the SCADA (Supervisory Control and Data Acquisition) Master Plan. These programs are designed to address specific and limited challenges currently facing RWRD. The Security Master Plan came out of a study that was conducted by RWRD to find the best method to upgrade security at all of the facilities including pump stations and any outlying facilities. Information from the SCADA system is used to optimize the system by improving process control. Both programs are also funded by sewer revenue obligations.

Since the Department implemented the programs, the CIP includes a few independent projects such as the Continental Ranch Regional Pump Station Upgrades. By the end of Fiscal Year 2011/2012, RWRD completed $18 million in non-ROMP work. The capital program is under constant evaluation in hopes that the Department can fine tune any future expenses, and RWRD has worked to develop a business model that will change the maintenance culture so that future needs can be better projected.

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Wastewater Management Advisory Committee Activities
July 2011 – June 2012

July 2011: No meeting

August 2011: The Committee learned that the County had moved forward with a new contract for the Household Hazardous Waste Program and PDEQ is the manager of the contract for Pima County. An update on the Marana 208 Plan Amendment was given. A presentation was given to the Committee on the PAG Watershed Planning Program.

September 2011: The Committee was given presentations on recent activities for the Regional Optimization Master Project (ROMP), and Tucson Water’s reclaimed system. John Warner, Deputy Director, provided an update on the Conveyance Division’s activities.

October 2011: A presentation on treatment and operational issues was given to the Committee by John Sherlock, Deputy Director. A System-Wide Odor Control update for the second and third quarters of 2011 was provided. Mark Stratton presented a recap of the Regional Wastewater Assessment Task Force Think Tank Report.

November 2011: The Committee received an overview on the 2010 Effluent Generation and Utilization Report, which provides an annual accounting for what effluent is generated. The Committee also received a presentation for the Enhanced Recharge Demonstration Project and learned the objectives of this project were to increase recharge and evaluate the effectiveness of enhanced recharge methods.

December 2011: The Committee was updated on the progress of the Connection Fee Methodology change process. The Committee held a discussion regarding the New Design Manual Report and the updates being made to the manual. The Committee also received updates on customer advocacy issues, such as: billing appeals, rates and charges, low-income subsidy program, community outreach, and the Vector Roach Control Program.

January 2012: Jackson Jenkins, Regional Wastewater Reclamation Department (RWRD) Director, provided a detailed update on ROMP. The Committee was given a tour of the newly constructed Water and Energy Sustainability Center.

February 2012: A presentation on the Biogas/Biosolids Master Plan was given to the Committee on how imperative it is to plan for the management of the biosolids/biogas. The Committee heard updates on State legislative actions that could impact RWRD.

March 2012: The Committee received a 2012 Financial Plan update, as well as a Capital Improvement update that included discussion related to the Modern Streetcar Project. A status update on the Connection Fee Methodology process was also provided.

April 2012: The Committee held a Public Meeting for public comment on the proposed sewer connection fee schedule and voted to recommend to the Board of Supervisors to approve the proposed sewer connection fee structure. At the regular monthly meeting, the Committee continued discussion on the 2012 Financial Plan. A presentation on “The Birds of PCRWRD” was given, and the Committee was also notified of the Water and Energy Sustainability Center Dedication Ceremony.

May 2012: New Committee member, Amber Smith, was welcomed as a representative of District 3. The Committee learned that the Board of Supervisors unanimously approved the new sewer connection fee ordinance. The Committee provided input and discussed the four follow up reports to the new ordinance requested by the Board. The Committee also received an update on the Biosolids/Biogas Master Plan Report. The Marana Sewer Obligation Debt Fact Sheet was shared with the Committee for their review and comment.

June 2012: Two new members, Alan Forrest with Tucson Water, serving as an ex-officio member, and Mark Taylor, representative of the Citizens’ Water Advisory Committee, were introduced to the Committee. The Committee received an overview and presentation on the Dispose-A-Med Program. Ann Marie Wolf and John Lynch were re-nominated as Chair and Vice-Chair of the Committee.

Regional Wastewater Reclamation Advisory Committee

Fiscal Year 2012/13 Meetings

July 19, 2012
August 16, 2012
September 20, 2012
October 18, 2012
November 15, 2012
December 20, 2012
January 17, 2013
February 21, 2013
March 21, 2013
April 18, 2013
May 16, 2013
June 20, 2013

Agendas and minutes are available on the Regional Wastewater Reclamation Advisory Committee web page:
www.pima.gov/wwm/programs/rwrac

General Regional Wastewater Reclamation Department activities can be viewed on the Department’s website:
www.pima.gov/wwm

Regional Wastewater Reclamation Advisory Committee meetings are generally held on the third Thursday of every month, in the Pima Association of Governments’ 5th floor conference room, Transamerica Building, 177 North Church Avenue, Tucson.

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