

WASTEWATER MANAGEMENT ADVISORY COMMITTEE
December 20, 2007

Committee Members Present:

Adam Bliven	Sheila Bowen	John Carhuff
John Carlson	Brad DeSpain	Marcelino Flores
Barbee Hanson	Rob Kulakofsky	Mark Stratton
Ann Marie Wolf	Mike Gritzuk	

Committee Members Absent:

Steve Halverson	Armando Membriola	John Sawyer
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Staff Present:

Mike Bunch	Ed Curley	Sandy Current
Laura Fairbanks	Mary Hamilton	Suzy Hunt
David Smith	Mike Kostrzewski	Jeff Nichols
Lorraine Simon		

Other County Staff Present:

Chuck Wesselhoff
County Attorney's Office

- I. **CALL TO ORDER.** Chair, Adam Bliven, called the meeting of the Wastewater Management Advisory Committee (WMAC) to order at 7:54 A.M.
- II. **APPROVAL OF MINUTES.** The Committee approved the minutes of the November 8, 2007 Public Meeting and November 8/15, 2007, WMAC meeting.
- III. **COMMITTEE/SUBCOMMITTEE REPORTS.**

- A. **Citizens' Water Advisory Committee (CWAC) Update.** Mr. John Carhuff presented the CWAC Update. In early January 2008, CWAC's Finance Subcommittee will present the proposed City of Tucson Water Department Financial Plan for FY 2008 – FY 2013 and proposed revenue increases to the full CWAC Committee. The Proposed Financial Plan recommends residential customer rate increases of 9.8% for FY 2008/09 and FY 2009/10, and then an increase of 7.1% each subsequent year from 2010/11 through FY 2012/13. This new proposed financial plan runs from 2009 to 2012. Looking at the period 2008 to 2012 (which are the years that are common to Tucson Water's previous financial plan) the forecast for water sales revenues for that five year period has declined by approximately \$20.7 million (at existing rates). In tackling the new financial plan, the CWAC Subcommittee had to account for that lower forecast. In addition to this projected shortfall, fees tied to "growth" (e.g., system equity fee, water resources fee and connection charges), are forecast to be \$18 million lower during this period. Mr. Carhuff informed Committee members that these are the real drivers for the recommended increases. Discussion followed. (Mr. Carhuff provided staff with a copy of the Proposed Financial Plan.)

Mr. Bliven asked if the CWAC Subcommittee felt that Tucson Water would not meet its revenue targets and not grow as fast as previously predicted. Mr. Carhuff responded in the affirmative and added that the Utility would not meet certain targets.

Mr. Stratton observed that, if Tucson Water's projections are for less water to be sold to consumers, indirectly there is a relationship to how much sewage flow goes to the wastewater

treatment plants. He asked if there had been discussions between Department and Tucson Water staff with regard to these projections and how they might impact future revenue sources for the Department. Mr. Jeff Nichols responded there had not been discussions to this point in time, and noted this was the first time he had seen this information. He added that he would review the Proposed Financial Plan and would plan to meet with Tucson Water's finance staff.

Mr. Stratton felt a fair amount of the water reduction probably was in the outdoor areas and low-flow plumbing devices were common for new developments. In addition, he felt that it would be good to see where Tucson Water is projecting the decrease in flows and how they are coming up with those numbers.

Mr. Nichols informed Committee members that, in the past, the Department had seen a decrease in typical family use from 10 ccf/month to 9 ccf/month. He added that if average residential usage drops below 9 ccf/month, the Department would need to adjust its user fee rate model and evaluate the potential impact on revenues.

Mr. Mike Bunch informed the members that the Department has a lot of coordination with the City of Tucson Water Department especially on population projections. He noted that two years ago flows increased by 700,000 gallons per day (GPD) at the Roger Road Wastewater Treatment Plant (WWTP), and last year they only increased by 100,000 GPD. In discussions with Tucson Water, Department staff learned that water sales were flat.

Mr. Gritzuk asked Mr. Stratton if Metro Water had experienced a reduction in water sales. Mr. Stratton responded that even with increased growth in the area, Metro Water has seen its flow production not increasing at the same rate. He felt this was attributable to lower consumer consumption - smaller lot size, less outdoor irrigation and new homes having low-flow plumbing devices.

Mr. Gritzuk said Department staff would review its records to see if there is a corresponding increase in solids concentration.

IV. WASTEWATER MANAGEMENT DIRECTOR'S REPORT. Mr. Mike Gritzuk presented the Director's Report.

At this point in the meeting, Mr. Gritzuk reminded the Committee that at previous meetings he had presented to those Committee members present a personalized glass art piece in recognition of their time and effort on behalf of the Department and the County. He again conveyed the County Administrator's appreciation to the Committee members for their participation on the Committee. Mr. Gritzuk then presented the personalized glass art piece to Ms. Ann Marie Wolf.

On December 11, 2007, the Department presented the FY 2007/08 Financial Plan and user fee and connection fee rate requests to the Board of Supervisors. The Board of Supervisors approved the Financial Plan and proposed rate increases. Mr. Gritzuk informed Committee members this was the first time in many years that the Board of Supervisors had approved a rate increase exactly as recommended by the Department and the Committee. Mr. Gritzuk thanked Committee members for their efforts in support of the Financial Plan. He felt this was one of the most significant achievements the Department had made this year.

Mr. Gritzuk provided a status report on the Department's Lower Flows Program. The Program is being conducted in cooperation (under contract) with the Water Conservation Alliance of Southern Arizona (Water CASA). There has been a reduction in wastewater coming out of those homes where the Department has changed out the toilets to low-flow toilets. However, the Department

has received reports that there are now blockages in service connections in some homes where low-flow toilets have been installed. The Department hired a consultant to evaluate this program. The consultant's report recommended that the Department should try to avoid installation of low-flow toilets at the terminal ends of streets and flat slope areas. As much of the area where Water CASA intended to offer low-flow toilets fits this category, the report advised against continued installation of the low-flow toilets where those conditions exist.

Mr. Stratton asked if just converting to low-flow toilets in residences was enough to create problems in the house connection sewers. Mr. Gritzuk responded this was the case in several instances. Mr. Stratton asked, if there was an ordinance revision push that required retrofitting resale homes with low-flow devices how that would impact future operations. Mr. Gritzuk responded the Department is re-evaluating the Lower Flows Program because it has become much more complicated than originally envisioned. The Department also wants to evaluate whether installing low-flow shower heads would be more cost effective (and save an equal amount of water).

Mr. Stratton noted that a member of the Tucson City Council had made a recommendation that new homes be plumbed for graywater systems. He asked if the Department was looking at this issue - with Tucson Water forecasting lower flows, are we going to be seeing some design criteria changes? Mr. Gritzuk responded that the Department also hired a consultant to perform a study of graywater systems. The Department is suggesting that installation of graywater systems only be accomplished in new construction and it is advising against retrofitting older homes with graywater systems. The Department will continue to evaluate this area.

Mr. Brad DeSpain asked if Water CASA was going to finish the Lower Flows Study. Mr. Gritzuk indicated that the Department wants Water CASA to complete the Program. However, he felt there would be some tweaks to the Lower Flows Program as originally envisioned (e.g., possibly incorporating low-flow shower heads).

Mr. Gritzuk said the Department does flush its sewer lines in areas where there are flat slopes and terminal sewers. The Department is considering expanding its flushing program. He informed the members that the Field Operations crews use potable water to flush the lines.

Mr. Carlson said he would like a briefing on graywater added to a future agenda.

Mr. Stratton asked (with the low-flow plumbing code having been in effect for some years), whether the Department has performed any closed circuit television (CCTV) inspections of sewer lines in subdivisions to determine the impact of low-flow devices. Mr. Bunch responded CCTV inspections have only been performed on lines where "dumping" was necessary. Mr. Stratton asked if the Department had conducted any CCTV inspections in some of the newer subdivisions that indicate whether or not there are solids that are settling out on the lower slopes since the plumbing code was revised. Mr. Bunch responded in the affirmative with regard to lower slopes.

Mr. DeSpain asked if it was unlawful or impractical for the Department to use wastewater rather than potable water to flush sewer lines. Mr. Gritzuk responded wastewater cannot be used to flush lines, but reclaimed water could probably be used. He informed the members that the Department was having discussions with Tucson Water about possibly using the City's reclaimed water system where flushing is necessary. Mr. Bunch added the issue is cost/distance to reach a reclaimed valve. Currently, the Department has agreements with several water utilities to use water from their fire hydrants.

Mr. Bliven observed that as everyone does the right thing to reduce their water use, the Department's income is reduced. Operations and maintenance costs are going up and user fee revenues are going down.

V. DISCUSSION.

A. Old Items/Updates.

1. **FY 2007/08 Financial Plan Update.** Mr. Jeff Nichols presented the FY 2007/08 Financial Plan Update. Mr. Nichols thanked Committee members for their support of the Department and the Financial Plan. In addition, he thanked Mr. Bliven, Ms. Barbee Hanson and Mr. Carlson for attending the December 11, 2007 Board meeting and expressing their support of the Financial Plan.

Mr. Nichols informed the members that Department staff is in the process of prioritizing the Department's five-year Capital Improvement Program (CIP). The order of prioritization is regulatory, rehabilitation and then capacity. At the same time and in parallel, staff is performing a review of Departmental budget requests for FY 2008/09. The FY 2008/09 Budget will be aligned with the FY 2007/08 Financial Plan.

Mr. Bliven also thanked Mr. Carlson and Ms. Hanson for attending the December 11, 2007 Board meeting and the other Committee members for their support of the Financial Plan.

2. System Wide Odor Control Program

- **Update.** Mr. Gritzuk presented the System Wide Odor Control Program Update. On December 11, 2007, Mr. Gritzuk presented a status report on the Department's Odor Control Program to the Board of Supervisors. The Status Report informed the Board that the Department feels it has made substantial improvements in odors system-wide through the Odor Control Program.

Because of some cultural resource issues encountered in the Odor Control Program, the two Roger Road WWTP Bio-tower Odor Control Projects remain to be completed. These massive bio-tower structures emit a lot of air with low concentrations of odors. When the air volume is combined with the odor, there is a substantial amount of net odors being emitted by these structures. The first bio-tower contract has been let, and will cost a little under \$1 million. Project completion is scheduled for March 2008. Once this project is complete, the Department will conduct air testing to see if it needs to move ahead with the second Bio-tower Project.

- **Citizens Involvement Committee (CIC) Report to Board of Supervisors.** On December 11, 2007, the CIC gave its report to the Board of Supervisors. Mr. Gritzuk reminded Committee members that Mr. Carlson and Ms. Wolf were members of the CIC. Mr. Gritzuk reviewed the CIC recommendations. These include: 1) Both bio-towers should be completed as soon as possible. 2) There must be a constant oversight and evaluation of all of the odor control projects that have been implemented as part of this project. This includes proper operation and maintenance with no skimping during times of budgetary shortfalls. (Mr. Gritzuk noted that, during meetings with the CIC, the members stressed that their concern was that, whenever there is a budget "crunch," items like odor control are the first to be "scratched.") The CIC wanted a guaranteed continuation (and funding) of the odor control program. 3) Odor control funding should be a separate line item in the Department's budget and should never be cut. Mr. Gritzuk informed Committee members that in the Department's future

budgeting, odor control will be a separate line item. 4) As both the Ina Road and Roger Road facilities are designed and constructed, there can be no skimping on odor control technology. Mr. Gritzuk said as the Department moves ahead with the ROMP, the best available technology at the time will be installed. He felt the Department would meet this recommendation. In addition, he felt the Department had used very innovative technology in the projects that have been installed to-date. 5) The Board of Supervisors should convene a new committee to specifically look at how the Department runs odor control infrastructure and operations and maintenance. The new committee should be charged with developing funding mechanisms that will assure odor control is never sacrificed to future budgetary shortfalls.

The Board of Supervisors acknowledged both the Department's Odor Control Program Status Report and the CIC recommendations. In addition, the Board has given the CIC recommendations to the WMAC for further evaluation, study and advice.

Mr. Carlson and Ms. Wolf provided their perspective on the CIC recommendations. Mr. Carlson informed Committee members that while he could not smell any substantial odors where controls had been installed, one CIC member stated that when the odors go up, they have a tendency to accumulate, increase in concentration and spread out. He asked Mr. Gritzuk for further clarification. Mr. Carlson felt there was acceptance by CIC members that the Department had done a lot of work to control odors, but it could not address all of the odors until all of the big ROMP projects are completed.

Ms. Wolf provided her perspective on the CIC recommendations. She said she has worked in the affected area and the odors were noticeable. She agreed with Mr. Carlson's observation that there was general acceptance on the part of the CIC that the Department was addressing odor control issues.

Mr. Gritzuk reviewed statistics included in the Odor Control Status Report. Where the Department has odor control projects in place and operational (e.g., at the headworks to the Roger Road WWTP) there is a dramatic decrease in odors. Before the odor control tent was constructed over the Roger Road headworks, the concentrations of hydrogen sulphide averaged 25 parts/million. With installation of the odor control, concentrations in the vicinity of the tent are now at a fraction of 1 part/million. The consultant who continues to perform odor control monitoring around the parameter of the Roger Road facility, has reported that all of the testing to-date has consistently shown a reduction of at least 90% of the odors based on all the odor control projects in place.

When the Department started the Odor Control Program (knowing that the Roger Road facility was going to be decommissioned), staff informed the CIC that, as the Department moved ahead with the Odor Control Program and it implemented the "Quick Fix" Projects, the community should see a "noticeable" reduction in odors. Later, the Department informed the CIC that the community should see a "significant" reduction of odors as the "Quick Fix" Projects moved ahead. Mr. Gritzuk felt the Department had achieved this goal and gone beyond that promise.

The cost of construction and installation of equipment for the Bio-tower Projects is approximately \$1 million each. The Department has let the contract for the first Bio-tower Project. If noticeable odors continue after completion of this project, the second Bio-tower Project would need to be completed.

Mr. Carlson asked about the bio-tower operating costs. Mr. Gritzuk responded the Department did not have an exact figure, but it will have a line item in future budgets for capital and Operations and Maintenance (O&M) costs for odor control. He gave one example. On December 18, 2007, the Department prepared a contract amendment for the replacement of granule-activated carbon in the units that it installed. The cost is for the replacement of carbon, at an estimated cost of \$1 million for one year. The Department did not have that cost in prior years.

Mr. Carlson asked about the spreading out of odors from the facility. Mr. Gritzuk responded when the air is heavier (in wintertime). The heavier air creates an air blanket over the facility and keeps odors down and they spread out on the ground to the surrounding areas. He felt that factor would not be a problem if you treat all of the odors. The Department wants to conduct testing before investing in the second \$1 million Bio-tower Project.

Mr. Gritzuk informed Committee members that they received the CIC recommendations in their meeting package, and the Committee needs to determine a mechanism of how it reviews them and respond to the Board of Supervisors with recommendations on each of the CIC recommendations.

Mr. Stratton suggested that the Committee review the CIC Report for discussion/recommendations to the Board of Supervisors at the next Committee meeting.

Mr. Bunch informed Committee members that the CIC wanted both bio-towers completed at the same time. He said that, if the Department changed the procurement method it has in place now, it would delay the first project until June or July 2008. Currently, completion of the first Bio-tower Project is scheduled for March 2008.

Mr. Bliven thanked Mr. Carlson and Ms. Wolf for their individual participation on the CIC.

3. Regional Optimization Master Plan (ROMP)

- **Update.** Mr. Gritzuk provided the ROMP Update. There are three major components of the ROMP Program. They are the upgrade and expansion of the Ina Road Water Pollution Control Facility (WPCF), the Plant Interconnect and the new water reclamation campus at the Roger Road site.

The consultant, Brown & Caldwell, is currently designing the Plant Interconnect. The Department has selected Sundt/Kiewit as the Construction-Manager-At-Risk (CMAR) for this project. Contract negotiations are underway for the initial phase of their contract. The initial phase is for the CMAR to participate in the development of the design. They will participate in such activities as cost modeling, constructability reviews, etc. Today, Department staff is meeting with the CMAR contractor and consultants in a facilitated session to conclude the negotiations between the CMAR and the Department. Mr. Gritzuk reminded the members that the Plant Interconnect is the urgent portion of the ROMP because the Department wants to divert flows from the Roger Road service area to Ina Road before the facility reaches its design capacity of 41 million gallons per day (MGD).

The Ina Road upgrade and expansion is the next most urgent portion of ROMP because it has to be completed by 2014. The Procurement Department has advertised for the design consultant to do most of the Ina Road design. The Department has

received Qualification Statements and shortlisted to three consultants and it will proceed with the interview process within a few weeks. Hopefully, by the end of January 2008, the design consultant will be selected.

This is the most complicated design component of the ROMP. In this component, there is a change-out of the existing treatment process, a new expansion, a lot of rehabilitation of existing structures and the design has to be performed in such a way that the existing Ina Road facility has to remain in operation and in compliance with permit requirements and scheduled in such a way that the Department is meeting the Arizona Department of Environmental Quality's (ADEQ) regulatory implementation schedule. Mr. Gritzuk felt the Ina Road project would also probably be the largest engineering design contract ever let in Pima County and will also be the largest capital construction project let in the County. The Procurement Department has advertised for a CMAR for Ina Road. A pre-submittal meeting was held on December 17, 2007, and many contractors attended the meeting.

Mr. Stratton asked whether the Department's intent was to have one general contractor for the Ina Road projects. Mr. Gritzuk responded the Department intends to have one CMAR for the various components of this project. The Department is not moving ahead just yet with two other components of the Ina Road expansion. These are the power plant and the future conversion of Class B sludge to Class A sludge. The individual components of construction within the CMAR umbrella could involve many contracts. Each of these components will have a guaranteed maximum price (GMP). He indicated, as examples, that the Department might have one GMP just for the expansion, another one for the liquid process train of the existing plant, another for solids handling, and one potentially for demolition site work at the facility. All of this needs to be orchestrated with the design contractor and the CMAR.

The water reclamation campus is the third ROMP component. This project has to be in place in 2015. The Department is looking at a design-build contract for this project. The Department has received a lot of inquiry about private financing of this project. So it could be a design-build-finance-operate type of procurement process. The Department will complete a very detailed evaluation with its consultants. The evaluation will be from an engineering and cost effective point of view.

Mr. Carlson noted that the Board of Supervisors had "jumped on the Department" for not reporting savings periodically to the Board, and he pointed out that the Department is going to use innovative contracting methods. He felt the Board and the Committee needed to understand that using innovative contract methods is how you save money.

Mr. Gritzuk responded that the approach the Department is going to take is to look at life cycle cost. The Department is going to be demonstrating this on the water reclamation campus procurement method. When you factor in the operational factor over some life cycle, it is life cycle cost that is the most important cost component. It factors in all of the costs together. On the water campus, there is a lot interest both from national and international firms. There appears to be a lot of interest in creating a public/private partnership for this facility.

- **Use of Outside CIP Project Management Services.** Mr. Gritzuk provided the report on the use of outside CIP program management services. The Department's original vision for the ROMP was that, because of the magnitude, complexity, regulatory nature and rigid time schedules it had been given, the Department would bring in project management services – an outside consulting consortium to do the project

Mr. Gritzuk informed the members that the Department continues to have many vacancies, especially in the engineering and operations area. However, recently the Department was successful in hiring some talented engineers.

The Department has developed a procurement package for the design of the Ina Road project. The Department hopes to retain a top notch design firm and a top notch CMAR. These would be firms that would be very experienced and multitalented. It feels that once you combine the talent of the CMAR with the talent of the design engineer, then you can take a look at what additional project management efforts are needed. Maybe the degree of project management that is done with an outside consultant can be diminished or not needed at all and projects can be managed with in-house staff. The anticipated timeline for design and construction of the overall Ina Road project is approximately six years. Estimated external project management costs were approximately \$2.5 million/year or \$15 million. Using in-house project management staff would cost a lot less.

4. **International Standards Organization (ISO) and Occupational Health and Safety Assessment (OHSA) Series Certification.** Mr. Bunch provided an update on the ISO and OHSA series certification for the Department. The week of November 12, 2007, the ISO and OHSA auditors completed their audits and recommended the Department for all three certifications. The Department contracted with the firm, TÜV SÜD America, for the auditing. Benchmarking shows that the Department will be the first enterprise – public or private – in North America to receive triple certification. Mr. Bunch praised the Conveyance Division staff for their motivation and processes that were put in place. It takes from 48 to 60 days to receive the certification.

The Administrative Team has decided the next step is to expand the scope of those Department divisions that it wants to pursue ISO Certification to include biosolids and the Compliance and Regulatory Affairs Office (CRAO), including all regulatory people that work in the lab and permitting group, and also the engineering group – mainly capacity management. Within the next 24 months, we should have the entire Department with all three certifications.

Mr. Bliven commented that he was impressed that staff involved in the ISO certification process attended the December 11, 2007 Board of Supervisors meeting. He said he understood now that the purpose of staff attending the meeting was to educate staff on how the Department receives its funding and the process that Department administration works under in order to get staff the tools they need. Mr. Bliven felt that was a very valuable exercise.

B. New Items.

1. **2008 Work Plan.** Members reviewed the draft Work Plan which they received in their meeting packets. The Work Plan will be reviewed for final approval at the next WMAC meeting.

Mr. Marcelino Flores asked about the regional water issue and said he would like that topic included on the work plan. He also informed Committee members that the Pima Association of Governments (PAG) is starting a land use program and he wondered if that could be discussed as well.

Mr. Stratton asked when the scope for the regional water study would be completed. Mr. Gritzuk responded the Department is working on the scope of work for the study. He said he was not aware of any multi-community meetings on the scope yet. He noted that there were discussions between the County Administrator and the City Manager. The County Administrator has directed the Department to draft a scope with other departments. The County has offered \$150,000 and it has also been suggested that the City of Tucson fund an equal amount. Mr. Bliven suggested that Mr. Gritzuk include an update when there is action on the regional water issue.

- VI. FUTURE AGENDA ITEMS.** FY 2007/08 Financial Plan Update; Capital Improvement Program Update; FY 2008/09 Budget; 2008 Work Plan; Regional Optimization Master Plan and Odor Control Plan Update and Recommendations to Board of Supervisors on Citizen Involvement Committee Recommendations.
- VII. CALL TO THE AUDIENCE.** There being no response from the audience, Mr. Bliven adjourned the meeting.
- VIII. ADJOURNMENT.** The meeting adjourned at 9:18 A.M.