

## **ISSUE RESPONSE SUMMARY JULY 9, 2008**

### **OVERSIGHT COMMITTEE MEETING**

**1. Why not site a reclaimed facility on east side?**

RESPONSE: The City and County have recently completed extensive evaluations of the need for potable water, wastewater treatment and reclaimed water facilities on the eastside of Tucson in the Houghton Road Master Plan (HAMP) area. However, City and County staff are currently looking at potential water reclamation sites in order to plan for the future needs of the area.

**2. Agreement with Corona De Tucson posted on project website**

RESPONSE: It is posted on the project website: [www.tucsonpimawaterstudy.com](http://www.tucsonpimawaterstudy.com)

**3. How many grade 5 and 4 rated pipes? (Maybe provide a graph)**

RESPONSE: The County is continually repairing and rehabilitating portions of its 3400 miles of conveyance system. The closed circuit television (CCTV) conveyance system assessment and repair program has evaluated all 15" and above sewer lines in the regional system and is now in the middle of assessing all the less than 15" pipe reaches in the system. All reaches assessed at a "5" level have been immediately scheduled for repair or replacement by the \$5-6 million dollar funding set aside each year for the conveyance system repair and rehabilitation program. No reaches assessed at "5" level currently exist in the system. All sewers evaluated at "4" are also reviewed for scheduling into this program as necessary. Through this repair program approximately 50-100 miles of sewer reaches receive rehabilitation and repair upgrades to selected segments each year. Pima County has a proactive preventive maintenance program for its conveyance systems complemented by an ongoing program of rehabilitation and replacement through an intensive CCTV program. CCTV video is used to identify structural conditions, corrosion and debris related failure potential and these reaches of sewer lines are prioritized for replacement and rehabilitation. An internal pipe relining process is also utilized to extend the life cycle of portions of the system.

**4. At any time have we had to repair our sewer system because subsidence causes wastewater to flow backward?**

RESPONSE: No, never.

**5. What is the status of *Beat The Peak*? In the 80's I heard on TV and radio and saw notices in the newspaper. Now it's invisible. Seems we need these reminders for conservation. What's the barrier to that? What can we as a community do to take the peak off summer demand of May-July?**

RESPONSE: The *Beat the Peak* program is alive and well! Each summer, Pete the Beak appears in a new identity to match the theme of the campaign. In 2008, the theme is "Elect to Save – Join the Campaign for Conservation."

The campaign kicked off with a Press Conference in early June. As in the past, the campaign's promotional package includes special articles in Tucson Water's monthly Water Connection newsletter, an activity booklet for youngsters that features games,

puzzles and coloring pages all centered around conservation, theme-based give-a-ways for kids, and an on-air Public Service Announcement. This year, due to budget restraints, the PSA did not run as often or on as many TV stations as it had in the past; this may be why the campaign is not as visible as it has been in previous years.

All of the *Beat the Peak* materials, including the Activity Book and the Public Service Announcement, are available on Tucson Water's web site. The Activity Booklet is also distributed to elementary schools throughout the Tucson Water service area as well as through Kidco and other afterschool programs.

**6. How about urging schools & parks (and other large entities) to install roof water collection?**

RESPONSE: Regarding rooftop catchments, the City and County have adopted *LEED* (Leadership in Energy and Environmental Design) standards for new City and County buildings. These standards include the use of rainwater harvesting at a minimum.

Many existing non-City and non-County facilities will likely look at roof harvesting opportunities in the future. It needs to be noted that school boards are the governing bodies of school districts, and they are responsible for determining whether *LEED* standards are adopted and implemented within their respective districts.

The City of Tucson is also in the process of adopting an ordinance which will require mandatory rainwater harvesting for new commercial development within the City of Tucson.

**7. Is Tucson Water planning to move to a wireless meter system, so you don't need meter readers?**

RESPONSE: Tucson Water began installing meters with automatic technology about four years ago. There are approximately 13,000 automated units currently in the Utility's system.

This technology allows a "drive by read" where the meter reader does not have to get out of the vehicle. This technology is currently being used on meter routes that are difficult to monitor and/or where meters are difficult to access. Use of this automated technology will likely be expanded in the future. (Comment: the line structure needs to be fixed...something was lost in translation when it was moved into this format.)

Tucson Water is also exploring the possible benefits of a networked system where the reads are automatically fed to data collector units placed throughout the community and transferred to a centrally located system. This type of technology could potentially reduce the need for the traditional meter reader; however, it has technical limitations and as such can not be applied system-wide. The meter monitoring program of the future may be a combination of the currently used manually-read meter, "drive by read" meters, and a networked meter monitoring system.

**8. Currently, are Impact Fees allowed to be charged for expansion, construction and maintenance of water delivery, wastewater conveyance/ treatment systems to new developments? If so, do those Fees cover those costs?**

RESPONSE: For the City of Tucson, the answer is “yes” with one exception. A municipality may assess development fees to offset costs associated with providing necessary public services to a development. These can include the costs of infrastructure, improvements, real property, engineering and architectural services, financing, other capital costs and associated appurtenances, equipment, vehicles, furnishings, and so on. The exception is “maintenance” since this is categorized as an O&M cost as opposed to a capital cost.

Under AR§ 252-11, Pima County is authorized to charge user fees and connection fees to support the regional wastewater conveyance and treatment system. User fees are charged to each customer to recover their proportionate share (based on flow and strength) of the operations, maintenance, rehabilitation and regulatory costs of the regional wastewater system. Connection fees are charged to each new connection to recover cost of that connection’s capacity in the conveyance and treatment systems. Connection fees recover the full cost of growth and expansion related elements of the regional wastewater system. No impact fees are utilized for wastewater funding.

**9. What is the estimated total cost of system replacements for the next 20 plus years? Nearly half of pipes will become at least 50 years old within this period.**

RESPONSE: Water and wastewater pipe replacement is performed based on condition not age.

Over this 20-year time period, the estimated total cost to make the necessary Tucson Water system replacements would be about \$150 million. (Comment: the line structure needs to be fixed...something was lost in translation when it was moved into this format.)

Over the same period, Pima County has projected that \$190 million will be expensed on repairs/replacement of the regional conveyance system.

**10. If drought conditions persist, is there a “Triage” Plan or priority list that can be implemented so that critical water needs are met first?**

RESPONSE: The City of Tucson Water Department has its *Drought Preparedness and Response Plan* already in place. It presents a series of four drought response stages which reflect the City’s priorities. The entire Plan can be reviewed on line at <http://www.ci.tucson.az.us/water>. Answers to frequently asked questions regarding the Plan is provided in Appendix B of the *2008 Update to Water Plan: 2000-2050*; the latter can be reviewed on line at <http://www.tucsonaz.gov/water/longrange.htm> (Comment: the line structure needs to be fixed...something was lost in translation when it was moved into this format.)

**11. What fraction of water that enters the potable system is lost due to leaks? How much potable water are we losing in flushing the sewer mains? What is the schedule of that and where? Also do other local water providers do the same for Pima County in their respective service areas? If so, can Pima County come up with total annual estimates if potable water from those systems is also utilized for sewer flushing?**

RESPONSE: Tucson Water estimates that in 2007, the volume of potable water lost due to system leaks was about seven percent. The Utility has recently instituted a Water Loss

Control Program which will further develop and refine the process used to track and document these losses with the ultimate goal being to minimize them.

Flushing of sewer lines is an integral part of the wastewater preventative maintenance program. Flushing is required in the older areas of the system due to grease accumulation from residential dwellings as well as from restaurants and sediment build-up due to flat slopes. Flushing is also needed in the newer areas of the system augment flows in new development or sparsely populated areas. It is estimated that Pima County annually uses about 4.8 million gallons of potable water or about 15 acre feet of the 123,000 acre feet delivered to customers in the Tucson Water service area to flush the lines in the regional wastewater system. The Department is now partnering with Tucson Water to utilize reclaimed water and also to coordinate with Tucson Water's hydrant flushing program whenever possible.

Probably 95% of the sewer line flushing is conducted in the Tucson Water service area.

**12. How long does the legal rights to use treated effluent last? (i.e. length of contract for treated effluent between Tucson Water and Golf course. Tucson Water and Golf course.**

RESPONSE: With the exception of the General Blanchard /Davis Monthan Golf Course (which expires July 31, 2009) and the final 9 holes at Dove Mountain #2 (which must begin construction by July 1, 2010), Tucson Water is obligated to serve all of the other golf courses as long as the conditions of the User Agreement and any other contracts are met.

**13. How much of bio-solids are land applied?**

RESPONSE: 10,300 dry tons were produced and land applied in 2007, 9600 dry tons were produced and land applied in 2006.

**14. Total number of golf courses and demand relative to other uses. Who pays for cost of infrastructure to serve Golf courses?**

RESPONSE: There are 22 municipal and private golf courses within Tucson Water's Service Area. Eighteen of these use reclaimed water. Two of the four that do not use reclaimed water pump groundwater from their own wells (El Dorado & Rolling Hills Golf Courses); this is allowed under the Arizona's 1980 Groundwater Management Act. Of the two remaining, the Silverbell Golf Course uses secondary effluent as opposed to tertiary-treated reclaimed water and the other, Tucson Estates uses potable water from Tucson Water's system because it is 8 miles from the nearest reclaimed pipeline.

In 2007, the City provided approximately 13,000 acre-feet of its effluent entitlement for turf irrigation through its Reclaimed Water System. Approximately 60 percent of the City's reclaimed water was directed to golf courses while parks accounted for about 18 percent and schools approximately 9 percent.

The reclaimed water system was developed using the golf courses as anchor points for the system because of their large annual water use (about 700 acre-feet per year per course as compared to 50 acre-feet per year for a high school). With the exception of the reclaimed system serving the golf courses on the northern part of the system (Heritage Highlands, Gallery 1 & 2, and Dove Mountain 1 & 2) and the 49er's Golf Course, the golf courses receiving reclaimed water do so through a delivery system funded by Tucson

Water revenue bonds which are repaid through the potable and reclaimed water rates. Golf courses on the northern part of the system and 49er's paid for a portion of the reclaimed delivery to their facilities under terms established in agreements that were approved by the City's Mayor and Council.

15. **What models exist for public private partnerships in the development of Wastewater? Reclamation Facilities (WRFs)? Are any partnership scenarios for development of WRFs under consideration?**

RESPONSE: The Department has solicited proposals for public/private partnerships under the ROMP program. These include the power generation facilities with these improvements at the Ina Road WRF and the design/construction alternatives for the new Water Campus adjacent to the existing Roger Road WRF.

16. **If the Southside facility is still having water taken from it's scrubbed (for TIA solvents), (Comment: Something got deleted...part of the question and my original answer is missing. I recommend going back to an earlier version to see what the question originally was. I don't have the original so I can't reproduce the question. So the response is a guess about the intent of the question.) would it be problematic for the (relatively) clean water from PMRRF to mingle with contaminated Southside water?**

RESPONSE: Native groundwater has always naturally flowed in the aquifer through the area. The Pima Mine Road Recharge Project, located about eight miles south of the southside area, adds Colorado River Water to the aquifer which blends and moves with native groundwater in the large Tucson basin aquifer. Once it recharges the aquifer, the Colorado River water actually flows out in a radial pattern in the immediate vicinity of the facility. The majority of the recharged water flows to the west, to the north following the regional groundwater gradient (toward the southside area), and to the east. Some of the blended water is pumped by local groundwater users before it reaches the southside area. It is actually beneficial to replenish the regional aquifer at Pima Mine Road since it helps off-set the effects of groundwater pumping which has long occurred in the area.