

Appendix 3: Comments Received After the First Federal Register Notice

After the first federal register notice comments were received from Pima County. Although Pima County had been contacted at an earlier point of survey development, the federal register notice served to advertise the project more widely to additional Pima County staff.

The Pima County Regional Wastewater Reclamation Department appreciates the opportunity to comment on the proposed EPA public opinion survey (EPA-HQ-ORD-2013-0282-0001) regarding future options for the water quality, water quantity, and other environmental benefits of the effluent-dependent reaches of the Upper and Lower Santa Cruz River. Our comments will focus on the Lower Santa Cruz River as that is the reach managed by various Pima County Government entities and utilized for effluent discharge and aquifer recharge by this Department.

The survey approach is to present the public with several potential future outcomes for the water quality, water quantity and habitat (“forest cover”) of a reach of the River (with photos and graphic illustrations) and ask that survey recipients choose from several incremental, per-household tax amounts that participants would be willing to pay for these outcomes. Although we are very interested in public perception and opinion related to water quality of this effluent-dependent portion of the Lower Santa Cruz (LSC) River, we nevertheless have significant concerns about the survey methodology and approach, background information provided, and the alternatives presented to the public in this survey. Highlights of our concerns are as follows:

- The survey approach assumes that the outcomes listed are feasible given the amount of funding stated. In fact, the legal, scientific and physical circumstances of these effluent-dependent flows combine to make many of the outcomes highly unlikely (if not nearly physically impossible), such as the river to meet “full-body contact” water-quality standards. For more information about the complex and unique issues of water quality and water quantity for effluent-dependent waters in the arid west, we recommend that the survey personnel review the Arid West Water Quality Research Project, which took place from 1995 to 2007 and which was funded and supervised by EPA Region IX. If necessary, we can provide copies of reports from this effort.
- The survey does not provide adequate background to the public as to the nature and impact of the over \$600 million in water-quality improvements to its two major metropolitan Water Reclamation Facilities (WRFs) that Pima County is currently constructing in coordination with the Arizona Department of Environmental Quality. These facilities provide the effluent flow in this reach of the Lower Santa Cruz River and will have state-of-the-art water-quality treatment processes and advanced odor control for which Pima County ratepayers are totally responsible for paying through increased sewer user charges. We can provide more details about this effort.
- The future alternatives presented in the survey neglect the economic and environmental benefits of using the water beneficially off-channel as reclaimed water or in-channel for aquifer augmentation.
- The survey approach includes sending the survey to selected residents in the Phoenix and Tucson Metropolitan areas, but the effluent-dependent flows of the Santa Cruz do not extend to the Phoenix areas and those residents are generally unaware of the River at all. Furthermore, people living along the Upper Santa Cruz River in Santa Cruz County are not surveyed. Therefore, half of the targeted survey recipients who have no connection to the Santa Cruz will be surveyed, while others with a direct connection will not.

In closing, the Department would recommend that, prior to proceeding further with this survey, EPA staff discuss the survey formally and fully with the Pima County Government management and staff to reconcile these and other discrepancies. We feel that addressing these concerns will lead to an improved survey and research study.

Through a series of follow-up teleconferences ORD and Pima County discussed the issues raised and how the survey could be improved as a result. Pima County partitioned its submitted

comments into four separate points. The first point focuses on whether the outcomes considered in the survey are feasible for the prices listed and safe full body contact in particular. In follow-up ORD explained that the methodology is not meant to pose actual estimated prices for the changes considered, but prices designed to bracket public values for those changes. The topic of whether safe full body contact is an appropriate standard for effluent-dominated waters was also raised. In follow-up ORD described that the purpose of the survey was not to investigate a change to a regulation, but public value research for a potential change. A desire for safe full body contact in waterways was a frequent theme in public focus groups, and is also a long-time theme in environmental willingness to pay research (e.g. Carson and Mitchell, 1993). The second point notes that the survey does not fully describe the current and expensive upgrades to wastewater treatment. The survey does actually mention this upgrade (as well as the upgrade to the treatment plant further south), so that respondents aware of these upgrades would not confound those changes with changes considered in the survey. It was found in focus groups and survey pre-tests that a particularly important factor is the odor associated with wastewater; thus that treatment upgrades will address odor is noted in two separate places in the survey, pg. 3 and pg. 6. More background on the wastewater upgrades could have been considered if the background material was not already lengthy. The third point remarks that the survey neglects the benefits of using treated wastewater for either off-channel purposes as reclaimed water, or in-channel as a means of aquifer recharge. In follow-up ORD agreed that all of the possible uses of treated wastewater could not be considered in the survey, and only a few key issues are investigated. However, the recharge impacts of in-channel wastewater was something about which the public displayed marked curiosity, thus there is a dedicated figure and explanation on pg 4 which describes the recharge implications of in-channel use of treated wastewater. The figure on pg 4 was pre-tested and supported by pre-test subjects. The fourth point questions the survey frame; why Phoenix would be surveyed while Santa Cruz County would not be surveyed. In follow-up ORD described the experimental design goal of testing “market extent” for the Santa Cruz River as the reason for surveying the Phoenix area, which is indeed relatively far away from the Santa Cruz River reaches described. Ideally Santa Cruz County would also be surveyed, but as a cost-savings measure only the two largest population centers of Arizona are proposed for the sample frame.

Four additional issues were discussed in the course of conversation with Pima County that did not appear in their submitted comments. The first was that the cover photo sequence in the draft survey could be interpreted as sensationalistic, and potentially cast Santa Cruz River management in a negative light, when in fact there has been considerable investment and attention to Santa Cruz River conditions. Thus, photos from pg 7 were copied onto the cover, which still capture a demonstration of river conditions with and without water. The second additional topic raised was the potential impression that one could pay more in order to receive more wastewater releases to the river, mirroring Dr. Hoehn’s comments (described above). The intention of the survey is to elicit willingness to pay to maintain different extents of river flow and forest, not willingness to pay to create new extents. Since this was insufficiently described in the draft survey, a graphic on pg 8 was added to summarize the information on the preceding pages, and the scenario description on pg 6 was revised. The third topic was the insufficient draft language describing the reason for river flows being cut-back in the Expected Future, which other reviewers also remarked on. The draft language has now been revised to state that there are competing demands for water resources in southern Arizona, besides supporting instream flows.

It furthermore states that the funds collected through taxes would be used as compensation for not selling the wastewater for off-channel purposes. The fourth topic was whether the estimated current condition extent of river flow for the North reach was accurate. In follow-up email dialogue with Pima County, and including the previously consulted natural scientists Drs. Thomas Meixner and Juliet Stromberg, there was noted uncertainty in the length of flow since there are agricultural return flows as well as potentially increased infiltration due to water quality changes due to the wastewater treatment upgrade. By necessity the survey uses best available knowledge.