



## CITY COUNCIL AGENDA ITEMS

**To:** Mayor Graham and City Council  
**From:** Dennis Sullivan, Director of Engineering & Public Works and  
Walter Denton, City Administrator  
**Date:** May 2, 2005  
**Subject:** WWTP Orbital Repairs

**List of committees that have reviewed:** This item has not been reviewed by Committee.

**Background:** The oxidation ditch at the WWTP, otherwise known as the Orbital, uses paddlewheels to inject oxygen into the sewage once it has entered the treatment plant. These paddlewheels, or rotors, are very large and the shaft supporting them sits on large bearings. Bearing failure has been an ongoing maintenance issue, so we have a program of in house thermal testing in conjunction with vibration analysis by an outside consultant. The combination of vibration analysis and thermal testing has led us to the conclusion that bearings located on rotors 2, 3, 8 and 10 are failing. With the emergency proposal from Rexel United, we intend to replace these bearings ASAP in order to prevent a spun bearing. In cases where the bearing becomes spun, the rotor must be removed with a heavy duty crane and it has to be re-machined. This takes the entire drive assembly out of service for an extended period of time as compared to proactive bearing replacement, which can usually be completed within a day. Rexel United has worked with WWTP staff to perform all previous bearing replacements and are very familiar with our setup.

**Legal Considerations, if any:** This is submitted as a sole source proposal due to the vendor's working knowledge of our systems and the quality of their work.

**Budget Impact:** The proposal for this service is \$12,800.

**Staff recommendation:** Staff recommends approval of the Rexel United proposal.