



## City Council Staff Report

Date: April 15, 2009 NEW BUSINESS

Subject: APPOINT TWO MEMBERS OF THE CITY COUNCIL TO THE PALM SPRINGS WASTEWATER TREATMENT PLANT SUBCOMMITTEE

From: David H. Ready, City Manager

Initiated by: Public Works and Engineering Department

---

### SUMMARY

Staff recommends that the City Council appoint two members to a sub-committee to coordinate with staff on various issues related to the City's wastewater treatment plant.

### RECOMMENDATION:

Appoint two members to the Palm Springs Wastewater Treatment Plant Sub-Committee.

### STAFF ANALYSIS:

The Palm Springs Wastewater Treatment Plant (WWTP) was originally constructed in 1960 to treat 4.15 million gallons per day (mgd). Two facility expansions were completed in 1979 and 1983, bringing the total WWTP design capacity to 10.9 mgd for average annual flow. The treatment processes consist of preliminary screening, grit removal, primary clarification, trickling filters, and secondary clarification. Treated effluent is disposed of on-site in percolation ponds or is supplied to Desert Water Agency (DWA) for further treatment to meet reuse standards for off-site irrigation. Bio-solids from the treatment process are thickened and stabilized by anaerobic digestion and dried with sludge drying beds before final disposal.

The WWTP has a Waste Discharge Requirement (WDR) permit from the California Regional Water Quality Control Board (RWQCB), originally issued in 1993. The general schedule to reissue the WDR was expected in 2003, but the update has not been completed by the RWQCB. Because the WWTP discharges effluent directly to land (in percolation ponds) or the effluent is accepted by DWA for tertiary treatment, the WDR permit limitations are not as severe as in cases where a facility discharges effluent directly to surface waters (lakes, rivers, or streams). In the case of our WWTP, no Federal Clean Water Act permit is required.

Staff expects the RWQCB to turn its attention to the WWTP, to re-issue an updated WDR permit. It is not known at this time what additional provisions the RWQCB might include in an updated WDR permit, but the RWQCB could consider requiring new WWTP processes to address removal of Ammonia and Nitrate nitrogen compounds. Nitrogen compounds, in high flows and concentrations, potentially may contaminate ground water, and Nitrate is a parameter specifically listed in the Federal drinking water standards. The capital costs to install unit processes to address ammonia and nitrate removal are significant.

The last major expansion of the WWTP was over 25 years ago in 1983. The original WWTP facilities constructed in 1960 are aging and require upgrading and/or replacement. Staff has been coordinating preparation of a Capital Rehabilitation and Repair Plan with Carollo Engineers to identify the individual unit processes within the WWTP, their capacity and reliability. The final report is nearing completion and will identify a 20 year plan to upgrade the WWTP, with an estimated total capital cost of \$50 Million or more.

Staff has also been coordinating preparation of a sewer rate study with Bartle Wells Associates, to identify the capacity of the City's current sewer fees to accommodate the capital costs of the Capital Rehabilitation and Repair Plan. The City's current sewer fee is \$10.36 per month per equivalent dwelling unit (EDU), or \$124.32 per year for a single family home. This fee has not been adjusted for over 15 years, since July 1, 1993, when the current fee was adopted. This fee is considered very low by regional and statewide standards, and is less than half the 2004 California average sewer rate of approximately \$24 per month. In order to fully address the aging infrastructure at the WWTP, it will be necessary to adequately increase the City's sewer fees to provide sufficient revenue to offset capital and financing costs.

In light of the various issues associated with the WWTP Capital Rehabilitation and Repair Plan, and review and consideration of increasing the City's current sewer fees, staff recommends that the Council appoint two members to a sub-committee to coordinate with staff on the intricate details of the WWTP unit processes, the needed capital upgrades, and the analysis of the City's sewer rate fee structure. An additional area of focus for the sub-committee will include review of sustainability projects to be implemented at the WWTP, which may include:

- Construction of Fats, Oils and Grease (FOG) receiving station to accept grease from commercial grease interceptors to generate additional methane gas for electrical energy production<sup>1</sup>;

---

<sup>1</sup> Methane is a strong greenhouse gas with more than 21 times the global warming potential of carbon dioxide. Currently, waste haulers dispose of waste from commercial grease interceptors at landfills, where the waste biodegrades and releases methane directly to air (and becomes a lost renewable energy resource), and further harms the environment.

- Construction of a food waste digester to accept food waste from commercial facilities to generate additional methane gas for electrical energy production<sup>2</sup>;
- Construction of methane gas pipeline to the City Hall municipal co-generation plant, to deliver methane generated at the WWTP to the co-generation plant to remove our reliance on natural gas<sup>3</sup>;
- Consideration of fuel cells and other alternative sources of electrical generation.


FISCAL IMPACT:

None.

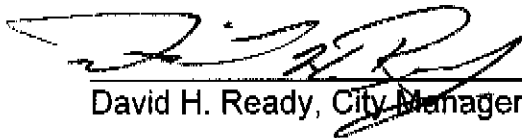
SUBMITTED:



David J. Barakian  
Director of Public Works/City Engineer



Thomas J. Wilson  
Assistant City Manager

  
David H. Ready, City Manager

---

<sup>2</sup> Food waste is a high volume of waste disposed of in landfills, and its biodegradation also releases high volumes of methane gas into the environment. The City may have the opportunity to coordinate with Burrtec Waste Industries in receiving food wastes recycled at its soon to be opened transfer station in north Palm Springs, thereby diverting tons of food waste that would otherwise be disposed of in landfills.

<sup>3</sup> The City's municipal co-generation plant provides 1.3 megawatts of electricity by converting natural gas to electricity; however, the reliance on natural gas has resulted in high operation costs as natural gas prices fluctuate, requiring significant General Fund expenditures (over \$2 Million was budgeted in the 2008/2009 fiscal year budget for natural gas for the City's two co-generation plants).