



# Monterey Regional Water Pollution Control Agency

*"Dedicated to meeting the wastewater and reclamation needs  
of our member agencies, while protecting the environment."*

Administration Office:  
5 Harris Court, Bldg. D, Monterey, CA 93940-5756  
(831) 372-3367 or 422-1001, FAX: (831) 372-6178  
Website: [www.mrwpc.org](http://www.mrwpc.org)

## MEETING NOTICE and AGENDA

### BUDGET/PERSONNEL COMMITTEE

Gloria De La Rosa, Chair  
Carmelita Garcia, Chris Orman, Dave Pendergrass, and Ron Stefani  
[Alternate – Lou Calcagno]

DATE:	<b>Friday, October 14, 2011</b>
TIME:	<b>1:30 p.m.</b>
LOCATION:	Admin Conference Room 5 Harris Court, Building D

### PUBLIC COMMENTS

*Anyone wishing to address the Committee on matters not appearing on the Agenda may do so now. Comments on any other matter listed on the Agenda are welcome at the time the matter is being considered by the Committee.*

- 1. CONSIDER REFINANCE OF CAL PERS SIDE FUND OBLIGATION** (see attachment)
- 2. DEVELOPMENT OF COST-SAVING GOALS** (see attachment)

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BUDGET/PERSONNEL COMMITTEE

October 14, 2011

Page 2 of 2

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This Committee Meeting Notice and Agenda was hereby posted at the MRWPCA Administrative offices, 5 Harris Court, Building D, Monterey, California 93940.

POSTED: **Tuesday, October 14, 2011**

BY: */s/ Betty Nebb*  
Executive Assistant



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## **MEMORANDUM**

**TO:** BUDGET/PERSONNEL COMMITTEE

**FROM:** BRAD HAGEMANN, ASSISTANT GENERAL MANAGER and  
JOHN TIERNAN, DEPUTY GM/DIR OF ADMIN SERVICES  
(via Keith Israel, General Manager)

**DATE:** OCTOBER 11, 2011

**SUBJECT:** CONSIDER REFINANCE OF CAL PERS SIDE FUND  
OBLIGATION

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In Fiscal Year 2005/06, Cal PERS pooled all Miscellaneous Agencies with less than 100 employees and conducted an actuarial of each of the agencies. Based on the actuarial findings, PERS established a "Side Fund" dollar amount that was required to fund the PERS obligations of the agencies.

The side fund's purpose was to account for the difference between the Agency plan's funded status and the Risk Pool after Risk Pools were established. The Side Fund is a dollar amount that is required in addition to the regular PERS obligations. The Side Fund obligation can be paid in a lump sum or amortized over a fifteen to twenty year period. The Agency's Side Fund obligation is currently \$8.8 million dollars, with 15 years remaining on the obligation. Our payment this fiscal year is approximately \$800,000.

PERS actuarial models assume that over the long-term PERS will achieve on average 7.75% per year return on their invested funds. Based on this, PERS is charging agencies 7.75% interest on their Side Fund note. With the favorable bond rates that are currently available, staff has been investigating the possibility of refinancing the Side Fund with a lower interest rate note or bond. Staff's

Joint Powers Authority Member Entities:

Boronda County Sanitation District, Castroville Community Services Water District, County of Monterey, Del Rey Oaks, Fort Ord, Marina Coast Water District, Monterey, Moss Landing County Sanitation District, Pacific Grove, Salinas, Sand City, and Seaside.

**MEMORANDUM**

Budget/Personnel Committee

October 11, 2011

Page 2 of 2

preliminary findings indicate that the Agency may be able to borrow money in the 4.5% – 5.5% fixed interest range with a 15 year term. This type of refinance would save \$50,000 to \$75,000 per year over the life of the note.

The purpose of this memo is to advise the Committee of staff's findings to date, solicit input/direction from the Committee, and advise the Committee that staff intends to bring refinancing options back to the BP Committee for consideration at the November meeting.

**RECOMMENDATION: Approve staff to consider and evaluate specific refinancing recommendations to be considered in November by the BP Committee.**

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## **MEMORANDUM**

**TO:** BUDGET/PERSONNEL COMMITTEE

**FROM:** BRAD HAGEMANN, ASSISTANT GENERAL MANAGER  
(via Keith Israel, General Manager)

**DATE:** OCTOBER 11, 2011

**SUBJECT:** DEVELOPMENT OF COST-SAVINGS GOALS

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As staff has embarked on completing the Board-approved Strategic Goals and associated Objectives, they have done so with an eye towards also identifying additional opportunities for increasing operational efficiencies, collaborating with our member entities and/or other agencies, and reducing our overall operating costs.

Under the Strategic Goal of "enhance and implement cooperation/collaboration with other agencies on projects of joint interest," staff has been working with the Landfill District on biosolids management, biogas cogeneration opportunities and sharing of staff (administration, maintenance and vehicle).

Staff continues to have cooperative relationships with the cities of Salinas, Pacific Grove and Monterey to help them cost effectively implement their Storm Water Management programs, Fats, Oil and Grease programs, and their Source Control programs. These cooperative efforts reduce our member entities costs and provide some continuity throughout our service area. Staff has also had preliminary discussions with the City of Salinas regarding options for managing flows from their industrial wastewater treatment facility. The existing industrial facility is reaching capacity and the City is looking at options for disposing/recycling the flows.

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## **MEMORANDUM**

Budget/Personnel Committee

October 11, 2011

Page 2 of 2

Staff has embarked upon a number of programs related to the Strategic Goal to “develop and implement a comprehensive energy plan.” In addition to preparation of the recently completed energy audit, staff is in the process of studying and implementing energy-savings measures related to lighting, pump operations, cogeneration efficiencies, etc. Chris Foley, our Electrical/ Instrumental Technician, recently prepared a paper entitled “Save a Watt Initiative” that provides analysis and recommendations for reducing lighting energy costs. The report is attached for your information.

In another cost-savings initiative, staff has embarked on using our computerized maintenance management system to track and control Operation and Maintenance Department’s parts and supplies inventory. Like any for-profit business, a substantial amount of our O&M budget is used towards replacement parts and supplies. Ensuring that we have an accurate inventory of the parts we need and only starting a job when we know the parts are in-house allows for much more efficient planning and management of O&M projects.

On the Administrative side, we have deferred filling vacated positions in order to save money, provide cross-training opportunities and stretch the work load of our employees. For example, instead of filling the Maintenance Supervisor position that became vacant in July 2010, we conducted an internal recruitment process and rotated the top three candidates through the position for three- month, out-of-class assignments, ultimately filling the position with the most qualified candidate. Similarly we have not yet filled the Accounting Supervisor position that was vacated in August 2010. Instead we have rotated one of the accounting staff through the position as an out-of-class assignment; most recently Tom Buell has stepped to the fill the position on a temporary basis.

Staff finds that having specific and stated goals usually assist in their achievement. Consequently, we will be developing a list of specific supplemental staff goals and plan to present this at the November BP Committee meeting for review and comment.

**RECOMMENDATION: That staff provide specific supplemental cost-saving goals for Committee review and comment.**

Attachment: “Save a Watt Initiative”

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# SAVE A WATT INITIATIVE

A commitment to saving energy

By: Chris Foley

19 September 2011

# Project Brief

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## 1. Purpose

To make a commitment to energy savings measures in order to reduce cost of energy and the agency's carbon footprint. Proper planning will allow any necessary budgeting of upgrades and maximize PG & E rebates. The wastewater treatment plant energy efficiency can be benchmarked using the EPA's ENERGY STAR portfolio manager tool and improvements can be tracked. The portfolio manager provides a 0 to 100 ENERGY STAR rating compared to similar wastewater facilities. It also calculates a per gallon energy cost for processing influent wastewater. There is also an opportunity to become an ENERGY STAR partner which formalizes the commitment to increasing energy efficiency.

[http://www.energystar.gov/index.cfm?c=water.wastewater\\_drinking\\_water](http://www.energystar.gov/index.cfm?c=water.wastewater_drinking_water)

Energy efficiency improvements would allow the agency to stop purchasing electrical utility power and allow the co-generation facility to supply all the electrical energy for the treatment plant. The agency can reduce its baseline kilowatts usage to achieve electrical independence and then focus on reducing total yearly kilowatt hour usage.

## 2. Background on energy efficient upgrades

- LED fixtures- More energy efficient while maintaining 70% light output at 50,000 hours. LED's can be controlled with motion sensors since they are instant on/off. Less frequent lamp and ballast repairs reduce cost of maintenance. LED's are also greener than traditional industrial HID fixtures because of their lack of mercury.
- Magnetic Induction light fixture-Essentially using magnetism to excite the mercury in the fluorescent lamp instead of electrodes. Efficient light fixtures with high lumen per watt output. With no electrodes to fail the lamp life expectancy increases to 65,000 to 100,000 hours. Induction fixtures can be controlled with motion sensors since they are instant on/off and hot re-strike capable. Less frequent lamp and ballast repairs reduce cost of maintenance.
- Astronomical Digital time-clocks- Automatically adjust on/off settings to account for sunrise and sunset.
- T12/ T8 fluorescent lamps- T12 are older 40 watt lamps that operate at the 60 HZ and have tendency to flicker. T8 lamps operate are 35% more efficient and have 7% higher light output. T8 lamps also maintain their light output longer and contain less mercury.



### 3. Identified Areas for Improvement

- **Regional Treatment Plant**

1. Upgrade existing mechanical time clocks to more energy efficient digital astronomical time clocks that account for changes in sunset and sunrise times. This will drastically reduce energy usage by keeping lights off during sunlight hours.
2. Upgrade 120 exterior 70 watt high pressure sodium lights to dual level 22 watt/ 44 watt LED fixtures. The existing lights are past their useful life and many are no longer repairable. This upgrade addresses the necessary lighting repairs and would reduce energy consumption of clarifier and digester lighting by 68%.
3. Replace the 18 mercury vapour 250 watt high bay fixtures located in co-generation with “instant on” 150 watt LED high bay fixtures with independent motion sensors. The new LED lights would only turn on when motion below each light is detected. The existing lights are on 24 hours 7 days per week. 2 lights would remain on 24 hours per day for night lighting purposes.
4. Retrofit remaining T12- 40 watt lamp fluorescent fixtures with T8- 32 watt lamp 1.0 ballast factor electronic ballasts. This will increase lumen output, reduce energy consumption and increase the time interval between lamp replacements.
5. Install a 60 minute timer in the vehicle storage area to control the fluorescent lighting that currently has no on/off switching means. The existing lights are on 24 hours 7 days per week.
6. Replace the primary distribution pit 400 watt high pressure sodium wall-pack lights with energy efficient 150 watt 100,000 induction wall-pack lights.
7. Implement a “turn the lights off program”. If the room is not occupied simply turn the switch off. This is the most cost effective measure to improving energy efficiency.
8. Ensure that the workstation computers are turned off after office hours or programmed for sleep mode.
9. Continue to upgrade co-generation process through improvements to the gas blend process and metering of digester gas production so that all the digester gas is utilized. Set a goal of zero waste gas burner flaring except during co-generation maintenance shut-downs.

- **Salinas Valley Reclamation Project**

1. Upgrade the malfunctioning site lighting time-clock with a digital astronomical time-clock. Perform an after dark survey to determine the minimum site lighting requirements and make any approved changes to the existing lighting control scheme.
2. Update the high pressure sodium lights in the filter gallery with motion controlled LED lighting. High pressure sodium lighting is better suited for outdoor site lighting since re-strike time can take up to 20 minutes if the lights are turned off. The existing lights are on 24 hours 7 days per week.
3. Upgrade existing high pressure sodium lights in the chlorine storage room and chlorinator room with energy efficient LED motion controlled lighting. . The existing lights are on 24 hours 7 days per week. 2 lights would remain on 24 hours per day for night lighting purposes.
4. Implement a “turn the lights off program”. If the room is not occupied simply turn the switch off. This is the most cost effective measure to improving energy efficiency.



- **Agency Pump Stations**

1. Investigate possibility of solar lease agreement for the larger pump stations.
2. Upgrade existing mechanical time clocks to more energy efficient digital astronomical time clocks that account for changes in sunset and sunrise times. This will drastically reduce energy usage by keeping lights off during sunlight hours.
3. Replace the existing 70 watt exterior high pressure sodium fixtures with 22 watt LED fixtures. Many of the existing fixtures are 20 years old and no longer function. The new LED fixtures would reduce light pollution and direct the usable light to ingress and egress of pump stations for night time maintenance.
4. The agency has already modified the dry well lights switching method in Monterey, Fort Ord and Salinas pump stations so that the fluorescent lights are controlled upstairs. The existing 8 per station 400 watt mercury vapour lights were previously operating 24 hours per day before this upgrade.

- **Harris Court Administration Building**

1. Retrofit the existing ceiling fluorescent T12 fixtures with T8 electronic ballast operated lamps.
2. Upgrade the exterior lighting mechanical time clocks with digital astronomical time clocks.
3. Ensure that the workstation computers are turned off after office hours or programmed for sleep mode.
4. Existing incandescent exit lights have already been upgraded to low wattage LED
5. Apply for the ENERGY STAR rating for office buildings. This rating is achieved by a rating of 75 or higher out of 100 and verified by an outside engineer or architect.

#### 4. Summary

- The first step is to partner with the EPA's ENERGY STAR program and perform the benchmarking for the treatment plant and the administration offices.
- Coordinate an external lighting audit through the no-cost professional services provided by Right Lights.
- Using the audit information decide what work will be completed in-house and which work will be contracted.
- Coordinate any upgrades or changes with PG&E so that any rebates can be awarded.
- Complete a budget plan for upgrades that require capital investment.
- Complete in-house low cost upgrades at pump stations, RTP and SVRP.
- Award contracts for contracted services to install energy efficient upgrade.

