



**ACTION ITEM**  
**REVISED**

November 17, 2010

**TO:** Board of Directors

**FROM:** **Planning & Operations**  
(Directors Royce, Clark, Hinman)

Kevin Hunt  
General Manager

Staff Contact:

J. Berg  
WUE Programs Manager

**SUBJECT: Continuation of the Industrial Process Water Use Reduction Program**

**STAFF RECOMMENDATION**

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Staff recommends the Board of Directors

1. Increase the URS Corporation Professional Services Contract by \$108,150 using grant funds provided by the US Bureau of Reclamation, and
2. Authorize the General Manager to enter into a Professional Service Agreement ~~with Spero Strategies, LLC~~ for the Industrial Process Water Use Reduction Program project management services in the amount of \$84,760 to be funded as follows:
  - a. \$15,000 from US Bureau of Reclamation grant funding, and
  - b. \$69,760 from MWDOC's general fund in FY 10-11 and FY 11-12.

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

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Over the past four years, MWDOC has operated an industrial water use efficiency program that has identified a substantial water savings potential of 1,338 acre feet per year.

<b>Budgeted (Y/N): Partial</b>	Budgeted amount: \$37,371
<b>Action item amount: \$69,760</b>	Line item: 7040
<b>Fiscal Impact (explain if unbudgeted):</b> \$32,389 to be budgeted in FY 11-12	

Staff is requesting Board authorization to continue implementation of the program through additional Bureau of Reclamation grant funds and a MWDOC contribution of ~~\$50,000~~69,760.

## DETAILED REPORT

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In June 2006, the Department of Water Resources awarded MWDOC a Water Use Efficiency Proposition 50 Grant in the amount of \$404,801 for implementation of an Industrial Process Water Use Reduction Program (Program). The water savings goal for this Program is 246 acre feet per year, or 1,723 acre feet over the seven-year life of process improvements. MWDOC staff utilized a Request for Proposals process in August 2006 and received Board approval to hire URS Corporation to implement the program. The DWR grant was split into two parts, professional services (URS Corporation) and customer incentives for process improvements. URS Corporation professional services tasks include Marketing, Focused and Comprehensive Surveys, Customer Support, Monitoring, Project Administration, and Engineering Assistance.

The Program provides local industrial customers with two levels of support including:

- Water use efficiency surveys containing recommendations to implement industrial process water use efficiency improvements, and
- Incentive funding, from MWDOC's grants and Metropolitan, to implement efficiency recommendations.

A Flow Chart summarizing the participation process is provided as **Attachment A**. The Focused Survey consists of screening audits to identify major water uses and potential water saving measures. If a Focused Survey reveals a significant water savings potential, a more detailed Comprehensive Survey is offered only to those customers that express a strong interest in implementing water saving improvements. The Comprehensive Survey includes an on-site analysis lasting up to three days each, flow measurements to develop preliminary engineering designs, cost estimates for recommended water saving improvements, incentive funding to implement recommendations, and "next steps" on how to implement the recommended improvements. Focused and Comprehensive Survey reports are customized to the specific site and efficiency recommendations.

For companies that are interested in implementing process improvement recommendations, a Statement of Interest, included in the Comprehensive Survey Report, is executed by the company and submitted to MWDOC. This step serves as a reservation for incentive funding for their process improvement. The company then completes final engineering, obtains firm cost estimates, and establishes a construction timeline. Once this work is complete, an Implementation Incentive Agreement is executed between MWDOC and the company to provide funding incentives towards the improvements. Upon completion of construction and optimization of the process improvement, MWDOC provides a 50% incentive payment, and a one-year monitoring period begins. At the conclusion of this monitoring period, water savings are verified, and the final incentive payment is paid. This payment is prorated based on actual water savings.

The Program initially focused on food processors, textile manufacturers, electronics manufacturers, and metal plating companies, but was expanded to include pharmaceutical companies, commercial laundries, and aerospace manufacturing.

In summary, a total of 33 Focused Surveys and 13 Comprehensive Surveys have been completed or are in progress. The water savings potential identified in the Surveys totals more than 436 million gallons, or 1,338 acre feet per year. Seven Statements of Interest have been submitted to MWDOC representing companies intending to access incentive funding to implement process improvements. Six Implementation Incentive Agreements have been signed, which include a water savings of 211 acre feet per year or 86 percent of the Program goal. Water savings over the 7-year life of the process improvements total 1,477 acre feet. These six agreements contain more than \$351,272 in incentive funding to implement water saving recommendations (includes a blend of incentive funding from Phase I and II grant sources). For a summary of these Surveys see **Attachment B**. Staff will continue to work with interested companies to move them to implementation, with a special interest in Jazz Semiconductor, American Apparel, Hixson Metal Finishing, and Oakley, whose combined savings potential is more than 900 acre feet per year.

Staff proposes to move to Phase II of the Industrial Process Water Use Reduction Program using two additional grants as detailed in Table I. The first grant is from the Bureau of Reclamation in the amount of \$100,000 from their Field Services Program. This grant is intended to provide additional incentives and technical assistance for participants that lack in-house staff resources. The second grant is from CALFED (administered by the Bureau of Reclamation) in the amount of \$358,150. The purpose of this grant is to conduct additional Focused and Comprehensive Surveys, and provide incentives for process improvements.

<b>Grant</b>	<b>Phase</b>	<b>Professional Services</b>		<b>Incentives</b>	<b>Total</b>
<b>DWR Prop 50</b>	Phase I	\$249,820	URS Corporation	\$154,981	\$404,801
<b>USBR Field Services*</b>	Phase I	\$10,000	URS Corporation	\$90,000	\$100,000
<b>USBR CALFED*</b>	Phase II	\$108,150	URS Corporation	\$250,000	\$358,150
<b>Total</b>		<b>\$367,970</b>		<b>\$494,981</b>	<b>\$862,951</b>

\* The USBR grants also include funding for MWDOC staff time reimbursement totaling \$28,500 (\$13,500 for Phase I has already been invoiced and \$15,000 for Phase II); these grant funds are not included in Table I to simplify the staff report and avoid confusion.

Of the \$458,150 from the two additional USBR grants, approximately \$118,150 is for professional services for program implementation by URS Corporation (\$10,000 for Phase I and \$108,150 for Phase II), and the balance of \$340,000 is for customer incentives. Because some of these incentive funds are already dedicated to existing participants, the balance of incentive funds for Phase II is approximately \$143,709 (total incentives of \$494,981 less \$351,272 encumbered for the six existing incentive agreements). It should be noted, however, that the grants allow for flexibility to shift funds between Professional Services and Incentives categories as the Program is implemented.

#### Program Implementation by URS Corporation

When the Program started in October 2006, URS Corporation was selected through an RFP process to implement the project. The RFP process included more than 22 consulting firms. The current Phase I URS Contract is valued at \$259,820 (DWR \$249,820 + USBR \$10,000) and is near completion. Through this effort, MWDOC and URS Corporation have refined the implementation and participation process, which is running smoothly. URS Corporation has established strong expertise in industrial process evaluations and is performing this work at a high level of quality; staff has been satisfied with their performance.

With the additional USBR grants, staff would like to continue to take advantage of URS Corporation's expertise and is proposing to increase their contract by \$108,150 to conduct additional Focused and Comprehensive Surveys, provide technical assistance, and conduct implementation monitoring. URS Corporation has agreed to continue to implement the project at the same rates agreed to when the project started. It is anticipated that up to 18 additional Focused Surveys and 7 comprehensive surveys will be conducted.

#### Incentives for Process Improvements

When the Program started, incentives offered to customers to implement process improvements were provided by MWDOC's DWR grant and Metropolitan's Conservation Credits Program. Metropolitan's incentive was \$3.00 per 1,000 gallons saved and the DWR grant provided an additional \$1.50 per 1,000 gallons for a total incentive of \$4.50 per 1,000 gallons saved. Since then, Metropolitan's funding has become increasingly uncertain due to recent Conservation Credits Program modifications. As a result, staff sought out and was awarded federal grants that could replace Metropolitan funding and be used to meet the DWR matching fund requirements. With intermittent Metropolitan funding and firm DWR/USBR funding, staff plans to continue to implement the Program using our grants as the primary source of incentive funding, but also access Metropolitan funding whenever available.

#### Professional Services for Project Administration

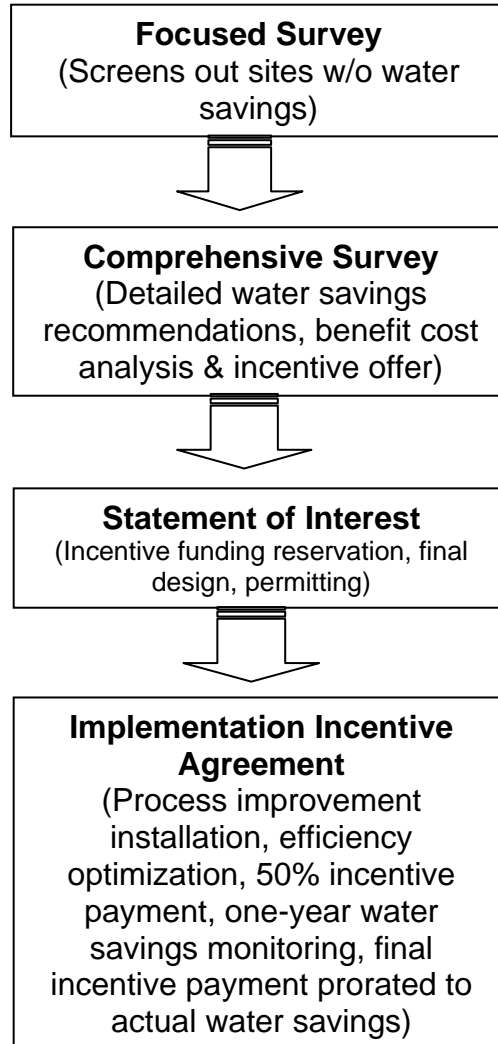
MWDOC's part-time Project Manager Elizabeth Clatfelter, responsible for implementing the Program, resigned in September 2010 to become a full time mom. Shortly after her resignation, Ken Gryske with Spero Strategies, LLC was hired as a temporary project manager at an amount not to exceed. Staff proposes to increase the current Spero Strategies, LLC contract valued at \$19,760. Staff needs to make a formal selection for the remaining project management contract services to the end of the contract which is estimated to cost by \$65,000, for a total project management cost to the program of \$84,760. This will provide for continued project management services through the end of the term of our grant agreements (December 2011). These project management services will be funded through a combination of USBR CALFED grant funds (\$15,000) and MWDOC general funds (\$69,760). Of the \$69,760 proposed from the General Fund, \$37,371 was budgeted this year for the original project manager (salary and benefits) and the balance of \$32,389 will be budgeted next Fiscal Year as professional services.

#### Conclusion

A significant water savings potential exists in the industrial sector; more than 1,338 acre feet per year has already been identified at 33 industrial companies in the MWDOC service

area. MWDOC has sufficient grant funding to continue implementing the Program through December 2011. While the weak economy has hampered companies from implementing our recommendations, they are beginning to show more interest in investing in process improvements. Staff would like to take this opportunity to complete our work with existing companies and conduct as many new surveys as possible so that when the economy improves, we will be ready to incentivize additional process improvements.

**Industrial Process Water Use Reduction Program  
Participation Flow**



## Industrial Process Water Use Reduction Program Summary

Industry Segment	Company Name	Retail Agency	Focused Survey	Comp Survey	State ment of Interest	Implement-ation Incentive Agreement	Incentive Funding			Water Savings Potential (MGY)	Comments
							MWDOC Grants	Local Agency Matching (IRWD)	MET CCP		
Electronics	Marcel Electronics (1)	City of Orange	X	X	X	X	\$ 19,222		\$ 42,092	14.0	
Electronics	Jazz Semiconductor	Irvine Ranch WD	X	In Prog			\$ 250,000	\$ 537,000	?	179.6	Comp Survey in progress, very high interest
Electronics	Excello Circuits Mfr Corp	Yorba Linda WD	X							1.9	
Electronics	Cirtech	City of Orange	X	X						6.2	
Electronics	Sanmina Corp	Mesa Consolidated WD	X							0	
Textile	Angelica	City of Orange	X							0	
Textile	St. John Knitts	Irvine Ranch WD	X							0	
Textile	USDF (aka American Apparel)	City of Garden Grove	X	X	X					86.5	High interest, stalled due to weak economy
Metals	All Metals Processing	Golden State Water Comp	X							1.8	
Metals	Continuous Coatings	City of Orange	X	X	X	X	\$ 11,097		\$ 24,250	5.2	Installing process improvement
Metals	Gerard Roofing	City of Brea	X							1.8	
Metals	Hixson Metal Finishing	Mesa Consolidated WD	X	X	X	In Prog				11.0	Installing new production line in 2011
Food	SunOpta (aka Cleugh Foods)	City of Buena Park	X	X						6.4	Customer implemented w/o incentive
Food	Pick Up Stix	Santa Margarita WD	X							0.6	
Food	Flavor Chem	City of San Clemente	X							0	
Food	Dean Foods (Ice Cream)	City of Buena Park	X	X						2.0	
Food	Dean Foods (Milk)	City of Buena Park	X	X						5.5	
Food	House Foods	City of Garden Grove	X							0	
Food	Knotts ConAgra	Golden State Water Comp	X							0.4	
Food	Langlois Frozen Foods	Laguna Beach County WD	X							0.4	
Food	Maruchan Inc.	Irvine Ranch WD	X							5.8	
Food	Pepsi Bottling	City of Buena Park	X							14.4	
Food	Seven-up Bottling	City of Buena Park	X							0	
Food	Todds Foods	Irvine Ranch WD	X							8.2	
Other	Boeing Aerospace	City of Huntington Beach	X	X	X	X	\$ 60,000			29.3	Customer provided engineering, installing process improvement
Other	AES Huntington Beach	City of Huntington Beach	X							8.4	
Other	TEVA Sicor Pharma	Irvine Ranch WD	X	In Prog						15.9	Comp Survey in progress
Other	Oakley	Irvine Ranch WD	X							18.9	Oakley considering moving to Comprehensive Survey
Other	B BRAUN Medical Inc.	Irvine Ranch WD	In Prog							0	
Other	Esterline Engineering (aka Kirkhill R	City of Brea	X							2.4	
Other	Electrolurgy	Irvine Ranch WD	X	X	X	In Prog	\$ 6,021	\$ 18,060		6.0	Customer provided engineering, in process of signing Incentive Agreement
Laundry	Oakwood Corporate Housing	City of Huntington Beach	X							0.4	
Laundry	Prudential Supply (1)	Irvine Ranch WD	X	X	X	X	\$ 4,932		\$ 10,800	3.1	
Totals			33	13	7	6	\$ 351,272	\$ 555,060	\$ 77,142	436.1	

Program Water Savings Goal: 80 MG/Y or 245 acre feet per year (DWR)

# Summary of MWDOC's Industrial Process Water Use Reduction Program

Planning and Operations Committee  
November 1, 2010

Joe Berg, Water Use Efficiency Programs Manager  
Municipal Water District of Orange County



## Program Background

- **Targets efficiency improvements in industrial manufacturing processes that are water intensive**
- **Grew out of an Industrial Technical Assistance Program implemented in the mid 1990's**
- **Couples Technical Assistance with performance based financial incentives to implement efficiency recommendations**





## Program Components

- **Technical Assistance**
  - Focused Surveys – screens for water savings potential
  - Comprehensive Surveys – detailed engineering reports containing recommendations, savings, and economic analysis
- **Financial Incentives**
  - Performance Based, paid on actual water savings
- **Completed**
  - 33 Focused Surveys
  - 13 Comprehensive Surveys
  - Signed 7 Statements of Interest
  - Signed 6 Incentive Agreements - **\$351,272 committed**



## Water Savings

- **Water Savings**
  - **Goal** **245 acre feet per yr.**
    - Via 6 Incentive Agreements
  - **Potential identified** **1,338 acre feet per yr.**
    - In Focused and Comprehensive Surveys
  - **Achieved** **211 acre feet per yr.**
    - 86% of savings goal
- **Looking forward**
  - Additional savings to be identified through additional Focused (18) and Comprehensive Surveys (7)



## Example Recommendations & Water Savings

Marcel Electronics	SunOpta	Boeing Aerospace
<p><b>Process Improvement:</b> Installation of a deionized water recycling system for washing of circuit boards</p> <p>Water Savings: 43 afy</p>	<p><b>Process Improvement:</b> Reverse flow strawberry washing system</p> <p>Water Savings: 20 afy</p>	<p><b>Process Improvement:</b> Convert Cooling Towers from potable to reclaimed groundwater</p> <p>Water Savings: 90 afy</p>

