

- **Board of Directors**
Water Planning, Quality and Resources Committee

May 11, 2004 Board Meeting

10-3

Subject

Report on fiscal year 2003/04 Innovative Supply Program Grant Recipients

Description

The Innovative Supply Program assesses new supply ideas from individuals and organizations, and provides a business approach to consider the merits of ideas that may expand regional water supply. Grant recipients will commit to develop credible information to advance the understanding of one or more fundamental aspect of their new supply proposal. **Attachment 1** describes ten competitively selected proposals under the ISP that would receive grants from Metropolitan to stimulate new water supply opportunities for its region. The total funding for ten proposals amounts to nearly \$250,000.

In March 2003, staff informed the Board of the framework for the Innovative Supply Program, and in April solicitations for competitive proposals were issued. The 17 proposals listed in **Attachment 2** were received and evaluated by the review panel. Collectively, the 17 proposals requested about \$1.2 million, nearly five times the program budget of \$250,000. **Attachment 3** lists the selection criteria used by the review panel to evaluate proposals. **Attachment 4** is a report summarizing the review panel's evaluation approach. The five-member review panel is identified in **Attachment 4** and consisted of representatives from a research institution, a university, Metropolitan, a member agency and a business entity.

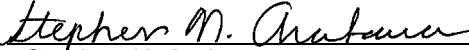
The next step is for staff to enter into contracts to provide grants to support investigations regarding each innovative supply idea. Metropolitan would provide 70 percent of each grant award up front, with the remaining funds provided when investigations are completed and final reports submitted to Metropolitan. Staff would monitor progress according to an agreed upon schedule. Investigations are expected to be completed within one year of contract execution. A workshop would be held with member agencies to review and consider the results. Staff would also report the findings to the Board.


Policy

By Minute Item 44974, dated August 20, 2002, the Board has supported proceeding with similar programs in the past, and authorized the Innovative Conservation Program.

Fiscal Impact

\$200,000 is budgeted for FY 2003/04 and \$50,000 would be budgeted for FY 2004/05.

 Stephen N. Arakawa Manager, Water Resource Management	4/23/2004 Date
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 Ronald R. Gastelum Chief Executive Officer	4/23/2004 Date
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Attachment 1 – Ten ISP Selected Projects

Attachment 2 – Proposals Received in Response to ISP RFP

Attachment 3 – ISP Selection Criteria

Attachment 4 – ISP Selection Process

BLA #2409

Ten ISP Selected Projects

Project Title	Project Proponent	Supply Aspect
Assessment of Opportunities to Recover Stormwater Runoff for Groundwater Recharge in the Calleguas Creek Watershed	West Cost Environmental & Engineering	Storm runoff for groundwater recharge
Dewevaporation with Liquid Desiccant Enhancement	L'Eau LLC (a private business)	Recycled water quality
Evaporation Control in Southern California	Flexible Solutions Inc.	Reservoir yield
Feasibility Evaluation of On-Site Water Recycling for Three Southern California Golf Courses	Southern California Golf Association	Recycled water
Horno Water Quality Basin Urban Runoff Recovery Project	Santa Margarita Water District	Storm runoff for groundwater recharge
LA Aquifer Aquasystem Trial, SAGES 1 Foot Unit	Egmond Associates Ltd	Storm runoff for groundwater recharge
San Antonio Canyon Surface Water Supplement Supply	Six Basins Water Master	Storm runoff for groundwater recharge
System-Wide Reservoir Reoperation to Augment California's Water Supply	Natural Heritage Institute	Reservoir yield
Urban Runoff Infiltration under Parkways for Groundwater Recharge	City of Santa Monica	Storm runoff for groundwater recharge
Waterbag Transport and Storage Technology for Brine Disposal	Terry Spragg & Associates	Recycled water quality

Proposals Received in Response to the Innovative Supply Program RFP

Project Title	Project Proponent	Requested Amount (\$)
Assessment of Opportunities to Recover Stormwater Runoff for Groundwater Recharge in the Calleguas Creek Watershed	West Coast Environmental & Engineering	\$95,000
Deep Sea Reverse Osmosis	DSRO	\$50,000
Dewevaporation with Liquid Desiccant Enhancement	L'Eau LLC	\$49,507
Evaporation Control in Southern California	Flexible Solutions Inc.	\$147,370
Feasibility Evaluation of On-Site Water Recycling for Three Southern California Golf Courses	Southern California Golf Association	\$150,000
Groundwater as a Supplement into the MWD System	Three Valleys MWD	\$40,000
Horno Water Quality Basin Urban Runoff Recovery Project	Santa Margarita Water District	\$6,290
LA Aquifer Aquasystem Trial, SAGES 1 Foot Units	Egmond Associates LTD	\$68,155
North Tijuana River Groundwater Production Feasibility Supply Proposal	Otay Water District	\$48,220
Pooling Resources Cisterns for Seasonal Water Supply	Urban Real Property	\$20,000
Project Desert Bloom	Project Desert Bloom Associates	\$85,000
Proof Of Concept Demonstration of Snowmaking from Seawater on board a ship at sea in winter.	Aquifer Ocean LLC	\$117,000
San Antonio Canyon Surface Water Supplemental Supply	Six Basins Water Master	\$55,000
Solar Water-Using Southern California's Natural Resources and New Technologies to Develop a Large Scale Renewable Water Supply	The LXT Group	\$86,012
System-Wide Reservoir Reoperation to Augment California's Water Supply	Natural Heritage Institute	\$75,000
Urban Runoff Infiltration under Parkways for Groundwater Recharge	City of Santa Monica	\$50,000
Waterbag Transport and Storage Technology	Terry Spragg & Assoc.	\$50,000
Total:		\$1,218,939

**Innovative Supply Program
Selection Criteria**

The review panel evaluated proposals based on balanced assessment of the following project-ranking factors.

Criteria	Description	Points
1. Innovation of Supply Concept	Project with potential to advance an innovative concept that produces a new source of water supply for Southern California.	30
2. Potential Regional Water Supply Benefits	Project that offsets a firm demand for imported water supplies and/or increases regional water supply reliability.	30
3. Adequacy of Work Plan, Product, and Capability to Complete ISP Grant Project	Project that addresses adequacy of work plan, product, and proponents capability to complete project.	30
4. Potential Cost of Water to the Region	Project estimated unit cost per acre-foot of yield for fully mature innovative concept.	10
TOTAL =100		

Innovative Supply Program Selection Process

I. Executive Summary

In March 2003, Metropolitan established the Innovative Supply Program (ISP) to stimulate the advancement of new and innovative methods of water supply for Southern California. The ISP creates a unique opportunity to consider the merits of non-traditional ideas that have the potential to expand regional water supplies.

In April 2003, Metropolitan issued a competitive Request for Proposals (RFP). In response to the RFP, seventeen candidate projects requesting \$1.2 million in funding were received from individuals, private entities, project partnerships/joint ventures, institutions, member agencies and subagencies. Ten projects were selected for grant funding within the program limit of \$250,000 to support investigations regarding advancement of new innovative ideas.

A five-member review panel of experts evaluated the proposals using selection criteria previously adopted by the Board. The review panel consisted of representatives from member agencies, academic and research institutions, private business with a venture capital background, and Metropolitan staff.

Prior to informing the Board, staff negotiated agreement terms, funding commitments, and scope of work for each of the selected projects. The next step is to enter into contracts to provide grants to support investigations regarding each innovative supply idea. Metropolitan would provide 70 percent of each grant award up front, with the remaining funds provided when the projects are completed and final reports submitted to Metropolitan. Staff would monitor progress according to an agreed upon schedule. It is anticipated that projects would be completed within one year of contract execution. A workshop would be held with member agencies to share the study findings regarding potential new directions in water supply. Staff would report project findings to the Board with a recommendation on whether to pursue any of the approaches investigated.

II. Background

The ISP provides a mechanism for Metropolitan to objectively consider new supply ideas from individuals and organizations consistent with the new public business principles of stewardship, added value, adaptability, and respect for local water rights and the rights of local communities. The program is also consistent with the objectives embodied within the Integrated Resources Plan of achieving supply reliability through a diverse resource portfolio and is modeled after the award winning Innovative Conservation Program.

III. Minimum Eligibility Requirements

The ISP was open to the following entities:

- Individuals
- Public and private entities including private companies, water suppliers, entrepreneurs, public agencies, Metropolitan member agencies, subagencies, universities, laboratories, research institutes, etc. - are all eligible
- Project partnerships/joint ventures

The ISP excluded projects that are currently participating, under consideration for participation, or eligible for participation in Metropolitan's traditional water supply programs (e.g. Local Resources, Seawater Desalination, and Innovative Conservation Programs).

Work plans were required to include one or more of the following to be considered eligible for ISP funding:

- public acceptance of implementing project
- cost to implement the concept and its cost-effectiveness
- needed water rights approvals
- wet and dry-year yields and water accounting methodologies
- compatibility with existing supply systems
- quantification of project and blended water quality
- permitting requirements and strategy for meeting these requirements
- environmental factors and CEQA requirements
- institutional arrangements and responsibilities
- technical testing and development to be conducted
- other similar analyses that advance the business, public, or technical understanding of the innovative supply idea

IV. ISP Review Panel

A five-member review panel was convened to evaluate the seventeen proposals received. The panel was directed to identify the mix of project proposals that best meets the region's needs consistent with the RFP. The following table lists the panel members and affiliations:

Name	Entity	Category
Dr. Harold Bailey	Research Advisory Committee of WaterReuse Foundation	Research institution
Dr. Duke Bristow	Anderson School of Management at UCLA	University
Warren Hagstrom	Metropolitan Water District, Water Resource Management Group	Metropolitan staff
Matt Lyons	Long Beach Water Department	Member agency
Patrick Meyers	Director of Strategy, Corporate Strategy Group, American Water	Business entity

V. Selection Process

The review panel evaluated the proposals listed in Table 1 (page 4) summarizes project proposals received under the ISP. These project proposals were categorized as follows:

- 3 Desalination projects
- 2 Groundwater recovery projects
- 2 Recycled water projects
- 7 Stormwater runoff projects
- 1 Waterbag technology project
- 2 other

The review panel used the following scoring criteria to guide its ranking of the candidate proposals as follows:

Criteria	Max. Points
Innovation of supply concept	30
Potential regional water supply benefits	30
Adequacy of work plan, product and capability to complete ISP grant project	30
Potential cost of water to region	10
Total	100

The review panel independently evaluated each proposal based on Metropolitan's requirements, and their respective knowledge and experience with water supply programs and business aspects of advancing innovation. The review panel participated in discussions and meetings at which the merits of the proposals were discussed as a basis for applying the scoring criteria. The scoring process was structured to evaluate the proposals with respect to differences in proposed project benefits and costs, when the proposals satisfied minimum requirements.

Table 1. Proposals Received in Response to the Innovative Supply Program RFP

Project Title	Project Proponent	Requested (\$) amount
Assessment of Opportunities to Recover Stormwater Runoff for Groundwater Recharge in the Calleguas Creek Watershed	West Coast Environmental & Engineering	\$95,000
Deep Sea Reverse Osmosis	DSRO	\$50,000
Dewevaporation with Liquid Desiccant Enhancement	L' Eau LLC Small Business Entity	\$49,507
Evaporation Control in Southern California	Flexible Solutions Inc.	\$147,370
Feasibility Evaluation of On-Site Water Recycling for Three Southern California Golf Courses	Southern California Golf Association	\$150,000
Groundwater as a Supplement into the MWD System	Three Valleys MWD	\$40,000
Horno Water Quality Basin Urban Runoff Recovery Project	Santa Margarita Water District	\$6,290
LA Aquifer Aquasystem Trial, SAGES 1 Foot Units	Egmond Associates LTD	\$94,540
North Tijuana River Groundwater Production Feasibility Supply Proposal	Otay Water District	\$48,220
Pooling Resources Cisterns for Seasonal Water Supply	Urban Real Property	\$20,000
Project Desert Bloom	Project Desert Bloom Associates	\$85,000
Proof Of Concept Demonstration of Snowmaking from Seawater on board a ship at sea in winter.	Aquifer Ocean LLC	\$117,000
San Antonio Canyon Surface Water Supplemental Supply	Six Basins Water Master	\$55,000
Solar Water	The LXT Group	\$86,012
System-Wide Reservoir Reoperation to Augment California's Water Supply	Natural Heritage Institute	\$75,000
Urban Runoff Infiltration under Parkways for Groundwater Recharge	City of Santa Monica	\$50,000
Waterbag Transport and Storage Technology	Terry Spragg & Assoc.	\$50,000
Total:		\$ 1.2 million

VI. Description of Selection Criteria and Ranking Proposals

The following describes how the independent review panel applied the program scoring criteria.

Innovation of Supply Concept (30 points)

- (1) Project Innovation (20 points). This item rated the degree of innovation that the concept brings forward regarding a new source of water supply. To score 20 points, concepts must be highly innovative in creating a new source of water supply.
- (2) Project Implementation (10 points). This item rated the potential to implement the concept. To score 10 points, concepts must provide a convincing potential for implementation.

Lesser scores were awarded for projects that were marginal in innovation and had low chance for implementation. The proposed projects selected for ISP funding averaged 13.6 points for Project Innovation, and 7.2 points for Project Implementation. Remaining projects averaged 7.3 and 3.3 points respectively.

Regional Water Supply Benefits (30 points). This category rated the extent to which the concept offsets a firm demand for imported water delivery or increases regional water supply reliability. To score 30 points, the concept needed to establish the following:

- Provided potential for a net new supply to Metropolitan's service area
- Provided sustained water supply benefits
- Reduced reliance on imported supplies to supplement local surface and groundwater supplies
- Production was not seasonal
- Did not affect local water supply planning for other agencies
- Supported from affected agencies
- Blending or replenishment with imported water supplies was not needed
- Production was not reduced if imported water for replenishment is curtailed
- Did not pose a risk to existing water supplies

Lesser scores were awarded to projects that provided moderate or minimal regional water supply benefits. The projects selected for ISP funding averaged 17.9 points for this criterion, and the remaining projects averaged 11.4 points.

Adequacy of Work Plan, Product, and Capability to Complete ISP grant Project (30 points)

- (1) Detailed project work plan identifying all project activities (10 points). The following factors were considered:
 - Determined public acceptance of implementing project
 - Quantified the cost to implement the concept and its cost-effectiveness
 - Determined needed water rights approvals
 - Quantified wet and dry-year yields and establish water accounting methodologies
 - Determined compatibility with existing supply systems
 - Quantified project and blended water quality
 - Identified permitting requirements and strategy for meeting these requirements
 - Identified environmental factors and CEQA requirements
 - Determined institutional arrangements and responsibilities

- Conducted technical testing and development
- Provided other similar analyses that advance the business, public, or technical understanding of the innovative supply idea

To score 10 points, the work plans were thorough and addressed one or more of the above project activities. Lower scores were given for weaker work plans.

The selected projects averaged 8.1 points, and the deferred projects averaged 5.6 points.

- (2) Proponent's experience and technical capability (10 points). Experienced teams in the subject matter to be investigated over the 12-month period received higher scores.

To score 10 points, proponents demonstrated strong project experience and technical capabilities. Lower scores were given for weaker project experience and technical capability.

The proposed projects selected averaged 8.6 points, and the remaining projects averaged 4.5 points.

- (3) Proponent's financial capability (5 points). Proponents with necessary financial resources to complete their 12-month investigation received higher scores.

To score 5 points, proponents demonstrated financials capability to implement project. Lower scores had significant financial risk for proponent to complete project.

The proposed projects selected averaged 4.2 points, and the remaining projects averaged 2.7 points.

- (4) Schedule (5 points). Thorough schedules with a high probability of accomplishment received higher scores.

To score 5 points, proponents schedule included key milestone dates, including required permits and CEQA documentation. Lower scores did not address key milestone dates or necessary work activities, such as required permits and CEQA documentation.

The proposed projects selected averaged 4.1 points, and the remaining projects averaged 2.2 points.

Potential Cost of Water to Region (10 points). This category was evaluated on the basis of the least cost per acre-foot of yield to Metropolitan over the contracted period of time. Projects received one point for every incremental decrease of \$250/AF in the cost of water. Ten points were awarded to projects providing a unit cost less than \$250/AF. On the other end of the scale projects received zero point for unit cost of water greater than \$2,500/AF.

VII. Conclusions

Based upon the preceding scoring criteria, the review panel selected the following projects.

Table 2. ISP Recommended Projects

Project Title	Project Proponent
Assessment of Opportunities to Recover Stormwater Runoff for Groundwater Recharge in the Calleguas Creek Watershed	West Cost Environmental & Engineering
Dewevaporation with Liquid Desiccant Enhancement	L'Eau LLC
Evaporation Control in Southern California	Flexible Solutions Inc.
Feasibility Evaluation of On-Site Water Recycling for Three Southern California Golf Courses	Southern California Golf Association
Horno Water Quality Basin Urban Runoff Recovery Project	Santa Margarita Water District
LA Aquifer Aquasystem Trial, SAGES 1 Foot Unit	Egmond Associates Ltd
San Antonio Canyon Surface Water Supplement Supply	Six Basins Water Master
System-Wide Reservoir Reoperation to Augment California's Water Supply	Natural Heritage Institute
Urban Runoff Infiltration under Parkways for Groundwater Recharge	City of Santa Monica
Waterbag Transport and Storage Technology	Terry Spragg & Associates