

• **Water Planning, Quality and Resources Committee**

November 18, 2002 Committee Meeting

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Subject

Integrated Resources Plan Update Report

Description

At the June 2002 Board meeting, staff summarized the early analysis of the Integrated Resources Plan (IRP) Update, including a statement of 100 percent full service water supply reliability through 2025. This analytical result assumed successful implementation of all current IRP goals, local development plans per the member agency 2000 Urban Water Management Plans, and an additional 50 thousand acre-feet (TAF) of seawater desalination. Staff also identified the potential need for “buffer supplies” to offset the uncertainties, beyond hydrology, that could impact water supply reliability in Southern California. Since then, work has continued on the IRP Update to identify a recommended size and source of buffer supplies and has been focused on the value of diversification into new water supply sources to minimize risk to reliability. Toward the goal of diversification, staff has worked with member agencies to determine the reasonable near-term capabilities for the development of seawater desalination as a new water resource for Southern California. In recognition of the diversification value of seawater desalination, staff envisions enlarging seawater desalination’s role in the IRP through the IRP Update. This strategy, along with overall increases in targets for conservation, recycling and groundwater recovery, and central valley transfers, is anticipated to provide reliability through 2025 against multiple uncertainties and reasonable assumptions of resource implementation risk.

To achieve the 100 percent regional water supply reliability through 2025 as reflected in the June board report, the Southern California region will need to develop approximately 1.93 million acre-feet (MAF) of identified supplies. Staff estimates that these future supplies have approximately a 25- to 30-percent implementation risk and despite best efforts may not be fully implemented as planned. These at-risk resources are approximately equal to 10 percent of regional retail demand in 2025. As a result, staff will recommend a planning reserve of 10 percent of regional retail demand. This planning reserve will not necessarily provide a 10 percent operating reserve, but will provide for reliability in the case that projects and programs are discontinued or fall behind schedule. The table below provides an estimate of the 10 percent planning reserve or “buffer” through 2025.

**Retail Water Demand and Buffer Requirements by Forecast Year in MAF
Based on 10 percent of Retail Water Demand Buffer Supply**

Forecast Year	Retail Water Demand with Conservation	~10 percent Buffer Requirement
2010	4.26	0.425
2015	4.47	0.450
2020	4.77	0.475
2025	4.91	0.500

The recommended source of additional supplies to achieve the buffer is determined by criteria established in the 1996 IRP, using diversification as a guiding principle. Although cost-effectiveness is also a significant objective, consensus among Metropolitan and member agency staff holds that these buffer supplies should not be weighted any more than 60 percent toward either local or imported supplies. The final determination of the local and

imported supply split will be based on cost-effectiveness and ability to implement supplies. For the purposes of setting targets, an approximate 50/50 split is initially set.

**Local and Imported Buffer Target by Forecast Year in MAF
Based on 10 percent Retail Water Demand Buffer Supply**

Forecast Year	Local Target for Buffer Supply	Imported Target for Buffer Supply
2010	0.215	0.210
2015	0.225	0.225
2020	0.240	0.235
2025	0.250	0.250

The addition of the buffer described above to current estimates of local and imported supplies provides the following update to targets under the IRP.

**2025 IRP Update Resource Development Goals with Buffer
Dry-Year Supply in MAF
(Does not include all local resources)**

Resource	Current 2020 IRP Goals	2025 IRP Update Goals	Increased Goal
Conservation	0.882	1.107	0.225
Recycling/Desalination	0.500	0.750	0.250
Colorado River Aqueduct	1.250	1.250	0.000
State Water Project	0.650	0.650	0.000
Groundwater Conjunctive Use	0.300	0.300	0.000
Central Valley Transfers	0.300	0.550	0.250

This resource mix, along with local supplies such as groundwater and surface water production, is projected to maintain Southern California's 100 percent supply reliability through 2025 and will continue to satisfy the new water supply reliability objectives passed in recent legislation.

If endorsed, Metropolitan's updated IRP targets will be as follows:

**2025 IRP Updated Resource Development Targets
Dry-Year Supply in Millions of Acre-Feet
(Does not include all local resources)**

Resource	2025 IRP Updated Targets	Current Supply	Remaining Target
Conservation	1.107	0.572	0.535
Recycling/Desalination	0.750	0.250	0.500
Colorado River Aqueduct	1.250	0.900	0.350
State Water Project	0.650	0.418	0.232
Groundwater Conjunctive Use	0.300	0.137	0.163
Central Valley Transfers	0.550	0.150	0.400

To achieve these goals, the southern California region will need to embark on an aggressive path to develop new supplies. Nearly one-quarter of these new supplies will come to the region through conservation, with marked increases in the region's transfer, recycling, and desalination goals. To help achieve these goals, staff will recommend that 150 TAF of seawater desalination be targeted for development. Staff makes this recommendation based on two factors: (1) seawater desalination represents the first feasible new water supply diversification option since the 1996 IRP, and (2) the responses to the Seawater Desalination Request for Proposal (RFP) showed that the resource can be developed with an incentive of up to \$250 per acre-foot, which is Metropolitan's limit for cost-effective local water resource development. No increase in targets for the State Water Project or Colorado River will be set under this IRP Update.

To support the resource development outlined in this report and needed by 2010 to remain consistent with a 10 percent planning supply buffer, staff will bring back to the Board, for its consideration, a series of recommendations and processes including:

1. A study of conservation to determine options to develop active program targets and set funding levels;
2. A 2003 Local Resources Program (LRP) RFP for a minimum of 65 TAF;
3. A recommendation to move forward with up to 150 TAF of seawater desalination in December 2002;
4. A recommendation to complete the groundwater conjunctive use programs related to the Proposition 13 (Prop. 13) co-funding and either expand the programs under the Prop. 13 co-funding or issue a 2003 RFP to develop up to 30 TAF of additional groundwater conjunctive use;
5. A recommendation on the programs necessary to meet the goal of a full Colorado River Aqueduct;
6. A renewed effort to ensure a 650 TAF minimum supply on the State Water Project, with an average available supply of 1,500 TAF;
7. A recommendation to complete the program development and contracting under the Dry-Year Transfers RFP, plus a recommendation to seek an additional 210 TAF of dry-year water transfers in January 2003.

Staff will present the potential rate impacts of these program increases at the November committee meeting.

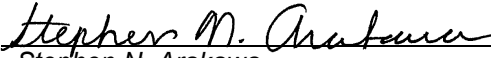
Policy


Integrated Resources Plan, approved by the Board on January 9, 1996 (Minute Item 41734)

Integrated Resources Plan Update, approved by the Board on November 20, 2001 (Minute Item 44696)

Fiscal Impact

None

 Stephen N. Arakawa Manager, Water Resource Management	11/6/2002 Date
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 Ronald R. Gastelum Chief Executive Officer	11/7/2002 Date
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