

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

July 11, 2000 Board Meeting

9-7

Subject

Expand General Manager's Authority to Execute Water Quality Exchange Agreements

Description

The proposed amendment to Administrative Code Section 4207 would expand the General Manager's authority to execute exchanges of Metropolitan's supplies that improve water quality. Metropolitan's access to the State Water Project (SWP) and groundwater banking programs provides opportunities for exchanges. In every exchange, benefits must exceed net exchange costs. We envision some exchanges where Metropolitan would incur no costs, but would benefit from avoided pumping charges.

The proposed amendment supplements the existing Administrative Code that explicitly established Metropolitan policy for exchanges between Metropolitan and State water service contractors regarding Colorado River water and among Metropolitan's member public agencies using Metropolitan facilities. The code would be amended to authorize exchanges up to a cumulative total of 50,000 acre-feet per year with cumulative net exchange costs not to exceed \$500,000. The benefits of exchanges up to 50,000 acre-feet would be modest in relationship to the large scale of Metropolitan's imported water deliveries; however, they would be incrementally valuable in terms of salinity management and lowering other constituents of concern.

Water quality exchange opportunities with private and public entities occur intermittently and may only be available for short time periods. For example, unusually warm weather could make high quality snowmelt water available for a short time period. Other opportunities could arise as agricultural water agencies adjust their operations to evolving supply and demand conditions. In these cases, there may not be sufficient time to obtain prior Board approval.

Costs to facilitate water quality exchanges would come from the Water Transfer Fund (Fund). Of the \$47.9 million currently in the Fund, no more than \$500,000 would be utilized in FY 2000-2001. Because the Fund sunsets by 2004, the Board would need to take action at a future date to extend the life of the Fund.

The following responses address questions raised at the previous Water Planning and Resources Committee meetings:

- A primary criterion would be that the exchange provides benefits that exceed costs. **Attachment 1** illustrates how this criterion would be applied to two theoretical water quality exchanges of SWP water for higher-quality Sierra water. The benefit-cost approach should automatically keep exchange costs within acceptable unit cost. Quantifiable benefits could include reduced SWP power and delivery charges, reduced treatment costs, and savings from reduced SWP water deliveries needed to meet blending targets or reduced salinity impacts to the region.
- Because water exchange agreements will assist Metropolitan in providing water quality benefits to its entire service area, a policy for member agencies to opt-out is not practical.
- Staff will seek opportunities for cost sharing with other SWP contractors benefiting from water quality improvements. In no-cost exchange scenarios, staff would seek to maximize Metropolitan's benefit before another contractor is pursued as a partner.

The proposed Administrative Code language in underscore/strikeout is shown on **Attachment 2**. The Board would be apprised of water exchange activity through oral water supply updates that are now provided to the

Engineering and Operations Committee on a regular basis. As experience is gained with exchanges, staff will evaluate the adequacy of the 50,000 acre-foot annual limit, the \$500,000 annual cost limit, and report back to the Board. Furthermore, in any given year, the Board may be requested to expand the 50,000 acre-foot limit if greater authority is needed.

Policy

Existing Metropolitan policy regarding water exchanges in Administrative Code Section 4207 is limited to minimizing the cost to Metropolitan for exchange of Colorado River water for State Project water and cooperating in exchanges between member public agencies. The proposed amendment to the Administrative Code will specify the General Manager’s authority to enter into a limited range of water quality exchange agreements.

Board Options/Fiscal Impacts

Option #1

Approve the proposed amendment to Administrative Code Section 4207 set forth in [Attachment 2](#) to specify the General Manager’s authority to enter into water quality exchange agreements subject to a cumulative maximum annual limit of 50,000 acre-feet per year with cumulative net exchange costs not to exceed \$500,000.

Fiscal Impact: A single exchange could result in either overall cost saving to Metropolitan or a net exchange cost. The annual cumulative net cost would not exceed \$500,000. For Fiscal Year 2000-2001 the \$500,000 would be from the existing Water Transfer Fund.

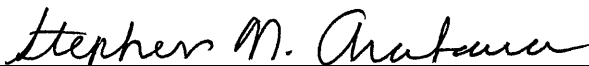

Option #2

No action.

Fiscal Impact: No net costs and unrealized opportunities for overall cost savings.

Staff Recommendation

Option #1.

	6/27/2000
Stephen N. Arakawa Acting Manager, Water Resource Management	Date
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	6/27/2000
General Manager	Date

[Attachment 1](#)
[Attachment 2](#)



Example Benefit/Cost Analysis for a Water Quality Exchange

Water Deliveries and Quality With and Without a 20 TAF Exchange

SWP Base Supply Total Dissolved Solids = 350 mg/L
(Sources blended to meet TDS objective of 500 mg/L)

	(1) Without Exchange	(2) With Exchange	(3) Difference <u>(2) - (1)</u>	Units
Colorado River Aqueduct (700 mg/L)	814	831	17	(TAF)
<u>State Water Project</u>				
Entitlement (350 mg/L)	1,086	1,049	-	"
Exchange (50 mg/L)	0	20	-	"
Total Deliveries through SWP	1,086	1,069	(17)	(TAF)
Blended SWP Water Quality	350	344	(6) *	(mg/L)

* SWP quality improved by 6 mg/L. This allows for reduced SWP deliveries of 17 TAF while still meeting blending target.

Calculation of Benefits

(Result from reduced SWP Deliveries needed to meet blend target)

Energy Savings: CRA vs SWP 17 TAF @ \$36/AF \$612,000

Treatment Savings: CRA vs SWP 17 TAF @ \$5/AF \$85,000

Total Benefits -----> \$697,000

Calculation of Net Costs

Local Conveyance Costs: 20 TAF @ \$20/AF \$400,000

By-passed SWP Pumping Plant: 20 TAF @ \$8/AF (\$160,000)

Total Net Costs -----> \$240,000

Conclusion: Transaction meets criteria.

1. Improves source water quality
2. Benefits exceed costs
3. Exchange is less than 50 TAF

§ 4207. Exchange of Water.

(a) The District's policy is that any exchange of Colorado River water for State Project water between the District and any state water service contractors shall be based upon such contractor paying all of the costs associated with delivery of State water at such contractor's delivery point, or at such other point as may be mutually agreed upon, which would result in the lowest cost to the District under such exchange.

(b) If two or more member public agencies of the District desire to enter into a water exchange arrangement, the District will cooperate in such an arrangement, subject to available capacity in the District's facilities and subject to availability of water for such exchange purposes, as determined by the District.

(c) The General Manager is authorized to enter into any economically beneficial water exchange agreement, in form approved by the General Counsel, without prior Board approval upon a determination that the exchange provides water quality benefits. The annual total of all exchanges under this subsection authority shall not exceed 50,000 acre-feet. The annual cumulative net exchange cost of exchanges under this subsection shall not exceed \$500,000. Water exchanges authorized under this subsection are exempt from competitive bidding requirements under the terms of Administrative Code Section 8103.

Section 322.13.4 - paragraph (b) [formerly Section 322.13.4.2] based on M.I. 23612 - February 11, 1964 and paragraph (a) [formerly Section 322.13.4.1] based on M.I. 25756 - December 13, 1966; amended by M.I. 33642 - March 10, 1981.
Section 322.13.4 repealed and Section 4205 adopted by M.I. 36464 - January 13, 1987, effective April 1, 1987; Section 4205 renumbered Section 4207 by M.I. 39412 - January 14, 1992.