

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

April 11, 2000 Board Meeting

10-3

Subject

Revised Groundwater Recovery Program Agreement for the Irvine Ranch Desalter Project

Description

Irvine Ranch Water District (IRWD) has requested that Metropolitan modify its 1993 Groundwater Recovery Program (GRP) incentive agreement to support a reconfiguration of the proposed Irvine Desalter Project (Project). The revised agreement would limit Metropolitan's incentives based on actual production of up to \$250 per acre foot to the first 20 years but would also allow Metropolitan to share in positive cash flow from the Project, if any, by means of a revised 40-year term. The reconfiguration is consistent with prior authority granted by the Board of Directors in 1993 and will not increase Metropolitan's financial exposure. The Project's water supply benefits to the region would be undiminished. [Attachment 1](#) is a Project description and [Attachment 2](#) describes financial factors.

Parties to the GRP agreement include IRWD, Metropolitan, Municipal Water District of Orange County and Orange County Water District (OCWD). OCWD and IRWD will jointly construct the Project and OCWD will finance the Project. IRWD will ultimately own the Project in the future, after capital payments are completed. IRWD will also operate the Project and deliver the production water to its customers. Protracted negotiations with the Department of the Navy over clean-up responsibilities have resulted in Project delays as well as reconfiguration of the Project. About one-third of the Project water will be redirected from the potable use to municipal use via IRWD's existing recycled water system because of public discomfort with the severe contamination of the source groundwater. The reconfiguration would allow construction to proceed and for receipt of Navy payments for cleanup of contaminants spilled from the former El Toro Marine Corps Air Station. The Navy contributions will be deducted from the Project costs in calculating Metropolitan's GRP incentive payment.

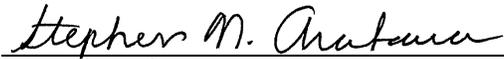
Metropolitan's incentive payments are forecasted at \$31.0 million for 136,000 acre-feet over 20 years. Incentive payments could vary from \$0 to \$250 per acre-foot, dependent upon actual cost and yield. The Navy is expected to contribute about \$7.5 million in an up-front capital payment and about \$0.56 million annually over 40 years. The reconfiguration and Navy contribution may reduce Metropolitan's incentive payments by as much as \$3.0 million over the 20-year GRP agreement

Policy

Board Letter dated November 26, 1991 that authorized execution of the GRP agreement.

Fiscal Impact

Potential reduction in incentive payments of \$3.0 million and a share of any positive cash flow from the Project.

	3/20/2000
Stephen N. Arakawa	Date
Acting Manager, Water Resource Management	

General Manager	Date
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[Attachment 1](#)

[Attachment 2](#)

ATTACHMENT 1

Project Description **Irvine Desalter Project**

The reconfigured Irvine Desalter Project (Project) will be constructed jointly by the Orange County Water District and the Irvine Ranch Water District in the Irvine area of the Orange County Groundwater Basin (Basin). The Project will be operated by the Irvine Ranch Water District to pump and treat groundwater with high concentrations of total dissolved solids (TDS), nitrates and trichloroethylene (TCE); convey the product water to the local distribution systems; and dispose brine waste from the treatment process to a local waste disposal system.

Water quality in certain regions of the aquifer is significantly degraded to the point that public confidence in the ability of the treatment process to produce suitable potable supplies from that portion of the aquifer is low. As a result, the project will include two separate production and treatment facilities for delivery to separate distributions systems: treated groundwater from the higher-quality areas of the aquifer will be delivered to a potable distribution system; and treated groundwater from the significantly degraded groundwater that will be delivered to an existing non-potable distribution system.

Source Water and Wells

The proposed wells will be located in the vicinity of the former El Toro Marine Corps Air Station. The Project requires construction of about 10 new wells as shown on the attached Figure 1. Total pumping capacity would be about 8.2 million gallons per day (MGD).

The Project will produce a total of about 7,000 acre-feet per year (AFY) of groundwater containing over 1,100 milligrams per liter (mg/L) of TDS, 63 mg/L of nitrates and 5 µg/L of TCE.

Initially, about two-thirds of the treated water would be for potable use and one-third for non-potable municipal uses. These proportions may change as operational conditions warrant.

Treatment Facilities

A single site will house two separate treatment systems: one for potable use and one for non-potable use. Both treatment systems will include reverse osmosis (RO) and TCE removal. All potable product water will meet the State of California Title 22 treatment requirements for drinking water. Water delivered to the non-potable system would be blended with recycled water and may be treated to different levels than the supply being delivered to the potable system, particularly with respect to TDS.

Concentrated Waste Disposal

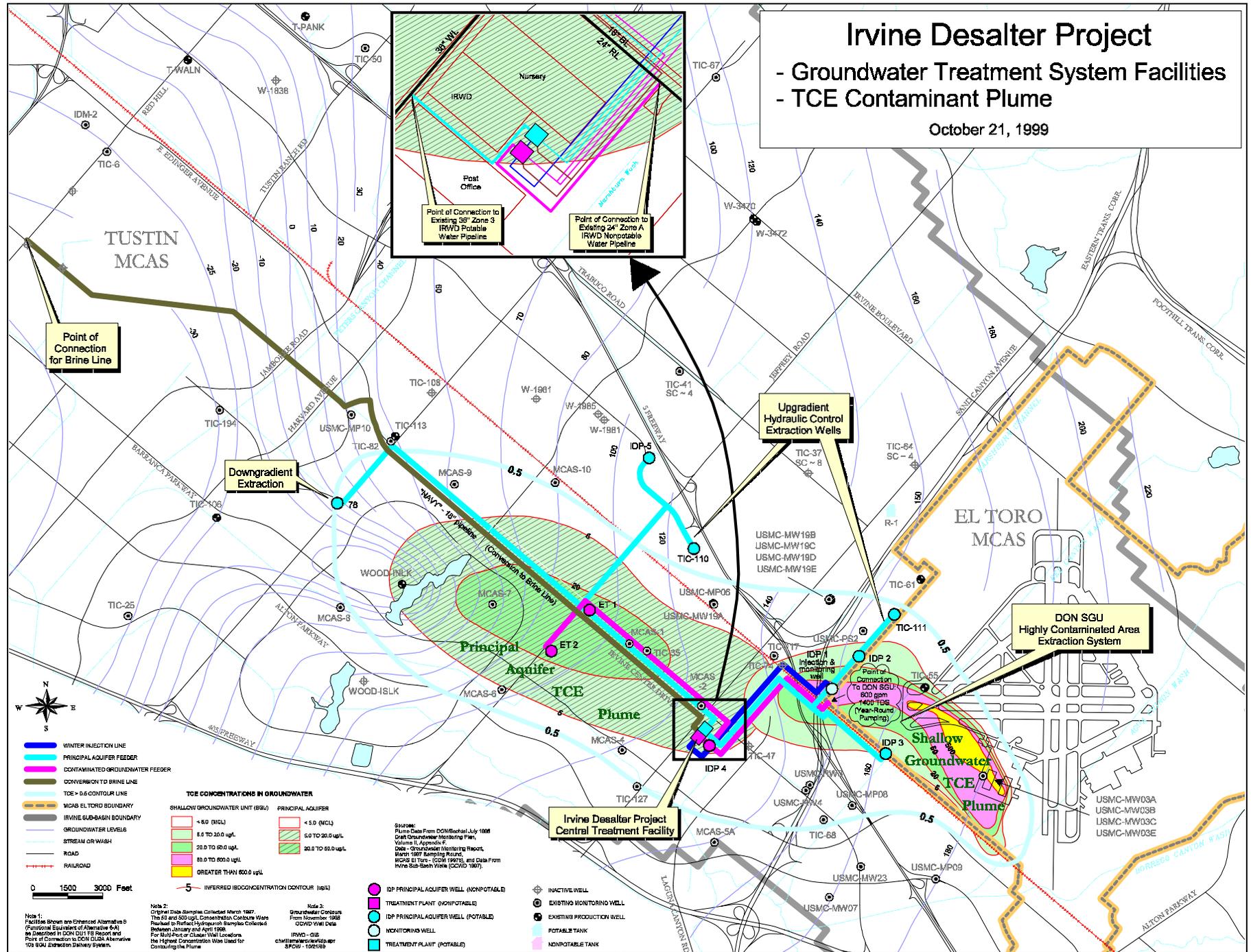
The concentrated salts and other waste products of the RO treatment process will be delivered to a new waste discharge line which will connect to either an existing sanitary sewer or a new regional concentrated waste line (brine line) that would bypass the Orange County Sanitation District (OCSD) treatment plants and discharge to OCSD's ocean outfall.

Map

Figure 1 shows the proposed Project features and concentrated waste disposal facilities.

Points of Connection

Project facilities will terminate at the points of connection to IRWD's existing potable/non-potable water distribution system(s) and sewer/concentrated waste disposal system(s).



Attachment 2

Financial Arrangements

Incentive Formula

Because IRWD's recycled water system is receiving incentives under Metropolitan's Local Projects Program, the GRP agreement would be modified to ensure an effective interface for the two incentive arrangements. Under the GRP amendment, water that supplements the 10,000-afy capacity of the recycled water system would be eligible for \$0 to \$250 per acre-foot incentives. Water that replaces recycled deliveries of less than 10,000 afy would receive \$0 to \$154 per acre-foot incentives, subject to remaining term of the LPP agreement. This is consistent with the existing GRP and LPP agreements for these and other projects that Metropolitan is assisting. Project production receiving GRP incentives would be about 6,800 afy. The existing GRP agreement upper limit of 8,040 afy will remain unchanged. Metropolitan's incentive payments are forecasted at \$31.0 million for 136,000 acre-feet over 20 years. The following table lists the payment and water schedule.

Navy Contribution

The Navy is expected to contribute about \$7.5 million in up-front capital and about \$0.56 million annually over 40 years. The reconfiguration and Navy contribution are forecast to reduce Metropolitan's incentive payments by as much as \$3.0 million over the GRP incentive payment term. The project reconfiguration is important to the Navy to ensure that well production is sustained to contain the large groundwater contaminant plume of TCE, a recognized carcinogen.

Revenues

After the 20-year GRP incentive period terminates, the Project capital is expected to be paid off and the unit cost of water will drop significantly. To the extent that lowered Project costs result in a positive cash flow during the 40-year agreement term, the parties would share in such benefits.

Metropolitan's Projected Annual GRP Contribution

<u>Fiscal Year</u>	<u>Incentive Rate (\$/AF)</u>	<u>Production (AF)</u>	<u>Annual Contribution</u>
2004	\$154/\$199*	6,800	\$1,306,409
2005	\$154/\$209*	6,800	\$1,391,819
2006	\$214	6,800	\$1,455,200
2007	\$220	6,800	\$1,496,000
2008	\$227	6,800	\$1,543,600
2009	\$228	6,800	\$1,550,400
2010	\$230	6,800	\$1,564,000
2011	\$232	6,800	\$1,577,600
2012	\$229	6,800	\$1,557,200
2013	\$225	6,800	\$1,530,000
2014	\$222	6,800	\$1,509,600
2015	\$219	6,800	\$1,489,200
2016	\$220	6,800	\$1,496,000
2017	\$222	6,800	\$1,509,600
2018	\$231	6,800	\$1,570,800
2019	\$245	6,800	\$1,666,000
2020	\$250	6,800	\$1,700,000
2021	\$250	6,800	\$1,700,000
2022	\$250	6,800	\$1,700,000
2023	\$250	<u>6,800</u>	<u>\$1,700,000</u>
	Total:	136,000	31,013,428

*A portion of the supply directed to the recycled water system may receive \$154/AF.