



## ● **Preliminary comparison of Metropolitan and Member Agency Urban Water Management Plans**

### Summary

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This Board Report summarizes a preliminary comparison of the projections in Metropolitan's urban water management plan with projections in the plans submitted by six representative member agencies. Staff compared the demand and supply projections for the period from 2015 to 2035 as reported in the agencies' recently completed plans. The member agencies selected for this initial comparison analysis historically constitute about 70 percent of Metropolitan's total water deliveries. The initial analysis yielded the following observations:

- *Total Demand:* Metropolitan's projections of total retail demand after conservation are on average 6 percent (about 164,500 acre-fee per year (AFY)) lower than the sum of the six member agencies.
- *Total Local Supply:* The summation of projections for total local supplies to be developed by member agencies shows that the Metropolitan projections are on average 4 percent (about 62,500 AFY) lower than the six member agency projected total.
- *Total Demands on Metropolitan:* The resulting projected demands on Metropolitan for imported water, as shown in Metropolitan's Urban Management Plan, are on average 8 percent (about 102,000 AFY) lower than the total of the six member agency projections.

These observations suggest that while projections for each specific member agency vary, overall regional totals are relatively consistent for imported deliveries between Metropolitan and these six member agencies, with a reasonable average difference over the 20-year period.

### Attachments

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[Attachment 1 – Comparison of Metropolitan and Six Member Agencies Projections](#)

[Attachment 2 – Metropolitan and Six Member Agencies Demand Comparison \(2010 UWMPs\)](#)

### Detailed Report

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#### Background

Metropolitan completed and adopted its 2010 Regional Urban Water Management Plan (RUWMP) in November 2010 and submitted it to the California Department of Water Resources (DWR) in December 2010 to satisfy all the process and content reporting requirements mandated by the Urban Water Management Act (Act). The Act requires that every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually prepare and adopt, in accordance with prescribed requirements, an urban water management plan. To fulfill the same requirements of the Act, Metropolitan's member agencies completed their respective urban water management plans for submission to DWR before July 1, 2011.

Metropolitan staff reviewed the 2010 Urban Water Management Plans (UWMP) of representative member agencies (including San Diego County Water Authority, Municipal Water District of Orange County, Inland Empire Utilities Authority, Central Basin and West Basin Municipal Water Districts, and Los Angeles Department of Water and Power) to develop a preliminary comparison analysis of Metropolitan and member agency projections on demand and supplies for the period of 2015 to 2035. These six representative agencies account for approximately 70 percent of Metropolitan total water deliveries. This comparison analysis is developed as part of Metropolitan's continued coordination with its member agencies to further promote consistent regional forecasting and maintain sound projections of demand and supply. This preliminary

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comparison is a precursor to a comprehensive service area wide analysis that will include all of Metropolitan's 26 member agencies. The comprehensive analysis should be complete by the end of 2011.

The 2010 RUWMP provides a comprehensive summary of Metropolitan's demand and supply outlook through 2035 and it incorporates the most current planning strategy and projections developed through the 2010 Integrated Water Resources Plan (IRP) Update. The IRP is the regional planning process that enables Metropolitan and its 26 member agencies to cooperatively develop a portfolio of resources that would provide adequate and reliable supplies to meet present and future needs. Prior to the IRP, more than half of the region's dry-year demands were met with water imported from the Colorado River and Northern California. Over the years, Metropolitan and its member agencies have successfully diversified their resource options through investments in water conservation, recycling, storage, and water transfers, which now meet the majority of the region's demands. This has brought diversity and stability in meeting the region's water needs and allowed for adaptability and flexibility in dealing with uncertainties and future challenges.

### Comparison Methodology

The Act requires urban water suppliers to perform a 20-year planning analyses to evaluate supply capabilities that would be sufficient to meet expected demands under three hydrologic conditions: average year, single dry-year, and multiple dry-year scenarios. For this comparison analysis, the demand and supply projections for the single dry-year conditions were used to provide a comparison of a scenario with critical demand and supply outlook. For Metropolitan, this represents conditions based on a repeat of the single driest hydrology, which is the year 1977. For the member agency projections, the "single dry-year" hydrologic conditions used to satisfy reporting requirements under the Act may be different but were assumed to be comparable for this analysis.

For this preliminary comparison analysis, staff evaluated the projections of six representative agencies that account for approximately 70 percent of Metropolitan's total water delivery. Since these agencies comprise a significant portion of Metropolitan's total deliveries, using these agencies' projections for this preliminary analysis should provide a good indication of comparison trend for the rest of the Metropolitan service area. This comparison analysis takes into consideration the member agencies' demand and supply accounting and tabulation of the projected components as presented in their respective UWMP.

Some of the considerations for this analysis include the following:

- *Conservation:* Metropolitan and member agency methodologies and base years for calculating conservation savings may differ but the remaining total retail demand after conservation are assumed to be comparable to allow side by side examination of projections.
- *Local Supply Projections:* The member agencies' projections of local supply development were incorporated into the analysis at the level and schedule indicated in their respective UWMPs. Also included in the total local supply are surplus supplies from some member agencies that were projected as part of their planning. Further work needs to be completed to verify that the member agencies' planned projects are consistent with Metropolitan's potential project list under its regional goal.
- *20x2020 Compliance:* Metropolitan and the member agencies projected reductions in demand from compliance with the 20x2020 water use goals. Metropolitan's estimates reflect the regional 20 percent reduction in per capita water use targeted in the 2010 IRP Update. The member agency projections include numbers that are reported in their respective UWMPs, which may be based on varied assumptions.

### Summary of Observations

**Attachment 1** presents a summary of the comparison between Metropolitan projections and the six member agency total projections. As shown in the table, Metropolitan's projections of Total Demand, Total Local Supply, and Total Demand on Metropolitan are consistent with that of the six agency total. These comparisons are also graphically presented in **Attachment 2**.

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The initial analysis yielded the following observations:

- *Total Demand:* Metropolitan's projections of total demand after conservation are on average 6 percent (about 164,500 AFY) lower than the sum of the six member agencies. The total demand numbers include projected reduction in demand from compliance with the 20x2020 water use reduction.
- *Total Local Supply:* The summation of projections for total local supplies shows that the Metropolitan projections are on average 4 percent (about 62,500 AFY) lower than the six member agency total. The total local supplies include groundwater, surface water, LA Aqueduct, groundwater recovery, recycling, and additional local supplies through new projects, water transfers, and seawater desalination to be developed in the future. In addition to this projected total, several member agencies included as part of their supply planning local projects that will yield an additional 111,500 AFY of surplus supplies.
- *Total Demands on Metropolitan:* The resulting projected demands on Metropolitan for imported water, as shown in Metropolitan's Urban Management Plan, deliveries are on average 8 percent (about 102,000 AFY) lower than the total of the six member agency projections.

The Metropolitan projections are found to be lower than the six member agency projections for the total demands, total local supply, and total demand for Metropolitan imported deliveries. In addition, the observed average difference between the projections over the 20-year period are within reason and consistent with previous UWMP comparisons. This consistency in demand and supply projections may be attributed to the continued coordination between Metropolitan and its member agencies through the overall regional planning within the IRP and RUWMP processes. Furthermore, Metropolitan completed its 2010 RUWMP in November 2010 (in advance of the July 2011 deadline) to make the plan available to the agencies and provide additional opportunity to coordinate and assist in its member agencies' preparation of their respective UWMP.

### **Next Steps**

This preliminary comparison between Metropolitan and the six member agency projections is a precursor to a comprehensive service area wide analysis that will include all of Metropolitan's 26 member agencies. Ultimately, the comprehensive analysis will allow staff to effectively develop comparative evaluation of Metropolitan's regional goals presented in 2010 IRP Update and the total member agency projections contained within their UWMP. Staff will report back to the Board after this comprehensive analysis is complete.



**Attachment 1**  
**Comparison of Metropolitan and Six Member Agencies Projections**<sup>1</sup>  
 (Values in Acre-feet per year)

	2015	2020	2025	2030	2035	Average Difference %	Average Difference in AFY
<b>Total Demands</b> <sup>2</sup>							
MWD Projections	2,584,058	2,509,406	2,532,497	2,572,456	2,603,840		2,560,451 (1)
Six MA Projections	2,566,042	2,645,376	2,738,379	2,808,468	2,866,400		2,724,933 (2)
	1%	-5%	-8%	-9%	-10%	<b>-6%</b>	<b>-164,482</b> (1)-(2)=(3)
<b>Local Supplies</b>							
MWD Projections	1,265,370	1,331,750	1,365,979	1,390,778	1,399,001		1,350,576 (4)
Six MA Projections <sup>3</sup>	1,142,634	1,404,118	1,478,576	1,506,336	1,533,946		1,413,122 (5)
	10%	-5%	-8%	-8%	-10%	<b>-4%</b>	<b>-62,546</b> (4)-(5)=(6)
<b>Demands on Metropolitan</b>							
MWD Projections	1,318,688	1,177,656	1,166,518	1,181,678	1,204,839		1,209,876 (7)
Six MA Projections	1,423,409	1,241,259	1,259,803	1,302,132	1,332,454		1,311,811 (8)
	-8%	-5%	-8%	-10%	-11%	<b>-8%</b>	<b>-101,936</b> (7)-(8)=(9) (3)-(6)=(9)

- Note:
1. The percentages indicate whether Metropolitan’s projection is higher or lower as compared to the six member agency total.
  2. Total demands include projected reductions in demand from compliance with the 20x2020 water use efficiency goal.
  3. In addition to this projected total local supply, several member agencies included planning projects that could yield an additional 111,500 AFY on average of surplus supplies beyond what is required to meet their total demands.

### Attachment 2

