

**WATER SUPPLY ASSESSMENT AND
VERIFICATION REPORT
FOR THE
MEADOWOOD PROJECT**

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CHAPTER 1

PURPOSE

The County of San Diego has caused this Water Supply Assessment and Verification Report (WSA&V Report) to be prepared in consultation with the San Diego County Water Authority (Water Authority), the San Diego Local Agency Formation Commission (LAFCO), the Valley Center Municipal Water District (VCMWD), the San Luis Rey Municipal Water District (SLRMWD), and the Rainbow Municipal Water District (RMWD) pursuant to Public Resources Code Section 21151.9, and California Water Code Sections 10631, 10656, 10910, 10911, 10912, and 10915 referred to as SB 610 and Business and Professions Code Section 11010, Government Code Sections 65867.5, 66455.3, and 66473.7 referred to as SB 221. SB 610 and SB 221 amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 requires that the water purveyor of the public water system prepare a water supply assessment to be included in the environmental documentation of certain proposed projects. SB 221 requires the County of San Diego to approve, conditionally approve, or disapprove tentative maps for certain residential subdivisions of property based upon the sufficiency of the water supply.

In the absence of a public water system, SB 610 requires the County to prepare the water supply assessment. SB 221 requires the County to make a written finding, or verification, of sufficient water supply based on the evidentiary requirements of subdivisions (c) and (d) of Section 66473.7 and to identify the mechanism for providing water to the subdivision. Subdivision (c) states that the verification shall be supported by substantial evidence which may include, but is not limited to, an urban water management plan or a water supply assessment.

This WSA&V Report is intended for use by the County of San Diego in its evaluation of the Meadowood project under the California Environmental Quality Act. This WSA&V Report evaluates water supplies that are or will be available during normal, single dry, and multiple dry water years during a 20-year projection to meet existing demands, expected demands of the project, and reasonably foreseeable planned future water demands served by the public water system.

CHAPTER 2

FINDINGS

This WSA&V Report concludes that the water demand for the Meadowood project is included in the water demand forecasts of the most recent April 2007 *Updated 2005 Urban Water Management Plan* of the San Diego County Water Authority (Water Authority). Water supplies necessary to serve the demands of the proposed project, along with existing and other projected future users, as well as the actions necessary to develop these supplies, have been identified in Sections 4 and 8 of the Water Authority's April 2007 *Updated 2005 Urban Water Management Plan*. This WSA&V Report demonstrates and verifies that with development of the resources identified there will be sufficient water supplies over a 20-year planning horizon to meet the projected demand of the proposed project and the existing and other planned development projects within the Water Authority service area. Since the Meadowood project is outside the Water Authority service area, it will be necessary for the project to be annexed into the Water Authority's service area to receive water. Concurrent with the Water Authority annexation, it will be necessary for the project to be annexed into the Metropolitan Water District of Southern California (Metropolitan) service area.

Based on a normal water supply year, the Water Authority projection, estimated in five-year increments over a 20-year period, indicates projected potable water supply will meet the projected potable water demand of 715,450 acre-feet per year (ac-ft/yr) in 2010 to 829,030 ac-ft/yr in 2030. Based on dry year forecasts, the projected water supply will also meet the projected water demand during single and multiple dry year scenarios. Supply and demand totals for a single dry year are approximated at 767,650 ac-ft/yr to 883,030 ac-ft/yr for years 2010 to 2030. Multiple three-year dry periods are also provided for.

The Water Authority's April 2007 *Updated 2005 Urban Water Management Plan* (2007 UWMP), in which the Meadowood project is specifically identified, states in its normal, single dry, and multiple dry year assessments that, "If the Water Authority and member agency supplies are developed as planned, along with the implementation of Metropolitan's IRP, no shortages are anticipated within the Water Authority's service area in a normal year through 2030" (pp. 8-1). The Water Authority states the same on later pages regarding the single dry and multiple dry year assessments. The analysis through 2030 demonstrates that the Water Authority will be able to meet the normal, single, and multiple dry year demands with a demand by the Meadowood project of 1,000 ac-ft/yr.

The 1,000 ac-ft/yr demand for the project did not consider conservation by the project and was based on all water demands, potable and non-potable, being met by Water Authority supplies. In actual development, the Meadowood project will implement conservation measures and utilize non-potable water for irrigation purposes to reduce its potable water demand. In addition to reducing potable water demand through the above actions, the project will further reduce its water demand by participating in offset programs or projects offered by the Water Authority or a MWD resulting in a net zero water demand on Water Authority supplies. The specific offset program(s) will be identified during the sphere of influence update process which will occur after approval of the Meadowood project.

Following approval of the CEQA documentation for the Meadowood project, the San Diego County Local Agency Formation Commission (LAFCO) will complete a Municipal Services Review and Sphere of Influence Update (MSR-SOI) to determine the appropriate provider of water and sewer service to the area, which includes the Meadowood project. Annexation into the water provider service area, the Water Authority, and Metropolitan is the mechanism by which the subdivision will receive water.

Together, these findings of the assessment report verify that there is sufficient water supply to serve the proposed project and the existing and other planned projects in the Water Authority service area in normal and dry year forecasts.

CHAPTER 3

PROJECT DESCRIPTION

The Meadowood development project encompasses a total of 389.5 acres. The project is located on the northern side of State Highway 76, just east of Interstate 15. The project will consist of single-family and multi-family housing along with a park, elementary school, common area landscaping and agricultural open space containing approximately 49 acres of retained groves. Tables 1 and 2 provide the Meadowood land use, respectively.

TABLE 1 MEADOWOOD LAND USE SUMMARY					
Planning Area	Land Use	Proposed Zoning	Gross Acreage	Dwelling Units	Actual Density *
1	Multi-Family Detached	RV10	26.1	164	6.3
2	Elementary School Site	RV10	12.7	42 **	3.3
3	Neighborhood Park	S80	10.1	--	--
4	Multi-Family Attached	RU20	24	325	13.5
5	Single-Family Detached	RS3	132.5	355	2.7
6	Agricultural Open Space	S80	47.6	--	--
7	Open Space	S80	128.5	--	--
	Roads, etc.	--	8	--	--
TOTAL			389.5	886	2.3

* Dwelling Units per acre

** Note: The actual proposed dwelling unit number is 886 – 42 = 844, as the elementary school is the intended use for Planning Area 2.

Source: *Meadowood Water Study* (Dexter Wilson Engineering, Inc., May 2009)

TABLE 2 MEADOWOOD LAND USE DETAIL				
Land Use	Gross Acreage	Area Acreage	HOA Area Acreage	Road Area Acreage
Single-Family	130.8	57.6	49.6	23.6
Multi-Family	50.1	29.5	7.9	12.7
Elementary School	12.7	11.1	1.4	0.2
Neighborhood Park	10.1	8.5	0	1.6
Retained Groves *	49.3	49.3	0	0
Open Space	128.5	128.5	0	0
Roads, etc.	8.0	0	0	8
TOTALS	389.5	284.5	58.9	46.1

* Includes Planning Area 6 (47.6 acres) and 1.7 acres of HOA Area within Planning Area 5

Source: *Meadowood Water Study* (Dexter Wilson Engineering, Inc., May 2009)

The project is within the Fallbrook Community Planning Area of San Diego County over which the County has jurisdiction for land use and development approvals. Presently, the County has not been able to identify a public water system which could immediately serve the project. As such, pursuant to Section 10910(b) of the California Water Code, the County of San Diego is preparing this WSA&V Report.

The project is partially within the San Luis Rey Municipal Water District (SLRMWD) boundaries and is not within the Water Authority or Metropolitan's service areas. San Luis Rey Municipal Water District is a groundwater monitoring district and cannot provide imported water or wastewater service. The San Diego County Local Agency Formation Commission (LAFCO) is conducting a Municipal Services Review and Sphere of Influence Update (MSR-SOI) to determine the appropriate provider of water and sewer service to the area which includes the Meadowood project. In addition to SLRMWD, LAFCO is examining the suitability of Rainbow Municipal Water District (RMWD) and Valley Center Municipal Water District (VCMWD) to provide water, wastewater, and recycled water service. Ultimately, annexation of the project to the Water Authority and Metropolitan service areas will be required once it is determined which MWD will serve the project. For all three MWDs included in the MSR-SOI, the source of water to the project will be imported water via the Water Authority.

PROJECT WATER DEMANDS

Water demands for the Meadowood project are based on the *Meadowood Water Study* (May 2009) by Dexter Wilson Engineering, Inc. and summarized in Table 3. This table represents the maximum potable water demand for the Meadowood project based on typical demand factors (water use rates) for the proposed land use type. The Meadowood project demand was included in the April 2007 *Updated 2005 Urban Water Management Plan* as a project to be served by the San Luis Rey Municipal Water District (SLRMWD), whose un-annexed area option was one of the areas proposing annexation at the time the April 2007 *Updated 2005 Urban Water Management Plan* was developed. Therefore, the Water Authority included the water demands forecasted for Meadowood because it was one of the areas/projects to be provided water within the SLRMWD annexation. At the time, the demand anticipated by the project was 892,500 gallons per day or 1,000 acre-feet per year. Table 3 sets forth a reduced projected water demand due to design refinements to the project.

**TABLE 3
MEADOWOOD WATER DEMAND**

Land Use	Dwellings Units or Acres	Water Use Factor	Demand		
			gpd	mgd	ac- ft/yr
Single-family	355	500 gpd/DU	177,500	0.178	199
Multi-family	489	400 gpd/DU	195,600	0.196	219
Elementary School ¹	11.1	2,000 gpd/ac	22,200	0.022	25
Neighborhood Park ¹	8.5	2,000 gpd/ac	17,000	0.017	19
HOA Areas ²	58.9	2,000 gpd/ac	117,800	0.118	132
R.O.W. Irrigation ³	9.22	2,000 gpd/ac	18,440	0.018	21
Retained Groves ¹	49.3	3,570 gpd/ac	176,001	0.176	197
Natural Open Space ¹	128.5	--	--	--	--
TOTAL			724,541	0.725	812

¹ Water Demand acreage based on Area Acreage, Table 2

² Water Demand acreage based on total HOA Area Acreage within each planning area, Table 2

³ Water Demand acreage based on 20% of total Road Area Acreage within each planning area, Table 2

Source: *Meadowood Water Study* (Dexter Wilson Engineering, Inc., May 2009)

The demands in Table 3 do not account for water conservation measures the project is planning to implement or the use of non-potable water sources such as groundwater and recycled water for the irrigation of the HOA landscaped slopes and the retained groves. Examples of water conservation features the project may utilize are provided below. Ultimately, the specific water conservation features incorporated into the project will be based on the most effective measures available and those recommended by the Water Authority and/or the identified MWD.

Interior water conservation features:

- High efficiency clothes washers
- High efficiency dishwashers
- Low flush toilets
- Low flow water faucets and showerheads
- Tankless water heaters

Exterior water conservation features:

- Weather-based irrigation controllers
- Low water use landscaping (xeriscape)
- Restrictions limiting turf use and encouraging artificial turf

Additional conservation features:

- Installation of “smart” meters with leak detection capability
- Individually metered multi-family units

Table 4 provides the project’s proposed water demands with the implementation of conservation measures and utilization of non-potable water, where appropriate, as outlined in the project’s water study. The water study provides the methodology for calculating the project’s potable versus non-potable demands and interior versus exterior potable water use. Exterior potable water use will be reduced for the project by maximizing the use of non-potable water for irrigation. The project’s water study is included as a technical appendix of the Meadowood EIR documentation.

**TABLE 4
MEADOWOOD POTABLE AND NON-POTABLE DEMANDS AND DELIVERIES,
WITH CONSERVATION**

Project Information		Potable Water, gpd			Non-potable Water, gpd		
Land Use	Project Water Demands, gpd	Total Demand	Interior Demand	Exterior Demand	Total Demand	Recycled Water Deliveries	Makeup Water (Ground-water) Deliveries
Single-family	133,125	133,125	79,875	53,250	0	0	0
Multi-family	146,700	146,700	117,360	29,340	0	0	0
Elementary School	16,650	8,325	8,325	0	8,325	5,617	2,708
Neighborhood Park	12,750	1,275	1,275	0	11,475	7,742	3,733
HOA Areas	88,350	4,418	4,418	0	83,933	56,631	27,301
R.O.W. Irrigation	13,830	0	0	0	13,830	9,331	4,499
Retained Groves	132,001	0	0	0	132,001	89,064	42,937
Natural Open Space	-	-	-	-	-	-	-
TOTAL, gpd	543,406	293,843	211,253	82,590	249,563	168,386	81,178
TOTAL, ac-ft/yr	608.7	329.2	236.6	92.5	279.6	188.6	90.9

* Includes recreation areas, drainage areas, wastewater treatment plant, and water tank sites

CHAPTER 4

HISTORICAL AND PROJECTED WATER DEMANDS

The Water Authority utilizes the San Diego Association of Government's (SANDAG) most recent regional growth forecast to calculate future demands within their service area. This provides for consistency between San Diego County planning efforts and the Water Authority demand projections, thereby ensuring that adequate supplies are being planned for existing and future water users. SANDAG's growth forecasts are based on the land use planning policies of the cities and county within San Diego County, so planned growth is included in the water demand forecasts of the County. Sections 1 and 2, pages 1-6 through 2-5, of the Water Authority's April 2007 *Updated 2005 Urban Water Management Plan* provide detail on the current population projection (in 5-year increments) as well as economic data utilized in their water supply planning. The Water Authority's 2005 Urban Water Management Plan was revised in April 2007 due to two actions. The first was a change on seawater desalination development within San Diego county from a regional supply project to a local supply project, and the second action was the adoption of the Water Authority's Drought Management Plan. The April 2007 *Updated 2005 Urban Water Management Plan* has been included in its entirety in Appendix A of this WSA&V Report.

The available historic potable water demands for the Water Authority are shown in Table 5 and projected demands during a normal water year are shown in Table 6. Tables 7 and 8 then provide single dry year and multiple dry year demand forecasts for the Water Authority, respectively. The Water Authority demand projections consider industrial and agricultural demands as well. Industrial demands are projected with municipal demands (M&I) in the Water Authority's Municipal And Industrial Needs (CWA-MAIN) computer model while agricultural demands are determined separately and then incorporated into the total forecasted demand.

Fiscal Year	Water Use, ac-ft
1995	526,053
1996	615,900
1997	621,739
1998	562,225
1999	619,409
2000	694,995
2001	646,387
2002	686,530
2003	649,622
2004	715,763
2005	642,152

Source: *Updated 2005 Urban Water Management Plan* (SDCWA, April 2007, p.2-2)

**TABLE 6
NORMAL WATER YEAR DEMAND FORECAST WITHIN THE WATER AUTHORITY
SERVICE AREA**

Water Demand Category	Total Projected Demand, ac-ft/yr				
	2010	2015	2020	2025	2030
M&I Baseline Forecast	699,250	739,020	780,350	830,550	877,740
Estimated Conservation Savings	79,960	87,310	94,170	101,950	108,400
M&I Forecast Reduced by Conservation	619,290	651,710	686,180	728,600	769,340
Agricultural Forecast	89,700	83,130	77,270	58,980	51,630
Total Projected Demand	708,990	734,840	763,450	787,580	820,970
Pending Annexations	6,460	8,060	8,060	8,060	8,060
Total Projected Demand with Pending Annexations	715,450	742,900	771,510	795,640	829,030

Source: *Updated 2005 Urban Water Management Plan* (SDCWA, April 2007, p. 2-4)

**TABLE 7
SINGLE DRY YEAR WATER DEMAND FORECAST
(5 YEAR INCREMENTS) WITHIN THE
WATER AUTHORITY SERVICE AREA**

Year	Total Projected Demand, ac-ft/yr
2010	767,650
2015	795,970
2020	825,560
2025	848,610
2030	883,030

Source: *Updated 2005 Urban Water Management Plan* (SDCWA, April 2007, p.2-5)

The multiple dry year demand forecast, shown in the following Table 8, was developed for the April 2007 *Updated 2005 Urban Water Management Plan* to evaluate the compounding effect that a multiple dry year event can have on demands. Multiple dry year demands are presented in 5 year increments beginning with 2006, based on a three dry year event.

TABLE 8 MULTIPLE DRY YEAR (3 YEARS) WATER DEMAND FORECAST (5 YEAR INCREMENTS) WITHIN THE WATER AUTHORITY SERVICE AREA	
Year	Total Projected Demand, ac-ft/yr
2006	744,520
2007	749,780
2008	755,030
2011	771,410
2012	777,280
2013	783,150
2016	801,030
2017	807,150
2018	813,270
2021	830,680
2022	835,840
2023	841,010
2026	858,480
2027	865,630
2028	872,770

Source: Updated 2005 Urban Water Management Plan (SDCWA, April 2007, p.2-5)

Demand Management (Water Conservation)

The County of San Diego enforces several State and local ordinances requiring water conservation to assure available water resources are put to beneficial use for all citizens of the County. California Plumbing Code, Section 402 requires the installation of water conserving fixtures in new construction. Section 67.101 of the County’s Code of Regulatory Ordinances simply prohibits water waste in that “No person shall waste or cause or permit to be wasted any water furnished or delivered by any agency distributing for public benefit any water dedicated to or provided for public use within the unincorporated territory of the County of San Diego.”

The County is required to enforce California’s Model Water Efficient Landscape Ordinance as it applies to new and rehabilitated public and private landscapes that require a permit and on developer installed residential landscapes (Section 6717c.1 of the County’s Zoning Ordinance). The County’s Water Conservation and Landscape Design Manual implements Zoning Ordinance Section 6712(d) which requires efficient irrigation uses (including rain sensors), transitional zones, use of native plantings, restriction on turf, use of mulch, the preservation of existing vegetation and natural features, and the use of reclaimed water when available.

The Water Authority's water conservation efforts include but are not limited to implementation of the Best Management Practices (BMPs) that are included in the California Urban Water Conservation Council's (CUWCC) 1991 *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU). Additional information regarding the BMPs, details of their Agricultural Efficient Water Management Practices (EWMPs), and conservation measures tailored to the landscape, commercial, industrial, and institutional sectors can be found in Section 3 of the April 2007 *Updated 2005 Urban Water Management Plan*.

CHAPTER 5

EXISTING AND PROJECTED SUPPLIES

Water supply for the Meadowood project will originate from the Water Authority, a member public agency of Metropolitan. The Water Authority was formed in 1944 to provide a supplemental supply of water to the San Diego region. The Water Authority's 24 member agencies purchase water from the Water Authority for retail distribution within their service areas. The Water Authority, through exchange and transfer agreements, currently purchases water from Metropolitan and conserved agricultural water transferred from the Imperial Irrigation District. Future supplies, through exchange and transfer agreements, will come from conserved water for the All-American Canal Lining and the Coachella Canal Lining projects. The contracts, agreements, and environmental permits for each of these Water Authority Supplies are addressed in Section 6 and Appendix E of the April 2007 *Updated 2005 Urban Water Management Plan*. Water Authority supplies also include local supplies developed and managed by its member agencies such as surface water, water recycling, groundwater, and in the future, desalinated seawater. Section 5 of the April 2007 *Updated 2005 Urban Water Management Plan* outlines the coordination steps between the Water Authority and its member agencies to develop the anticipated yields from each of the local supplies.

Sections 4, 5, and 6 of the April 2007 *Updated 2005 Urban Water Management Plan* provide the detailed supply forecasts, in 5 year increments (pages 4-8, 5-14, and 6-1), of each of these supplies. Tables 9, 10, and 11 below summarize these supply forecasts. These sections of the April 2007 *Updated 2005 Urban Water Management Plan* also discuss further the exchange and transfer agreements, contracts, entitlement, financing, and permitting of the Water Authority's supplies. With seawater desalination becoming a new source for the region, the April 2007 *Updated 2005 Urban Water Management Plan* identifies no entities outside the Water Authority which have existing entitlements, water rights, or water service contracts to the same source of water.

TABLE 9					
NORMAL YEAR WATER SUPPLY FORECAST					
WITHIN THE WATER AUTHORITY SERVICE AREA					
Water Supply Source	Total Projected Supply, ac-ft/yr				
	2010	2015	2020	2025	2030
Water Authority	147,700	177,700	267,700	277,700	277,700
Member Agency	121,892	165,345	172,436	175,070	178,408
Metropolitan Water District	445,858	399,855	311,374	342,870	372,922
Total Projected Supplies	715,450	742,900	771,510	795,640	829,030

Source: *Updated 2005 Urban Water Management Plan* (SDCWA, April 2007, p.8-1)

TABLE 10 SINGLE DRY YEAR WATER SUPPLY FORECAST WITHIN THE WATER AUTHORITY SERVICE AREA					
Water Supply Source	Total Projected Supply, ac-ft/yr				
	2010	2015	2020	2025	2030
Water Authority	147,700	177,700	267,700	277,700	277,700
Member Agency	78,190	119,882	126,134	128,768	132,106
Metropolitan Water District	541,760	498,388	431,726	442,142	473,224
Total Projected Supplies	767,650	795,970	825,560	848,610	883,030

Source: Updated 2005 Urban Water Management Plan (SDCWA, April 2007, p.8-2)

The multiple dry year supply forecast, shown in the following Table 11, was developed for the April 2007 *Updated 2005 Urban Water Management Plan* to evaluate the compounding effect that a multiple dry year event can have on supplies. Multiple dry year supplies are presented in 5 year increments beginning with 2006, based on a three dry year event.

TABLE 11 MULTIPLE DRY YEAR (3 YEARS) WATER SUPPLY FORECAST (5 YEAR INCREMENTS) WITHIN THE WATER AUTHORITY SERVICE AREA				
Year	Supply, ac-ft/yr			
	Water Authority	Member Agency	Metropolitan	Total Projected
2006	40,000	56,670	647,850	744,520
2007	71,500	60,230	618,050	749,780
2008	71,500	80,900	602,630	755,030
2011	157,700	101,012	512,698	771,410
2012	167,700	100,431	500,149	777,280
2013	177,700	116,970	488,480	783,150
2016	177,700	109,214	514,116	801,030
2017	177,700	108,149	521,301	807,150
2018	207,700	124,194	481,376	813,270
2021	277,700	114,752	438,228	830,680
2022	277,700	112,960	445,180	835,840
2023	277,700	128,288	435,022	841,010
2026	277,700	117,524	463,256	858,480
2027	277,700	115,873	472,057	865,630
2028	277,700	131,343	463,727	872,770

Source: Updated 2005 Urban Water Management Plan (SDCWA, April 2007, pp. 8-2 – 8-3)

Water Supply Reliability

As the Water Authority's supplies are diverse, the primary vulnerabilities of the supplies differ. Water coming from Metropolitan's Colorado River and Northern California supplies are vulnerable to implementation risks such as seismic events due to the terrain the supplies cross to reach the San Diego region. The Water Authority's surface water supplies are more vulnerable to water quality issues due to increasing urbanization. Section 7.3 of the April 2007 *Updated 2005 Urban Water Management Plan* specifically discusses how the Water Authority addresses their surface water vulnerability.

Section 9 of the April 2007 *Updated 2005 Urban Water Management Plan* includes a water shortage contingency analysis which addresses how the Water Authority would manage catastrophic shortage and drought situations. The water shortage contingency analysis discusses the Water Authority's Emergency Response Plan and Emergency Storage Project, demonstrating they are taking actions to prepare for and appropriately handle a catastrophic interruption of water supplies. The analysis also describes the coordinated development of a Drought Management Plan for the San Diego region which identifies the actions to be taken by the Water Authority to minimize the impacts of a supply shortage due to a drought and includes an allocation methodology to be used if cutbacks are necessary.

Section 8 of the April 2007 *Updated 2005 Urban Water Management Plan* provides a water supply reliability assessment of the imported and local supplies necessary to meet demands over the next 25 years in normal year (page 8-1), single dry year (page 8-2), and multiple dry year (pages 8-2 and 8-3) scenarios. The Water Authority's April 2007 *Updated 2005 Urban Water Management Plan* assessment of their water supplies states that under single dry year and multiple dry year conditions, "The supplies available from projected recycling and groundwater recovery projects are assumed to experience little, if any, reduction in a dry-year. The Water Authority's existing and planned supplies from the IID transfer, canal lining projects, and seawater desalination are also considered "drought-proof" supplies as discussed in Section 4. Therefore, estimated normal yields from these supplies are also included in the [dry year] analysis." (p. 8-2) The plan states that if projected Water Authority and member agency supplies are developed as planned, no shortages are anticipated with the Water Authority service area. Additionally, the Water Authority has identified contingency sources of water. For example, should future seawater desalination not be pursued, the Water Authority has considered alternative options, including accelerating the construction of the Pipeline 6 project. This pipeline would allow for additional supply deliveries from Metropolitan.

Since the publishing of the April 2007 *Updated 2005 Urban Water Management Plan*, there have been several water supply reliability challenges. Most notable are the federal and state actions in the Delta area to protect certain fish species. These actions have reduced the State Water Project pumping, and may do so further. Additionally, state storage reservoirs are below normal storage levels due to two consecutive years of dry conditions. In response to these concerns, in April 2008 Metropolitan developed with its member agencies a Five-Year Supply Plan to identify specific resource and conservation actions over the following five years to manage water deliveries under continued drought conditions and court-ordered restrictions. This Five-Year Supply Plan is in addition to Metropolitan's Integrated Water Resources Plan, to be revised in 2009, which addresses broader challenges associated with water supply such as

population growth, increased competition for low-cost water supplies, variable weather conditions, and increased environmental regulations for clean and safe drinking water. Metropolitan's *Appendix A* attached to their January 15, 2009 Official Statement for \$200,000,000 Water Revenue Bonds (attached to this WSA&V as Appendix C) provides additional background on their water supply planning and details the litigation regarding the Bay-Delta area to protect fish species such as the Delta smelt.

The Five-Year Supply Plan has identified new supplies for Metropolitan to consider in addition to the State Water Project and Colorado River on which it substantially relies. Metropolitan has demonstrated on a monthly basis in reports to their Board, that firm demands on Metropolitan are able to be met by these sources along with utilization of its Water Surplus Drought Management Storage Portfolio.

In April 2009, the Water Authority declared a Drought Response Level 2 in anticipation of Metropolitan declaring a Regional Shortage Level 2. The Water Authority's Model Drought Ordinance does not identify water use restrictions for new projects at the Drought Response Level 1 or 2, as outlined in the Water Authority's May 2006 *Drought Management Plan*. However, several of the Water Authority's member agencies, including the VCMWD, specify that new projects or annexations will not be allowed to continue unless the proposed demand is offset. The Meadowood project will offset its potable water demand, resulting in a net zero demand on Water Authority supplies.

The County recently addressed water supply reliability in the November 2008 *San Diego County Draft General Plan Update*. Within the Land Use Element of the Update (p. 3-34) and addressing water supply reliability for the county, the Update states, "The Water Authority prepared an updated Urban Water Management Plan in 2007 that assessed the ability of future water supplies to meet future demand through 2030. The plan concluded that if existing supplies remained reliable and projected supplies are developed as planned, no shortages are anticipated within the Water Authority's service area under single dry-year or multiple dry water years through 2030. Since development of this plan, deliveries from the State Water Project have been cut due to regulatory and judicial restrictions. The Water Authority and its member agencies will continue to develop local resources in order to reduce dependence on the State Water Project and support actions at the state level to improve the reliability of the State Water Project. Future updates of the Water Authority's Urban Water Management Plan will address these actions."

CHAPTER 6

AVAILABILITY OF SUFFICIENT SUPPLIES

In comparing the Water Authority's projected supplies to projected demands, the Water Authority can reliably meet demands during normal, single dry, and multiple dry year scenarios. Tables 12, 13, and 14 at the end of this chapter present the comparison of the Water Authority's projected demands which were presented in Chapter 4 and the projected supplies which were presented in Chapter 5 of this WSA&V Report.

Of importance to the Meadowood project is that these projected demands include areas which were pending annexation to the Water Authority, of which the Meadowood project was part, at the time the April 2007 *Updated 2005 Urban Water Management Plan* was adopted by the Water Authority. The areas pending annexation to the Water Authority service area, and subsequently Metropolitan's service area, were included to provide a more comprehensive analysis of future Water Authority demands, as these areas were not included in the SANDAG population projections on which Water Authority demands are based. The Meadowood project was explicitly identified as a project to be served by the San Luis Rey Municipal Water District (SLRMWD). The SLRMWD's un-annexed area option was one of the areas proposing annexation at the time the Water Authority April 2007 *Updated 2005 Urban Water Management Plan* was developed. Therefore, the Water Authority included the water demands forecasted for Meadowood because it was one of the areas/projects to be provided water within the SLRMWD annexation.

The demand of the SLRMWD pending annexation was determined in the SLRMWD's December 2006 *Master Plan for Water, Wastewater, and Recycled Water Services, Final Draft Report (Un-annexed Area Option)* where water demands were calculated for the SLRMWD, including the Meadowood project and others, to be 4,217 ac-ft/yr. In the report, the projected demand for Meadowood was calculated to be 892,500 gallons per day or 1,000 acre-feet per year. Excerpts from the Water Authority and SLRMWD documents discussed in this section can be found in Appendices A and B, respectively.

The acreage distribution between land use types for the Meadowood project has been refined resulting in a lower demand of 724,541 gpd or 812 acre-feet per year. Additionally, in accounting for conservation and the use of non-potable water, the Meadowood project's potable demand is 293,843 gpd or 329 acre-feet per year. In addition to reducing potable water demand through the above actions, the project will further reduce its water demand by participating in offset programs or projects offered by the Water Authority or a MWD resulting in a net zero water demand on Water Authority supplies. The specific offset program(s) will be identified during the sphere of influence update process which will occur after approval of the Meadowood project.

Because the Meadowood project was part of SLRMWD's proposed annexation to the Water Authority service area, and because SLRMWD's proposed annexation to the Water Authority is accounted for as a near term future annexation in the Water Authority's April 2007 *Updated 2005 Urban Water Management Plan*, the Meadowood project's water demands have been

accounted for and included in the Water Authority’s long term water planning. Independent of the LAFCO determination of the ultimate water service provider (i.e. MWD determination), an adequate supply of water is available from the Water Authority to serve the Meadowood project’s demands. Moreover, the project’s conservation efforts, use of non-potable water, and offset of potable demand will result in a net zero impact on the Water Authority’s supply requirements.

The assessment conducted in this WSA&V Report demonstrates and verifies that with development of the resources identified there will be sufficient water supplies to meet the projected demand of the proposed project and the existing and other planned development projects within the Water Authority and Metropolitan service areas over the next 20 years during average year, dry year, and multiple dry year conditions. Moreover, the project’s conservation efforts, use of non-potable water, and offset of potable demand will result in a net zero impact on the Water Authority’s supply requirements.

TABLE 12 NORMAL YEAR DEMAND AND SUPPLY COMPARISON WITHIN THE WATER AUTHORITY SERVICE AREA					
Projection	ac-ft/yr				
	2010	2015	2020	2025	2030
Total Demand with Pending Annexations	715,450	742,900	771,510	795,640	829,030
Total Supply	715,450	742,900	771,510	795,640	829,030

TABLE 13 SINGLE DRY YEAR DEMAND AND SUPPLY COMPARISON WITHIN THE WATER AUTHORITY SERVICE AREA					
Projection	ac-ft/yr				
	2010	2015	2020	2025	2030
Total Demand with Pending Annexations	767,650	795,970	825,560	848,610	883,030
Total Supply	767,650	795,970	825,560	848,610	883,030

**TABLE 14
 MULTIPLE DRY YEAR (3 YEARS) DEMAND AND SUPPLY
 COMPARISON (5 YEAR INCREMENTS)
 WITHIN THE WATER AUTHORITY SERVICE AREA**

Year	Total Projected Demand, acre-feet/year	Total Projected Supply, acre-feet/year
2006	744,520	744,520
2007	749,780	749,780
2008	755,030	755,030
2011	771,410	771,410
2012	777,280	777,280
2013	783,150	783,150
2016	801,030	801,030
2017	807,150	807,150
2018	813,270	813,270
2021	830,680	830,680
2022	835,840	835,840
2023	841,010	841,010
2026	858,480	858,480
2027	865,630	865,630
2028	872,770	872,770

REFERENCES

County of San Diego. (November 2008). *San Diego County Draft General Plan*.

Infrastructure Engineering Corporation. (December 2006). *Master Plan for Water, Wastewater, and Recycled Water Services, Final Draft Report (Un-annexed Area Option)* for the San Luis Rey Municipal Water District.

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San Diego County Water Authority. (April 2007). *Updated 2005 Urban Water Management Plan*.

San Diego County Water Authority. (November 2006). *Drought Management Plan*.

The Metropolitan Water District of Southern California. (July 2004). *Integrated Water Resources Plan Update*.

The Metropolitan Water District of Southern California. (November 2005). *Regional Urban Water Management Plan*.

The Metropolitan Water District of Southern California. (February 2008). *Water Supply Allocation Plan*.

APPENDIX A

San Diego County Water Authority April 2007
Updated 2005 Urban Water Management Plan

APPENDIX B

Excerpts from the December 2006
Master Plan for Water, Wastewater, and Recycled Water Services,
Final Draft Report (Un-annexed Area Option)
for the San Luis Rey Municipal Water District

APPENDIX C

Appendix A to Official Statement
dated January 15, 2009 for \$200,000,000
The Metropolitan Water District of Southern California
Water Revenue Bonds, 2008 Authorization, Series A