

Appendix M

Water Supply Assessment





March 15, 2017

TO THE BOARD OF DIRECTORS:

Thomas P. Evans, President
Brenda Dennstedt, Vice President
Robert Stockton, Secretary-Treasurer
Donald D. Galleano
S.R. "Al" Lopez

FROM: John V. Rossi, General Manager
Craig D. Miller, Deputy General Manager

CONSIDER ADOPTION OF RESOLUTION 2976 APPROVING A WATER SUPPLY ASSESSMENT FOR VETERAN'S INDUSTRIAL PARK 215

RECOMMENDATION:

The Engineering, Operations, and Water Resources Committee and staff recommend the Board of Directors:

1. Adopt Resolution 2976 to approve the Water Supply Assessment for the proposed Veteran's Industrial Park 215.

BUDGET IMPACT:

None

BUSINESS PLAN REFERENCE:

No Business Plan reference; this action is part of Western Municipal Water District's ("WMWD") routine business activities.

EXECUTIVE SUMMARY:

California Water Code section 10910 *et seq.*, commonly referred to as California Senate Bill 610 ("SB 610"), and related provisions of the California Environmental Quality Act ("CEQA") require a retail water provider to prepare a Water Supply Assessment ("WSA") for certain projects as defined in SB 610 to evaluate, among other things, current and projected water supply in comparison to water demands associated with the proposed project along with existing and planned future uses. At 143.0 acres, the proposed Veteran's Industrial Park 215 (the "Project") meets the criteria in Water Code section 10912(a)(5) that requires the preparation of a WSA for industrial parks planned to house more than 1,000 persons,

occupying more than 40 acres of land, or encompassing more than 650,000 square-feet of floor space.

The March Joint Powers Authority ("March JPA"), acting as the lead agency, has: 1) determined the proposed Project is subject to review under CEQA, 2) identified Western as the public water system that will provide retail water service to the Project, and 3) requested that Western prepare a WSA for the Project.

Staff evaluated the water needs of the proposed Project and Western's total projected water supply under normal, single-dry, and multiple-dry year scenarios. Staff concluded, subject to conditions stipulated in the WSA, that Western will be able to meet the water demands of the Project, in addition to Western's existing and planned future uses within its service area, in accordance with the standards set forth by SB 610.

DETAIL:

The proposed Project is a 143-acre site composed of two industrial buildings that will allow for a mix of logistics center uses that could support wholesale, storage, distribution, manufacturing and/or assembly centers. The Project is located directly east of the Interstate 215 Freeway off-ramp at Van Buren Boulevard, south of the existing March Field Air Museum and west of an existing March Air Reserve Base airport runway, and located within the boundaries of the March Inland Port Airport in unincorporated Riverside County.

According to the Project applicant, the total estimated water demand for the Project is 109 acre-feet per year, including commercial and landscape usage.

As noted above, the purpose of a WSA is to evaluate whether the total existing and projected water supplies available to Western during normal, single-dry, and multiple-dry years over the next 20-year period are sufficient to meet the projected demands of the proposed Project in addition to Western's existing and planned future uses, including agricultural and manufacturing.

Upon adopting the WSA, it will be forwarded to March JPA and incorporated into the CEQA document being prepared for the Project. As the lead agency for the Project, March JPA must then determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the Project, in addition to existing and planned future uses.

Staff prepared the WSA which concludes, subject to conditions set forth in the WSA, Western will have sufficient supplies to meet the water demand of the proposed Project as well as Western's existing and planned future water demands of its service area in accordance with the standards set forth by SB 610.

Board of Directors
March 15, 2017
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Based on this evaluation, staff recommends adopting Resolution 2976 for the WSA for the subject Project.

JOHN V. ROSSI
General Manager

JVR:CDM:TB:KG:ll:tb

Attachments:

1. Resolution 2976
2. Veteran's Industrial Park 215 WSA – PowerPoint Presentation
3. WSA Veteran's Industrial Park Project

Attachment 1

RESOLUTION 2976

A RESOLUTION OF THE BOARD OF DIRECTORS
OF WESTERN MUNICIPAL WATER DISTRICT
REGARDING ADOPTION OF A WATER SUPPLY
ASSESSMENT FOR THE VETERAN'S
INDUSTRIAL PARK PROJECT

WHEREAS, Western Municipal Water District ("WMWD") was formed by the voters in 1954 for the purpose of importing water supplies from the Metropolitan Water District of Southern California; and

WHEREAS, WMWD is a public water system as defined by Water Code section 10912 and, accordingly, may receive requests from time to time to prepare a water supply assessment ("WSA") pursuant to California Water Code section 10910 *et seq.*, commonly referred to as California Senate Bill 610 ("SB 610"); and

WHEREAS, the March Joint Powers Authority ("March JPA"), acting as a lead agency under the California Environmental Quality Act, recently submitted a request to WMWD to prepare a WSA for the proposed Veteran's Industrial Park Project (the "Project") located within the boundaries of the March Inland Port Airport in unincorporated Riverside County, described by March JPA as an approximately 143-acre site composed of two industrial buildings that will allow for a mix of logistics center uses that could support wholesale, storage, distribution, manufacturing and/or assembly centers; and

WHEREAS, WMWD has prepared a WSA for the proposed Project pursuant to applicable Water Code provisions, including Water Code 10910 *et seq.*; and

WHEREAS, the Board of Directors of WMWD desires to adopt this Resolution in order to approve the WSA for the proposed Project; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Western Municipal Water District of Riverside County as follows:

Section 1. All of the foregoing Recitals are true and correct and the Board so finds and determines. The Recitals set forth above are incorporated herein and made an operative part of this resolution.

Section 2. Pursuant to the requirements of Water Code section 10910 *et seq.*, the Board hereby approves the WSA prepared for the proposed Veteran's Industrial Park Project.

ADOPTED, this 15th day of March, 2017, by the Board of Directors of the Western Municipal Water District of Riverside County, California.

THOMAS P. EVANS
President

R-2976

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March 15, 2017

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of Resolution 2976 adopted by the Board of Directors of Western Municipal Water District of Riverside County at its regular meeting held March 15, 2017.

ROBERT STOCKTON
Secretary-Treasurer

Attachment 2

Water Supply Assessment – Veteran’s Industrial Park 215

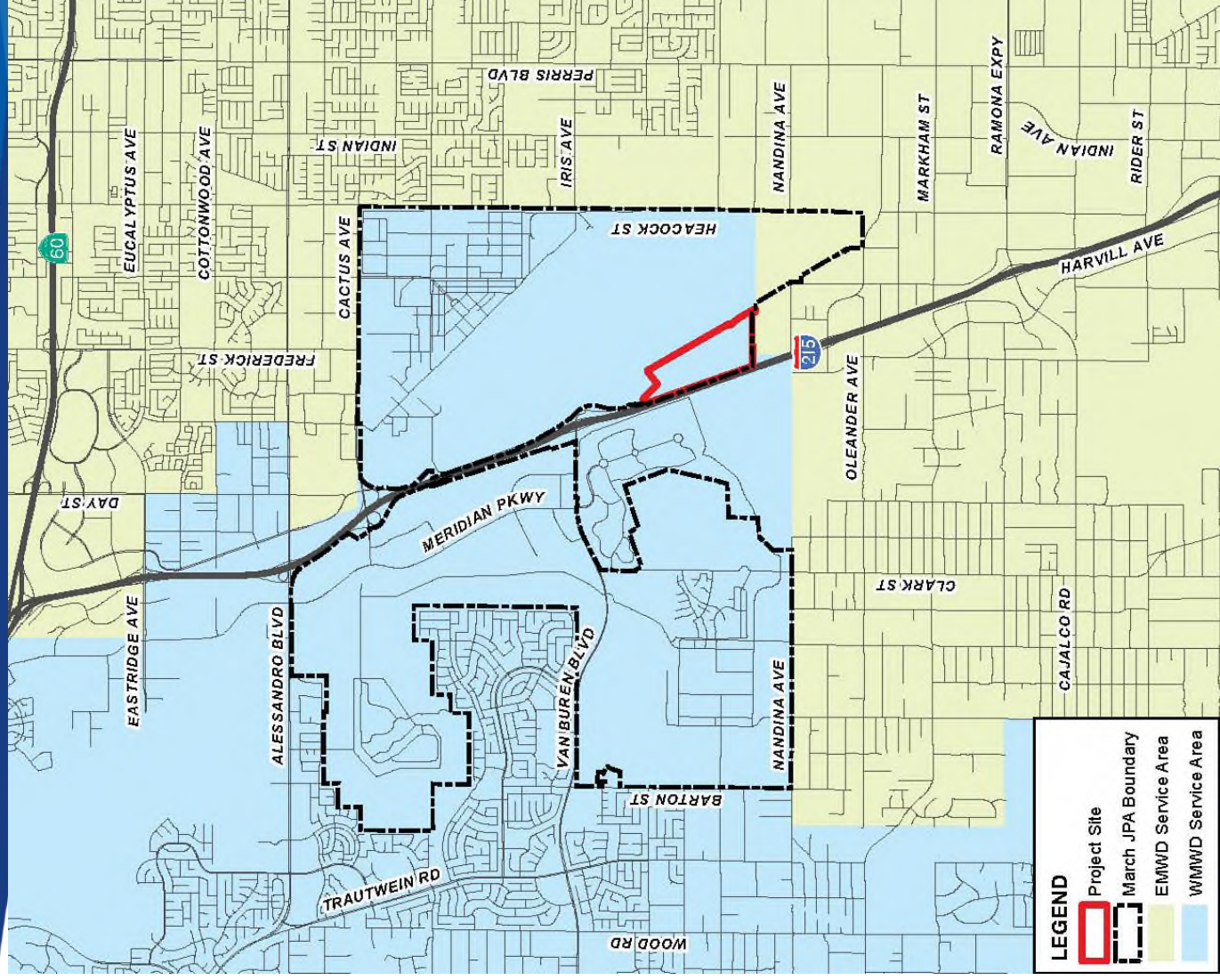
Board of Directors

March 15, 2017



Western Municipal Water District

Vicinity Map

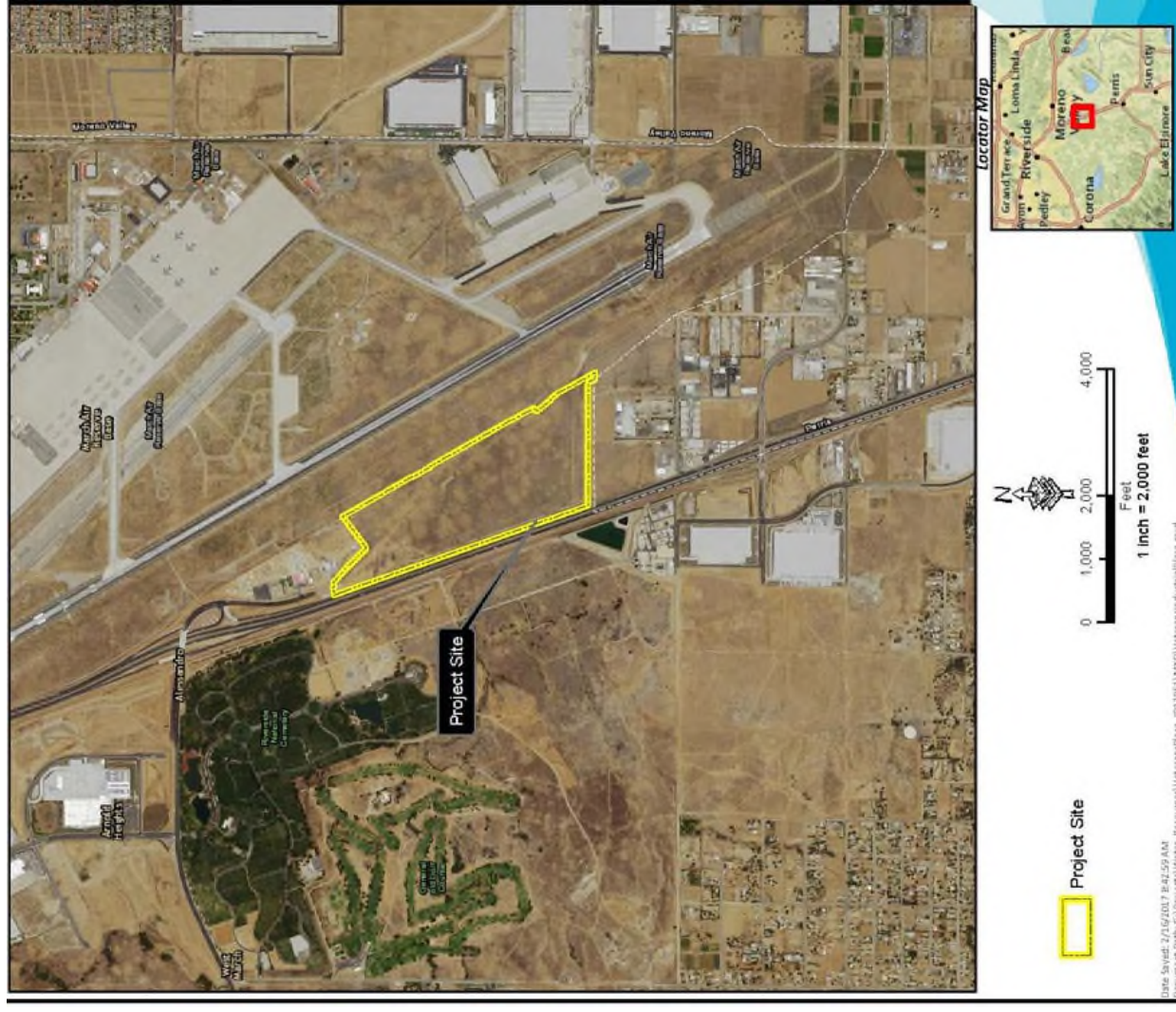


Project Description



- Located east of I-215, south of March Field Air Museum, and west of March Air Reserve Base airport runway
- Project proposes two industrial buildings:

Building 1 = 1,024,822 sq.ft.
Building 2 = 1,195,030 sq.ft.
- Total water demands = 109 acre-feet per year (AFY)



Analysis Results



Multiple-Dry Years Hydrology Veterans Industrial Park 215		2020	2025	2030	2035	2040
WMWD Full-Service Demand⁽¹⁾		30,814	33,714	36,415	39,170	41,704
Loss Due to Drought Allocation (20% reduction)		6,163	6,743	7,283	7,834	8,341
Annual Allocation from MWD		24,651	26,971	29,132	31,336	33,363
Supplemental Water Supply Projects		Projected Operation				
<i>Meeks & Daley Asset Exchange Agreement⁽²⁾</i>		Operable				
<i>Riverside Highland Company⁽³⁾</i>		Operable				
<i>Bunker Hill Basin Coordinated Use Agreement⁽⁴⁾</i>		Operable				
<i>Arlington/Corona Exchange</i>		Operable				
<i>Arlington Desalter Expansion (Arlington Basin Recharge)</i>		2,800	2,800	2,800	2,800	2,800
<i>Coordinated Agreement with the City of Riverside⁽⁵⁾</i>		2020				
<i>Chino Desalter II Expansion/La Sierra Pipeline</i>		3,534	3,534	3,534	3,534	3,534
<i>Western Water Recycling Facility</i>		1,600	1,900	2,100	2,400	2,700
Net supplemental water supply		9,934	10,234	10,434	10,734	11,034
Total water supply (supplemental & MWD water)		34,585	37,205	39,566	42,070	44,397
Total water demand approved for projects since WMWD's 2015 UWMP, excluding this project		2,062	2,062	2,062	2,062	2,062
Total water supply less approved project since WMWD's 2015 UWMP		32,523	35,143	37,504	40,008	42,335
Water supply less Western's demand		1,709	1,429	1,089	838	631
Veterans Industrial Park 215 Project water demand		109	109	109	109	109
(Shortfall)/Surplus		1,600	1,320	980	729	522

Recommendation



Staff recommends:

Board of Directors approval of Resolution 2976, adopting the Water Supply Assessment (WSA)

Rationale:

- Adequate supply is shown by analysis



QUESTIONS?



Securing Your Water Supply

Western Municipal Water District
Administration 951.571.7100
Operations 951.789.5100
wmwd.com
outreach@wmwd.com

Water Supply Assessment

Veteran's Industrial Park 215

March 15, 2017

Western Municipal Water District
14205 Meridian Parkway
Riverside, CA 92518

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Introduction

The purpose of this water supply assessment ("WSA") is to evaluate whether the total projected water supplies available to Western Municipal Water District ("Western") during normal, single-dry, and multiple-dry years over the next 20-year period are sufficient to meet the projected demands of the proposed Veteran's Industrial Park ("Project"), in addition to Western's existing and planned future uses, including agricultural and manufacturing. This WSA has been prepared in accordance with the requirements of Water Code section 10910 *et seq.*, commonly referred to as California Senate Bill 610 ("SB 610").

Proposed Project – Veteran's Industrial Park 215

The Veteran's Industrial Park 215 ("Project") is an approximately 143-acre site composed of two industrial buildings located within the March Joint Powers Authority (JPA) jurisdiction area of unincorporated Riverside County, California.

Project Location

The Project site is located directly east of the Interstate 215 ("I 215") Freeway off-ramp at Van Buren Boulevard, south of the existing March Field Air Museum, and west of an existing March Air Reserve Base airport runway. The I-215 Freeway off-ramp provides no access to the runway, any taxiways or other airport flying facilities. The Assessor Parcel Numbers ("APNs") for the property are: 294-150-009, 294-170- 005, 295-300-008, and 294-180-038. The Project site is presently vacant and surrounded by the following uses:

- North:** Immediately to the north of the Project site is the existing March Field Air Museum, zoned for Public Facilities uses.
- East:** The area east of the Project site consists of the existing runways and facilities of the March Air Reserve Base.
- South:** Immediately south of the Project site is the corporate boundary of the City of Perris, and the Perris Valley Commerce Center Specific Plan, zoned for Business Park and Light Industrial uses (City of Perris).
- West:** West of the Project site is the I-215 Freeway, with the Riverside National Cemetery and the Meridian Business Park beyond.

Project Description

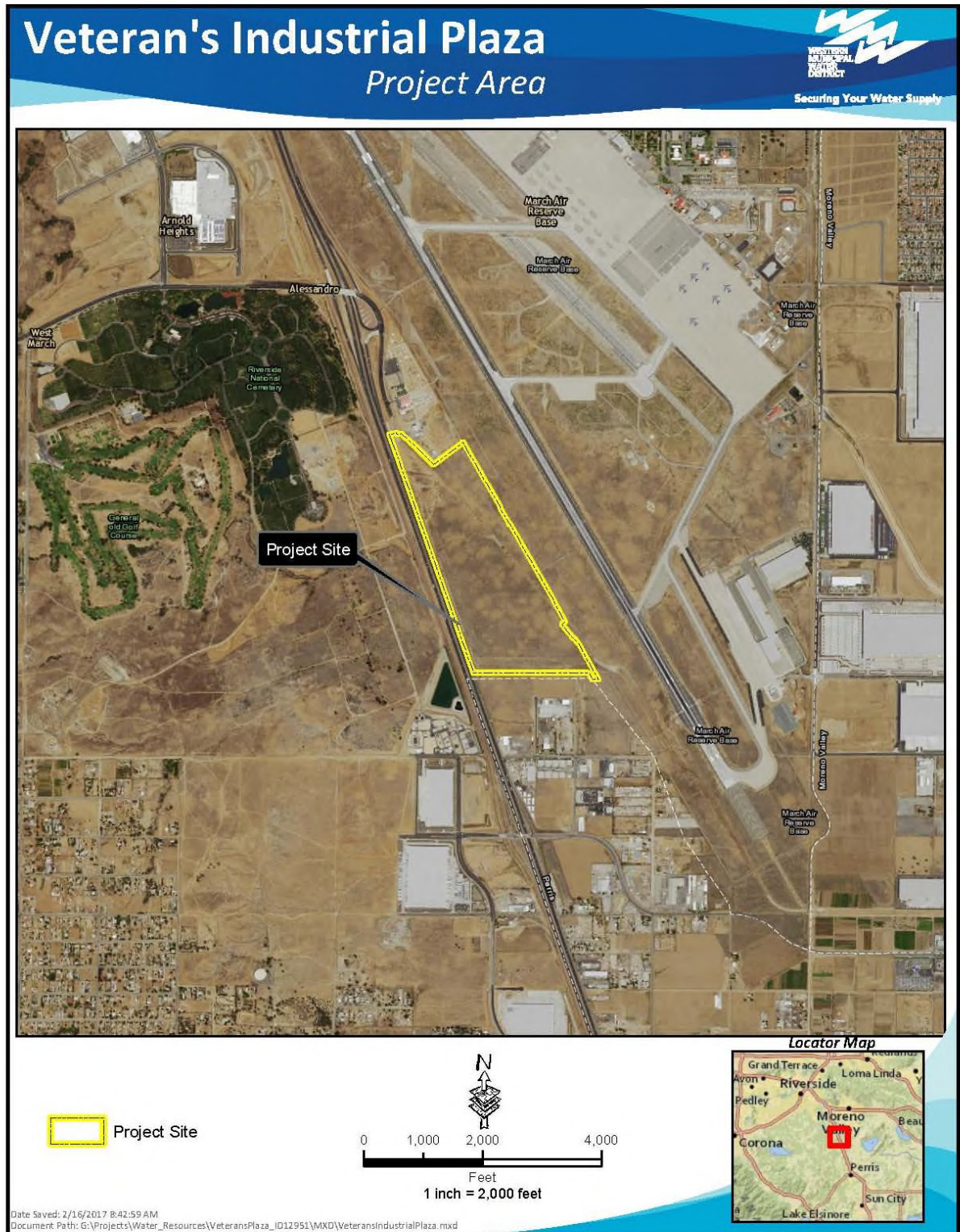
The Project site is not served by aircraft taxiways and ramp facilities and is proposed for development with non-aviation land uses. The Project proposes industrial buildings that would allow for a mix of logistics center uses that could support wholesale, storage, distribution, manufacturing and/or assembly centers. The conceptual site plan, as shown below, identifies two high cube industrial buildings which total approximately 2,219,852 square feet:

Building 1: 1,024,822 square feet

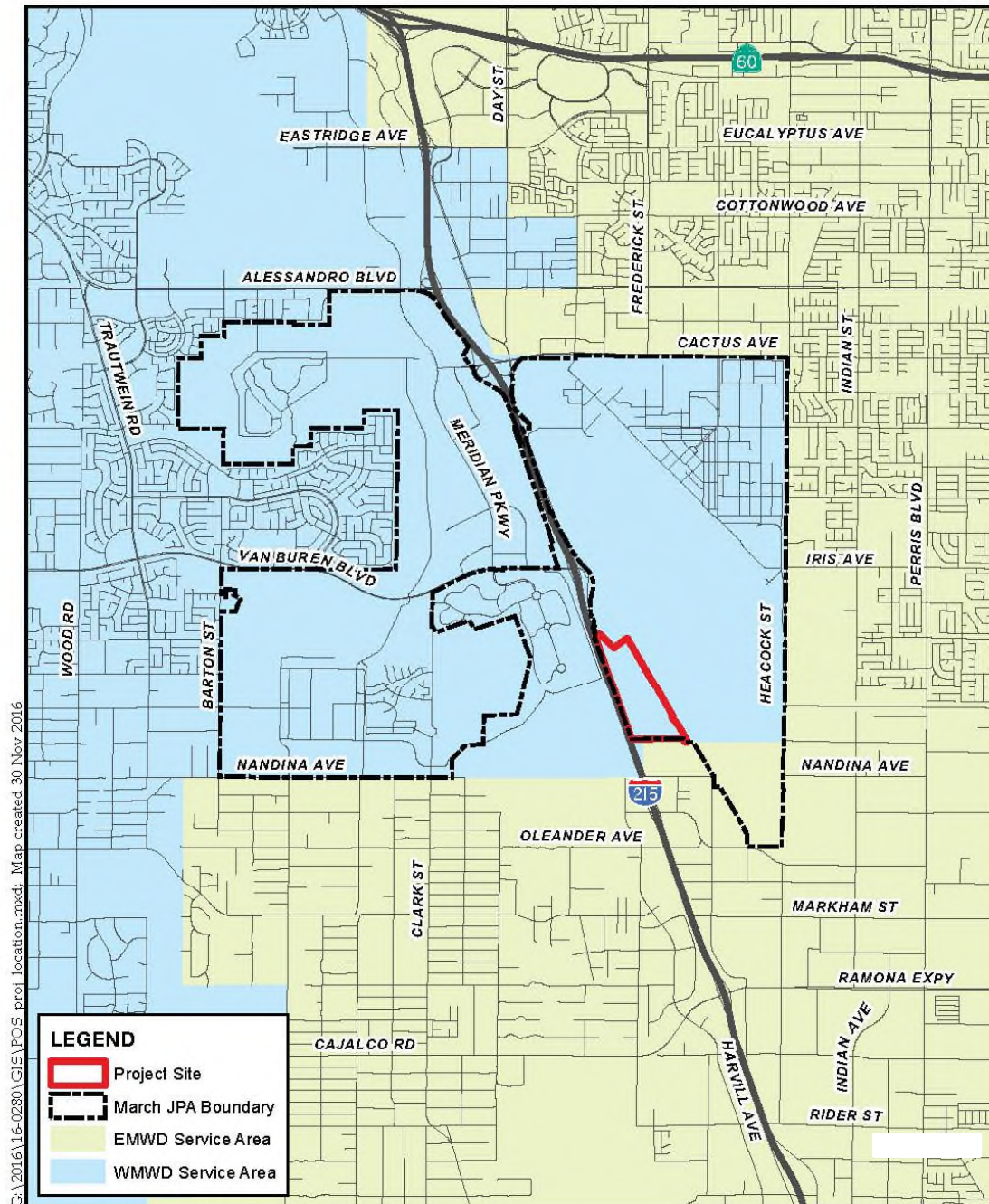
Building 2: 1,195,030 square feet

Each building would have a north to south orientation with trailer truck dock doors located on the rear of each building. All development within the Project area will include all onsite and offsite infrastructure necessary for operation of facilities at the completion of development.

Project Location Map



Project Area Map



G:\2016\16-0280\GIS\POS proj location.mxd; Map created 30 Nov 2016

Sources: March JPA, 2016;
Riverside Co. GIS, 2016;

March JPA Hillwood POS



Water Supply Assessment Statute

Senate Bill 610

SB 610 requires the preparation of a WSA for certain projects that are subject to review under the California Environmental Quality Act ("CEQA") and that meet any of the following criteria:¹

1. A residential development of more than 500 units,
2. A business/shopping center with more than 1,000 employees or 500,000 square feet of floor space,
3. A commercial office building with more than 1,000 employees or 250,000 square feet of floor space,
4. A hotel/motel with more than 500 rooms,
5. An industrial/manufacturing/processing plant or industrial park with more than 1,000 employees, encompassing more than 650,000 square feet of floor space, or occupying more than 40 acres of land,
6. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project,
7. A mixed-use development project that includes one or more of the projects specified in subsections 1 through 6, above, or
8. For a public water system with 5,000 or fewer connections, a project that will increase the number of connections by 10 percent or more.

As an industrial park occupying more than 40 acres of land and encompassing more than 650,000 square feet of floor space, the proposed Project meets the criteria in Water Code section 10912(a)(5), and thus requires preparation of a WSA. Under SB 610, at the time the local/lead agency determines a "project" (as defined by Water Code section 10912) is subject to review under CEQA, the agency must identify any public water system whose service area includes the project site and any public water system adjacent to the project site that may provide water service to the project and request the applicable water provider to prepare a WSA for the project.²

Generally, the WSA must include an analysis of whether the total projected water supplies available to the water provider over the next 20-year period during normal, single-dry, and multiple-dry years, will be sufficient to meet the projected water demand associated with the proposed project, in addition to the water provider's other existing and planned future uses, including agricultural and manufacturing uses.³ Additional analysis is required if the water supplies identified to serve the project include groundwater. Due to the location of the proposed Project and the configuration of Western's retail distribution system, the

¹ California Water Code § 10912(a)-(b)

² California Water Code § 10910(b)-(c)

³ California Water Code § 10910(c)

proposed Project will not receive groundwater or other local supplies that have been developed by Western and secured through agreements with neighboring agencies. Those local supplies, when available, can be used by Western for potable and non-potable purposes during normal, off-season, extraordinary, or emergency conditions in other parts of its distribution system in lieu of imported water. Nevertheless, to ensure a comprehensive discussion regarding the availability and reliability of Western's overall water supply portfolio, this WSA includes information and analysis regarding groundwater and other local supplies available to Western, as further set forth below.

Upon the water provider's adoption of the WSA, the WSA must be forwarded to the lead agency and incorporated into the CEQA document being prepared for the project. The lead agency must then determine, based on the entire record, whether the total projected water supplies available to the water provider over the next 20-year projection during normal, single-dry, and multiple-dry years will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.⁴

Western Municipal Water District

Western was formed by the voters in 1954, primarily to bring supplemental water to western Riverside County. Today, Western serves eight wholesale customers and approximately 24,000 retail customers. Western's water supply portfolio consists mainly of imported supplies from the Colorado River and the State Water Project ("SWP") but also includes recycled water and supplemental water obtained from the Cities of Corona and Riverside, and other local projects. Western's general district consists of a 527-square mile area of western Riverside County and an estimated population of more than 860,000.

As a member agency of the Metropolitan Water District of Southern California ("MWD"), Western provides supplemental water on a wholesale basis to the cities of Corona, Norco, and Riverside and the water agencies of Box Springs Mutual Water Company, Eagle Valley Mutual Water Company, Elsinore Valley Municipal Water District ("EVMWD"), Temescal Valley Water District, and Rancho California Water District. Western serves retail customers in the unincorporated areas of El Sobrante, Eagle Valley, Temescal Creek, Woodcrest, Lake Mathews, and March Air Reserve Base.

Retail Service Area

Western's retail service area covers about 104 square miles and provides water to an estimated population of 95,000, via approximately 24,000 service connections. Western purchases water from MWD comprised of Colorado River and SWP supplies to serve its wholesale and retail customers. Most of the water purchased by Western is imported from the SWP with about 20 percent from the Colorado River. Western also obtains water through several local water supply projects and agreements, although as noted above, the proposed Project will not be served with groundwater or other local supplies and instead will be served entirely with imported water.

⁴ California Water Code § 10911(b)-(c)

Western's main retail service area is within the County of Riverside. Based on the total number of domestic customers, Western's retail service area experienced an annual average growth of approximately 5.8 percent between 2001 and 2010. Western's growth rate was influenced by the undeveloped land in its retail service area compared to historically urban areas. This annual average growth rate then attenuated to approximately 1.14 percent between 2010 and 2015.⁵ The Southern California Association of Governments ("SCAG") projected the annual growth rate for regional population will be only 0.7 percent through the year 2040.⁶ Western's 2015 Urban Water Management Plan projected the annual population growth rate within Western's service area at an average of 1.4 percent through the year 2040.

The WSA Process

In accordance with the requirements of SB 610, this WSA evaluates:

1. The total projected water supplies available to Western during normal, single-dry, and multiple-dry water years during a 20-year projection, and
2. Whether Western's total projected supplies will be sufficient to meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

SB 610 provides: "If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment"⁷ The Urban Water Management Planning Act, Water Code section 10610 *et seq.*, requires water providers to perform various planning analyses with the goal of ensuring overall long-term water supply sufficiency and reliability within their service areas. For instance, Urban Water Management Plans ("UWMP") must include a water supply reliability assessment, including a detailed evaluation of the supplies necessary to meet demands over at least a 20-year period in average, single-year, and multi-year drought conditions. Urban water providers must also prepare a water shortage contingency plan that documents the stages of actions needed to address up to a 50 percent reduction in an agency's water supplies. Water shortage contingency plans must also identify actions to be taken in the event of a catastrophic interruption in water supplies and describe mandatory prohibitions against specific water use practices during water shortages. All such elements are included in Western's 2015 UWMP.

Western, as a member agency of MWD, closely coordinated the preparation of its 2015 UWMP and analyses with MWD's 2015 Regional Urban Water Management Plan ("RUWMP"), MWD's 2015 Integrated Resources Plan ("IRP"), and related analyses.

⁵ 2015 Urban Water Management Plan, Western Municipal Water District

⁶ Regional Transportation Plan, 2016–2040 Sustainable Communities Strategy Report Chapter 3

"Challenges in a Changing Region," Average Annual Population Growth Rate, Page 47, Southern California Association of Governments, December 2015

⁷ California Water Code § 10910(c)(2)

Western's 2015 UWMP, MWD's 2015 RUWMP, and MWD's 2015 IRP are the most recent local and regional water supply analyses prepared and adopted pursuant to the Urban Water Management Planning Act. Thus, as authorized by SB 610, certain information and analyses from those and other documents were utilized in preparing this WSA. In addition, and as further discussed below, information and analyses from MWD's 2015 RUWMP and 2015 IRP were used, in part, to address and analyze recent legal, regulatory, and environmental conditions having the potential to affect the availability and reliability of imported water supplies from MWD.

The projected water demands associated with the proposed Project were not specifically accounted for in Western's 2015 UWMP; however, the overall projected demands for the land use were accounted for by population growth. Therefore, in preparing this WSA, projected and adjusted demand information for Western's service area has been reviewed and presented in relation to Western's 2015 UWMP and MWD's 2015 RUWMP to evaluate the sufficiency of Western's total projected water supplies to serve the proposed Project in addition to Western's existing and planned future uses. This WSA also identifies conservation and water-budgeted tiered rates as a means of reducing demand in Western's retail area.

Among other data and analyses, the following documentation was utilized in the preparation of this WSA:

Western Municipal Water District

- 2015 Urban Water Management Plan
- Updated Integrated Regional Water Management Plan Report
- Drought Allocation Plan and Water Conservation and Supply Shortage for the Western Municipal Water District, April 15, 2015
- Western Municipal Water District Ordinance 384, February 18, 2015
- Western Municipal Water District Ordinance 385, May 20, 2015
- Western Municipal Water District Resolution 2910, May 20, 2015

Metropolitan Water District of Southern California

- 2015 Integrated Water Resources Plan
- 2015 Regional Urban Water Management Plan

California Department of Water Resources

- State Water Project Final Delivery Capability Report, July 2015

Water Supply

Under normal water year conditions, Western's retail service area relies almost entirely on imported water supplies from MWD. However, as discussed in greater detail below, Western has developed various local supplies that can be used in various portions of its service area for potable and non-potable purposes during normal, off-season, extraordinary, or emergency conditions. As indicated above, the proposed Project will be

served with imported water and groundwater is not part of the supply that will be used to serve the Project.

Imported Water Supplies – Metropolitan Water District of Southern California

Below are the imported water supplies that Western has received from MWD for the last five years.

Total Western Calendar Year Imported Water from MWD (AF)				
2011	2012	2013	2014	2015
72,485.2	78,578.4	75,696.6	81,894.7	58,446.9

MWD is a legislatively created agency charged with regional water supply management for large portions of Southern California. MWD holds contractual rights to receive SWP and Colorado River water supplies, and has developed various other water supply programs and projects to augment its overall portfolio. From that perspective, MWD has developed comprehensive and highly specialized modeling techniques to evaluate short, intermediate, and long-term availability and reliability of its total projected supplies used to serve and supplement the needs of its 26 member agencies, including Western.

MWD's mission statement is "[T]o provide its service area with adequate and reliable supplies of high quality water to meet present and future needs in an environmentally and economically responsible way."⁸ To fulfill this mission, MWD takes a coordinated approach to regional planning through its IRP. The first IRP was developed in 1996. MWD and its member agencies worked cooperatively to compile and analyze water demand and supply data, then applied that information in developing a diverse water supply portfolio. The 1996 plan stated that MWD and its member agencies would meet all full-service water demands without interruption through 2020. The IRP also set targets for conservation, development of local supplies, imported water supplies, groundwater banking, and water transfers.

MWD has updated its IRP several times. The most recently updated 2015 IRP was adopted on January 12, 2016. The 2015 IRP Update identifies various strategies to ensure water supply reliability including:

1. Diversified portfolio of actions calling for stabilization and maintenance of imported supplies,
2. Meeting future growth through increased water conservation and sustaining and developing new local supplies,
3. Pursuing a comprehensive transfer and exchange strategy, and
4. Building storage in wet and normal years to manage risks and drought.

MWD's IRP process used the MWD-MAIN Water Forecasting System to calculate demand projections among the MWD member agencies. The model incorporates demographic and economic data (and, thus, projected demand) obtained from regional

⁸ <http://www.mwdh2o.com/WhoWeAre/Mission>

planning agencies. Supply reliability was evaluated through another computer model developed by MWD known as the Integrated Resources Planning Simulation Model ("IRPSIM"). This model uses historical hydrologic data from 1922 to 2012 to generate water shortage/surplus estimates over a 25-year planning horizon.

The 2015 IRP Update provides a roadmap for maintaining regional water supply reliability over the next 25 years and beyond and addresses many of the key factors affecting SWP and Colorado River supplies. In addition, the update incorporated those factors into its forecasts, analyses, and future planning actions to ensure an adequate and reliable water supply for its member agencies.

The 2015 IRP Update presents a three-component approach:

1. A core resources strategy represents baseline efforts to manage water supply and demand conditions and to stabilize MWD's traditional imports from the Colorado River and northern California through the Sacramento-San Joaquin Delta. This strategy is based on known factors, including detailed planning assumptions about future demographic scenarios, water supply yields, and a range of observed historical weather patterns. Under this strategy, MWD and its member agencies will advance water use efficiency through conservation and recycling, and with further local development such as groundwater recovery and seawater desalination.
2. A cost-effective "supply buffer" will enable the region to adapt to future circumstances and foreseeable challenges. The buffer helps protect the region from possible shortages caused by conditions that exceed the core resources strategy, starting with increased conservation and water-use efficiency on a region-wide basis.
3. Foundational actions guide the region in determining alternative supply options for long-range planning. If future changed conditions, such as climate change or the availability of resources, exceed what is covered by MWD's core resources and supply buffer, these alternatives would provide a greater contribution to water reliability than MWD's imported water sources or any other single supply. These actions, including feasibility studies, research, and regulatory review would provide the foundation to develop alternative resources, if needed.⁹

⁹ 2015 Integrated Water Resources Plan Update, Press Release, January 12, 2016.

The 2015 IRP Update builds upon the adaptive management strategy established in the 2010 IRP, and continues to refine that strategy to ensure water supply reliability throughout MWD's service area. This strategy includes a diversified portfolio of actions that calls for stabilizing and maintaining imported water supplies; meeting future growth through increased water conservation, and sustaining and developing new local supplies; pursuing a comprehensive transfer and exchange strategy; building storage in wet and normal years to manage risks and drought; and preparing for uncertainty with future water supply actions. Among other water supply strategies, the 2015 IRP Update includes the following reliability targets for the SWP, Colorado River Aqueduct, local water supplies, and conservation:

1. **Maintain Colorado River Supplies.** The 2015 IRP Update goal for Colorado River Aqueduct ("CRA") supplies is to maintain current levels of water supplies from existing programs, while also developing flexibility through dry-year programs and storage. In order to accomplish this goal, the 2015 IRP Update targets development of sufficient base supply programs to ensure that a minimum of 900,000 AF of diversions are available when needed and to ensure access to 1.2 million AF of supplies in dry years through flexible programs and storage.
2. **Stabilize SWP Supplies.** The goal for SWP supplies is to adaptively manage flow and export regulations in the near term and to achieve a long-term Delta solution that addresses ecosystem and water reliability challenges. Achieving this goal will require continued participation and a successful outcome in the California WaterFix and the California EcoRestore efforts. This approach targets an average of 980,000 AF of SWP supplies in the near term and 1.2 million AF on average starting in 2030 when a long-term Delta solution is estimated to be in place.
3. **Achieve Additional Conservation Savings.** Conservation is crucial to the 2015 IRP Update strategy. While Metropolitan and its member agencies continue to work toward achieving water savings consistent with 20x2020 goals, the 2015 IRP Update seeks further savings through increased emphasis on outdoor water use efficiency, largely through enhanced regional compliance with the state's Model Water Efficient Landscape Ordinance. Metropolitan would work with its member agencies to develop a combination of incentive, education/outreach, and other programs in support of this approach. The 2015 IRP Update target for conservation would result in approximately 485,000 AF of new water savings by 2040.
4. **Develop Additional Local Water Supplies.** Local supplies are a key to providing water supply reliability into the future. Over half of the region's water supplies come from locally developed sources. The 2015 IRP Update goal for local water supplies is primarily to maintain existing and under-construction supply sources. The 2015 IRP Update target for local supplies totals 2.2 million AF in 2016; this target grows to a total of 2.4 million AF by 2040. In comparison, local supplies produced a total of about 1.94 million AF in calendar year 2014. Over the next 25 years, up to 460,000 AF of additional local supplies would be developed.

Imported Water Supplies – 2011–2015 Drought Impacts on MWD Supplies

Four years (2011 through 2015) of dry climate conditions throughout the state and additional constraints on water supplies from the SWP have increased the possibility that in the future MWD could face shortages and may have to allocate supplies to its member agencies to meet total firm demands within the MWD service area. To prepare for this situation, MWD has worked jointly with member agencies, including Western, to develop an updated Water Supply Allocation Plan (“WSAP”) for MWD member agencies and to implement the WSAP when needed.

As noted above, MWD’s ability to provide redundant layers of water supply availability and reliability to its member agencies is predicated on the regionally developed framework between MWD and its members. As part of this process, MWD has developed and adopted its Water Surplus and Drought Management Plan (“WSDM”) to provide policy guidance and manage regional water supply actions under both surplus and drought conditions to achieve the overall goal of ensuring water supply reliability to its member agencies as set forth in MWD’s 2015 Regional UWMP and IRP. The WSDM Plan outlines various water supply conditions and corresponding actions MWD may undertake in response to moderate, serious, and extreme water shortages. Under Condition 1, MWD issues a Water Supply Watch and encourages local agencies to implement voluntary dry-year conservation measures and utilize regional storage reserves. Under Condition 2, MWD issues a Water Supply Alert and calls for cities, counties, its member agencies, and all other retail water providers to implement extraordinary conservation through drought ordinances and other measures to minimize the use of storage reserves. Under Condition 3, MWD may activate its WSAP, which allocates available water supplies among its member agencies based on factors such as impacts to retail customers, population, and projected growth of particular member agencies, the availability of recycled water and other local supplies, conservation efforts, and other factors. At times when the WSAP is implemented, MWD member agencies do not lose their ability to receive any particular amount of imported water supplies from MWD, but instead MWD places limits on the amount of water its member agencies can purchase without facing a surcharge.

The original WSAP was adopted in February 2008, and when MWD’s storage levels previously dropped due to multi-year drought conditions, MWD implemented its WSAP to achieve a 10 percent reduction in wholesale water deliveries from July 1, 2009 through June 30, 2011. On December 9, 2014, MWD approved adjustments to its WSAP in response to the more recent multi-year drought. These adjustments included: (1) update to the base period to fiscal years ending 2013 and 2014; (2) update to the conservation demand hardening credit to a method based on member agency per capita water use reductions with considerations for the early enforcement of mandatory conservation ordinances and requirements; (3) include a separate allocation for drought-impacted groundwater basins; and (4) replace the current penalty rates with an allocation surcharge based on marginal water conservation program costs.

On April 14, 2015, in support of Governor Brown’s April 1, 2015 Executive Order B-29-15 requiring mandatory water conservation, MWD declared a Condition 3 shortage and decided to implement its WSAP with the goal of achieving a 15 percent reduction in

regional deliveries to its member agencies starting on July 1, 2015. MWD's staff report for this action contained several notable statements:

- The decision was in direct response to and in support of the Governor's April 1, 2015 Executive Order B-29-15 and call for a 25 percent reduction in consumer water use statewide. (MWD staff report, p. 1.)
- By implementing the WSAP, MWD placed limits on the amount of water member agencies can purchase without facing a surcharge. (MWD staff report, page 3; see also, pp. 4–5.)
- Implementation of the WSAP allocation merely involved the potential application of a surcharge to those member agencies whose deliveries of water from MWD exceeded their allocations, but did not otherwise prohibit or restrict such deliveries. (MWD staff report, p. 6.)

In addition to implementing its WSAP Condition 3, MWD provided additional tools that could be used to help retail agencies reduce water use. Those tools included:

- Expanding outreach and media strategy to achieve greater consumer awareness on how to reduce water use;
- Additional budget approval to continue regional conservation incentives through Fiscal Year 2015/2016;
- Partnering with the State on funding of rebate and outreach programs;
- Focusing on a long-term transition toward drought tolerant landscapes;
- Monthly tracking and reporting of member agency water use and enforcement actions to achieve greater reductions in consumer water use; and
- Working with the State on accelerating funding from Proposition 1 for local projects.

On February 18, 2015, Western's Board adopted Ordinance 384 establishing the Water Supply Shortage Contingency Program ("WSSCP"). Ordinance 384 updates the existing WSSCP, originally adopted in 2009. The WSSCP provides Western with actionable measures that adjust water budgets and promote the efficient use and conservation of water supplies, which are necessary during declared water supply shortage conditions. In addition, Western adopted Ordinance 385 to update its 2008 Drought Allocation Plan ("DAP") and prepare for the possibility that MWD may implement its 2014 WSAP, as described above. Western's 2015 DAP is consistent with allocation methodology adopted as part of the MWD 2014 WSAP and accounts for a range of potential imported water shortage scenarios. In response to MWD's implementation of the WSAP in 2015, Western activated its 2015 DAP and initiated a Stage 3 alert under Western's Ordinance 384 and WSSCP. One of the main purposes of the 2015 DAP is to provide Western and its wholesale customers with a method, if necessary, for allocating limited imported water supplies from MWD under various shortage conditions. Notably, however, Western was not required to impose a wholesale shortage allocation in response to MWD's Condition 3

declaration. Because all wholesale agencies that Western serves were assigned mandatory water use reductions by the State Water Resources Control Board ("State Board") that exceed MWD's Condition 3 goal of reducing regional deliveries by 15 percent, Western determined not to implement a water shortage allocation to its wholesale customers.

On May 20, 2015, in response to emergency water conservation regulations issued by the State Board that required Western to reduce water use by 32 percent as compared to water use in 2013, Western's Board adopted Resolution 2910 implementing Water Shortage Stage 4(b) of Western's WSSCP as provided in Ordinance 384. Implementation of the measures outlined in Stage 4(b), plus additional measures defined in Resolution 2910, were necessary to maximize water conservation and reduce retail water demands throughout Western's retail service area in an effort to comply with the State Board mandate.

In May 2016, due in large part to improved water supply conditions in northern California, and lower regional demands achieved through extraordinary water saving efforts, MWD deactivated its WSAP. Also, in May 2016, the State Board adopted a new emergency regulation which, among other things, requires urban retail water suppliers to either: (1) develop and report on individualized water conservation and reduction standards according to prescribed methodologies, or (2) reduce its total potable water production by the percentage identified as its conservation standard under the previous emergency regulation, subject to potential adjustments. The new regulation was originally scheduled to remain in effect until February 2017. Recently, the State Board proposed to extend its new conservation regulation for an additional 270 days.

Imported Water Supplies – Determination of MWD available supplies

MWD Regional Urban Water Management Plan

With respect to imported supply, MWD's 2015 Regional Urban Water Management Plan has evaluated projected near, intermediate, and long-term water supply availability and reliability using historic hydrology. The year 1977 was identified as the single driest and 1990–1992 was used for the three-year dry period. MWD's water supply estimates are provided below in Table 2-4 for the single driest year, Table 2-5 for multi-year dry period, and Table 2-6 for the average year hydrology.

Table 2-4
Single Dry-Year
Supply Capability¹ and Projected Demands
Repeat of 1977 Hydrology
 (Acre-feet per year)

Forecast Year	2020	2025	2030	2035	2040
Current Programs					
In-Region Supplies and Programs	693,000	774,000	852,000	956,000	992,000
California Aqueduct ²	691,000	712,000	723,000	749,000	749,000
Colorado River Aqueduct					
Total Supply Available ³	1,451,000	1,457,000	1,456,000	1,455,000	1,454,000
Aqueduct Capacity Limit ⁴	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Colorado River Aqueduct Capability	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Capability of Current Programs	2,584,000	2,686,000	2,775,000	2,905,000	2,941,000
Demands					
Total Demands on Metropolitan	1,731,000	1,784,000	1,826,000	1,878,000	1,919,000
IID-SDCWA Transfers and Canal Linings	274,000	282,000	282,000	282,000	282,000
Total Metropolitan Deliveries⁵	2,005,000	2,066,000	2,108,000	2,160,000	2,201,000
Surplus	579,000	620,000	667,000	745,000	740,000
Programs Under Development					
In-Region Supplies and Programs	43,000	80,000	118,000	160,000	200,000
California Aqueduct	20,000	20,000	198,000	198,000	198,000
Colorado River Aqueduct					
Total Supply Available ³	155,000	125,000	75,000	25,000	25,000
Aqueduct Capacity Limit ⁴	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	63,000	100,000	316,000	358,000	398,000
Potential Surplus	642,000	720,000	983,000	1,103,000	1,138,000

¹ Represents Supply Capability for resource programs under listed year type.

² California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

³ Colorado River Aqueduct includes programs, IID-SDCWA transfer and exchange and canal linings conveyed by the aqueduct.

⁴ Maximum CRA deliveries limited to 1.20 MAF including IID-SDCWA transfer and exchange and canal linings.

⁵ Total demands are adjusted to include IID-SDCWA transfer and exchange and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

SDCWA – San Diego County Water Authority

MAF – Million Acre-Feet

CRA – Colorado River Aqueduct

Table 2-5
Multiple Dry-Year
Supply Capability¹ and Projected Demands
Repeat of 1990-1992 Hydrology
 (Acre-feet per year)

Forecast Year	2020	2025	2030	2035	2040
Current Programs					
In-Region Supplies and Programs	239,000	272,000	303,000	346,000	364,000
California Aqueduct ²	664,000	682,000	687,000	696,000	696,000
Colorado River Aqueduct					
Total Supply Available ³	1,403,000	1,691,000	1,690,000	1,689,000	1,605,000
Aqueduct Capacity Limit ⁴	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Colorado River Aqueduct Capability	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Capability of Current Programs	2,103,000	2,154,000	2,190,000	2,242,000	2,260,000
Demands					
Total Demands on Metropolitan	1,727,000	1,836,000	1,889,000	1,934,000	1,976,000
IID-SDCWA Transfers and Canal Linings	274,000	282,000	282,000	282,000	282,000
Total Metropolitan Deliveries⁵	2,001,000	2,118,000	2,171,000	2,216,000	2,258,000
Surplus	102,000	36,000	19,000	26,000	2,000
Programs Under Development					
In-Region Supplies and Programs	36,000	73,000	110,000	151,000	192,000
California Aqueduct	7,000	7,000	94,000	94,000	94,000
Colorado River Aqueduct					
Total Supply Available ³	80,000	75,000	50,000	25,000	25,000
Aqueduct Capacity Limit ⁴	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	43,000	80,000	204,000	245,000	286,000
Potential Surplus	145,000	116,000	223,000	271,000	288,000

¹ Represents Supply Capability for resource programs under listed year type.

² California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

³ Colorado River Aqueduct includes programs, IID-SDCWA transfer and exchange and canal linings conveyed by the aqueduct.

⁴ Maximum CRA deliveries limited to 1.20 MAF including IID-SDCWA transfer and exchange and canal linings.

⁵ Total demands are adjusted to include IID-SDCWA transfer and exchange and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Table 2-6
Average Year
Supply Capability¹ and Projected Demands
Average of 1922-2012 Hydrologies
(Acre-feet per year)

Forecast Year	2020	2025	2030	2035	2040
Current Programs					
In-Region Supplies and Programs	693,000	774,000	852,000	956,000	992,000
California Aqueduct ²	1,555,000	1,576,000	1,606,000	1,632,000	1,632,000
Colorado River Aqueduct					
Total Supply Available ³	1,468,000	1,488,000	1,484,000	1,471,000	1,460,000
Aqueduct Capacity Limit ⁴	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Colorado River Aqueduct Capability	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Capability of Current Programs	3,448,000	3,550,000	3,658,000	3,788,000	3,824,000
Demands					
Total Demands on Metropolitan	1,586,000	1,636,000	1,677,000	1,726,000	1,765,000
IID-SDCWA Transfers and Canal Linings	274,000	282,000	282,000	282,000	282,000
Total Metropolitan Deliveries⁵	1,860,000	1,918,000	1,959,000	2,008,000	2,047,000
Surplus	1,588,000	1,632,000	1,699,000	1,780,000	1,777,000
Programs Under Development					
In-Region Supplies and Programs	43,000	80,000	118,000	160,000	200,000
California Aqueduct	20,000	20,000	268,000	268,000	268,000
Colorado River Aqueduct					
Total Supply Available ³	5,000	25,000	25,000	25,000	25,000
Aqueduct Capacity Limit ⁴	0	0	0	0	0
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	63,000	100,000	386,000	428,000	468,000
Potential Surplus	1,651,000	1,732,000	2,085,000	2,208,000	2,245,000

¹ Represents Supply Capability for resource programs under listed year type.

² California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

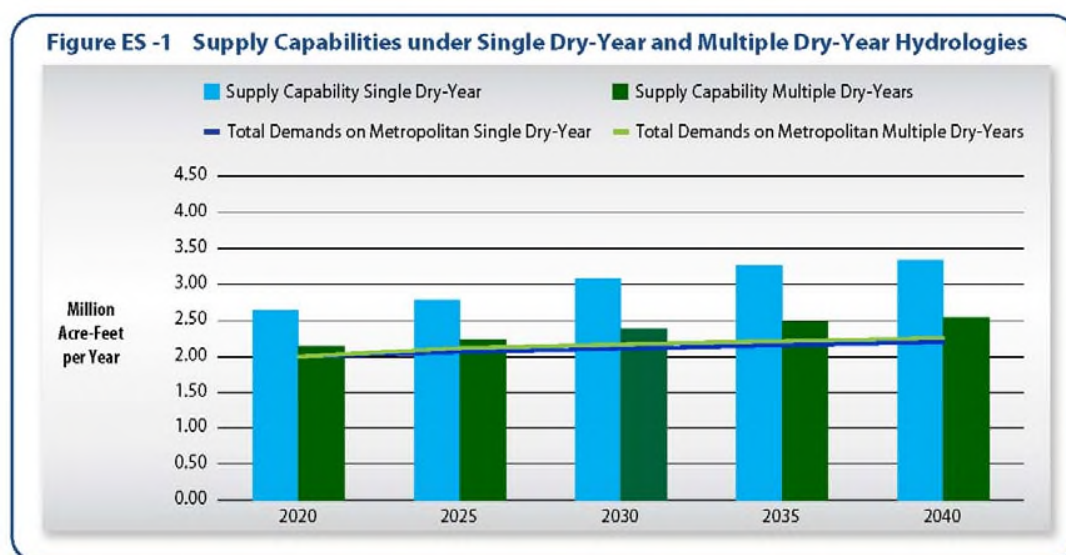
³ Colorado River Aqueduct includes programs, IID-SDCWA transfer and exchange and canal linings conveyed by the aqueduct.

⁴ Maximum CRA deliveries limited to 1.20 MAF including IID-SDCWA transfer and exchange and canal linings.

⁵ Total demands are adjusted to include IID-SDCWA transfer and exchange and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Based on these tables and the supporting analyses and information in its most recent 2015 RUWMP, MWD has concluded that:

1. MWD has supply capabilities that would be sufficient to meet expected demands from 2020 through 2040 under single dry-year and multiple dry-year conditions, as presented in Figure ES-1 (2015 RUWMP, pp. ES-5 through ES-6).



Note:

1. Supply capabilities are derived using the simulated median storage level going into each of five-year increments based on the balances of supplies and demands. Under the median storage condition, there is an estimated 50 percent probability that storage levels would be higher than the assumption used, and a 50 percent probability that storage levels would be lower than the assumption used.
2. Under some conditions, Metropolitan may choose to implement the WSAP in order to preserve storage reserves for a future year, instead of using the full supply capability. This can result in impacts at the retail level even under conditions where there may be adequate supply capabilities to meet firm demands.
3. All storage capability figures shown in the 2015 UWMP reflect actual storage program conveyance constraints.

2. MWD has comprehensive plans for stages of actions it would undertake to address up to 50 percent reduction in its water supplies and a catastrophic interruption in water supplies through its Water Surplus and Drought Management and Water Supply Allocation Plans. MWD also developed an Emergency Storage Requirement to prepare for potential interruption in water supplies resulting from catastrophic occurrences within the southern California region, including, but not limited to, seismic events along the San Andreas Fault. In addition, MWD is working with the State to implement a comprehensive improvement plan to address catastrophic occurrences that could occur outside of the southern California region, such as a maximum probable seismic event in the Delta that would cause levee failure and disruption of SWP deliveries.
3. MWD has plans for supply implementation and continued development of a diversified resource portfolio including Colorado River and SWP supplies, Central Valley transfers, local resource projects, and in-region storage that enables MWD to meet the water supply needs of its member agencies, including Western.

Importantly, MWD's conclusions and water supply capabilities have been developed to specifically account for several critical factors, as further discussed in this WSA:

Increasing Water Demand: Despite the recent residential development slowdown, population growth in the southern California region has continued to increase overall water demands, and MWD has accounted for that growth.

State Water Supply: Recent regulatory issues, court decisions, and climate conditions have imposed restrictions on the amount and timing of deliveries from the SWP.

Colorado River Supplies: The Colorado River Basin has experienced a multi-year drought and ongoing legal and regulatory factors continue to have potential effects on California's use of Colorado River supplies.

To address these and other factors, MWD notes that it continues to evaluate and develop resource alternatives to provide a reliable and high quality water supply, while exploring ways to reduce demands through water conservation and efficiency programs and allocating supplies among its member agencies when necessary through its WSAP. MWD's recent adoption of its 2015 IRP Update is an example of its ongoing water supply planning efforts. Also discussed herein, various statewide, regional, and local measures are being enacted to change historic water use practices, increase conservation, and reduce per capita water demands.

State Water Project Deliveries

Various legal, regulatory, climatic, and environmental factors have the potential to affect the availability and reliability of SWP supplies. As further discussed below, the California Department of Water Resources ("DWR") specifically accounts for these and other factors in evaluating the projected delivery capability of SWP supplies to MWD and other State contractors. Following is a brief summary of several factors concerning the SWP:

FWS and NMFS Biological Opinions

In December 2008 and June 2009, respectively, the United States Fish and Wildlife Service ("FWS") and the National Marine Fisheries Service ("NMFS") issued biological opinions ("BiOps") setting forth each agency's conclusions regarding the effects that the proposed long-term coordinated operations of the SWP and Central Valley Project ("CVP") would have on threatened and endangered fish species in the Delta.¹⁰ Both BiOps conclude that the operation of the SWP and CVP, as proposed by DWR and the Bureau of Reclamation ("BOR") would jeopardize continued existence of the protected species. Because FWS and NMFS reached "jeopardy" conclusions, each was required by the federal Endangered Species Act ("ESA") to develop a Reasonable and Prudent Alternative ("RPA") to the proposed project, and to include that RPA in its respective BiOp.

¹⁰ The December 15, 2008 FWS BiOp evaluated impacts to the delta smelt. The June 4, 2009 NMFS BiOp evaluated impacts to winter-run and spring-run Chinook salmon, steelhead, green sturgeon, and resident killer whales.

According to their terms, the RPAs developed and adopted by FWS and NMFS impose various new restrictions and requirements on SWP and CVP operations.

As applied to the SWP, the RPAs included in the BiOps have the potential to result in substantially reduced water exports from the Delta. Previous estimates prepared by DWR indicated that, in comparison to the level of SWP exports from the Delta that previously were authorized under State Board Decision 1641 (D-1641),¹¹ the FWS BiOp could reduce SWP deliveries by 18 to 29 percent during average and dry conditions, respectively, and the NMFS BiOp could reduce SWP deliveries by an additional 10 percent (for an aggregate reduction of 28 to 39 percent). Those potential reductions, however, cannot be predicted with certainty because the RPA restrictions are dependent upon highly variable factors such as hydrologic conditions affecting Delta water supplies, flow conditions in the Delta, migratory and reproductive patterns of the protected species, and numerous other non-project factors that impact the health and abundance of fish species and their habitats. As further discussed herein, the RPA restrictions contained in the BiOps have been expressly accounted for in DWR's 2015 SWP Delivery Capability Report and future projections of SWP deliveries, and in turn have also been accounted for by MWD in its 2015 Regional UWMP, and by Western in its 2015 UWMP.

FWS BiOp Litigation

In early 2009, the State Water Contractors, the San Luis Delta-Mendota Water Authority, and several individual water agencies holding contracts for SWP and CVP supplies filed legal challenges against the FWS BiOp regarding delta smelt. (The Consolidated Delta Smelt Cases, E.D. Cal. 1:09-CV-00407-OWW-GSA.) In November 2009, the Federal District Court of the Eastern District of California granted summary judgment on the claim made by several plaintiffs that the federal defendants violated the National Environmental Policy Act ("NEPA") by failing to perform NEPA analysis prior to provisionally adopting and implementing the FWS BiOp and RPA. Further, in May 2010, the court issued Findings of Fact and Conclusions of Law on a motion for preliminary injunction, which confirmed the court's prior NEPA ruling and also determined that plaintiffs were likely to prevail on their claims that FWS violated the federal ESA and the Administrative Procedure Act ("APA") in adopting the RPA for delta smelt. Thereafter, the parties filed motions for summary judgment to obtain a final ruling in the cases, and those motions were argued in early July 2010. In March 2011, the court issued a final decision that invalidated the FWS BiOp and RPA in several respects and ordered FWS to prepare a new BiOp. FWS and others appealed that decision to the Ninth Circuit Court of Appeals. In March 2014, the Court of Appeals issued an opinion that reversed the District Court decision and determined that the FWS BiOp and RPA did not violate the ESA or the APA. The Court of Appeals ruled, however, that the BOR must prepare an Environmental Impact Statement under NEPA to evaluate the effects of the BiOp. To date that NEPA

¹¹ D-1641 implements the objectives of the 1995 Bay-Delta Plan and imposes flow and water quality objectives to assure protection of beneficial uses in the Delta. The requirements of D-1641 address, among other things, standards for fish and wildlife protection, municipal and industrial water quality, agricultural water quality, and salinity. D-1641 imposed a new operating regime for the Delta, including measures such as "X2," an export/inflow ratio, and the Vernalis Adaptive Management Program ("VAMP"). The standards under D-1641 are accomplished through requirements and conditions imposed on the water right permits for the SWP, the CVP, and others.

analysis has not been completed, although an Environmental Impact Statement is expected in 2016. In the meantime, FWS, DWR, and BOR continue to use the RPA measures as a guideline for restricting SWP and CVP operations to protect delta smelt.

NMFS BiOp Litigation

After issuance of the NMFS BiOp in June 2009, the State Water Contractors and other water agencies filed legal challenges against the BiOp. (The Consolidated Salmon Cases, E.D. Cal. 1:09-CV-1053-OWW-DLB.) In May 2010, the Federal District Court for the Eastern District of California ruled that the federal defendants violated NEPA by failing to analyze the impact of the BiOp and RPA on humans and the human environment. The court also ruled that plaintiffs were likely to prevail on their claims that NMFS violated the federal ESA and the APA in adopting the RPA. As with the delta smelt litigation, the parties also filed motions for summary judgment to obtain a final ruling in the cases. In September 2011, the court issued a final decision that invalidated the NMFS BiOp and RPA and ordered NMFS to prepare a new BiOp. NMFS and others appealed that decision to the Ninth Circuit Court of Appeals. In December 2014, the Court of Appeals issued an opinion that reversed the District Court decision and held that NMFS's BiOp was sufficient and that NMFS's adoption of the BiOp was not arbitrary and capricious. Similar to the delta smelt case, above, the Court of Appeals ruled that BOR must prepare an Environmental Impact Statement under NEPA to evaluate the effects of the NMFS BiOp. To date, that NEPA analysis has not been completed. Meanwhile, NMFS, DWR, and BOR continue to use the RPA measures as a guideline for restricting SWP and CVP operations to protect listed anadromous species.

Consistency Determination Litigation

Because the delta smelt and salmon species that are the subject of the FWS and NMFS BiOps are also protected under the California Endangered Species Act ("CESA"), the SWP and CVP are required to obtain take authorization for project operations from the California Department of Fish and Wildlife ("DFW", formerly Department of Fish and Game). In July 2009 and September 2009, respectively, DFG issued "consistency determinations" which found that SWP and CVP operations do not violate CESA to the extent that such operations are in compliance with the RPAs set forth in the FWS and NMFS BiOps. Because the consistency determinations are issued under state law, and thus, could have remained in effect even if the federal BiOps were overturned, the State Water Contractors and the Kern County Water Agency filed legal challenges against the consistency determinations. Those cases were stayed for years pending the final outcome of The Consolidated Delta Smelt Cases and The Consolidated Salmon Cases.¹² In late 2015, the legal challenges against the consistency determinations were dismissed, thus, generally the RPAs in the federal BiOps serve as the regulatory framework for take authorization under CESA.

¹² See, e.g., *State Water Contractors v. Cal. Dept. of Fish and Game*, Sac. Sup. Ct. Case No. 34-2010-80000552; *State Water Contractors v. Cal. Dept. of Fish and Game*, Sac. Sup. Ct. Case No. 34-2010-80000560.

Longfin Smelt Protections

Regulatory actions related to longfin smelt also have the potential to affect the availability and reliability of SWP supplies. In February 2008, longfin smelt were listed as a “candidate” species under CESA, and DFW imposed certain interim restrictions on SWP operations for the protection of longfin smelt and its critical habitat. In February 2009, shortly before longfin smelt were officially listed as a “threatened” species under CESA, DFW issued Incidental Take Permit No. 2081-2009-001-03 (the Permit) to DWR, which imposes various terms and conditions on the ongoing and long-term operations of SWP facilities in the Delta. The operating restrictions under the Permit are based in large part on the restrictions imposed on the SWP by the 2008 FWS BiOp for delta smelt, see above. The resulting water supply reductions under the Permit depend on several variable factors, such as Delta hydrology, migratory, and reproductive patterns of longfin smelt, and other factors affecting species abundance in the Delta. Notably, DWR has not indicated whether any particular reductions in SWP exports are likely to result from the Permit. In March 2009, a legal challenge was filed against the Permit.¹³ In February 2014, a settlement was reached and the suit was dismissed. Among other terms, the settlement calls for implementation of a 3-year longfin smelt study program.

Development of Delta Plan and Delta Flow Criteria

In November 2009, the California Legislature enacted SBx7-1 as part of a comprehensive package related to water supply reliability, ecosystem health, and the Delta.¹⁴ Among other things, SBX7-1 creates the Delta Stewardship Council (“the Council”) and directs the Council to develop a management plan for the Delta by January 1, 2012 (“the Delta Plan”). In May 2013, the Council approved and certified a Final Programmatic Environmental Impact Report (“Final P-EIR”) for the proposed Delta Plan. Various agencies and organizations have filed legal challenges against the FPEIR. (See, *State Water Contractors et al. v. Delta Stewardship Council*, Sacramento County Superior Court, Judicial Council Coordinated Proceeding No. 4758.) The coordinated challenges allege that the Council exceeded its authority under the Sacramento-San Joaquin Delta Reform Act of 2009 and failed to analyze the Plan’s impacts under CEQA.

In May 2016, the Court issued a Statement of Decision addressing the parties’ arguments on statutory issues, and dismissing the CEQA claims as moot unless and until the Council adopts a revised Plan and related CEQA document. Specifically, the Court found that the Delta Plan violated the Delta Reform Act, and directed the Council to rescind its Plan-related approvals and revise the Plan and any applicable regulations to: (1) include quantified or otherwise measurable targets associated with achieving reduced Delta reliance, reduced environmental harm from invasive species, restoring more natural flows, and increased water supply reliability, in accordance with the Delta Reform Act; (2) provide a flow policy that includes quantified or otherwise measure targets; and (3) promote options for water conveyance and storage systems. At this time, it is not known

¹³ See *State Water Contractors v. California Dept. of Fish and Game, et al.*, Sac. Sup. Ct. Case No. 34-2009-80000203.

¹⁴ SBX7-1 became effective February 3, 2010 and adds Division 35 to the California Water Code (commencing with Section 85300). Division 35 is referred to as the Sacramento-San Joaquin Delta Reform Act of 2009.

whether, when, or to what extent the Council may amend the Delta Plan or undertake related actions or further CEQA review. Parties to the case may appeal the trial court decision, and thus, the litigation is still considered active.

SBX7-1 also directed the State Board to develop flow criteria for the Delta to protect public trust resources, including fish, wildlife, recreation, and scenic enjoyment, and required DFW to identify quantifiable biological objectives and flow criteria for species of concern in the Delta. In August 2010, the State Board adopted Resolution No. 2010-0039 approving its report entitled, "Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem" ("Flow Criteria"). The State Board report concludes that substantially higher flows are needed through the Delta than have occurred in previous decades in order to benefit zooplankton and various fish species.¹⁵ Separately, in September 2010, DFW issued a draft report entitled, "Quantifiable Biological Objectives and Flow Criteria for Aquatic and Terrestrial Species of Concern Dependent on the Delta" ("DFW Report"). The DFW Report is based on similar biological objectives and recommends Delta flows similar to those set forth in the State Board's Flow Criteria.¹⁶ Notably, both the State Board and DFW recognize that their recommended flow criteria for the Delta do not balance the public interest or the need to provide an adequate and reliable water supply, and thus, the recommendations may not be consistent with the public trust doctrine.¹⁷ Both the State Board and DFW acknowledge that their recommended flow criteria do not have any regulatory or adjudicatory effect, although they may be used to inform the Council as it prepares the Delta Plan, and may be considered as the Bay Delta Conservation Plan ("BDCP") process moves forward.¹⁸

Public Trust Challenge to Delta Exports

In 2010, environmental and fisheries advocates filed suit in Sacramento County Superior Court alleging that water exports from the Delta violate the public trust doctrine and are unconstitutional. (See, *California Water Impact Network v. SWRCB* (Sac. County Sup. Ct. Case No. 34-2010-80000653.)) The plaintiffs in that case seek to compel the State Board to adopt and enforce flow, salinity, and temperature standards in the Delta. DWR is also a respondent in the case, and State Water Contractors ("SWC") have intervened as parties. DWR and the SWC contend that plaintiffs' claims already have been determined by litigation related to the State Board Water Right Decision 1641 that is now final. In 2011, the BOR, which was named as a real party in interest, filed a statement that it will not waive sovereign immunity. The matter is still pending before the trial court.

¹⁵ Flow Criteria at 5-8

¹⁶ DFW Report at 13

¹⁷ Flow Criteria at 4; DFW Report at 16

¹⁸ Flow Criteria at 3, 10; DFW Report at ES-4

Monterey Plus Litigation

In 2010, the Central Delta Water Agency and others filed suit in Sacramento County Superior Court to invalidate the Monterey Plus Environmental Impact Report and the Monterey Plus Project. (See, *Central Delta Water Agency, et al. v. DWR* (Sac. County Sup. Ct. Case No. 34-2010-80000561.)) In April 2012, the court entered an order bifurcating the issues for a series of trials. Phase one, dealing with affirmative defenses based upon statute of limitations, laches, and mootness was tried by the court in November 2012. In January 2013, the court issued its final statement of decision, finding that plaintiffs' second and third causes of action (for reverse validation and mandamus) were untimely. The court also found that challenges to the DWR-KWBA transfer were barred by certain defenses. The hearing on the remaining CEQA cause of action challenging the sufficiency of the 2010 Environmental Impact Report ("EIR") was held in January 2014. The Central Delta I and Rosedale CEQA challenges were consolidated for a combined hearing on the CEQA issues. The court issued its ruling in March 2014, rejecting most of the plaintiffs' challenges, yet determining that the EIR's discussion of the Kern Water Bank's future impacts requires further analysis. The hearing on the remedies phase related to the analysis of the Kern Water Bank was held in September 2014. The court issued a final ruling in October 2014 requiring decertification of the Monterey Plus Amendment EIR, noting, however, that DWR is not required to prepare an entirely new EIR and that only the new EIR sections will be subject to challenge. Importantly, prior project approvals are to remain in place and the Kern Water Bank may continue to operate while DWR corrects the EIR. The trial court decision was appealed by several parties and the appeal process is pending.

DWR Final 2015 SWP Delivery Capability Report

DWR continues to evaluate the issues affecting SWP exports from the Delta and how those issues may affect the long-term availability and reliability of SWP deliveries to water agencies that hold SWP contracts. As indicated above, DWR has released its Final 2015 SWP Delivery Capability Report. According to the 2015 Final Report, the average delivery of contractual SWP Table A supply is projected to be 62 percent under current conditions. Within that long-term average, SWP Table A deliveries can range from 11 percent (single dry-year) to 98 percent (single wet-year) of contractual amounts under current conditions, under current conditions, contractual amounts are projected to range from 28 to 33 percent during multiple-dry year periods, and from 76 to 95 percent during multiple wet periods.¹⁹ The 2015 Final Report also presents the following findings:

The average annual delivery of Table A water estimated for 2015 Report is 2,553,000 AF per year (an increase of 1 percent from 2013 Report).

The estimated maximum Table A deliveries for the 2015 Final Report is 4,055,000 AF which is higher by 1.5 percent than 2013 Report. The 2015 Final Report also shows 74 percent likelihood (79 percent with the 2013 Report) that more than 2,000,000 AF/year of Table A water will be delivered under the current estimates.

¹⁹ DWR 2015 Final Report at 26-27, Tables 6-3, 6-4.

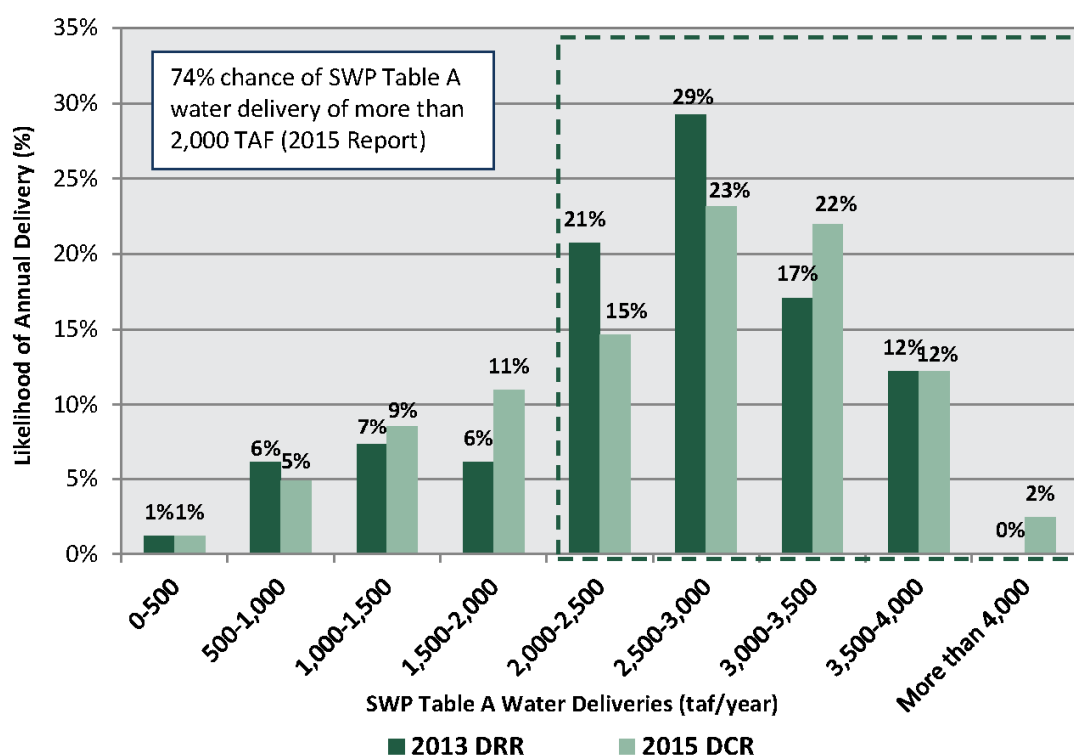


Figure 6-2. Estimated Likelihood of SWP Table A Water Deliveries, by Increments of 500 taf (Existing Conditions)

taf = trillion acre feet

To ensure a conservative analysis, DWR's 2015 Final Report expressly assumes and accounts for the institutional, environmental, regulatory, and legal factors affecting SWP supplies, including but not limited to: water quality constraints, fishery protections, other D-1641 requirements, and the operational limitations imposed by the FWS and NMFS BiOps that are discussed above. The 2015 Final Report also considers the potential effects of Delta levee failures and evaluates the potential impacts on Delta water supplies associated with continued land subsidence, earthquakes, and flood events.²⁰ Notably, the 2015 Final Report assumes that all of these restrictions and limitations will remain in place over the next 20-year period and that no actions to improve the Delta will occur, even though numerous legal proceedings, various Delta restoration processes, and new legal and legislative requirements and efforts for Delta improvements are currently underway (i.e., Bay Delta Conservation Plan, Delta Vision, Delta Plan). Finally, DWR's long-term SWP delivery reliability analyses incorporate assumptions intended to account for potential supply shortfalls related to climate change.²¹ These and other factors result in DWR presenting a conservative projection of SWP delivery reliability in its 2015 Final Report.

²⁰ See, e.g., DWR 2015 Final Report, Section 4, pp. 13–16.

²¹ See, e.g., DWR 2015 Report, Section 6 pp. 21–30.

DWR's 2015 Final Report demonstrates the projected long-term average delivery amounts of contractual SWP Table A supplies are essentially the same as those projected in the 2013 Final Report. As noted, the projections developed by DWR are predicated on several conservative assumptions, which make the projections useful from a long-range water supply planning perspective. While various factors could lead DWR to increase its delivery projections, the 2015 Final Report remains the best available information concerning the long-term delivery reliability of SWP supplies.

As discussed herein, the 2013/2015 timeframe is one of the driest periods (if not the driest) on record. In early 2014, DWR had decreased the SWP Table A allocation to an unprecedented zero percent. In March 2015, DWR increased the allocation to 20 percent based on precipitation, runoff, and current water supply conditions. (California Department of Water Resources, Notice to State Water Project Contractors 15-03, March 02, 2015.) On December 1, 2015, DWR announced an initial SWP allocation of ten percent for 2016. (California Department of Water Resources, Notice to State Water Project Contractors 15-07, December 1, 2015). As storms developed, the allocation was increased to 15 percent on January 26, then to 30 percent on February 24, and 45 percent on March 17, 2016. On April 21, 2016, DWR increased its water delivery estimate for most recipients to 60 percent of Table A requests for the calendar year (California Department of Water Resources, Notice to State Water Project Contractors 16-06, April 21, 2016).

Colorado River Water Deliveries

The CRA, which is owned and operated by MWD, transports water from the Colorado River approximately 242 miles to its terminus at Lake Mathews in Riverside County. After deducting for conveyance losses and considering maintenance requirements, up to 1.2 million AF of water a year may be conveyed through the CRA to MWD's member agencies, subject to availability of Colorado River water for delivery to MWD. Similar to SWP supplies discussed above, various legal, regulatory, climatic and environmental factors have the potential to affect the availability and reliability of Colorado River supplies. Following is a summary of several key factors.

Background on Colorado River Supplies

The Colorado River is managed and operated in accordance with the *Law of the River*, the collection of interstate compacts, federal and state legislation, various agreements and contracts, an international treaty, a U.S. Supreme Court decree, and federal administrative actions that govern the rights to use of Colorado River water within the seven Colorado River Basin states. The Colorado River Compact, signed in 1922, apportioned the waters of the Colorado River Basin between the Upper Colorado River Basin (Colorado, Wyoming, Utah, and New Mexico) and the Lower Basin (Nevada, Arizona, and California). The Colorado River Compact allocates 15 million AF per year ("AFY") of Colorado River water: 7.5 million AFY to the Upper Basin and 7.5 million AFY to the Lower Basin, plus up to 1 million AFY of surplus supplies. The Lower Basin's water was further apportioned among the three Lower Basin states by the Boulder Canyon Project Act in 1928 and the 1964 U.S. Supreme Court decree in *Arizona v. California*. Arizona's basic annual apportionment is 2.8 million AFY, California's is 4.4 million AFY, and

Nevada's is 0.3 million AFY. California has been diverting up to 5.3 million AFY in recent years, using the unused portions of the Arizona and Nevada entitlements. Mexico is entitled to 1.5 million AFY of the Colorado River under the 1944 United States-Mexico Treaty for Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande. However, this treaty did not specify a required quality for water entering Mexico. In 1973, the United States and Mexico signed Minute No. 242 of the International Boundary and Water Commission requiring certain water quality standards for water entering Mexico.

California's apportionment of Colorado River water is allocated by the 1931 Seven Party Agreement among Palo Verde Irrigation District ("PVID"), Imperial Irrigation District ("IID"), Coachella Valley Water District ("CVWD"), and MWD. The three remaining parties, the City and the County of San Diego and the City of Los Angeles, are now part of MWD. The allocations defined in the Seven Party Agreement are shown in the Table below. In its 1979 supplemental decree in the *Arizona v. California* case, the United States Supreme Court also assigned "present perfected rights" to the use of Colorado River water to a number of individuals, water districts, towns, and Indian tribes along the river. These rights, which total approximately 2,875,000 AFY, are charged against California's 4.4 million AFY allocation and must be satisfied first in times of shortage. Under the 1970 Criteria for Coordinated Long-Range Operation of the Colorado River Reservoirs (Operating Criteria), the Secretary of the Interior determines how much water is to be allocated for use in Arizona, California, and Nevada and whether a surplus, normal, or shortage condition exists. The Secretary may allocate additional water if surplus conditions exist on the Colorado River (see additional discussion that follows).

Priorities and Water Delivery Contracts Under Seven Party Agreement of 1931

Priority	Description	AFY
1	Palo Verde Irrigation District gross area of 104,500 acres of Coachella Valley lands	3,850,000
2	Yuma Project (Reservation Division) not exceeding a gross area of 25,000 acres within California	
3(a)	IID, CVWD and lands in Imperial and Coachella Valley's to be served by the All American Canal	
3(b)	Palo Verde Irrigation District – 16,000 acres of mesa lands	
4	Metropolitan Water District of Southern California for use on coastal plain	550,000
	Subtotal – California Basic Apportionment	<u>4,400,000</u>
5(a)	Metropolitan Water District of Southern California for use on coastal plain	550,000
5(b)	Metropolitan Water District of Southern California for use on coastal plain	112,000
6(a)	IID and lands in the Imperial and Coachella Valley's to be served by the All American Canal	300,000
6(b)	Palo Verde Irrigation District – 16,000 acres of mesa lands	
	Total	<u><u>5,362,000</u></u>

Sources: United States Bureau of Reclamation, <http://www.usbr.gov>; MWD 2015 Official Statement, Special Variable Rate Water Revenue Refunding Bonds, Appendix A, p. A-17.

California's Colorado River supply is protected by the 1968 Colorado River Basin Project Act, which provides that in years of insufficient supply on the main stream of the Colorado River, supplies to the Central Arizona Project shall be reduced to zero before California will be reduced below 4.4 million AF in any year. This assures full supplies to the Coachella Valley except in periods of extreme drought. As further described below, delivery analyses performed for the Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead indicated that California would only experience shortages if the total shortage in the Lower Basin exceeds 1.7 million AFY.

Quantification Settlement Agreement

Although the rights and relative priorities to Colorado River supplies, as discussed above, remain established under the *Law of the River*, an additional framework applies in California. In 2003, CVWD, IID, and MWD successfully completed negotiation of the Quantification Settlement Agreement ("QSA"). The QSA quantifies the Colorado River water allocations of California's agricultural water contractors for the next 75 years and provides for the transfer of water between agencies. As further discussed below, legal challenges were filed against the QSA in 2003 and the case was litigated over the following ten years.

Drought Conditions and Interim Guidelines

Drought conditions in the Colorado River Basin are well documented. For example, the period from 2000 through 2007 was the driest eight-year period in the 100-year historical record of the Colorado River. That drought in the Colorado River Basin reduced Colorado River system storage, while demands for Colorado River water supplies continued to increase. From October 1, 1999 through September 30, 2007, storage in Colorado River reservoirs decreased from 55.8 million AF (approximately 94 percent of capacity) to 32.1 million AF (approximately 54 percent of capacity), and was as low as 29.7 million AF (approximately 52 percent of capacity) in 2004. In November 2010, Lake Powell and Lake Mead were at 62 percent and 38 percent of their storage capacities, respectively (Reclamation, 2010b). As of February 2017, Lake Powell and Lake Mead were at 47 percent and 40 percent of their respective storage capacities, with total system storage reported at 53 percent of capacity.²²

In January 2001, the Secretary of the Interior adopted guidelines (the "Interim Surplus Guidelines") for use through 2016 in determining if there is surplus Colorado River water available for use in California, Arizona, and Nevada. The Interim Surplus Guidelines were amended in 2007, with the new Guidelines extending through 2026. The Interim Surplus Guidelines contain a series of benchmarks for reductions in agricultural use of Colorado River water within California by set dates.

The purposes of the Guidelines are to: (1) improve Reclamation's management of the Colorado River by considering trade-offs between the frequency and magnitude of reductions of water deliveries, and considering the effects on water storage in Lake Powell

²² Lower Colorado Region Available Reservoir Elevations and Contents. Available at: <http://www.usbr.gov/lc/rivops.html>

and Lake Mead, where BOR will also consider the effects on water supply, power production, recreation, and other environmental resources; (2) provide mainstream United States users of Colorado River water, particularly those in the Lower Division states, a greater degree of predictability with respect to the amount of annual water deliveries in future years, particularly under drought and low reservoir conditions; and (3) provide additional mechanisms for the storage and delivery of water supplies in Lake Mead to increase the flexibility of meeting water use needs from Lake Mead, particularly under drought and low reservoir conditions. As a result of the Guidelines, recipients of Colorado River water will receive deliveries with a higher degree of reliability.

Protected Species and Other Environmental Issues

Federal and state environmental laws protecting fish species and other wildlife species have the potential to affect Colorado River operations. A number of species that are on either endangered or threatened lists under the ESAs, are present in the area of the Lower Colorado River, including among others, the bonytail chub, razorback sucker, southwestern willow flycatcher, and Yuma clapper rail. To address this issue, a broad-based state/federal/tribal/private regional partnership that includes water, hydroelectric power, and wildlife management agencies in Arizona, California, and Nevada have developed a multi-species conservation program for the main stem of the Lower Colorado River (the Lower Colorado River Multi-Species Conservation Program or "MSCP"). The MSCP allows MWD to obtain federal and state permits for any incidental take of protected species resulting from current and future water and power operations of its Colorado River facilities and to minimize any uncertainty from additional listings of endangered species. The MSCP also covers operations of federal dams and power plants on the Colorado River that deliver water and hydroelectric power for use by MWD and other agencies. The MSCP covers 27 species and habitat in the Lower Colorado River from Lake Mead to the Mexican border for a term of 50 years. Over the 50-year term of the program, the total cost to MWD will be about \$88.5 million (in 2003 dollars), and annual costs will range between \$0.8 million and \$4.7 million (in 2003 dollars). (MWD 2015 Official Statement, Special Variable Rate Water Revenue Refunding Bonds, Appendix A, pp. A-23 to A-24.)

Potential Climate Change Impacts

Climate change has the potential to affect imported water supplies. Potential effects of global warming could also increase water demand within California. Although precise estimates of potential future impacts of climate change on runoff throughout the Colorado River Basin cannot be predicted with certainty, reports and data have been developed that address changes in climate and hydrology within that region. For example, the BOR's 2011 SECURE Water Act Report identifies the following climate challenges in the Colorado River Basin: (1) on average, Colorado River Basin temperature is projected to increase by 5 to 6 degrees Fahrenheit during the 21st century, with slightly larger increases projected in the upper Colorado Basin; (2) precipitation is projected to increase by 2.1 percent in the upper Basin while declining by 1.6 percent in the lower Basin by 2050; (3) mean annual runoff is projected to decrease by 8.5 percent by 2050; and (4)

warmer conditions will likely transition snowfall to rainfall, producing more December through March runoff and less April through July runoff.²³

The 2011 SECURE Water Act Report also discussed potential future impacts for water and environmental resources in the Colorado River Basin. The Report notes that:

- 1) spring and early summer runoff reductions could translate into a drop in water supply for meeting irrigation demands and adversely impacting hydropower operations at smaller reservoirs,
- 2) increased winter runoff may require infrastructure modifications or flood control rule changes to preserve flood protection, which could further reduce warm season water supplies,
- 3) warmer conditions might result in increased stress on fisheries, shifts in geographic ranges, increased water demands for instream ecosystems and thermoelectric power production, increased power demands for municipal uses, including cooling, and increased likelihood of invasive species infiltrations, where endangered species issues might also be exacerbated, and
- 4) warming could also lead to significant reservoir evaporation, increased agricultural water demands and losses during water conveyance and irrigation.

In response to climate change issues, BOR is taking a lead role in assessing risks to western U.S. water resources and is dedicated to mitigating risks to ensure long-term water resource sustainability. Where opportunities exist, BOR has begun adaptation actions in response to climate stresses as well as land use, population growth, invasive species and others. These activities include extending water supplies, water conservation, hydropower production, planning for future operations, and supporting rural water development. For example, a 2010–2011 Pilot Run of the Yuma Desalting Plant increased water supplies in the Lower Basin through conservation by an estimated 29,000 AF, enough to supply as many as 150,000 people for one year. At Hoover Dam, new wide head range turbines are being installed that will allow more efficient power generation over a wider range of lake levels than existing turbines. Furthermore, the Department of the Interior High Priority Goal for Climate (“Department”) includes activities of the Landscape Conservation Cooperatives and Climate Science Centers, assessing vulnerabilities to the natural and cultural resources management by the Department and activities to adapt to the stresses of climate change.

Potential climate changes impacts were also evaluated in the Environmental Impact Study (“EIS”) on the BOR Interim Surplus Guidelines (“Guidelines”) discussed above. The Guidelines extend through 2026, providing the opportunity to gain valuable operating experience through the management of Lake Powell and Lake Mead, particularly for low flow reservoir conditions, and to improve the bases for making additional future operational decisions during the interim period and thereafter. The Guidelines are crafted to include operational elements that would respond if potential impacts of climate change and increased hydrologic variability occur. The Guidelines include coordinated

²³ See U.S. Department of the Interior, Bureau of Reclamation, Basin Report, Colorado River (<http://www.usbr.gov/climate/SECURE/docs/coloradobasinfactsheet.pdf>).

operational elements that allow for adjustment of Lake Powell releases to respond to low average storage conditions in Lake Powell or Lake Mead. In addition, the Guidelines enhance conservation opportunities in the Lower Basin and retention of water in Lake Mead.

Quantification Settlement Agreement Litigation

On November 5, 2003, the IID filed a validation action in Imperial County Superior Court, seeking a judicial determination that thirteen agreements associated with the water transfer between IID and the San Diego County Water Authority ("SDCWA") and the QSA are valid, legal, and binding. Other lawsuits also were filed contemporaneously challenging the execution, approval, and implementation of the QSA on various grounds. All of the QSA cases were coordinated in Sacramento Superior Court. Between early 2004 and late 2009, a number of pretrial challenges and dispositive motions were filed by the parties and ruled on by the court, which reduced the number of active cases and narrowed the issues for trial, the first phase of which began in November 2009 and concluded in December 2009. One of the key issues in this first phase was the constitutionality of the QSA Joint Powers Agreement, pursuant to which IID, CVWD, and SDCWA agreed to commit \$163 million toward certain mitigation and restoration costs associated with implementation of the QSA and related agreements, and the State agreed to be responsible for any costs exceeding this amount. A final judgment was issued on February 11, 2010, in which the trial court held that the State's commitment was unconditional in nature and, as such, violated the appropriation requirement and debt limitation under the California Constitution. The trial court also invalidated eleven other agreements, including the QSA, because they were inextricably interrelated with the QSA Joint Powers Agreement. Lastly, the trial court ruled that all other claims raised by the parties, including CEQA claims related to the QSA Programmatic EIR and the IID Transfer Project EIR, were moot. (MWD 2015 Official Statement, Special Variable Rate Water Revenue Refunding Bonds, Appendix A, p. A-21.)

In March 2010, MWD, IID, CVWD, SDCWA, the State and others filed notices of appeal challenging various aspects of the trial court's ruling. On December 7, 2011, the Court of Appeal issued its ruling reversing, in part, the trial court's ruling. In particular, the Court held that while the State's commitment to fund mitigation costs in excess of \$163 million was unconditional, actual payment of such costs was subject to a valid appropriation by the Legislature, as required under the California Constitution. Moreover, the State's commitment did not create a present debt in excess of the State Constitution's debt limit. Thus, the QSA Joint Powers Agreement was held to be constitutional. The Court of Appeal also rejected other challenges to this agreement, including that it was beyond the State's authority, there was no "meeting of the minds," and there was a conflict of interest. In light of its ruling, the Court of Appeal remanded the matter back to the trial court for further proceedings on the claims that had been dismissed as moot, including the CEQA claims.

On June 4, 2013, the trial court issued its ruling on remand, validating the QSA and eleven related agreements while denying the remaining legal challenges that were brought against the QSA. Among other important rulings, the court upheld the CEQA review that was

prepared for the QSA. Among its decisions on specific environmental issues, the court determined that the potential air quality impacts to the Salton Sea were adequately analyzed under CEQA. The court also found that the use of a baseline consisting of existing and predicted future conditions of the Salton Sea was appropriate to measure the impacts of the long-term water transfers. It denied project opponents' arguments that more alternatives should have been considered and found that the water agencies' conclusion that use and transfer of water to the San Diego area would not induce growth, was supported by record evidence. The court also addressed the nature of changes made to the agreements after the environmental documentation was completed and the procedural decision of water districts to designate themselves as "co-lead agencies" under CEQA, finding that these decisions did not violate CEQA. As a result, the court concluded that the record supported the lead agencies' conclusions relating to CEQA and upheld the validity of the QSA and 11 related agreements.

In January 2010, a separate complaint was filed by the County of Imperial and the Imperial County Air Pollution Control District alleging that execution and implementation of three QSA-related agreements violate the federal NEPA and federal Clean Air Act ("CAA"). The complaint named the Department of the Interior, Secretary of the Interior, Bureau of Reclamation and Commissioner of Reclamation as defendants, and MWD, CVWD, IID, and SDCWA as real parties in interest. With respect to NEPA, the complaint alleged that the environmental impact statement prepared by the BOR failed to adequately analyze potential impacts on the Salton Sea and on land use, growth and socioeconomics; improperly segmented various project components; failed to address cumulative impacts; and failed to address mitigation of potential impacts. With respect to the CAA, the complaint alleged that the BOR failed to conduct a conformity analysis as required under the Act and Imperial County Air Pollution Control District's own rules. In April 2012, the court ruled against the plaintiffs and in favor of the defendants on all claims. The court held that the plaintiffs lacked standing to pursue NEPA and CAA claims and that the NEPA claims lacked merit. In May 2012, the plaintiffs filed a notice of appeal and the non-federal defendants filed a notice of cross-appeal. Briefing on all appeals was completed in 2013, and in May 2014, the United States Court of Appeals for the Ninth Circuit issued a decision that upheld the District Court ruling and found that no violations of NEPA or the CAA occurred in connection with the QSA.

Colorado River Basin Study

In December 2012, the BOR issued its Colorado River Basin Water Supply and Demand Study (2012 Study). According to BOR, the 2012 Study was prepared against the backdrop of challenges and complexities of ensuring a sustainable water supply and meeting future demand in the Colorado River system. Notably, the 2012 Study recognizes that because of the Colorado River system's ability to store approximately 60 million AF of water (or nearly four years of average natural flow of the Colorado River), all requested deliveries have been met in the Lower Basin, despite recently experiencing the worst 11-year drought in the last century. (2012 Study, Executive Summary, p. ES-1.) The 2012 Study concludes that, without additional future water management actions among the Upper and Lower Basin states, a wide range of future imbalances is plausible, primarily due to uncertainties inherent in future water supply. (Id., p. ES-6.) Comparing the median

long-term water supply projections against the median long-term water demand projections, and factoring in the myriad factors having the potential to affect the availability and reliability of Colorado River supplies and demands (such as climate change, species and other environmental issues, social trends, economic and legal forces, and technical capabilities), the 2012 Study shows that a long-term projected imbalance of 3.2 million AF or more could occur by the year 2060. (Id.) To address such potential long-term imbalances, the 2012 Study identifies and discusses a broad range of potential options to resolve the differences between water supply and demand. During the study period, over 150 options were received and organized into four groups: (1) those that increase Basin water supplies; (2) those that reduce Basin water demands; (3) those that focus on modifying operations; and (4) those that focus primarily on Basin governance. (Id., p. ES-7.) Moreover, recognizing that no single option is likely sufficient to resolve potential water supply and demand imbalances, the 2012 Study developed groups and portfolios of options to reflect different adaptive strategies. (Id., p. ES-11.) Importantly, the 2012 Study recognizes that *complete* elimination of Basin vulnerability is not likely obtainable, yet concludes that implementation of various adaptive management options results in a significant reduction in vulnerability (e.g., the percentage of future scenarios resulting in Lake Mead elevations being less than 1,000 feet mean sea level is reduced from 19 percent to only 3 percent). (Id., p. ES-14.) Indeed the 2012 Study states that implementation of management portfolios are projected to be successful in significantly improving the resiliency of Basin resources to vulnerable hydrologic conditions. (Id.) Similar to the extraordinary conservation and management efforts being undertaking throughout the MWD service area (including Western), the 2012 Study concludes that supply augmentation, water reuse and conservation will be critical tools in managing potential supply and demand imbalances. (Id.)

Western Municipal Water District – Local Water Supplies and Water Supply Projects

Western has developed various local water supplies through projects and agreements with neighboring water agencies. Western is able to use its local supplies for potable and non-potable purposes during normal, off-season, extraordinary, or emergency conditions in lieu of imported water. As noted above, the proposed Project will not receive groundwater or other local supplies due to its location within Western's retail distribution system. However, the following information is provided to ensure a comprehensive discussion regarding the availability and reliability of Western's overall water supply portfolio.

Below is a summary of water supplies that Western received from the Bunker Hill Basin for the last five years.

Total Western Calendar Year Imported Water from Bunker Hill Basin (AF)				
2011	2012	2013	2014	2015
5,536	4,980	5,438	4,194	7,150

To reduce its dependency on imported water, Western has aggressively sought to develop and/or expand local sources of supply for use under both non-emergency and emergency conditions. Western's Water Resources staff have evaluated a number of projects under the following criteria:

- Reliability – Meet system demands and ensure supply reliability under droughts and emergency conditions.
- Water Quality – Provide a safe and high quality water supply that meets or exceeds safe drinking quality regulations, and supports the development of recycled water and conjunctive use.
- Cost – Provide reliable and high quality water supply at a cost-effective price.
- Ability to Implement – Prioritize projects that have the greatest chance for successful implementation.
- Flexibility – Prioritize projects that have the greatest potential for operational flexibility.
- Environment – Consider the environmental impacts when developing and utilizing future water supplies.

Using these criteria, a number of water supply projects have been identified:

- I. Interconnections
 - A. City of Riverside
 1. Existing Mockingbird Canyon Pump Station
 2. Existing Whitegates Interconnection
 3. Proposed Campbell Interconnection
 - B. City of Corona
 1. Emergency 4 cubic feet per second (CFS) connection at the end of Reach F
- II. Arlington Desalter Expansion
- III. Chino Desalter Expansion
- IV. Banking Programs (Storage of SWP in SBBA and wheeled to Western via City of Riverside conveyance facilities)
- V. Riverside North Aquifer Storage and Recovery Project

Many of the new local water supplies identified below will be implemented through a variety of instruments including: (1) Cooperative Agreement with the City of Riverside for Water Production and Conveyance, (2) Reciprocal Use Agreement between Western, the City of Riverside, and EVMWD, and (3) Agreement regarding the Corona-Western Promenade Connection. While these resources will become part of Western's total water supply portfolio used to meet overall water demands of Western's Riverside Retail service area, they are not identified as specific sources that will supply the proposed Project. Rather, these local sources offset the overall demand on Western's imported supplies, thus, increasing system-wide water supply availability and reliability. As a related note, none of the local groundwater supplies available to Western are from basins that have been identified by the Department of Water Resources as being subject to critical conditions of overdraft.

Interconnections

Meeks & Daley Asset Exchange Agreement – Pursuant to various agreements, Western has access to up to 4,208 AF annually of groundwater from the Bunker Hill Basin and the Colton and Riverside Basins. A “Cooperative Wheeling Agreement” (Cooperative Agreement for Water Production and Conveyance between the City of Riverside and Western) was finalized in February 2009. With this agreement, Western is able to convey groundwater obtained from EVMWD's groundwater rights (referred to as Meeks & Daley water), which is delivered via Riverside Public Utilities via the existing Mockingbird Canyon Pump Station and Whitegates Reservoir. Presently, Western does not itself extract groundwater from the Bunker Hill Basin. To the extent it utilizes native groundwater produced from the Bunker Hill Basin, it uses up to 4,208 AFY of Meeks & Daley water rights and water it purchases on an off-season basis from the City of Riverside, which has an adjudicated right of 53,918 AF per year, including new conservation allocation. This agreement can be canceled with a year's notice. Thus, although Western uses this agreement to utilize less expensive water, Western does not account for this supply as a firm source of water. In 2016, Western entered into a 1-year lease with Riverside Highland Water Company (“RHWC”) to acquire up to 1,500 AF from RHWC's adjusted groundwater rights from the SBBA. While this was a 1-year agreement, Western anticipates entering into a similar agreement for 2017, and into the future.

City of Corona (Promenade Interconnection) – the City of Corona Promenade Avenue Connection is a two-way interconnection located in Promenade Avenue easterly of McKinley Street, in the city of Corona, that will provide multiple benefits to a number of regional water purveyors.

- 1) Western will have the capability of furnishing water to Corona from Western's Arlington Desalter using Western's 30-inch diameter, 930 hydraulic grade line (“HGL”), while Corona will have the ability to receive water into its 30-inch diameter, 905 HGL Zone 2 pipeline.
- 2) Corona will have the capability of furnishing water to Western from Corona's 24-inch diameter, 1060 HGL Zone 3 pipeline and Western will have the ability to receive the water into its 30-inch diameter, 930 HGL Arlington Desalter Pipeline.
- 3) Corona will realize water quality benefits by receiving Western's Arlington Desalter water with a total dissolved solids (“TDS”) of 350 milligrams per liter (mg/L) in lieu of Colorado River water with a TDS range of 600–700 mg/L.
- 4) Both parties will realize water supply reliability benefits when other water supply facilities are out of service for planned or unplanned maintenance.

This project is fully operable and can provide 400 AFY.

Bunker Hill Basin Coordinated Use Agreement – The Bunker Hill Basin has been adjudicated since 1969. Its safe yield, as determined by the Western-SBVMWD Watermaster, is 232,100 AF per year. Total groundwater storage capacity for the Basin is approximately 5,976,000 AF. Recharge to the Bunker Hill Basin historically has resulted

from infiltration of runoff from the San Gabriel and San Bernardino Mountains. The Bunker Hill Basin is also replenished by deep percolation of water from precipitation and resulting runoff, percolation from delivered water, and water spread in streambeds and spreading grounds.

Western, SBVMWD, and MWD have executed a coordinated-use agreement that allows Western to purchase surplus SWP supplies and store them in the San Bernardino/Bunker Hill Basin Area. The agreement allows Western to purchase up to 15,000 AF in any given year. The water is stored and retrieved as needed to meet demands. Western currently has 6,000 AF stored under this agreement. This project is fully approved and being implemented. All associated documents and agreements are on file with Western.

Arlington Basin Recharge

The Arlington Groundwater Basin is a shallow, alluvial-filled valley located in western Riverside County within the limits of the city of Riverside. Total groundwater storage in the Arlington Basin is less than 80,000 AF. The quality of groundwater in Arlington Basin is generally poor, with TDS concentrations of approximately 1,000 mg/L and nitrate-nitrogen concentrations of approximately 20 mg/L. Without treatment, this water is not usable as a drinking water resource. The Arlington Desalter, owned and operated by Western, is a reverse-osmosis groundwater treatment facility located within the Arlington Basin that is supplied by five nearby production wells. The Arlington Desalter treats this groundwater so that it can be used as a potable resource.

Western has a contractual obligation to deliver up to 4,400 AFY of Arlington Desalter water to the City of Norco. Any additional production from the facility combined with other resources from the Chino Desalter can be available to Western's Riverside Retail customers once the La Sierra Pipeline (discussed below) is constructed. This will provide up to 2,800 AFY of additional supplies above current operation of the Arlington Desalter. To avoid the chance of Arlington Basin overdraft, Western is planning a project to stabilize the Arlington Basin, the "Arlington Basin Recharge Project." This project will recharge the Arlington Basin with storm runoff, urban runoff, and recycled water in the future using surface ponds. This project will increase the plant capacity by 1,800 AFY and allow the plant to operate at its permitted capacity of up to 7.25 million gallons per day ("MGD") and production to about 7,200 AF annually. CEQA work has been finalized and preliminary design of the project is underway.

The estimated cost for the Arlington Recharge Project is approximately \$10 million, which will be reduced by funding for construction costs from three agencies: (1) \$1 million from Riverside County Flood Control and Water Conservation District, (2) \$1 million from Santa Ana Watershed Project Authority awarded through Proposition 84, Round 1, and (3) \$1 million of a federal WaterSMART grant. The net cost of the project, including grant commitments, is approximately \$7 million.

La Sierra Pipeline

The La Sierra pipeline will convey potable water from the Arlington Desalter to Western's retail service area in the city of Riverside. The project includes construction of an approximately 4.5-mile pipeline and two pump stations. The La Sierra Pipeline project will provide additional conveyance facilities within Western's retail area, thus, improving the reliability of Western's water supply to its customers and reducing the potential effect of water supply allocations by MWD, as discussed above. The pipeline includes three reaches: Reach 1 starts from the Arlington Desalter to its turnout at the intersection of Pierce Street and Indiana Avenue; Reach 2 starts from the Arlington Desalter Turnout to La Sierra Turnout; and Reach 3 starts at La Sierra Turnout to La Sierra Tank and Mills Gravity Pipeline ("MGL"). A pump station will be located near the Arlington Desalter, pumping water from approximately a HGL of 720' to the MGL at a variable HGL of 1,600' to 1,650'. Water would then flow by gravity back through the MGL to the Mockingbird Pump Station which would be required to lift water to Western's 1650 pressure zone, a total lift of approximately 136'. The total cost of the La Sierra Pipeline is estimated at \$25 million.

Chino II Desalter Expansion

Western, in coordination with the City of Ontario and Jurupa Community Services District, is expanding the Chino II Desalter from a capacity of 10.5 MGD to 20.5 MGD, resulting in additional annual production capability of 10,500 AF. Western's portion of the additional supply is 3,534 AF annually. The project includes treatment, conveyance, and well facilities that will be constructed in the Chino Basin. A programmatic EIR for this project was completed in 2002, with subsequent environmental review for some facilities as the project has been implemented. This water will be utilized to meet, in part, the 4,400 AFY obligation Western has to provide the City of Norco desalted water (see discussion above under Arlington Desalter) thereby allowing a like amount of water produced at Arlington Desalter to be used by Riverside Retail once the La Sierra Pipeline is constructed.

The Chino Basin was adjudicated in 1978, and groundwater storage and production within the Chino Basin is managed and reported by the Chino Basin Watermaster pursuant to the Judgment. In 2000, the various groundwater-producing entities entered into the court-approved "Peace Agreement," and then in 2007 the parties entered the court-approved "Peace II Agreement," which together formalized and made permanent the Watermaster governance structure and fostered a new level of cooperation in groundwater management. These agreements also paved the way for the implementation of the Optimum Basin Management Plan ("OBMP"), by which the Watermaster develops and enacts comprehensive programs for groundwater monitoring, salt management and desalter production, groundwater recharge, and groundwater storage and recovery.

In accordance with the OBMP Implementation Plan, Watermaster staff, its consulting engineer, and parties to the Judgment evaluated various data and determined that the Basin's safe yield should be reduced from the current level of 140,000 AFY to 135,000

AFY. As part of that evaluation process, Watermaster developed and used an updated hydrologic model that accounted for new production data during the 2000/2001 through 2009/2010 period. In July 2013, Watermaster held an initial workshop for the redetermination of safe yield. Because a possible reduction in safe yield had the potential to affect related contractual matters, many workshops, meetings, technical review sessions, and facilitated discussions were held during the subsequent 24-month period, resulting in key principles that were then transformed into a proposed 2015 Safe Yield Reset Agreement ("SYRA").

In September 2015, the Chino Basin Watermaster Board adopted a resolution endorsing the 2015 SYRA and directing its legal counsel to prepare moving papers recommending approval by the Superior Court. As an overview, the 2015 SYRA includes three main components:

- 1) reset of the Basin's safe yield from 140,000 AFY to 135,000 AFY,
- 2) accounting provisions for various components of recharge to the Basin and replenishment obligations for the desalters; and
- 3) the establishment of safe storage management measures intended to ensure that withdrawals of groundwater from authorized storage accounts within the Basin are safe, sustainable, and will not cause material physical injury or undesirable results.

While most parties to the Judgment have supported the proposed 2015 SYRA, other parties have filed objections with the Court and the matter is currently pending review. Notably, the outcome of the 2015 SYRA is not projected to affect Western's rights to desalter water in the Chino Basin.

Bunker Hill Coordinated Agreement

The City of Riverside's ability to deliver Meeks & Daley and other waters is seasonally limited due to distribution system demands. On an annual basis, all this water can be moved during the eight non-peak periods of the year. To address the seasonality issue, the City of Riverside and Western are collaborating on projects. Western has recently completed construction of improvements to its Mockingbird Pump Station to increase reliability of water deliveries from the City of Riverside at this location, which is the major delivery point. Western is also in the planning stages on the construction of a new Campbell Pump Station that will allow Western a third robust interconnection with the City of Riverside. Western purchased a property for the Campbell Pump Station in the city of Riverside. The City of Riverside has identified two projects within their distribution system in which Western may want to participate by oversizing certain major transmission pipelines to accommodate firm delivery capability throughout the year. Participation in these future projects will be dependent on timing and cost.

In 2013, Western started purchasing water from RHWC, which is produced by the City of Riverside and wheeled through its conveyance system for delivery to Western. In 2015,

Western and RHCW signed one-year lease agreement allowing Western to purchase 1,500 AF unused water from RHCW. The basis of this agreement is that RHCW has groundwater rights in the SBBA in excess of its demands and is willing to lease those rights, on an annual basis, to Western until such time that RHCW's demands increase. Total water purchased from RHCW for year 2015 was 1,500 AF. As noted above, Western anticipates entering into a similar agreement for 2017, and into the future.

This water is not considered a firm source of supply because of RHCW's future demands and because the arrangement is subject to available capacity in the City of Riverside's conveyance system.

The following table provides estimates of the potential yield from Western's water supply projects described above and expected operational dates:

Project	Western – Local Water Supply Project Yields (AF/year)						
	Projected Date of Operation	2016	2020	2025	2030	2035	2040
Meeks & Daley Asset Exchange Agreement	Operable	4,208					
Non-potable Water Purchase – Riverside Public Utilities	Operable	2,000					
Riverside Highland WC	Operable	1,500					
Bunker Hill Basin Coordinated Use Agreement	Operable		A total 6,000 AF is currently in storage (more may be added as replenishment water is available).				
Arlington Desalter	2018		2,800	2,800	2,800	2,800	2,800
Chino Desalter II Expansion	2017		3,534	3,534	3,534	3,534	3,534
Bunker Hill Basin Coordinated Agreement with the City of Riverside	2017		2,000	2,000	2,000	2,000	2,000

Recycled Water Program

Western provides wastewater service to the unincorporated Riverside County areas north and east of Lake Mathews within its retail water service boundaries. This area is served by the Western Water Recycling Facility ("WWRF"), which is currently a three-MGD (3.0) wastewater treatment facility producing tertiary treated recycled water.

Treated water from the facility is provided to the Riverside National Cemetery and General Archie Old Golf Course as well as parks, schools, groves, and nurseries, representing a set of customers who previously were dependent on MWD supplies. With conversion of the distribution system from a non-potable system (when delivering raw MWD non-potable CRA water) to a recycled water system, those customers now have a new local and reliable supply which offsets demands for imported potable water supplies.

The following table provides projected WWRF recycled water production and uses:

Western Water Recycling Facility Projected Recycled Water Production and Use			
Year	Plant Design Capacity (AFY)	Expected Effluent (AFY)	Recycled (AFY)
2015	3,360	1,304	1,109
2020	3,360	1,600	1,600
2025	5,600	1,900	1,900
2030	5,600	2,100	2,100
2035	5,600	2,400	2,400
2040	5,600	2,700	2,700

Water Use Efficiency

Given the factors affecting imported water supplies, there is increasing focus on water conservation—or water use efficiency—at the state, regional, and local levels.

On November 10, 2009, the state Legislature passed Senate Bill 7 (“SBX7-7”), more commonly referred to as “20 x 2020”. This law seeks to achieve a 20 percent reduction in urban per capita water use across California by 2020. This law codifies a similar reduction referenced in the Governor’s 2009 Executive Order.

In addition to creating methodologies to define specific water-use reduction targets, SBX7-7 includes reporting requirements for all retail urban water suppliers. It is intended to promote urban conservation standards consistent with the California Urban Water Conservation Council’s (“CUWCC”) Best Management Practices.

Anticipating the need for additional conservation, Western has expanded and enhanced its water use efficiency program by adopting a Water Use Efficiency Master Plan (“WUEMP”), which has become one of many tools used by Western to achieve extraordinary conservation throughout its service area.

The Plan is designed to:

- 1) analyze water use to target water use efficiency strategies,
- 2) gather data on current conservation efforts,
- 3) calculate the cost effectiveness of CUWCC Best Management Practices,
- 4) identify emerging technologies designed to increase efficiency,
- 5) evaluate and screen potential water use efficiency programs, and
- 6) develop short- and long-term strategies.

In 2011, Western implemented a water budget-based rate structure. The structure provides every customer with an individualized water allocation based on efficient indoor and outdoor practices. Monthly water bills now provide a regular signal of efficient water use. In an effort to assist customers to remain within their water budget, Western offers a portfolio of water use efficiency/customer support programs.

Examples of the programs currently offered by Western include:

- *Free irrigation efficiency evaluations* – Western contracts with irrigation professionals to evaluate irrigation systems and provide a written report to the customer highlighting opportunities to increase water use efficiency.
- *Rebate Programs* – Numerous rebates are available to retail customers for high-efficiency clothes washers, smart irrigation controllers, and high-efficiency sprinkler nozzles. The SoCal WaterSmart program (www.socalwatersmart.com) is administered by MWD. Western adds additional funding to some of the water-saving devices.

Executive Order – Condition of Statewide Drought

On April 1, 2015, Governor Brown issued an Executive Order calling for a 25 percent reduction in consumer water use in response to the historically dry conditions throughout the state of California. The Executive Order also includes mandatory actions aimed at reducing water demands, with a particular focus on outdoor water use. In addition to requiring urban water use reductions, the Executive Order called for the following:

- remove and replace turf with drought tolerant landscape options,
- support rebate program for water efficient devices,
- restrict water use on commercial, industrial, and institutional properties in order to achieve 25 percent reduction in potable water use,
- prohibit irrigation of ornamental turf on street medians with potable water supplies,
- prohibit irrigation of new construction with potable water unless drip or micro spray systems are used, and
- direct water supplies to develop rate structures and pricing mechanisms to maximize water conservation consistent with statewide restrictions.

State Board Emergency Water Conservation Regulations

In May 2015, pursuant to the Governor's Executive Order, the State Board adopted emergency regulations designed to achieve an overall 25 percent reduction in potable urban water use across California. The regulations were in response to the current four-year drought and mark the first time in the State's history for such action. Under the regulations, the State's urban water suppliers (i.e., those serving more than 3,000 customers or delivering more than 3,000 AF of water per year, but not including suppliers functioning solely in a wholesale capacity) were required to achieve assigned water-saving targets that collectively would result in a 25 percent reduction in potable urban water

production across the state. The original and extended regulations were effective through May 2016.

On May 9, 2016, Governor Brown issued Executive Order B-37-16 calling on the State Board to adjust emergency water conservation regulations through the end of January 2017 in recognition of differing water supply conditions across the state. On May 18, 2016, the State Board adopted a new emergency conservation regulation to allow urban water providers to calculate an alternative water conservation standard based on a “stress test” approach that assumes three additional dry years. The alternative conservation standard is calculated by comparing the average annual customer demand from 2013 and 2014 to the available supplies in 2017, 2018, and 2019 assuming the three-year hydrology of 2013, 2014, and 2015. Based on this criteria, Western has evaluated its retail water supply conditions using the methodology developed by the State Board and has calculated that it has sufficient supplies to meet the demands of retail water customers for the three-year certification defined by the State Board.

Under the new conservation regulation, urban retail water suppliers must reduce total potable water production by the amount of their self-certified conservation standard. Compliance will be determined by comparing total potable water production between June 2016 and January 2017 with total potable water production in the same months of 2013. Urban water suppliers will have discretion in deciding how to achieve their conservation standards across residential, commercial, industrial, and institutional sectors. The new regulation was initially scheduled to remain in effect until February 2017. Recently, the State Board proposed to extend the conservation regulation for an additional 270 days.

Western's Water Conservation and Management Measures

Retail Measures

In response to the recent regulatory actions requiring enhanced water conservation, Western's Board of Directors adopted Resolution 2958 on June 1, 2016, implementing Water Shortage Stage 3(b) of Western's Retail Customer Water Supply Shortage Contingency Program (“Program”) as provided in Western's Ordinance 384. The Program establishes five (5) stages of water conservation and supply shortage response measures which may be implemented. Stage 1 establishes permanent water use standards intended to alter behavior related to efficiency for non-shortage conditions. Stages 2 through 5 further establish levels of shortage response actions to be implemented during times of water supply shortage. Stage 3(b) provides conservation and supply shortage measures, such as:

- Tier 4 water rates in Western's water budget rate structure have been removed, and all water use 125 percent above a customer's water budget will be charged the applicable Tier 5 water rate.
- All construction water used for moisture conditioning soil and dust control shall be non-potable or recycled water unless the source of supply is more than 1,000 feet from the site.

- Irrigation with potable water for ornamental turf or grass in public street medians or parkways is prohibited.

Water budgeted tiered rates are intended to promote the efficient use of water and provide customers with economic signals as their water use increases. Essentially, the rate structure is based upon providing customers with the water they need at a lower rate, while inefficient use is penalized with higher rates. Western's budgeted tiered rate system has demonstrated the ability to result in reductions in water consumption. Implementation of the measures outlined in Stage 3(b), plus additional measures defined in Resolution 2958, are designed to maximize water conservation and reduce retail water demands throughout Western's retail service area.

Wholesale Measures

As discussed above, Western also updated its DAP in May 2015 to provide Western's wholesale customers with a means for potentially allocating limited imported water supplies from MWD under shortage conditions. The updated 2015 DAP is consistent with the allocation methodology adopted as part of MWD's WSAP and provides a range of potential imported water shortage scenarios. The goal of the 2015 DAP is to equitably share potential water shortage allocations by MWD between Western and its wholesale agencies, and to avoid proposed MWD penalty rates in scenarios where its WSAP is implemented.

The updated 2015 DAP would be used to allocate water for municipal and industrial ("M&I") purposes among Western's wholesale water customers:

- City of Corona
- City of Norco
- City of Riverside
- Eagle Valley Mutual Water Company
- Elsinore Valley Municipal Water District
- Temescal Valley Water District
- Rancho California Water District
- Western Municipal Water District Retail Customers (including Box Springs Mutual Water Company)

The 2015 DAP²⁴ was prepared with the input and support from Western's wholesale customers. Recognizing the importance of wholesale customer involvement, Western created a Drought Allocation Plan Workgroup, made up of staff from Western and its wholesale customers. The DAP allocates supply to wholesale agencies based on:

- demand during the base period using data for the two most recent non-allocation years;
- base period local supplies;

²⁴ Drought Allocation Plan for the Western Municipal Water District of Riverside County, Adopted May 20, 2015.

- base period gallons per capita daily; and
- adjustments for growth.

Western Riverside Retail Demand

Western tracks retail water usage by customer types including residential, commercial, industrial, institutional, and agricultural accounts. Tracking is done by user code and reports can be generated to determine the number of accounts and quantities of water consumed. The number of future residential and commercial/industrial customers is expected to increase at the same rate as the estimated population growth.

Although population in Western's retail service grew tremendously during the early 2000s, the recent economic slowdown has substantially curtailed this trend. Data from the Southern California Association of Government's ("SCAG") *2015 Regional Transportation Plan* suggests that future growth in the Inland Empire will be over the next 25 years less than one percent per year. As discussed above, for water supply planning purposes, Western's 2015 UWMP has projected the annual population growth rate within Western's service area at an average of 1.4 percent through the year 2040.

Agricultural land use is expected to continue decreasing with continued urbanization within the retail service area. The following table summarizes water demands for Western's retail service area from 2010–2015.

Total Western Calendar Year Retail Demands (AF)					
2010	2011	2012	2013	2014	2015
22,658	22,623	24,556	24,258	24,237	23,357

Project Demand

According to information submitted by the lead agency, March Joint Powers Authority, and the Project proponent, the projected water demand for the proposed Project is approximately 109 AF per year.

Water Supply Analysis

In addition to the foregoing, the following analyses and figures provide a detailed assessment of whether the total projected water supplies available to Western during normal, single-dry, and multiple-dry years over the next 20-year period will be sufficient to meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses. As a conservative measure, this WSA specifically analyzes how Western would address potential shortfalls in the availability and reliability of imported water supplies in demonstrating that sufficient water supplies are available to Western to serve the proposed Project according to the standards set forth by SB 610.

With respect to analyzing total projected water supplies available in normal, single-dry and multiple-dry years, this WSA addresses potential water supply reductions under MWD's WSAP, which presents drier conditions than have existed under historic "single-dry" and "multiple-dry" scenarios. MWD's 2015 RUWMP identified 1977 as the single-

dry year and 1990–1992 as the multiple-dry year scenarios. These years were selected based on delivery conditions for the SWP only because it is MWD's largest and most variable water supply. In 1977, SWP deliveries to MWD were approximately one-third of 1976 and 1978 deliveries. Nevertheless, MWD delivered more water in 1977 than either 1976 or 1978 (due to increased Colorado River supplies). During the early 1990's multiple-dry year period, SWP deliveries ranged from approximately 78 percent to 94 percent of average 1985–1999 deliveries. Total MWD (i.e., SWP plus Colorado River) deliveries during this same period averaged 94.82 percent of "normal". Although MWD requested voluntary conservation during this three-year period, there were no delivery cutbacks or drought allocations.

As discussed above, MWD recently declared a Condition 3 water supply allocation under its WSAP in response to extraordinary multiple-dry year conditions with the goal of reducing regional water deliveries to its member agencies by 15 percent. In turn, Western's Board adopted Resolution 2910 and implemented Water Shortage Stage 4(b) to reduce potable water use by 32 percent in accordance with the State Board's emergency conservation regulation in place at that time and its requirement that Western reduce potable water use by 32 percent.²⁵

Because MWD's Condition 3 water supply allocation and Western's water use reductions represent a more severe shortage condition than what occurred during the single-dry year or multiple-dry year scenarios identified by MWD's 2015 Regional UWMP, modeling potential cutbacks under MWD's WSAP allows this WSA to analyze water supply sufficiency under more severe shortage conditions than under the SB 610 single-dry year and multiple-dry year scenarios and thus, provides a more conservative approach to the availability of future water supplies. By demonstrating that Western can supply the proposed Project in addition to existing and planned future uses under modeled conditions of 10–20 percent reductions in imported supply, this WSA also demonstrates that Western has adequate supplies under the single-dry year and multiple-dry year scenario standards of SB 610.

The water supply and demand data used for scenarios below (normal, single-dry, and multiple-dry years) are derived from Western's 2015 UWMP. Through Western's WUEMP implementation, Western has already implemented most of the conservation elements including Free Irrigation Efficiency Evaluations, Smart Yard, Turf Replacement, and Rebate programs throughout the retail service area, especially in the single-family

²⁵ As discussed above, in May 2016, due in large part to improved water supply conditions in northern California and lower regional demands achieved through extraordinary water saving efforts, MWD deactivated its WSAP. Also, in May 2016, the State Board adopted a new emergency regulation which, among other things, requires urban retail water suppliers to either: (1) develop and report on individualized water conservation and reduction standards according to prescribed methodologies, or (2) reduce its total potable water production by the percentage identified as its conservation standard under the previous emergency regulation, subject to potential adjustments. Western has developed its own water conservation standard according to the State Board methodologies. On June 1, 2016, Western's Board of Directors adopted Resolution 2958 implementing Water Shortage Stage 3(b) of Western's Retail Customer Water Supply Shortage Contingency Program as provided in Western's Ordinance 384.

residence outdoor watering arena. Water conservation is included in all the scenarios illustrated in the following Tables.

Normal Year

Table 1 illustrates Western's water supply and demand projections under normal conditions, where no types of imported water supply reductions are being implemented by MWD. This scenario also assumes additional local water supplies being available from the WWRF for future demands.

**Table 1: Western Municipal Water District Water Supply Portfolio
Normal Year with Future Projects that Western Controls**

Normal Year Hydrology Veterans Industrial Park 215		2020	2025	2030	2035	2040
WMWD Full-Service Demand⁽¹⁾		30,814	33,714	36,415	39,170	41,704
Loss Due to Drought Allocation (Normal Year – 0% reduction)						
Annual Allocation from MWD		30,814	33,714	36,415	39,170	41,704
<i>Supplemental Water Supply Projects</i>						
<i>Projected Operation</i>						
<i>Meeks & Daley Asset Exchange Agreement⁽²⁾</i>	Operable					
<i>Riverside Highland Company⁽³⁾</i>	Operable					
<i>Bunker Hill Basin Coordinated Use Agreement⁽⁴⁾</i>	Operable	2,000	2,000	2,000	2,000	2,000
<i>Arlington/Corona Exchange</i>	Operable					
<i>Arlington Desalter Expansion (Arlington Basin Recharge)</i>	2018	2,800	2,800	2,800	2,800	2,800
<i>Coordinated Agreement with the City of Riverside⁽⁵⁾</i>	2020					
<i>Chino Desalter II Expansion/La Sierra Pipeline</i>	2017	3,534	3,534	3,534	3,534	3,534
<i>Western Water Recycling Facility</i>	Operable	1,600	1,900	2,100	2,400	2,700
Net supplemental water supply		9,934	10,234	10,434	10,734	11,034
Total water supply (supplemental & MWD water)		40,748	43,948	46,849	49,904	52,738
Total water demand approved for projects since WMWD's 2015 UWMP, excluding this project		2,062	2,062	2,062	2,062	2,062
Total water supply less approved projects since WMWD's 2015 UWMP		38,686	41,886	44,787	47,842	50,676
Total water supply less Western's demand		7,872	8,172	8,372	8,672	8,972
Veterans Industrial Park 215 Project water demand		109	109	109	109	109
(Shortfall)/Surplus		7,763	8,063	8,263	8,563	8,863

(1) Based on Western's 2015 Urban Water Management Plan projections for 2020, 2025, 2030, 2035, and 2040. (2) Up to 4,208 AFY of groundwater is available from the San Bernardino Basin Area and the Colton and Riverside Basins pursuant to agreements with Riverside and EVMWD. (3) Western and RHWC entered an agreement in 2015 to purchase up to 1,500 AFY of unused water from the San Bernardino Basin Area. This water is not considered a firm supply because of RHWC's future demands and Riverside's ability to wheel it through its conveyance system. (4) Western currently stores 6,000 AF in the Bunker Hill Basin. This water is wheeled through the city of Riverside. Western plans to purchase imported water from MWD when water is available in the future. (5) Western is planning to increase groundwater production from the San Bernardino Basin Area and deliver it through existing interconnections at Mockingbird and Whitegates and a future intertie with the Riverside Campbell Reservoir up to 10,000 AFY combined.

The total annual demand for the proposed Project is estimated at 109 AFY. Table 1 demonstrates that Western will have sufficient supplies in a normal year scenario to serve the projected demands associated with the proposed Project over the 20-year projection, in addition to Western's existing and planned future uses.

Single-Dry Year

Table 2, below, illustrates Western's supply and demand projections under single-dry year conditions, which for conservative purposes in this analysis are represented by a ten percent reduction in imported water supplies pursuant to a potential MWD water supply allocation. This scenario assumes additional local water supplies would only be used from the WWRF for future demands.

**Table 2: Western Municipal Water District Water Supply Portfolio
Near-Term Shortage/Single-Dry Year Scenario (10%)
with Future Projects that Western Controls**

Single-Dry Year Hydrology Veterans Industrial Park 215		2020	2025	2030	2035	2040
WMWD Full-Service Demand⁽¹⁾		30,814	33,714	36,415	39,170	41,704
Loss Due to Drought Allocation (10% reduction)		3,081	3,371	3,642	3,917	4,170
Annual Allocation from MWD		27,733	30,343	32,774	35,253	37,534
Supplemental Water Supply Projects						
	Projected Operation					
Meeks & Daley Asset Exchange Agreement⁽²⁾	Operable					
Riverside Highland Company⁽³⁾	Operable					
Bunker Hill Basin Coordinated Use Agreement⁽⁴⁾	Operable	2,000	2,000	2,000	2,000	2,000
Arlington/Corona Exchange	Operable					
Arlington Desalter Expansion (Arlington Basin Recharge)	2018	2,800	2,800	2,800	2,800	2,800
Coordinated Agreement with the City of Riverside⁽⁵⁾	2020					
Chino Desalter II Expansion/La Sierra Pipeline	2017	3,534	3,534	3,534	3,534	3,534
Western Water Recycling Facility	Operable	1,600	1,900	2,100	2,400	2,700
Net supplemental water supply		9,934	10,234	10,434	10,734	11,034
Total water supply (supplemental & MWD water)		37,667	40,577	43,208	45,987	48,568
Total water demand approved for projects since WMWD's 2015 UWMP, excluding this project		2,062	2,062	2,062	2,062	2,062
Total water supply less approved project since WMWD's 2015 UWMP		35,605	38,515	41,146	43,925	46,506
Water supply less Western's demand		4,791	4,801	4,731	4,755	4,802
Veterans Industrial Park 215 Project water demand		109	109	109	109	109
(Shortfall)/Surplus		4,682	4,692	4,622	4,646	4,693

(1) Based on Western's 2015 Urban Water Management Plan projections for 2020, 2025, 2030, 2035, and 2040. (2) Up to 4,208 AFY of groundwater is available from the San Bernardino Basin Area and the Colton and Riverside Basins pursuant to agreements with the City of Riverside and EVMWD. (3) Western and RHWC entered an agreement in 2015 to purchase up to 1,500 AFY of unused water from the San Bernardino Basin Area. This water is not considered a firm supply due to RHWC's future demands and Riverside's continued ability to wheel it through its conveyance system. (4) Western currently stores 6,000 AF in the Bunker Hill Basin. This water is wheeled through the city of Riverside. Western plans to purchase imported water from MWD when water is available in the future. (5) Western is planning to increase groundwater production from the San Bernardino Basin Area and deliver it through existing interconnections at Mockingbird and Whitegates and a future intertie with the Riverside Campbell Reservoir of up to 10,000 AFY combined.

As noted above, the total annual demand for the proposed Project is estimated at 109 AFY. Table 2 demonstrates that Western will have sufficient supplies in a single-dry year scenario to serve the projected demands associated with the proposed Project over the 20-year projection, in addition to Western's existing and planned future uses.

Multiple-Dry Year

Tables 3-1 through 3-2, below, illustrate Western's water supply and demand projections under multiple-dry year conditions, which for purposes of this analysis are conservatively represented by a 20 percent reduction in imported water supplies pursuant to a potential MWD water supply allocation, and where Western implements alternative supply projects.

Table 3-1 includes only supply projects Western has developed and can control such as the Arlington Desalter Expansion and Chino Desalter Expansion. Western is planning to increase water production from the Arlington Desalter up to 7,200 AFY. This project includes construction of an artificial recharge basin and a new production well. This project is anticipated to be on line in 2018. Western has a contractual obligation to deliver up to 4,400 AFY of Arlington Desalter water to the City of Norco. This project will provide up to 2,800 AFY of additional supplies above current operation of the Arlington Desalter. Any additional production from the facility combined with other resources from the Chino Desalter can be available to Western's Riverside Retail customers once the La Sierra Pipeline is constructed.

As discussed above, Western is a member of the Chino Desalter Authority ("CDA"). The CDA is a collaborative effort among its members and other water users in the Chino Basin with the goal of maintaining water yield and water quality. Upon completion of the Chino Desalter Expansion, Western will receive 3,534 AFY. This will be allocated to the City of Norco, and thus free up 3,534 AFY of the Arlington Desalter water that was previously delivered to Norco. This 3,534 AFY will be delivered to Western's Riverside Retail System via the La Sierra Pipeline.

Because those water supplies will be from adjudicated and highly managed groundwater basins (Arlington and Chino), the amounts are categorized as reliable sources in normal, single-dry year, and multiple-dry year conditions.

**Table 3-1: Western Municipal Water District Water Supply Portfolio
Intermediate and Long-Term Shortage/Multiple-Dry Year Scenario (20%)
with Future Projects Western Controls**

Multiple-Dry Years Hydrology Veterans Industrial Park 215		2020	2025	2030	2035	2040
WMWD Full-Service Demand⁽¹⁾		30,814	33,714	36,415	39,170	41,704
Loss Due to Drought Allocation (20% reduction)		6,163	6,743	7,283	7,834	8,341
Annual Allocation from MWD		24,651	26,971	29,132	31,336	33,363
Supplemental Water Supply Projects						
<i>Meeks & Daley Asset Exchange Agreement⁽²⁾</i>	Projected Operation					
<i>Riverside Highland Company⁽³⁾</i>	Operable					
<i>Bunker Hill Basin Coordinated Use Agreement⁽⁴⁾</i>	Operable	2,000	2,000	2,000	2,000	2,000
<i>Arlington/Corona Exchange</i>	Operable					
<i>Arlington Desalter Expansion (Arlington Basin Recharge)</i>	2018	2,800	2,800	2,800	2,800	2,800
<i>Coordinated Agreement with the City of Riverside⁽⁵⁾</i>	2020					
<i>Chino Desalter II Expansion/La Sierra Pipeline</i>	2017	3,534	3,534	3,534	3,534	3,534
<i>Western Water Recycling Facility</i>	Operable	1,600	1,900	2,100	2,400	2,700
Net supplemental water supply		9,934	10,234	10,434	10,734	11,034
Total water supply (supplemental & MWD water)		34,585	37,205	39,566	42,070	44,397
Total water demand approved for projects since WMWD's 2015 UWMP, excluding this project		2,062	2,062	2,062	2,062	2,062
Total water supply less approved project since WMWD's 2015 UWMP		32,523	35,143	37,504	40,008	42,335
Water supply less Western's demand		1,709	1,429	1,089	838	631
Veterans Industrial Park 215 Project water demand		109	109	109	109	109
(Shortfall)/Surplus		1,600	1,320	980	729	522

(1) Based on Western's 2015 Urban Water Management Plan projections for 2020, 2025, 2030, 2035, and 2040. (2) Up to 4,208 AFY of groundwater is available from the San Bernardino Basin Area and the Colton and Riverside Basins pursuant to agreements with Riverside and EVMWD. (3) Western and RHWC entered an agreement in 2015 to purchase up to 1,500 AFY unused water from the San Bernardino Basin Area. This water is not considered a firm supply due to RHWC's future demands and Riverside's ability to wheel it through its conveyance system. (4) Western currently stores 6,000 AF in the Bunker Hill Basin. This water is wheeled through the city of Riverside. Western plans to purchase imported water from MWD when water is available in the future. (5) Western is planning to increase groundwater production from the San Bernardino Basin Area and deliver it through existing interconnections at Mockingbird and Whitegates and future intertie with the Riverside Campbell Reservoir up to 10,000 AFY (Coordinated agreement with the City of Riverside).

As noted above, the total annual demand for the proposed Project is estimated at 109 AFY. Table 3-1 demonstrates that Western will have sufficient supplies in a multiple-dry year scenario to serve the projected demands associated with the proposed Project over the 20-year projection, in addition to Western's existing and planned future uses.

Table 3-2 identifies potential supply projects including the Arlington Desalter Expansion, the Chino Desalter Expansion, and Bunker Hill groundwater to be delivered through the Riverside conveyance system.

**Table 3-2: Western Municipal Water District Water Supply Portfolio
Intermediate and Long-Term Shortage/Multiple-Dry Year Scenario (20%) with All Future
Groundwater Supplies Projects from Bunker Hill and Riverside Basins**

Multiple-Dry Years Hydrology Veterans Industrial Park 215		2020	2025	2030	2035	2040
WMWD Full-Service Demand⁽¹⁾		30,814	33,714	36,415	39,170	41,704
Loss Due to Drought Allocation (20% reduction)		6,163	6,743	7,283	7,834	8,341
Annual Allocation from MWD		24,651	26,971	29,132	31,336	33,363
Supplemental Water Supply Projects						
<i>Meeks & Daley Asset Exchange Agreement⁽²⁾</i>	Operable	4,208	4,208	4,208	4,208	4,208
<i>Riverside Highland Company⁽³⁾</i>	Operable	1,500	1,500	1,500	1,500	1,500
<i>Bunker Hill Basin Coordinated Use Agreement⁽⁴⁾</i>	Operable	2,000	2,000	2,000	2,000	2,000
<i>Arlington/Corona Exchange</i>	Operable	400	400	400	400	400
<i>Arlington Desalter Expansion (Arlington Basin Recharge)</i>	2018	2,800	2,800	2,800	2,800	2,800
<i>Coordinated Agreement with the City of Riverside⁽⁵⁾</i>	2020	2,292	2,292	2,292	2,292	2,292
<i>Chino Desalter II Expansion/La Sierra Pipeline</i>	2017	3,534	3,534	3,534	3,534	3,534
<i>Western Water Recycling Facility</i>	Operable	1,600	1,900	2,100	2,400	2,700
Net supplemental water supply		18,334	18,634	18,834	19,134	19,434
Total water supply (supplemental & MWD water)		42,985	45,605	47,966	50,470	52,797
Total water demand approved for projects since WMWD's 2015 UWMP, excluding this project		2,062	2,062	2,062	2,062	2,062
Total water supply less approved project since WMWD's 2015 UWMP		40,923	43,543	45,904	48,408	50,735
Water supply less Western's demand		10,109	9,829	9,489	9,238	9,031
Veterans Industrial Park 215 Project water demand		109	109	109	109	109
(Shortfall)/Surplus		10,000	9,720	9,380	9,129	8,922

(1) Based on Western's 2015 Urban Water Management Plan projections for 2020, 2025, 2030, 2035, and 2040. (2) Up to 4,208 AFY of groundwater is available from the San Bernardino Basin Area and the Colton and Riverside Basins pursuant to agreements with Riverside and EVMWD. (3) Western and RHWC entered an agreement to purchase up to 1,500 AF of unused water from the San Bernardino Basin Area. This water is not considered a firm supply due to RHWC's future demands and Riverside's ability to wheel it through its conveyance system. (4) Western currently stores 6,000 AF in the Bunker Hill Basin. This water is wheeled through the city of Riverside. Western plans to purchase imported water from MWD when water is available in the future. (5) Western is planning to increase groundwater production from the San Bernardino Basin Area and deliver it through existing interconnections at Mockingbird and Whitegates and a future intertie with the Riverside Campbell Reservoir of up to 10,000 AFY combined (Coordinated agreement with the City of Riverside).

Table 3-2 further demonstrates that Western has sufficient supplies in multiple-dry year scenarios to serve the projected demands (109 AFY) associated with the proposed Project, in addition to existing and planned future uses over the 20-year projection.

Conditions of Approval

As with all projects within the Western retail service area, the proposed Veteran's Industrial Park 215 may be conditioned to construct on-site and off-site water facilities needed near the project area. Water service also is contingent upon prompt payment of all applicable fees and charges as specified in Western's Rules and Regulations Governing Water Service and Water Users, Water Rate Schedules, Cost Recovery Charges, and Connection and Added Facilities Charges and Fees.

Landscape plans are required to ensure compliance with applicable requirements. In Western's area, those requirements may include, but are not limited to, landscape ordinances of the County of Riverside (Water Efficient Landscape Requirements Ordinance No. 859), and the City of Riverside (Municipal Code 19.570), as those authorities may be amended from time to time. The applicant/developer will be required to plan and install water efficient devices and landscaping in accordance with applicable ordinances and requirements.

As noted in this WSA, the projected water demands associated with the proposed Project (109 AFY) fall generally within the overall projected increase in commercial, industrial, and institutional water demand within Western's Riverside Retail Area as set forth in Western's 2015 UWMP. Notwithstanding, nothing in this WSA is intended to create a right or entitlement to water service or any specific level of water service, nor does this WSA impose, expand, or limit any duty concerning the obligation of Western to provide service to its existing customers or to any future potential customers. (Water Code section 10914.) Nor does anything in this WSA prevent or otherwise interfere with Western's discretionary authority to declare a water shortage emergency in accordance with Water Code section 350 *et seq.* and to take any and all related and other actions authorized by law. Western retains complete discretion to adopt and implement rules, regulations, policies and procedures within its authority that may apply to the proposed Project, to develop a specific plan of service for the proposed Project, and to coordinate land use decisions and water supply planning to ensure a sufficient and reliable water supply for Western's existing and planned future uses.

This WSA is not a commitment to serve the proposed Project, but a review of Western's total projected water supplies based on information presently available. This WSA and the analyses and conclusions herein are conditioned on MWD's ability to continue to supply imported water to meet Western's requirements, including the requirements for the proposed Project. The proposed Project is subject to any special or additional requirements imposed by MWD or Western on water deliveries, including increased and/or varying pricing structure.

Conclusion

The projected water demand associated with the proposed Project is 109 AF per year, which represents about 0.47 percent of Western's total demand of Calendar Year 2015. Based on the information and analyses contained in this WSA, Western concludes that the total projected water supplies available to Western during normal, single-dry and multiple-dry years throughout the next 20-year period will be sufficient to meet the projected water demands of the proposed Project in addition to Western's existing and planned future uses, including agricultural and manufacturing uses.