

Technical Appendix L

Water Supply Assessment



Board of Directors

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January 22, 2014

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Randy A. Record

**Board Secretary and
Assistant to the
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Rosemarie V. Howard

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TO: Board of Directors
FROM: General Manager
SUBJECT: Approve the Water Supply Assessment for the First Nandina Logistics Center

RECOMMENDATION

The following proposal was presented to the Planning Committee on January 21, 2014, and received its full concurrence. It is recommended that the Board approve the Water Supply Assessment for the First Nandina Logistics Center, in accordance with the provisions of Senate Bill 221 (SB 221) and Senate Bill 610 (SB 610).

Concur:

Paul D. Jones II, P.E.
General Manager

Submitted by:

Charles J. Bachmann
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Planning, Engineering, and Construction

Director: Paule
Division: 1

Water Supply Assessment Report for the First Nandina Logistics Center

Section I - Introduction

1.1 Purpose

Water Code 10910 (a)(b)(c)

The purpose of the "Water Supply Assessment Report" is to satisfy the requirements under Senate Bill 610 (SB 610), Water Code Section 10910 et seq., and Senate Bill 221 (SB 221), Government Code Section 66473.7, that adequate water supplies are or will be available to meet the water demand associated with the proposed development. SB 610 focuses on the content of a water supply agency's Urban Water Management Plan (UWMP). It also stipulates that, when an environmental impact report is required in connection with a project, the appropriate water supply agency must provide an assessment of whether its total projected water supplies will meet the projected water demand associated with the Proposed Project. SB 221 requires water supply verification when a tentative map, parcel map, or development agreement for a project is submitted to a land use agency for approval. Senate Bill 221 applies to proposed residential development of more than 500 dwelling units with some exceptions. Senate Bill 610 applies to a proposed residential development of more than 500 dwelling units, or large commercial, industrial, or mixed-use development. The need for an assessment or verification is determined by the lead agency for the project.

1.2 Project Description

The City of Moreno Valley is the lead agency for the preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA), Public Resources Code Section 21000, et seq. for the First Nandina Logistic Center (Proposed Project) located at the northeast corner of Nandina Avenue and Indian Street. The Proposed Project site encompasses 72.9 acres and includes a 1,450,000 square foot warehouse building. Demand from the Proposed Project is estimated to be 54.68 acre feet per year (AFY). The project developer is First Industrial, L.P..

1.3 Requirements

The City of Moreno Valley requested that Eastern Municipal Water District (EMWD) prepare this updated Water Supply Assessment Report. EMWD has confirmed that the demand from the Proposed Project is within the limits of demand accounted for in the EMWD 2010 UWMP adopted in June of 2011. Accordingly, the District has elected to incorporate information from the 2010 UWMP in the preparation of this Water Supply Assessment Report as authorized by Water Code Section 10910 (c)(2). The 2010 UWMP is attached as Appendix A.

Exhibit A



Water Supply Assessment Report
for the
First Nandina Logistics Center

January 22, 2014

In accordance with Water Code Section 10910(d) – (f), the Water Supply Assessment shall:

1. Identify any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the Proposed Project, and provide a description of the quantities of water received in prior years by the public water system, under existing water supply entitlements, water rights, or water service contracts;
2. If no water has been received in prior years by the public water system, identify other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts to the same source of water as the public water system.
3. If groundwater is included in the proposed supply, identify the groundwater basin or basins from which the Proposed Project will be supplied; and include any applicable documentation of adjudicated rights to pump. If the basin is not adjudicated, regardless of whether the basin has been identified as over-drafted; provide a detailed description and analysis of the amount and location of groundwater pumped by the public water system for the past five (5) years from any groundwater basin from which the Proposed Project will be supplied; and provide a detailed description and analysis of the amount and location of groundwater from the basin or basins from which the Proposed Project will be supplied to meet the projected water demand associated with the Proposed Project.

If the Proposed Project includes a "subdivision" of more than 500 residential dwelling units as defined by Government Code Section 66473.7(a)(1), the public water system shall also provide verification as to whether the public water system is able or unable to provide a sufficient water supply based upon an analysis of whether water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection, will meet the projected demand associated with the proposed subdivision which considers:

1. The historical record for at least 20 years;
2. The applicability of any urban water shortage contingency analysis;
3. The reduction in water supply for "specific water use sector" per an adopted resolution, ordinance or contract; and
4. The amount of water that can be reasonably relied upon from specified supply projects.

This assessment is a technical, informational, advisory opinion only. It is a supporting document for an environmental impact report and is not a commitment by EMWD to supply water for the Proposed Project. The information included is based on information available at the time of the report and changing circumstances could affect EMWD's water supply evaluation presented in this document.

This assessment does not specifically address funding of new or existing supplies. The cost of water supplies will increase over time. The developer of this project will be required to fund the acquisition of new supplemental supplies, treatment or recycled water facilities and water efficiency measures for existing customers. The extent of additional funding will be determined by EMWD and may take the form of a new component of connection fees or a separate charge. New customers may also be required to pay a higher commodity rate for water used than existing customers. This would offset the rising costs of new supplies.

Prior to project construction, the developer of this project is required to meet with EMWD staff to develop a plan of service. The plan of service will detail water, wastewater and recycled water requirements to serve the projects. If there is a change in the circumstances detailed in this assessment, EMWD will address the changes in the plan of service for the project. Modifications at the plan of service stage could reduce the amount of water available to serve this project.

1.4 Background

Eastern Municipal Water District was formed in 1950 and annexed into The Metropolitan Water District of Southern California (MWD) in 1951 to deliver imported water. With the acquisition of the Fruitvale Mutual Water Company in 1971, EMWD assumed the role of a groundwater producer. Presently, EMWD's supply portfolio includes desalted groundwater and recycled water in addition to imported water and potable groundwater.

EMWD's service area encompasses 540 square miles with an estimated population of over 755,000. The service area includes areas where EMWD provides retail water directly or indirectly through the following agencies:

- City of Hemet Water Department
- City of Perris Water System
- City of San Jacinto Water Department
- Lake Hemet Municipal Water District (LHMWD)
- North Perris Water System
- Nuevo Water Company
- Rancho California Water District (RCWD)

1.5 Urban Water Management Plan

Water Code 10910 (c) (1)

In June of 2011, the EMWD Board of Directors adopted the 2010 UWMP. This plan details EMWD's demand projections and provides information regarding EMWD's supply. The majority of EMWD's existing and future planned demand is met through imported water delivered by MWD. EMWD's 2010 UWMP relies heavily on information and assurances included in the 2010 MWD Regional Urban Water Management Plan (2010 RUWMP) when determining supply reliability. Demand for EMWD included in the 2010 UWMP is calculated across the District and is not project-specific. The 2010 RUWMP is attached as Appendix B.

1.6 Population Projection

EMWD used the Riverside County Center for Demographic Research (RCCDR) 2010 Projection to estimate the future population. RCCDR considers land use and land agency information to develop projections. The RCCDR projection has been adopted by the Western Riverside Council of Governments.

As evidenced by the population projection, EMWD is located in a developing area. Approximately 40 percent of EMWD's service area remains undeveloped. As population and the associated water demand increase, EMWD will increase the amount of water imported through MWD to meet demands.

Table 1 - Projected Population – 2015 – 2035

	2015	2020	2025	2030	2035
EMWD Retail Service Area	548,718	628,918	709,729	785,810	849,059
City Of Perris Water Department	9,151	9,464	9,906	10,312	10,699
North Perris Water Company	4,977	4,977	4,977	4,977	4,977
Nuevo Water Company	7,781	8,580	6,903	5,902	5,346
City of San Jacinto Water Department	19,706	21,467	22,738	23,635	24,341
City of Hemet Water Department	27,474	29,363	31,273	33,181	35,217
Lake Hemet Municipal Water District	47,446	50,865	54,296	57,742	59,167
Rancho California Water District	114,604	116,969	120,231	122,259	122,923
Total	779,857	870,603	960,053	1,043,818	1,111,729

Source: Riverside County Center for Demographic Research

Section 2 - Identification of Supply and Quantity

Water Code 10910 (d) (1)

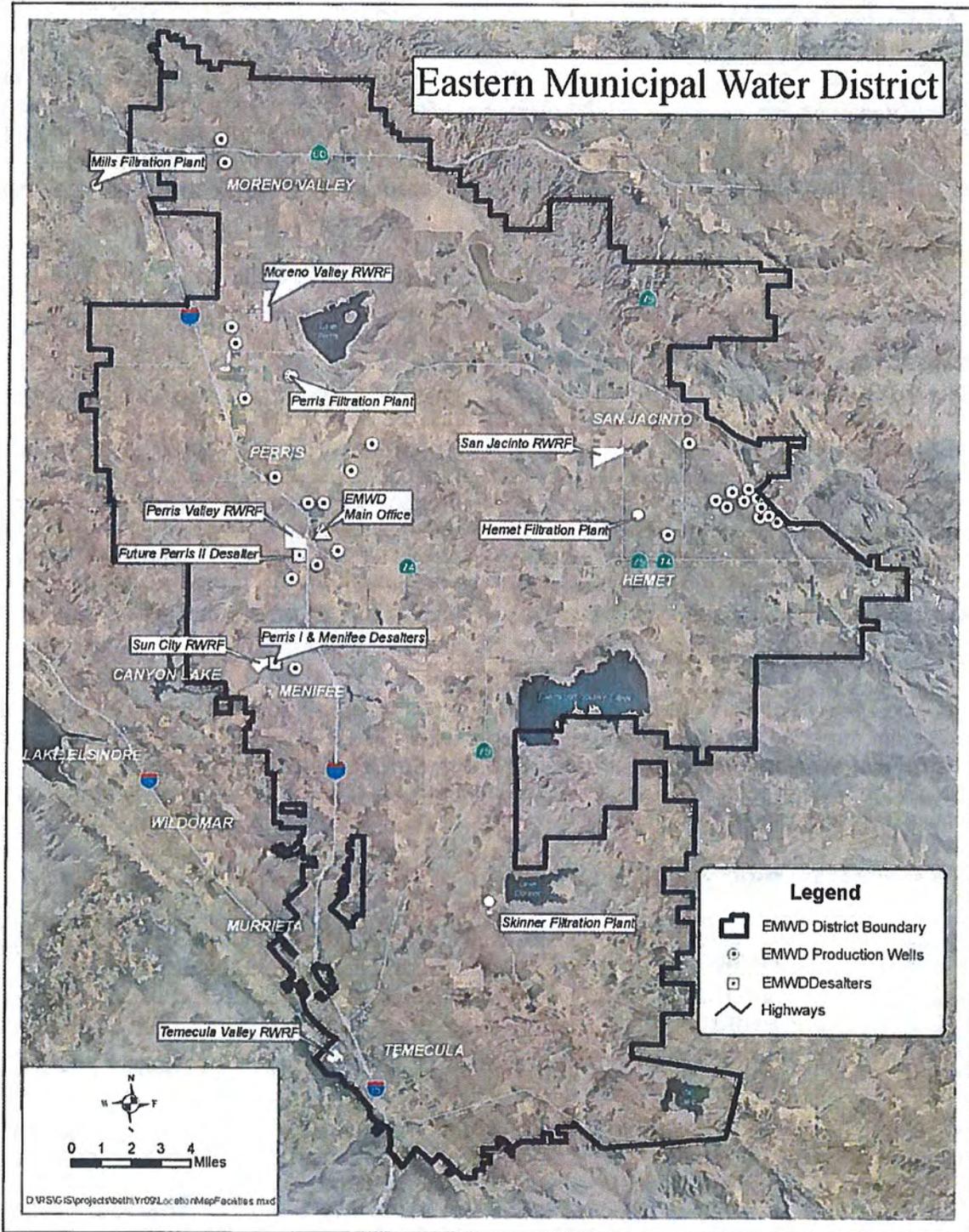
2.1 Overview of Supplies

EMWD has four (4) sources of water supply: imported water purchased from MWD, local potable groundwater, local desalted groundwater and recycled water. Imported water accounts for approximately 67 percent, local potable groundwater is approximately 12 percent, desalted groundwater is 3 percent, and recycled water is 19 percent of supply. Table 2, with information taken from the 2010 UWMP, lists the past supply quantities by source. Figure 1 shows the location of EMWD supplies.

Table 2 - Water Supply (AFY) – 2008– 2012

Type	Source	2008	2009	2010	2011	2012
Imported	Metropolitan Water District	94,400	84,200	75,000	72,500	75,900
Imported – Locally Treated	Metropolitan Water District	16,600	17,000	16,600	17,000	20,300
Groundwater	West San Jacinto Management Area	20,000	18,100	15,800	17,400	15,500
Desalination	West San Jacinto Management Area	3,000	4,800	5,800	5,700	5,700
Recycled Water	EMWD Regional Water Reclamation Facilities	27,500	32,400	28,200	31,000	36,800
Total		161,500	156,500	141,400	143,700	154,200

Figure 1 - Location of Supply Sources



It is anticipated that the majority of the water demands within EMWD's jurisdiction caused by future development will be met through additional water imports from MWD recognizing the conditions described in this document. Imported sources will be supplemented by an increase in desalination of brackish groundwater, recycled water use and water use efficiency. In the 2010 RUWMP, MWD analyzed the reliability of water delivery through the State Water Project (SWP) and the Colorado River Aqueduct (CRA) and concluded that with the storage and transfer programs developed by MWD, MWD will have a reliable source of water to serve its member agencies' needs through 2030 during normal, historic single-dry and historic multiple-dry years within a 20-year projection. Unprecedented shortage will be addressed through the principles of the Water Surplus and Drought Management Plan as described in the MWD RUWMP.

Table 3 - Existing Water Supply Resources – Average Year Hydrology – 2015 – 2035

	2015	2020	2025	2030	2035
Metropolitan Water District	149,300	170,700	190,700	210,000	226,200
Recycled Water	43,900	50,000	53,900	54,900	55,300
Groundwater	13,200	13,200	13,200	13,200	13,200
Existing Desalter	7,500	7,500	7,500	7,500	7,500
Total Existing Supplies	213,900	241,400	265,300	285,600	302,200

Based on a average of 2004- 2009 conditions

To supplement existing water supplies, EMWD has identified several projects that would supplement imported supplies, retrofit of potable water landscape customers, indirect potable recharge and additional water use efficiency. These projects will offset the demand of existing water and free up resources for new development. Table 4 provides a summary of additional potential local supplies.

Table 4 - Potential Water Supply – 2015 - 2035

	2015	2020	2025	2030	2035
Additional Recycled Water	6,100	13,500	16,400	22,200	28,200
Desalination	4,500	4,500	4,500	4,500	4,500
Planned Additional Conservation	0	0	1,300	4,300	6,400
Water Transfers/Exchanges	0	0	0	0	0
Total	10,600	18,000	22,200	31,000	39,100

These projects are in the planning stage of development and costs and implementation timelines are subject to change. New development will be required to help fund new water supply sources. The extent of additional funding will be determined by the EMWD and may take the form of a new component of connection fees or a separate charge. Details about funding will be developed with the plan of service

2.2 Wholesale Water Supplies

2.2a Written Contracts or Other Proof of Entitlement

Water Code Section 10910 (d) (2) (A)

EMWD is one of the 26 member agencies that make up MWD. The statutory relationship between MWD and its member agencies establishes the scope of EMWD's entitlements from MWD. Typically there are no set limits on supply quantities to member agencies and MWD has provided evidence in the 2010 RUWMP that its supplies will meet member agency demands during normal, historic single-dry and historic multiple-dry years within a 20-year projection.

During unprecedented shortage events, the MWD Water Supply Plan (WSAP) is implemented, requiring a reduction in demand by member agencies. The allocation plan takes into account member agency population growth and investments in local resources. Member agencies are allocated a portion of their anticipated demand with the assurance that a member agency will not see a retail shortage greater than the regional shortage. Water supply is not limited under the allocation plan but water use above a member agency's allocation is charged at a much higher rate. Several years of dry conditions and limitations on State Water Project operations required MWD to implement the allocation plan at a 10 percent regional shortage level from July of 2009 through April of 2011. This action follows the principles in the Water Surplus and Drought Management Plan as described in the 2010 RUWMP. During the allocation from MWD, EMWD implemented demand reduction strategies as outlined in its Water Shortage Contingency Plan and reduced imported demand below the allocation level.

2.2b Metropolitan Water District of Southern California Supply

EMWD relies on MWD to provide the majority of its potable water supply and a small percent of its non-potable water supply. The majority of EMWD's potable water is supplied in the northern part of EMWD by the Mills MWD Water Treatment Facility and in the southeastern portion of EMWD by the MWD Lake Skinner Water Treatment Facility. Untreated water from MWD is treated at EMWD's Perris and Hemet Microfiltration Plants for use as a potable source of water.

It is anticipated that the majority of the water demands within EMWD's jurisdiction caused by future development, will be met through additional water imports from MWD recognizing the conditions described in this document. Imported sources will be supplemented by an increase in desalination of brackish groundwater, recycled water use and water use efficiency. In the 2010 RUWMP, MWD analyzed the reliability of water delivery through the State Water Project (SWP) and the Colorado River Aqueduct. The RUWMP concluded that with programs developed, MWD will have a reliable source of water to serve its member agencies' needs through 2035. The analysis included in the UWMP included reliability data for historic single-dry and historic multiple-dry years. Unprecedented shortage will be addressed through the Water Supply Allocation Plan as described in the MWD RUWMP.

2.2c MWD Regional Urban Water Management Plan

The 2010 RUWMP provides information about MWD supply reliability and demand. MWD does not provide supply projections for each member agency; instead MWD uses a regional approach to developing projections. MWD calculates the demand for the entire region, as discussed in Appendix A.1 of the 2010 RUWMP, and then, using information about existing and proposed local projects, determines the amount of imported water that will be needed in the future. EMWD staff worked with MWD on the 2010 RUWMP, exchanging information about demand, local supply and projects, and clarification on boundary information and population

projections. Based on this information and additional data provided by other member agencies, MWD states it is able to meet the projected demands of all member agencies through 2035. The information supplied in the 2010 RUWMP provides assurance that MWD will have a reliable water supply available to deliver the demand required by all the member agencies including EMWD through 2035, even during dry periods. Under extreme conditions, water supply could be allocated to member agencies using the WSAP to preserve storage. The 2010 RUWMP is included as Attachment B of this assessment.

2.3 Local Resources

Water Code 10910 (d) (1)

In an effort to reduce dependency on imported water from MWD, EMWD has developed several programs designed to take advantage of local resources. High-quality groundwater is a source of water for local customers in the Hemet/San Jacinto Area. In the West San Jacinto Basin, groundwater is blended with imported water for use in the western portion of EMWD. EMWD has also constructed two (2) desalination facilities to recover poor quality groundwater with high total dissolved solids (TDS) levels in the West San Jacinto groundwater basin areas. The product water from the desalters enters EMWD's potable distribution system. A third desalter is now in the final stages of design.

2.4 Groundwater

Water Code Section 10910 (f)

Groundwater information is included in this assessment to assist the lead agency in determining the adequacy of EMWD's total supply. Groundwater is not being proposed to serve this project. New developments, including this project, will be supplied with imported water – (1) treated imported water directly from The Metropolitan Water District of Southern California (MWD); (2) untreated imported water from MWD subsequently treated by EMWD; or (3) untreated imported water treated by EMWD and recharged into the basin for later withdrawal.

2.4a Urban Water Management Plan Review

Water Code Section 10910 (f) (1)

The 2010 UWMP discusses projected groundwater use in EMWD and explains assumptions made about groundwater. In the following sections, portions of the 2010 UWMP are included with information about groundwater resources. The water supply for the Proposed Project will not include groundwater. The following information regarding EMWD's groundwater supply is for informational purposes only.

2.4b San Jacinto Watershed - Groundwater Management Zones in EMWD's Service Area

Water Code Section 10910 (f) (2)

The San Jacinto Watershed covers an area of approximately 728 square miles, measured above a point just downstream from Railroad Canyon Dam. The groundwater management zones of the San Jacinto Watershed lie within alluvium-filled valleys carved into the elevated bedrock plateau of the Perris Block. Collectively, the groundwater management zones are nearly surrounded by impermeable bedrock mountains and hills. Internally, island-like masses of granite and metamorphic bedrock rise above the valley floor.

The San Jacinto Fault Zone, which contains the Claremont and Casa Loma faults, is the major geologic feature that bounds and/or crosscuts many of the groundwater management zones,

and typically provides effective barriers to groundwater flow. The area between the Claremont and Casa Loma faults is a deep, alluvium-filled graben of tectonic origin, commonly referred to as the San Jacinto Graben. The effective base of freshwater in the graben is known to be quite deep but has not been precisely determined. The San Jacinto Graben consists of a forebay area in the southeast where surface water recharge primarily occurs, and a pressure area in the northwest where deep aquifers exist under confined conditions. To the east, the San Jacinto mountain range is the dominant geographic feature of the region, rising to a height of 10,805 feet.

Groundwater management zones were delineated based on major impermeable boundaries, constrictions in impermeable bedrock, groundwater divides, and internal flow systems. The eight groundwater management zones in the San Jacinto Watershed within EMWD's service area include the Canyon, San Jacinto Upper Pressure, San Jacinto Lower Pressure, Lakeview/Hemet North, Hemet South, Perris South, Perris North, and Menifee Management Zones.

Detailed descriptions of each Management Zone are included in the 2010 UWMP under Section 3 attached as Appendix A of this report.

2.4c Groundwater Management *Water Code 10910 (f) (2)*

Since 2001, the Cities of Hemet and San Jacinto, Lake Hemet Municipal Water District (LHMWD), EMWD, and representatives of the private groundwater producers, with DWR acting as an impartial mediator, have been working on a groundwater management plan for the Hemet/San Jacinto Water Management Plan area. Over the past several years, the group has discussed and resolved several controversial issues, including San Jacinto Tunnel seepage water, export of groundwater from the basins, and how to maximize the use of recycled water. As a result of their efforts, a final Hemet/San Jacinto Water Management Plan (HSJWMP) was completed in 2007 and a Stipulated Judgment was final in 2013. The Stipulated Judgment for the Hemet/San Jacinto Water Management Plan is in effect, and has established a Watermaster responsible for managing the basins.

The Hemet/San Jacinto Water Management Plan:

- Limits the amount of water being extracted from the basin to a sustainable yield.
- Implements continued recharge of the basin using imported water through the Integrated Recharge and Recovery Project (IRRP).
- Insures settlement claims by the Soboba Band of Luiseño Indians are facilitated and accommodated.
- Expands existing water production and water services system to meet future urban growth through the use of imported water recharged into the basin.
- Protects and/or enhances water quality in the management plan area.
- Supports cost-effective water supplies and treatment by the public agencies.
- Eliminates groundwater overdraft and enhances basin yield.
- Continues the monitoring program to promote and provide for best management and engineering principles to protect water resources.

Long term groundwater management includes artificial recharge using MWD replenishment water via permanent facilities through the IRRP. An agreement with the Soboba Band of Luiseño Indians requires, on average, an annual delivery of 7,500 acre-feet of water from MWD for the next 30 years. Water will be delivered to EMWD, LHMWD, and the Cities of Hemet and

San Jacinto. This is part of an effort to recharge groundwater in the Hemet/San Jacinto area, fulfilling the Soboba Tribe's water rights and addressing chronic groundwater overdrafts.

EMWD's rights under the HSJWMP are a base groundwater production right of 10,869 AFY in 2012/13. If water levels continue to decline EMWD will be required to reduce production by up to 10% annually over six years. Any pumping above that amount is subject to replenishment fees.

In the West San Jacinto area, a cooperative groundwater management plan is already in place to insure the reliability and quality of the water supply. In June 1995, EMWD adopted the West San Jacinto Groundwater Basin Management Plan (WSJGBMP) in accordance with the statutes in the State Water Code Sections 10750 through 10755 resulting from the passage of Assembly Bill 3030 (AB 3030). The plan was adopted after extensive public outreach and meetings with interested individuals and agencies.

Implementation of the WSJGBMP began directly after its adoption. Initial efforts to implement the WSJGBMP included establishing an advisory committee; prioritizing the management zones; evaluating groundwater resources including establishing groundwater quality, level, and extraction monitoring programs; and conducting hydro-geophysical investigations. The West San Jacinto Groundwater Basin Management Plan Annual Report, documenting the implementation of the plan and activities in the groundwater management zones, has been published annually since 1996.

2.4d Groundwater Recharge

Through pilot programs and using temporary facilities, EMWD has recharged groundwater in the Hemet/San Jacinto area with imported surplus water from MWD since 1990. Long term facilities have been built as part of the Integrated Recharge Recovery Program (IRRP). The IRRP is an integral piece of the water management plan and the Soboba settlement. The IRRP initially consists of 35 acres of basins or ponds for recharging State Project Water; three extraction wells; three monitoring wells; modification to two existing pump stations; and pipelines within, and adjacent to, the San Jacinto River. In 2012 over 8,000 AF was recharged at the IRRP ponds, and about 7,500 AF in 2013.

EMWD is also contributing to the replenishment of the basin by providing recycled water in lieu of groundwater production. The Recycled In-Lieu Program supplies recycled water for agricultural irrigation in-lieu of pumping native groundwater. The project can deliver up to 8,540 acre-feet per year to local agricultural water producers. The project costs are jointly funded by EMWD, LHMWD, and the Cities of Hemet and San Jacinto. Agreements that set limits on groundwater production, and provide for a payment of a portion of the operation and maintenance costs have been in place since 2008.

2.4e Groundwater Pumping Rights *Water Code 10910 (f)*

The eastern portion of EMWD's service area or Hemet/San Jacinto area contains good quality groundwater and is a major source of municipal as well as private production, although groundwater levels are in serious decline. To manage the groundwater in the area the HSJWMP is in place. EMWD's rights under the HSJWMP will be a base groundwater production right of 10,869 AFY in 2012/13. If water levels continue to decline EMWD will be required to reduce production by up to 10% annually over six years. Any pumping above that amount is subject to replenishment fees.

2.4f Surface Water Diversion Rights

License No. 10667

EMWD holds a right to divert up to 5,760 AFY of San Jacinto River flows for recharge and subsequent use from November 1 through June 30 each year. EMWD's diversion and recharge of San Jacinto River surface water to the Canyon Management Zone takes place at EMWD's Grant Avenue Ponds in the Valle Vista area. EMWD's diverted water is recharged into the groundwater aquifer of the Canyon Management Zone and is not used for direct use or sale. The San Jacinto River is an ephemeral river and, consequently, river flows may be insufficient for any diversion at all. In 2012, river flows were insufficient to divert surface water. Additional information about surface water diversion is available in Chapter 3 of the Annual Report.

2.4g Past Groundwater Extraction

Water Code 10910 (f) (3)

Table 2 depicts the total potable groundwater extracted by EMWD from 2008 through 2012. The majority of EMWD's groundwater is extracted from the Hemet/San Jacinto area. The remaining groundwater is extracted from the area covered by the WSJGBMP, including brackish groundwater extraction for the desalters. The location of wells used to pump groundwater and the desalters can be seen on Map 1.

2.4h Projected Groundwater Extraction

Water Code 10910 (f) (4)

Table 3 lists the amount of potable groundwater that EMWD is projecting to be available. Groundwater extraction in the Hemet/San Jacinto area is limited by the HSJWMP. EMWD's rights under the HSJWMP are a base groundwater production right of 10,869 AFY in 2012/13. If water levels continue to decline EMWD will be required to reduce production by up to 10% annually over six years. Any pumping above that amount is subject to replenishment fees. The Perris/Moreno Valley wells in the WSJGBMP area are projected to continue to produce 6,000 AFY. The desalters are part of managing the WSJGBMP area and will reduce salinity in the groundwater management zones with the added benefit of providing a source of potable water. The well locations shown on Figure 1 should remain consistent in the future.

2.4i Analysis of the Sufficiency of Groundwater

Water Code 10910 (f) (5)

Protecting the available groundwater supply is an important part of EMWD's planning efforts. EMWD is actively working with other agencies and groups to insure that groundwater will be a reliable resource far into the future. Part of managing groundwater responsibly requires the replacement of groundwater extracted beyond the safe yield. Groundwater extraction in Hemet/San Jacinto area will be replaced with imported water as water is recharged through the HSJWMP, and groundwater extraction in the WSJGBMP area will remain static. Although the desalters will provide an additional supply of water, the amount of water produced is not sufficient to accommodate the proposed growth within EMWD. The majority of the increased water demand caused by this project will be met by increasing the use of imported water from MWD recognizing the conditions of approval outlined in this document.

2.5 Recycled Water
Water Code 10910 (d) (1)

Recycled water is extensively used in EMWD's service area in place of potable water. To offset municipal demand, recycled water is used to irrigate landscape and for industrial purposes. The majority of EMWD's agricultural customers also use recycled water. In some cases, recycled water is used by agricultural customers in lieu of groundwater production, increasing the amount of groundwater available for municipal use without increased recharge.

The supply of recycled water will continue to grow with EMWD's population growth. The four (4) regional water reclamation facilities that EMWD is currently operating are all either in the process of expansion or have an expansion planned in the near future. Recycled water is currently used for both municipal and agricultural purposes. Municipal customers use recycled water for landscape irrigation and industrial process water. Agricultural customers use recycled water for irrigation of crops. A portion of agricultural demand of recycled water is in lieu of using groundwater. Currently, the use of recycled water is limited by the amount available to serve during peak demands and with livestream discharge occurring in off peak periods. EMWD has developed plans to eliminate discharge and use all of the recycled water available within the District, and to offset demand of existing potable customers, including retrofit of potable water landscape customers and indirect potable recharge.

2.6 Water Use Efficiency Measures

The Water Conservation Act of 2009, Senate Bill 7x-7, set a requirement for water agencies to reduce their per capita water use by the year 2020. The overall goal is to reach a state wide reduction of per capita urban water use of 20 percent by December 31, 2020, with an intermediate 10 percent reduction by December 31, 2015. Demand reduction can be achieved through both conservation and the use of recycled water as a potable demand offset. EMWD will reduce potable water demand to meet the goals of SB7x-7 two ways; using recycled water to offset potable water demand and reducing demand for water through conservation. Three methods have been identified for conserving water: 1) a budget based tiered rate, 2) requirements for water efficiency in new construction, and 3) an active conservation program. Water use reduction will be focused on outdoor demand reduction by all customer types. Table 5 summarizes water savings by type.

Table 5 - Water Efficiency Savings (AFY) – 2005 - 2035

Saving Type	2005	2010	2015	2020	2025	2030	2035
Recycled Water Potable Offset	3,601	4,041	5,000	6,300	11,500	13,900	14,300
Tiered Rate	0	8,700	8,700	8,700	8,700	8,700	8,700
New Construction	0	200	2,000	4,100	6,100	8,000	9,600
Active Conservation	1,500	3,400	6,500	9,500	10,700	11,700	12,600
Total	5,101	16,341	22,200	28,600	37,000	42,300	45,200

Recycled water will be used to offset potable demand through the expansion of the existing recycled water system.

Tiered Rate savings are an estimate of water saved by customers, after the implementation of a budget based tiered rate. In April 2009, EMWD implemented a tiered rate billing structure for its residential and landscape customers. Customers are provided an allocation for reasonable water use and are required to pay a higher rate for water use over their allocated limit. Water savings by existing customers has been estimated. Actual water demand since the implementation of the tiered rate has been lower than the estimated amounts, likely as a result of several factors and not the tiered rate implementation alone.

Water Use Efficiency Requirements in New Development includes installing lower water use landscape and interior fixtures. Water use efficiency is mandated statewide through existing ordinances, plumbing codes and legislation. To enforce water use efficiency in new development EMWD has lowered the water budget allocations for new development. Any residential or dedicated landscape account installed after January 1, 2011 has an outdoor budget allocation based on only 70 percent of ET, compared to up to 100 percent of ET for older accounts. Water use savings shown in Table 5 are calculated assuming lower budgets allocation will result in a proportionate reduction in water use. Actual savings will be measured based on average use by new meters.

Active Conservation savings are the result of water use efficiency programs implemented by EMWD. EMWD encourages the replacement of inefficient devices and includes monetary rebate, distribution and direct installation programs. Water savings are based on estimated water savings for each device and takes into account the lifetime of each device.

Through the above three methods of reducing water use, and recycled water use, EMWD anticipates the reduction of potable water demand to meet the requirements of SB7x-7.

2.7 Local Resources Documentation

2.7a Written Contracts or Other Proof

Water Code 10910 (d) (2) (A)

Below is a list of documents related to EMWD's local water supply:

- ❖ **EMWD 2010 Urban Water Management Plan (June 2010)** - EMWD's 2010 Urban Water Management Plan is attached as Appendix A. This plan supplies additional information on EMWD, its service area, and water management and supply capabilities.
- ❖ **West San Jacinto Groundwater Basin Groundwater Management Plan 2012 Annual Report (July 2013)** - Detailed information on the history and progress of groundwater basin management and the Groundwater Monitoring Program can be found in the 2011 Annual Report on the Status of the Groundwater Subbasins, located on EMWD's Website (www.emwd.org).
- ❖ **Hemet/San Jacinto Groundwater Water Management Area Water Management Plan 2012 Annual Report (May 2013)** - Detailed information on the history and progress of the Water Management Plan and Groundwater Monitoring Program can be found in the 2011 Annual Report on the Status of the Groundwater Subbasins, located on EMWD's Website (www.emwd.org).
- ❖ **Hemet/San Jacinto Groundwater Management Area Water Management Plan** - This plan was developed by the stakeholders in the Hemet/San Jacinto area to provide a foundation to guide and support responsible water management into the future. The plan was finalized in 2007 and an EIR was approved for the project on November 21, 2007 by EMWD's Board of Directors.

With regard to EMWD's ownership and use of reclaimed/recycled water, California Water Code Section 1210 states:

The owner of a waste water treatment plant operated for the purpose of treating wastes from a sanitary sewer system shall hold the exclusive right to the treated waste water as against anyone who has supplied the water discharged into the waste water collection and treatment system, including a person using water under a water service contract, unless otherwise provided by agreement.

With regard to the Water Use Efficiency Ordinance that will result in additional supplies through conservation:

The County of Riverside Board of Supervisors approved an update to Ordinance No. 859 on October 20, 2009, requiring water efficient landscaping in any new development requiring a permit.

EMWD's Board of Directors approved Ordinance 72.25 for implementation on January 1, 2011, requiring water efficient landscaping in new developments and requiring water efficiency enforced through tiered rates. Ordinance 72.25 can be found on EMWD's website www.emwd.org.

2.7b EMWD's Capital Improvement Plan

Water Code 10910 (d) (2) (B)

EMWD maintains and periodically updates a comprehensive Water Facilities Master Plan (WFMP). This working plan defines water supply, transmission mains, and storage facilities required for the accommodation of projected growth within EMWD. On a yearly basis, a five-year Capital Improvement Plan (CIP) is prepared, which is based on a further refinement of the WFMP. The CIP outlines specific projects and their funding source. Each project is also submitted individually to the Board for authorization and approval. This allows EMWD to accurately match facilities' needs with development trends. Financing information for the desalter plant construction, regional water reclamation facilities expansion, and well replacement can also be found in the CIP.

2.7c Federal, State and Local Permits Needed for Construction

Water Code 10910 (d) (2) (C)

As part of EMWD's CIP, an Environmental Review Committee has been established. This Committee, made up of representatives from the Engineering, Planning, and Environmental and Regulatory Compliance Departments, discuss each project and the steps needed to comply with regulatory requirements. EMWD works with various government agencies, including the U.S. Department of Fish and Wildlife, the U.S. Army Corps of Engineers, the California Department of Public Health, the California State Water Resources Board, the California Air Quality Management District, and the California Department of Fish & Game to obtain permits when necessary. The Engineering Department procures additional construction permits on a case-by-case basis. EMWD has already, or is in the process of, obtaining Environmental Impact Reports or other environmental documents necessary for desalter construction, regional water reclamation facilities expansion, and well replacements. Any necessary permits secured by EMWD are kept on file at the District office.

2.7d Regulatory Approvals
Water Code 10910 (d) (2) (D)

The Department of Public Health (DPH) has issued a system-wide permit for EMWD's water supply system. EMWD's Environmental and Regulatory Compliance Department conforms to specific regulations and obtains any additional necessary approvals. As new facilities are constructed by EMWD, they are subject to inspection and testing by regulatory agencies and the DPH permit is amended.

Section 3 - Demand

3.1 Demand Projections
Water Code 10910 (c) (2), 10631 (e) (1)

EMWD's primary retail customers can be divided into residential, commercial, industrial, institutional and landscape sectors. Although the residential section is by far EMWD's largest customer segment, each market segment plays a role in the growth and development of EMWD's service area. See Table 6 for water use by various customer types.

Table 6 - Retail Water Deliveries by Customer Type – 2005 - 2035

Year /Type	Units	Single family Res.	Multi-family Res.	Comm-ercial	Indus-trial	Inst/ gov.	Land-scape	Agri-culture	Total
2005	No. of accounts	114,100	1,000	1,500	100	40	1,500	200	118,440
Actual	Volume (AF)	62,300	5,500	3,900	400	2,900	7,500	2,400	84,900
2010	No. of accounts	129,400	4,300	2,100	100	500	2,200	100	138,700
Actual	Volume (AF)	54,000	6,100	4,200	400	2,300	8,900	1,800	77,700
2015	No. of accounts	140,600	5,700	2,300	1,200	100	3,300	100	153,300
Projected	Volume (AF)	74,400	8,300	5,600	600	3,600	18,500	2,800	113,800
2020	No. of accounts	150,200	6,100	2,400	1,300	100	3,500	85	163,685
Projected	Volume (AF)	79,600	8,800	5,900	600	3,800	19,600	2,400	120,700
2025	No. of accounts	169,600	6,900	2,700	1,400	100	4,000	85	184,785
Projected	Volume (AF)	89,800	10,000	6,700	700	4,300	22,200	2,400	136,100
2030	No. of accounts	187,700	7,700	3,000	1,500	100	4,400	85	204,485
Projected	Volume (AF)	99,400	11,000	7,400	800	4,800	24,500	2,400	150,300
2035	No. of accounts	202,800	8,200	3,300	1,700	100	4,700	85	220,885
Projected	Volume (AF)	107,400	11,900	8,000	800	5,200	26,500	2,400	162,200

Note: Water Quantities include raw water to agricultural customers but does not include recycled water deliveries.

Table 7 shows sub-agency water use and Table 8 shows other water uses. Total water use is shown in Table 9.

Table 7 - Wholesale to Other Agencies – 2005 - 2035

Water distributed	Actual Sales (AF)		Projected Sales (AF)				
	2005	2010	2015	2020	2025	2030	2035
City of Hemet	100	0	0	0	0	0	0
City of Perris	1,900	1,700	1,700	1,800	1,900	2,000	2,100
City of San Jacinto	0	0	0	0	0	0	0
Lake Hemet MWD ¹	100	1,300	1,100	1,100	1,000	1,100	1,100
North Perris Water Company	0	0	0	0	0	0	0
Nuevo Water Company	800	600	800	1,600	1,700	1,700	1,700
Murrieta Water Company	100	1,600	0	0	0	0	0
Rancho California Water District	26,300	21,900	36,500	48,600	50,800	53,000	55,200
Hemet/San Jacinto Basin Plan Water Master	0	0	7,500	8,500	9,600	11,200	12,300
Total	29,300	27,100	47,600	61,600	65,000	69,000	72,400

1. Sales of water to Lake Hemet are for non-potable supplies used to meet agricultural demand.

Table 8 - Other Water Uses – 2005 – 2035

	Actual Use (AF)		Projected Use (AF)				
	2005	2010	2015	2020	2025	2030	2035
Recycled Water	32,600	28,200	43,900	50,000	53,900	54,900	55,300
Recharge Water ¹	7,000	0	0	0	0	0	0
Distribution System Water Losses	7,600	8,200	8,400	8,900	10,100	11,200	12,100
Treatment Water Losses	100	200	200	200	200	200	200
Total	47,300	36,600	52,500	59,100	64,200	66,300	67,600

1. Future recharge will be through the Hemet/San Jacinto Basin Plan Water Master as seen in Table 8.

Table 9 - Water Demand (AFY) – 2005 - 2035

	Actual		Projected				
	2005	2010	2015	2020	2025	2030	2035
Retail Potable Water Sales	84,900	77,700	113,800	120,700	136,100	150,300	162,200
Water Sales to Other Agencies	29,400	27,100	47,600	61,600	65,000	69,000	72,400
Other Water Uses/Losses	47,300	49,900	52,500	59,100	64,200	66,300	67,600
Total	161,600	154,700	213,900	241,400	265,300	285,600	302,200

3.2 Project Demand

The City of Moreno Valley is the lead agency for the preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA), Public Resources Code Section 21000, et seq. for the First Nandina Logistic Center (Proposed Project) located at the northeast corner of Nandina Avenue and Indian Street. The Proposed Project site encompasses 72.9 acres and includes a 1,450,000 square foot warehouse building. Demand from the Proposed Project is estimated to be 54.68 acre feet per year (AFY). The project developer is First Industrial, L.P.. Table 10 estimates the demand for this project.

Table 10 – Project Demand

Description	Quantity	Units	Demand per Unit (AFY)	Demand (AFY)
Warehouse Industrial	72.9	Acres	0.75	54.68

Per project description

The demand for this project is estimated based on average annual demand from similar landuse and is for supply planning only. Demand for facilities planning will be based on peak flows and determined as part of the plan of service for the project. The demand for this project is within the limits of projected demand accounted for in the 2010 UWMP and would be included in the projected demand shown in Table 9 of this water supply assessment report.

3.3 Database of Proposed Projects

Water Code 10910 (c) (3)

To develop the projections used in this Water Supply Assessment, EMWD uses a development-tracking database that assesses future water demands for specific projects. EMWD uses this database to help plan for future water supply and infrastructure needs by monitoring new projects through various stages of development. Subject to the Board of Director's approval of this assessment, information associated with this project will be updated in the supply and demand projections EMWD uses for planning. Changes in density and land use are also tracked in this database for planning purposes. The developer is required to notify EMWD if any changes to project density or land use occur.

Section 4 Evaluation of Supply and Demand
 Water Code 10910 (c) (2)

4.1 Supply and Demand Evaluation under Historic Conditions

Tables 11, 12 and 13, taken from the 2010 UWMP, are an estimate of EMWD's demand during average, single and multiple dry years.

Table 11 - Existing Water Supply Resources – Average Year Hydrology – 2015 - 2035

	2015	2020	2025	2030	2035
Metropolitan Water District	149,300	170,700	190,700	210,000	226,200
Recycled	43,900	50,000	53,900	54,900	55,300
Groundwater	13,200	13,200	13,200	13,200	13,200
Existing Desalter	7,500	7,500	7,500	7,500	7,500
Total Existing Supplies	213,900	241,400	265,300	285,600	302,200
Total Projected Demands	213,900	241,400	265,300	285,600	302,200
Shortfall/Surplus	0	0	0	0	0

Based on a repeat of 2004- 2009 conditions

Table 12 - Existing Water Supply Resources – Dry Year Hydrology – 2015 – 2035

	2015	2020	2025	2030	2035
Metropolitan Water District	155,300	177,600	198,300	218,300	235,100
Recycled	45,500	51,800	55,800	56,900	57,300
Groundwater	13,200	13,200	13,200	13,200	13,200
Existing Desalter	7,500	7,500	7,500	7,500	7,500
Total Existing Supplies	221,500	250,100	274,800	295,900	313,100
Total Projected Demands	221,500	250,100	274,800	295,900	313,100
Shortfall/Surplus	0	0	0	0	0

Note: Based on a repeat of 1977 conditions

Table 13 - Existing Water Supply Resources – Multi - Dry Year – 2015 - 2035

	2015	2020	2025	2030	2035
Metropolitan Water District	156,600	179,000	199,800	219,900	236,900
Recycled	45,800	52,200	56,200	57,300	57,700
Groundwater	13,200	13,200	13,200	13,200	13,200
Existing Desalter	7,500	7,500	7,500	7,500	7,500
Total Existing Supplies	223,100	251,900	276,700	297,900	315,300
Total Projected Demands	223,100	251,900	276,700	297,900	315,300
Shortfall/Surplus	0	0	0	0	0

Note: Based on a repeat of 1990-1992 conditions

EMWD's 2010 UWMP discusses the supply reliability for EMWD during dry years. It is anticipated that the majority of water for future development will be supplied by imported water from MWD during single dry years. Typically, MWD does not place imported water limits on a member agency, but predicts the future water demand based on regional growth information. MWD stated in its 2010 RUWMP that with the addition of all water supplies, existing and planned, MWD would have the ability to meet all of its member agencies' projected supplemental demand through 2035, even under a repeat of historic drought scenarios.

4.2 Contingency Planning

Included in the 2010 UWMP is a copy of EMWD's Water Shortage Contingency Plan (WSCP). In the case of unprecedented shortage EMWD will reduce demand using significant penalties for wasteful water use. EMWD's WSCP details the plan for demand reduction for several stages of shortage up to 50 percent. Additional information about contingency planning is included in Section 5 of EMWD's 2010 UWMP.

Section 5 - Water Supply Assessment

5.1 Potable Water

From a facilities perspective, the Proposed Project would be conditioned to construct off-site and on-site water facilities needed to distribute water throughout the project area. Prior to construction the developer should contact EMWD staff to develop a plan of service and determine if any revisions are required to the master plan. See Figure B for existing water facilities in relation to the project.

With respect to water supply, as discussed above, the project will be served using imported water from MWD supplemented with new local supply projects during multi-dry years, if needed. Allocation from MWD may result in water supplies being made available at a significantly higher cost depending on circumstances.

5.2 Recycled Water

EMWD policy recognizes recycled water as the preferred source of supply for all non-potable water demands, including irrigation of recreation areas, green-belts, open space common areas, commercial landscaping, and supply for aesthetic impoundment or other water features. The proposed project is near an existing recycled water line and in the future recycled water may be required for the project.

According to EMWD policy, the project may be conditioned to construct a recycled water system physically separated from the potable water system. The system will need to be constructed to recycled water standards. The project may also be conditioned to construct off-site recycled water facilities. EMWD will make a final determination on requirements for recycled water use and facilities during the plan of service phase of the project.

5.3 Duration of Approval

This assessment will be reviewed every three years until the project begins construction. The project applicant shall notify EMWD when construction has begun. The review will insure that the information included in this assessment remains accurate and no significant changes to either the project or EMWD's water supply have occurred. Further, if the environmental impact report (EIR) for the project is not certified within three (3) years after the adoption of this WSA, the WSA may be updated at such time if there are changed circumstances warranting updated analysis. If the EIR is certified within three (3) years of the adoption of the WSA, then the applicant shall provide updates to EMWD every three (3) years on the status of the project until construction commences; however, in such instance, the WSA shall not be amended or invalidated by EMWD. If neither the project applicant nor the lead agency contacts EMWD within three years of approval of this WSA, it will be assumed that the Proposed Project no longer requires the estimated water demand calculated, the demand for this project will not be considered in assessments for future projects, and the assessment provided by this document will become invalid.

5.4 Conclusion

EMWD relies on MWD to meet the needs of its growing population. MWD stated in its 2010 RUWMP that with the addition of all water supplies, existing and planned, MWD would have the ability to meet all of its member agencies' projected supplemental demand through 2035, even under a repeat of historic multi-year drought scenarios.

Based on present information and the assurance that MWD is engaged in identifying solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies, EMWD has determined that it will be able to provide adequate water supply to meet the potable water demand for this project as part of its existing and future demands.

In the event the lead agency determines adequate water supply exists for this project, the developer of this project is required to meet with EMWD staff to develop a plan of service. The plan of service will detail water, wastewater and recycled water requirements to serve the projects. An agreement developed prior to construction will determine additional funding required to reduce existing customer demand on imported supplies through the expansion of local resources. The reduction of existing customer demand on imported water supplies will free up allocated imported water to be used to serve this project under multiple dry year conditions. The amount of funding will be determined by the EMWD and may take the form of a

new component of connection fees or a separate charge. The estimated cost of desalinated water is between \$1,400 and \$1,700 per AF. These costs are expected to increase over time.

If there is a change in the circumstances detailed in this assessment, EMWD will address the changes in the plan of service for the project. Modifications at the plan of service stage could reduce the amount of water available to serve this project.

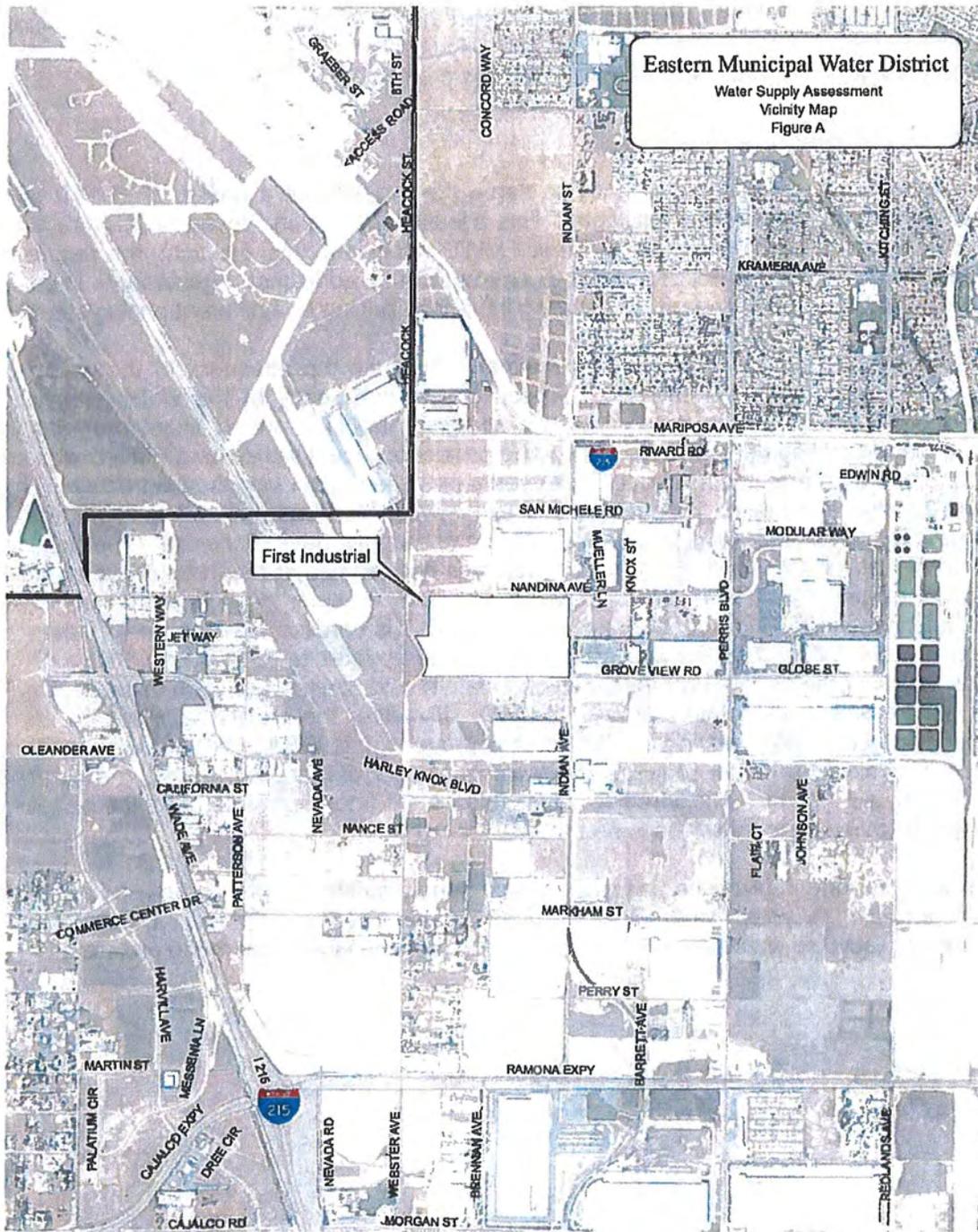
Section 6 - Conditions of Approval

This assessment is not a commitment to serve the project, but a review of EMWD supplies based on present information available. This assessment is conditioned on MWD's ability to continue to supply imported water to meet EMWD's requirements, including the requirements for this project. This project is subject to any special or additional requirements imposed by MWD or EMWD on such deliveries, including increased pricing or a different pricing structure.

The lead agency for the project is responsible to evaluate the adequacy of the water supply assessment and make the ultimate decision of the sufficiency of the water supply. The developer for the project is responsible for keeping EMWD informed about progress in the planning and development of the project. The project applicant will contact EMWD with project status information and updates every three years until the project begins construction. This will insure that the information included in this assessment remains accurate and no significant changes to either the project or EMWD's water supply have occurred. Further, if the environmental impact report (EIR) for the project is not certified within three (3) years after the adoption of this WSA, the WSA may be updated at such time if there are changed circumstances warranting updated analysis. If the EIR is certified within three (3) years of the adoption of the WSA, then the applicant shall provide updates to EMWD every three (3) years on the status of the project until construction commences; however, in such instance, the WSA shall not be amended or invalidated by EMWD. If neither the project applicant nor the lead agency contacts EMWD within three years of approval of this WSA, it will be assumed that the Proposed Project no longer requires the estimated water demand calculated, the demand for this project will not be considered in assessments for future projects, and the assessment provided by this document will become invalid.

If the lead agency determines adequate water supply exists for this project, to the greatest extent possible, recycled water shall be used on the Proposed Project. Details about the feasibility of recycled water use shall be included in the plan of service for the project.

Figure A Project Location



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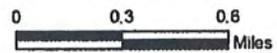
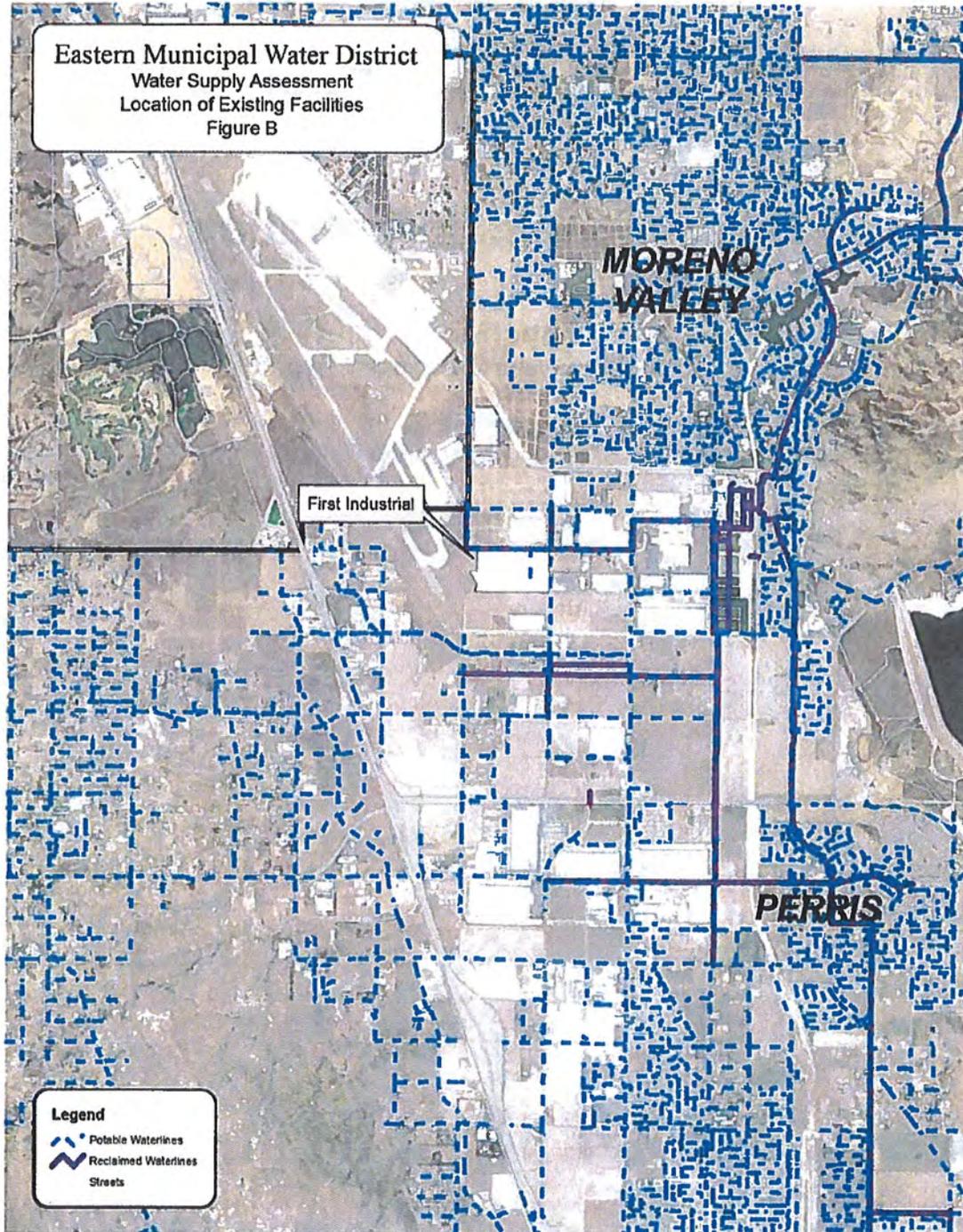


Figure B Project Location in Relation to Existing Waterlines



WATER SUPPLY ASSESSMENT REPORT

Supplemental Information

Appendix A

2010 Urban Water Management Plan

Appendix B

2010 MWD's RUWMP

Appendix C

EMWD's CIP Budget

BACKGROUND

Senate Bills 221 and 610 require the District respond to requests for a statement that adequate water supplies are or will be available to meet the water demands associated with proposed land development. Senate Bill 610 focuses on the content of a water supply agency's Urban Water Management Plan and stipulates that when an Environmental Impact Report (EIR) is required in connection with a project, the appropriate water supply agency must provide an assessment of whether its total projected water supplies will meet the projected water demands associated with the proposed project. Senate Bill 221 also requires water supply verification when a tentative map, parcel map or development agreement for a project is submitted to a land-use agency for approval. Senate Bill 221 applies to proposed residential development of more than 500 dwelling units with some exceptions. Senate Bill 610 applies to a proposed residential development of more than 500 dwelling units, or large commercial, industrial or mixed-use development.

The City of Moreno Valley is the lead agency for the preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA), Public Resources Code Section 21000, et seq. for the First Nandina Logistic Center (Proposed Project) located at the northeast corner of Nandina Avenue and Indian Street. The Proposed Project site encompasses 72.9 acres, and includes a 1,450,000 square foot warehouse building. Demand form the Proposed Project is estimated to be 54.68 acre feet per year (AFY). The project developer is First Industrial, L.P. Figure A shows the location of this project.

This project supports the District's Strategic Plan Objective "Community Relations: Promote and sustain timely and effective two-way communication between the District and the communities it serves and continue to be a trusted resource for the communities on all water, wastewater, and recycled water issues."

EL:sgc

Attachment: Exhibit A – Water Supply Assessment for the First Nandina Logistics Center

Finance 

Purchasing/Contracts 

Author: Elizabeth Lovsted

