moulton niguel water district

ENGINEERING & OPERATIONS
BOARD OF DIRECTORS' MEETING
MOULTON NIGUEL WATER DISTRICT
27500 La Paz Road, Laguna Niguel
April 18, 2016
8:30 AM
Approximate Meeting Time: 3 Hours

1. CALL MEETING TO ORDER

2. APPROVE THE MINUTES OF THE MARCH 14, 2016 ENGINEERING AND OPERATIONS BOARD OF DIRECTORS' MEETING

3. PUBLIC COMMENTS

Persons wishing to address the Board of Directors on matters not listed on the Agenda may do so at this time. "Request To Be Heard" forms are available at the entrance to the Board Room. Comments are limited to five minutes unless further time is granted by the Presiding Officer. Submit form to the Recording Secretary prior to the beginning of the meeting.

Those wishing to address the Board of Directors on any item listed on the Agenda should submit a "Request To Be Heard" form to the Recording Secretary before the Presiding Officer announces that agenda item. Your name will be called to speak at that time.

PRESENTATION ITEMS

4. CIP Budget Update

DISCUSSION ITEMS

5. Water Supply Assessment for the Agora Arts District Downtown Project

6. Fall Protection System - Potable Water & Recycled Water Reservoirs

7. Pradera 850 Zone Loop System Contract Award

INFORMATION ITEMS

8. Debt Issuance Based On Market Update

9. Plant 3A Status Update

10. Baker Water Treatment Plant Project Update

11. Operations Center Consolidation Improvement Project Update

12. Quarterly Construction Progress Report

13. Quarterly Communications License Program Report

14. Northern Transmission Main Emergency Repair

15. Future Agenda Items (Any items added under this section are for discussion at future meetings only)

16. Late Items (Appropriate Findings to be Made)

    a. Need to take immediate action; and

    b. Need for action came to District's attention after Agenda Posting. [Requires 2/3 vote (5 members) or unanimous vote if less than 2/3 are present]

CLOSED SESSION

17. CONFERENCE INVOLVING A JOINT POWERS AGENCY – SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

    Discussion will concern: POTENTIAL LITIGATION – IN 1 MATTER

    Pursuant to Government Code Section 54956.9 Closed Session will be conducted to confer with legal counsel RE: potential litigation in 1 matter

ADJOURNMENT

The Board of Directors' Meeting Room is wheelchair accessible. If you require any special disability related accommodations (i.e., access to an amplified sound system, etc.), please contact the Moulton Niguel Water District Secretary's office at (949) 831-2500 at least forty-eight (48) hours prior to the scheduled meeting. This agenda can be obtained in alternate format upon written request to the Moulton Niguel Water District Secretary at least forty-eight (48) hours prior to the scheduled meeting.

Agenda exhibits and other writings that are disclosable public records distributed to all, or a majority of, the members of the Moulton Niguel Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection at the District Office, 27500 La Paz Road, Laguna Niguel, CA ("District Office"). If such writings are distributed to members of the Board less than seventy-two (72) hours prior to the meeting, they will be available in the reception area of the District Office at the same time as they are distributed except that, if such writings are distributed immediately prior to, or during the meeting, they will be available in the Board meeting room and on the District website at www.mnwd.com.

DRAFT
MINUTES OF THE REGULAR MEETING OF THE ENGINEERING & OPERATIONS BOARD OF DIRECTORS OF THE MOULTON NIGUEL WATER DISTRICT

March 14, 2016

A Regular Meeting of the Engineering & Operations Board of Directors of the Moulton Niguel Water District was held at the District offices, 27500 La Paz Road, Laguna Niguel, California, at 8:30 AM on March 14, 2016. There were present and participating:

DIRECTORS

Duane Cave	Director
Scott Colton	Vice President/Chair
Richard Fiore	Director
Donald Froelich	President
Gary Kurtz	Director
Larry Lizotte	Director
Brian Probolsky	Vice President (arrived at 9:17 a.m.)

Also present and participating were:

STAFF MEMBERS, LEGAL COUNSEL, AND MEMBERS OF THE PUBLIC

Joone Lopez	General Manager
Matt Collings	Assistant General Manager
Marc Serna	Director of Engineering & Operations
Gina Hillary	Director of Human Resources
Jeff Ferre	Best, Best, & Krieger (General Counsel)
Paige Gulck	Board Secretary
Tim Bonita	Recording Secretary
Trevor Agrelius	MNWD
Drew Atwater	MNWD
Johnathan Cruz	MNWD
Megan Geer	MNWD
James Glover	MNWD
Tracy Ingebrigtsen	MNWD
Eva Plajzer	MNWD

John Shafer	Aqua Metric
Mark Wakefield	Water Techniques

1. CALL MEETING TO ORDER

The meeting was called to order by Scott Colton at 8:30 a.m.

2. APPROVE THE MINUTES OF THE FEBRUARY 16, 2016 SPECIAL ENGINEERING AND OPERATIONS BOARD OF DIRECTORS' MEETING

MOTION DULY MADE BY DUANE CAVE AND SECONDED BY DONALD FROELICH, MINUTES OF THE FEBRUARY 16, 2016 SPECIAL ENGINEERING AND OPERATIONS BOARD OF DIRECTORS' MEETING WERE APPROVED AS PRESENTED. THE VOTE WAS UNANIMOUS WITH DIRECTORS DUANE CAVE, SCOTT COLTON, RICHARD FIORE, DONALD FROELICH, GARY KURTZ, AND LARRY LIZOTTE ALL VOTING 'AYE'. DIRECTOR BRIAN PROBOLSKY WAS ABSENT.

3. PUBLIC COMMENTS

None.

DISCUSSION ITEMS

4. AMI Implementation Pilot Project Phase 1

Marc Serna presented details of the proposed AMI Pilot Project agreement. Staff recommends that the Board of Directors authorize the General Manager to execute an agreement with Aqua Metric Sales Company, for the purchase and installation of the Phase 1 Sensus AMI Hardware and Software Application, in the amount of $796,077; and authorize the General Manager or designee to approve change orders up to 5% of contract value. Discussion ensued regarding the agreement.

5. Amendment to Professional Services Agreement for Strategic Real Estate Consulting

Matt Collings presented the proposed amendment to the professional services agreement for strategic real estate consulting with Starpointe Ventures. It is staff's recommendation that the Board of Directors approve Amendment No. 4 valued at $60,000 for a total not-to-exceed amount of $195,200; and authorize the General Manager to execute the Amendment. Discussion ensued regarding the amendment.

INFORMATION ITEMS

6. Water Softener Rules and Regulations Update

Marc Serna provided an update on water softener rules and regulations. Staff will bring back recommendation for updating the rules and regulations in the future.

Brian Probolsky arrived at 9:17 a.m.

7. Baker Water Treatment Plant Project Update

Joone Lopez gave a brief update on the Baker Water Treatment Plant Project.

8. Joint Powers Authority Quarterly Update

Matt Collings gave the Joint Powers Authority Quarterly update.

9. Operations Center Consolidation and Improvement Project Update

Matt Collings gave a brief update on the operations center consolidation and improvement project, including the status of the environmental analysis, architecture development and site planning.

10. Future Agenda Items (Any items added under this section are for discussion at future meetings only)

None

11. Late Items (Appropriate Findings to be Made)

Staff has none.

CLOSED SESSION

12. CONFERENCE INVOLVING A JOINT POWERS AGENCY – SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Discussion will concern: POTENTIAL LITIGATION – IN 1 MATTER

Pursuant to Government Code Section 54956.9 Closed Session will be conducted to confer with legal counsel RE: potential litigation in 1 matter

This item will be discussed at the Board of Directors' Meeting on March 17, 2016.

ADJOURNMENT

The meeting was adjourned at 10:20 a.m.

Respectfully submitted,

Tim Bonita
Recording Secretary

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: April 18, 2016**

FROM: **Marc Serna, Director of Engineering and Operations**
Mark Mountford, Principal Engineer

SUBJECT: **Water Supply Assessment for the Agora Arts District Downtown Project**

DIVISION: **5**

SUMMARY:

Issue: Water Supply Assessment for the Agora Arts District Downtown Project is complete.

Recommendation: It is recommended that the Board of Directors approve the WSA dated April 2016, as prepared by Arcadis.

Fiscal Impact: None. The City of Laguna Niguel will refund the expense of the WSA preparation, amounting to $24,618 for document preparation.

BACKGROUND:

In January 2016, the City of Laguna Niguel (City) submitted an application to the District for the preparation of a Water Supply Assessment (WSA) for the Agora Arts District Downtown Project. Per Water Code section 10910 et seq. (commonly referred to as Senate Bill 610), the District has 90 days to complete a WSA for the project. The District retained Arcadis to prepare the report in accordance with Sections 10910 and 10911 of the California Water Code. An information item was brought to the Board at the Engineering and Operations meeting on February 16, 2016 to introduce the scope of the project and the requirements to prepare a WSA.

WSAs became mandated in 2001 when Senate Bill 610 came into law. A WSA must be performed when a proposed project is: a residential development of more than 500 dwelling units, a commercial office building employing more than 1,000 people or greater than 250,000 square feet, a business establishment employing more than

1,000 persons or having a floor space of more than 500,000 square feet, a hotel of having more than 500 rooms, an industrial development employing more than 1,000 people or having more than 650,000 square feet of floor area, or a mixed-use project that would equate to demands greater than 500 dwelling units. The WSA reviews the total projected water supplies available to MNWD during average, single-dry, and multiple-dry water years over the next 20 year period, and analyzes whether this supply will be sufficient to meet both the proposed project's water demands and the District's existing and planned future uses.

In response to the new regulation, the District's Board adopted Resolution No. 05-01 to provide the process for the preparation of the WSAs. As part of the process, the applicant must assume cost responsibility for the preparation of the WSA. The application includes indemnification clauses and stipulates that the WSA is not to be construed as a "will serve".

DISCUSSION:

The Agora Concept Project proposes to develop the old Orange County courthouse site adjacent to the Laguna Niguel City Hall into a mixed use commercial and residential complex. Approximately 279,500 sq. ft. is planned for the commercial space, including space for restaurants, retail, offices and classrooms, and kiosks. The residential use will consist of 200 multi-family residential units ranging from studios to two-bedroom apartments. The combined commercial and residential development's scale meets the definition of a "project" as defined by California Water Code Section 10912 (based upon total water demand surpassing the equivalent of a 500 dwelling unit project), and is subject to Senate Bill (SB) 610 requirements, codified in Section 10910 requiring the water supplier of the project to prepare a WSA.

In the preparation of the WSA, Arcadis followed the methodologies required by the applicable sections of the Public Resources Code and the California Water Code.

The WSA findings are that there are sufficient and reliable water supplies to meet the demands of the Agora Arts District Downtown Project. This is primarily based upon Metropolitan's Draft 2015 UWMP supply projections, as well as MWDOC conclusions in its Draft 2015 UWMP that it will be able to meet full service demands of its retail agencies under average, single-dry, and multiple-dry year conditions with 100% reliability. Based on the analysis performed by Arcadis, the project will increase District water demands by 141 acre-feet per year, or 0.4 percent of current water demands. In addition, existing District infrastructure is adequate to provide the estimated overall water demand to the area. When specific improvement plans and requirements are submitted to the District, local infrastructure will be reviewed for fire flow requirements, sewer loading, and recycled water use.

Attachment: Agora Arts District Downtown Water Supply Assessment

Moulton Niguel Water District

Agora Arts District Downtown Water Supply Assessment

April 2016

AGORA ARTS DISTRICT DOWNTOWN PROJECT WATER SUPPLY ASSESSMENT

Katie Porter, P.E.

Principal Engineer

Sarina Sriboonlue, P.E.

Staff Engineer

Greg Imamura, P.E.

Staff Engineer

Prepared for:

Mark Mountford, P.E.

Moulton Niguel Water District

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Our Ref.:

03862009.0000

Date:

April 2016

CONTENTS

ACRONYMS AND ABBREVIATIONS

AF	acre-feet
AFY	acre-feet per year
AWMA	Aliso Water Management Agency
BDCP	Bay Delta Conservation Plan
AMP	Allen-McColloch Pipeline
cfs	cubic feet per second
CDR	Center for Demographic Research
CRA	Colorado River Aqueduct
CIP	Central Intertie Pipeline
DU	dwelling unit
EOCF#2	East Orange County Feeder Number 2
EIR	Environmental Impact Report
ET_0	Evapotranspiration
ETWD	El Toro Water District
GPCD	gallons per capita per day
HBDP	Huntington Beach Desalination Project
gpd	gallons per day
IRP	Integrated Regional Plan
JTM	Joint Transmission Main
JRWSS	Joint Regional Water Supply System
ksf	thousand square feet
MNWD	Moulton Niguel Water District
MWDOC	Municipal Water District of Orange County
QSA	Quantification Settlement Agreement
SB	Senate Bill
SCP	South County Pipeline
SMWD	Santa Margarita Water District
sq. ft.	square feet
SWP	State Water Project
TM	Technical Memorandum

UWMP	Urban Water Management Plan
WSA	Water Supply Assessment
WTP	water treatment plant

EXECUTIVE SUMMARY

In January 2016, the City of Laguna Niguel, the Lead Agency as defined by Senate Bill (SB) 610, determined that the Agora Arts Downtown District Project (Project) proposed by Lab Holding (Project Applicant) qualifies as a "project" as defined by the California Water Code section 10912 and requested Moulton Niguel Water District (MNWD), the Water Supplier as defined by SB 610 to prepare a Water Supply Assessment (WSA) to satisfy the requirements of Water Code section 10910 et seq., commonly referred to as Senate Bill (SB) 610. Generally, the WSA must address whether the total projected water supplies available to MNWD over the next 20 years—during normal, single dry, and multiple dry years—will be sufficient to meet the demand projected for the proposed Project in addition to MNWD's existing and planned future uses, including agricultural and manufacturing uses.

The Project proposes to develop the old Orange County courthouse site adjacent to the Laguna Niguel City Hall into a mixed use commercial and residential complex. The Project will result in a net increase in water demand from MNWD's residential, commercial, and landscape irrigation customer sectors. The Project is proposing to add 200 multi-family residential units comprising a mixture of studios, one-, and two-bedroom apartments. These residential units will generate approximately 24,000 gallons per day (gpd) or 27 acre-feet per year (AFY) of potable water demand. The Project will also include approximately 279,500 sq. ft. of commercial space. Commercial potable water demand is estimated to increase by 100,000 gpd (112 AFY), mainly as a result of adding restaurants. The Project will result in a net increase of approximately 71,000 sq. ft. of drought tolerant landscape areas to the mall and residential units, with an associated irrigation demand of approximately 2,000 gpd (2 AFY).

In accordance with the foregoing and the standards set forth by SB 610, this WSA concludes that the total projected water supplies available to MNWD during average, single-dry, and multiple-dry water years over the next 20 years will be sufficient to meet the projected water demands for the proposed Project, in addition to MNWD's existing and planned future uses.

1. INTRODUCTION

This section provides background information on the proposed Agora Arts District Downtown Project (Project) and the requirements of Water Code section 10910 et seq., commonly referred to as Senate Bill (SB) 610 for developing a Water Supply Assessment (WSA) by the public water supplier. This section also provides a brief overview of the Moulton Niguel Water District (MNWD), the public water supplier that will be supplying water to the proposed Project.

1.1 Agora Arts District Downtown Project

The Project proposes to develop the old Orange County courthouse site adjacent to the Laguna Niguel City Hall into a mixed use commercial and residential complex. Approximately 279,500 sq. ft. is planned for the commercial space, including space for restaurants, retail, offices and classrooms, and kiosks. The residential use will consist of 200 multi-family residential units ranging from studios to two-bedroom apartments. The Project conceptual site plan is shown on Figure 1-1.

Figure 1-1: Agora Arts District Downtown Concept Site Plan (MNWD, January 2016)

1.2 Water Supply Assessment Requirement

Effective January 1, 2002, SB 610 was signed into law, requiring the preparation of a WSA for certain types of development projects subject to CEQA review. Section 10912(a) of the Water Code defines a "project" for which a WSA must be prepared as any of the following:

1. A proposed residential development of more than 500 dwelling units.
2. A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
3. A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
4. A proposed hotel or motel, or both, having more than 500 rooms.
5. A proposed industrial, manufacturing, or processing plant or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor space (with limited exceptions for certain energy facilities until January 1, 2017).
6. A mixed-use project that includes one or more of the projects specified above.
7. 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[1].

The City of Laguna Niguel (Lead Agency) has determined that a WSA is required for this Project as it proposes the type of development that constitutes a "project" under Water Code section 10912 (above). As the Project is within MNWD's service area, the City contacted MNWD and requested the preparation of a WSA. As noted above, the WSA must address whether the total projected water supplies available to MNWD for the next 20 years during normal, single dry, and multiple dry years will be sufficient to meet the demand projected for the proposed Project in addition to MNWD's existing and planned future uses, including agricultural and manufacturing uses.

1.3 Moulton Niguel Water District

MNWD was formed on November 16, 1960, under the provisions of the California Water District Law, Division 13, Section 34000 et seq. of the California Water Code. Prior to the formation of the water district, the lands within the service area were primarily utilized for livestock grazing, with a small area devoted to citrus and field crop production limited by the lack of adequate local water supplies. MNWD was initially formed by local ranchers in order to secure a reliable water supply for their herds.

MNWD now provides water, recycled water, and wastewater service to more than 170,000 people within a 37 square mile service area covering portions of six cities in southern Orange County: Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Mission Viejo, and San Juan Capistrano.

[1] Certain other "projects" require the preparation of a WSA if the public water system has fewer than 5,000 service connections (See Water Code § 10910(b).)

All potable water served by MNWD is imported from the Metropolitan Water District of Southern California (Metropolitan) through its member agency, the Municipal Water District of Orange County (MWDOC). MNWD's recycled water supply is locally sourced and has steadily increased to account for 23 percent of the overall water supply in the service area. MNWD's water supplies and demands are described in more detail in Sections 2 and 3, respectively.

2. WATER SUPPLIES

This section describes existing water supply sources and quantifies supplies available to meet MNWD's water demands. Additionally, this section provides an overview of MNWD's potential future supply sources currently under development and quantifies the water supplies projected to be available to MNWD in the next 20 years.

2.1 Existing Water Supplies

All of MNWD's potable water supply is imported water from Metropolitan through MWDOC. Treated imported potable water comes from the Robert B. Diemer (Diemer) Filtration Plant located north of Yorba Linda. Through the 2014/15 fiscal year treated, imported water represented about 79 percent of MNWD's total water supply. The other 21 percent is (non-potable) recycled water used for landscape irrigation. MNWD is a member of the San Juan Basin Authority (SJBA); however, none of MNWD's supplies are produced from the San Juan Basin. Table 2-1 shows MNWD's historical and current water supplies and use from 1990 to 2015 (according to fiscal years July 1 to June 30.)

Table 2-1: Historic and Current Water Supplies

Water Supply Sources	Fiscal Year Ending (AFY)					
	1990	1995	2000	2005	2010	2015
MWDOC (Imported Treated, Full Service)	30,743	32,540	38,040	32,230	29,491	26,824
Recycled Water	165	1,884	5,670	6,402	6,858	7,988
Total	**30,908**	**34,424**	**43,710**	**38,632**	**36,349**	**34,812**

2.1.1 Existing Water Rights and Imported Supplies

Table 2-2 provides a summary of existing water rights and entitlements to imported supplies available to MNWD, including a future supply from the Baker Water Treatment Plant (WTP) described in Section 2.2.3. MNWD owns capacity rights to regional pipelines that convey imported water from Metropolitan's facilities to MNWD. However, capacity rights in pipelines do not guarantee supply, which is subject to availability from Metropolitan and MWDOC. Additionally, as a matter of practice, Metropolitan does not provide annual contractual entitlements or specific allotments of imported water to its member agencies such as MWDOC or to local agencies that are supplied by Metropolitan member agencies. Instead, Metropolitan uses a regional framework whereby its member agencies annually advise Metropolitan how much water they anticipate they will need during the next five years, and an ongoing process is employed by Metropolitan and its member agencies to develop a forecast of future water demands. Through a comprehensive planning process, Metropolitan calculates regional demand projections and, together with information about existing and proposed local projects and effects of conservation, determines the amount of imported and other supplies to secure to meet the demands of its member agencies. Based on this approach, Metropolitan is able to fulfill

delivery requests from its member agencies such as MWDOC, and MWDOC is able to fulfill the delivery requests from its water agency members such as MNWD.

Metropolitan's ability to ensure water supply availability and reliability to its member agencies is based in part on its Water Surplus and Drought Management Plan (WSDM). Metropolitan developed and adopted the WSDM Plan 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 Metropolitan's Regional Urban Water Management Plan (UWMP) and Integrated Regional Plan (IRP). The WSDM Plan outlines various water supply conditions and corresponding actions Metropolitan may undertake in response to moderate, serious and extreme water shortages. Under Condition 1, Metropolitan issues a Water Supply Watch and encourages local agencies to implement voluntary dry-year conservation measures and utilize regional storage reserves. Under Condition 2, Metropolitan 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, Metropolitan may implement its Water Supply Allocation Plan (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, Metropolitan member agencies do not lose their ability to receive any particular amount of imported water supplies, but instead Metropolitan places limits on the amount of water its member agencies can purchase without facing a surcharge. In turn, MWDOC has also developed a WSAP to allocate imported supplies at the retail level in Orange County. Under these WSAPs, the availability of imported water supplies is based primarily on the need for imported supplies relative to the total need for those supplies within the Metropolitan and MWDOC service areas.

In response to prolonged drought conditions, in April 2015 Metropolitan 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. Importantly, Metropolitan has confirmed that implementation of its WSAP merely involves the potential application of a surcharge to those member agencies whose deliveries of water from Metropolitan exceed their allocations, but it does not otherwise prohibit or restrict such deliveries. (Metropolitan WSAP Staff Report, pp. 3-6.)

Table 2-2 represents the highest amount of imported water that MNWD has purchased from MWDOC in the previous five years.

Table 2-2: Existing Water Rights and Supply Sources

Existing Supply	Amount (AFY)	Availability	Right	Contract	Ever Used
MWDOC [1]	29,036	X		X	Yes
Recycled Water [2]	10,951	X	X		Yes
Future Supply	**Amount (AFY)**	**Availability**	**Right**	**Contract**	**Ever Used**
Baker WTP [3]	9,400	X		X	No

[1] Based on the highest amount purchased in the previous five years (FY 2010-11 to FY 2014-15).

[2] Average wastewater flow to SOCWA JRTP and Plant 3A (two active plants) are 10.4 MGD and another 1 MGD to J.B. Latham Treatment Plant (which does not currently generate recycled water). This is equivalent to 11,658 AFY of wastewater for recycled water production assuming future production at J.B. Latham. MNWD's average flow-weighted percentage conversion from wastewater to recycled water is 94%.

[3] MNWD has capacity rights of 13 cfs (9,400 AFY) when Baker Water Treatment Plant comes online in 2016. Baker WTP is not a "new" day-to-day water supply, it merely offsets and reduces amount of purchased Metropolitan treated water from Diemer Filtration Plant. However, the potential exists for the project participants to receive and treat local surface water from Irvine Lake as a yet to be quantified new supply of source when available.

2.1.2 Imported Water Deliveries

In FY 2014-15, MNWD received 26,641 AFY of imported water from Metropolitan/MWDOC. Due to continuing drought conditions, MNWD budgeted for 25,840 AFY of imported water for FY 2015-16. Metropolitan's principal water sources originate from the Colorado River via the Colorado River Aqueduct and from Northern California through the State Water Project (SWP). For purposes of delivery to MNWD, these raw water sources are treated at the Diemer Filtration Plant located north of Yorba Linda. Typically, the Diemer Filtration Plant receives a blend of Colorado River water from Lake Mathews through Metropolitan's Lower Feeder and SWP water through the Yorba Linda Feeder.

MNWD has service connection agreements with Metropolitan's member agency, MWDOC. These agreements entitle MNWD to receive water from available Metropolitan sources via the regional transmission system located in Orange County. MWDOC delivers water from Metropolitan in the amount requested by MNWD, subject to capacity limitations of the service connections and the capacity limits of MNWD in the pipelines. The water is conveyed to MNWD through two Metropolitan-operated transmission mains, the East Orange County Feeder No.2 (EOCF #2) and the Allen-McColloch Pipeline (AMP). MNWD has two service connections to the AMP and nine service connections to the Joint Regional Water Supply System (JRWSS) which is directly supplied from the EOCF #2.

Although pipeline capacity rights do not guarantee the availability of water, pipeline capacity does provide the ability to convey water when it is available from Metropolitan sources to the MNWD system and, therefore, demonstrates not only water supply reliability, but also physical delivery system reliability. All imported water supplies assumed in this document are available to MNWD from existing infrastructure.

Allen-McColloch Pipeline and *South County Pipeline* – The AMP is primary major supply line of imported water from the Diemer Filtration Plant with a terminus in the northern section of Mission Viejo. Metropolitan owns and operates the AMP. MNWD's AMP capacity ownership, expressed as rate of flow, is 35.1 cubic feet per second (cfs) or 25,430 acre-feet per year. The Agreement for Sale and Purchase of Allen-McColloch Pipeline (Metropolitan Agreement No. 4623) among Metropolitan, MWDOC, MWDOC Water Facilities

Corporation and certain other identified participants, including MNWD, dated July 1, 1994 (the AMP Sale Agreement) requires Metropolitan, among other things, to meet MNWD's requests for water deliveries (subject to the availability of water from Metropolitan). The AMP Sale Agreement further requires Metropolitan to augment/increase capacity necessary to meet MNWD projected ultimate service area water demands and other undeveloped lands within MNWD. The South County Pipeline (SCP) conveys water from the AMP to MNWD, Santa Margarita Water District, South Coast Water District (SCWD), City of San Juan Capistrano, and City of San Clemente. MNWD obtains flow from the SCP at MNWD's takeout (SC-2) and delivers flow to Laguna Hills, Mission Viejo, Laguna Niguel, and Aliso Viejo via the Central Intertie Pipeline (CIP).

East Orange County Feeder No. 2, Joint Transmission Main, and Eastern Transmission Main – The EOCF #2 is a pipeline jointly owned by several local agencies (City of Anaheim, City of Santa Ana, and MWDOC) and Metropolitan, which operates it. The Joint Transmission Main (JTM) conveys imported water from the EOCF #2 to south Orange County. The JTM is jointly owned by MNWD, Irvine Ranch Water District (IRWD), El Toro Water District (ETWD), City of San Juan Capistrano, City of San Clemente, and SCWD. The JTM is operated under a contract by SCWD. Originally, MNWD had 45 cfs capacity in the JTM and EOCF #2 but later transferred 2 cfs capacity to ETWD with the de-annexation of Improvement District No. 1 in 1985. MNWD currently has 43 cfs, or 31,150 acre-feet per year of capacity rights in the Joint Regional Water Supply System (JRWSS). MNWD owns 10 cfs (7,244 AFY) of capacity in the Eastern Transmission Main (ETM) which begins as a branch off the JTM near Moulton Parkway and Laguna Hills Drive.

2.1.3 Recycled Water

In 1984, MNWD constructed a 0.6 MGD Advanced Wastewater Treatment Plant (AWT) at the Aliso Water Management Agency (AWMA) plant in Laguna Niguel, currently known as the SOCWA Joint Regional Wastewater Treatment Plant (JRTP). This tertiary treatment facility originally produced approximately 350 AFY of water for irrigation at the El Niguel Country Club in Laguna Niguel. In 1989, the AWT facility was expanded from 0.6 to 2.4 MGD of tertiary treatment capacity to service the El Niguel Country Club, Crown Valley Community Park, Laguna Niguel Regional Park, and several greenbelt areas within the City of Laguna Niguel. In 1996, MNWD constructed a second AWT at the JRTP with a capacity of 9 MGD along with an underground recycled water storage tank.

In 1991, MNWD constructed a 2.4 MGD AWT facility at Plant 3A to provide recycled water for irrigation use. This expanded MNWD's recycled water supply capacity to provide maximum-month demands for its recycled water distribution system. This system serves two separate hydrologic areas (HA): Laguna HA 1.1 (including the Laguna Niguel, Aliso Viejo, and Dana Point hydrologic sub-areas), and Mission Viejo HA 1.2.

The recycled water distribution system is able to serve recycled water from three water reclamation plants, including, MNWD Plant 3A, the JRTP, and the SCWD Water Recycling Plant (WRP at the SOCWA Coastal Wastewater Treatment Plant), which is interconnected to the MNWD distribution system via a storage reservoir.

MNWD currently has 13.8 MGD of tertiary treatment capacity in compliance with Title 22 Recycled Water requirements. MNWD also has 1,000 AF of seasonal storage for its recycled water distribution system. MNWD has 11.4 MGD (12,780 AFY) capacity in the JRTP and 2.4 MGD (2,690 AFY) in Plant 3A.

In FY 2014-15, MNWD's tertiary-treated recycled water supplies included 854 AFY from Plant 3A and 7,203 AFY from the JRTP.

2.2 Projected Future Supplies

While imported water from Metropolitan will continue to meet the majority of MNWD's demands over the next 20 years, MNWD's supply portfolio is changing in a way that will reduce reliance on imported supplies and increase the use of local recycled supplies through planned expansion of MNWD's recycled water distribution system. In addition, the Baker WTP, a partnership among several local retail water agencies, will further reduce MNWD's dependence on treated imported water from the Metropolitan Diemer Filtration Plant and provides the project participants the potential to receive and treat local surface water from Irvine Lake[2] as that supply becomes when available. MNWD will have an expected delivery of 9,400 AFY from the Baker WTP. Construction of the Baker WTP began in February 2014 and the plant is anticipated to be on line in late 2016.

MNWD's projected water supplies from 2015 to 2040 are summarized in Table 2-3.

Table 2-3: Projected Water Supply Sources

Water Supply Sources [1]	Fiscal Year Ending (AFY)					
	2015 [3]	2020	2025	2030	2035	2040
MWDOC (Imported Treated, Full Service)	26,824	21,094	24,283	24,964	25,375	25,375
Baker WTP (Imported Untreated, Full Service) [2]	-	9,400	9,400	9,400	9,400	9,400
Recycled Water Available	7,988	10,435	10,495	10,574	10,616	10,616
Total	**34,812**	**40,929**	**44,178**	**44,938**	**45,391**	**45,391**

[1] 2020 to 2040 total supply projections are from MNWD's 2015 UWMP Table 6-9.

[2] Baker WTP supply will offset and reduce purchased Metropolitan treated water from Diemer Filtration Plant.

[3] Actual data for FY 2014-15

2.2.1 Imported Water

Metropolitan's draft 2015 UWMP reports on its water supply availability and reliability and identifies projected supplies to meet the long-term demand within its service area. The 2015 UWMP, which is incorporated herein by reference, provides comprehensive information and analyses regarding Metropolitan's supply capacities from 2020 through 2040 under the three hydrologic conditions specified in the UWMP Act: average year, single dry-year, and multiple dry-years.

Colorado River Aqueduct (CRA) supplies include supplies that would result from existing and committed programs and from implementation of the Quantification Settlement Agreement (QSA) and related

[2] Irvine Lake is supplied with untreated water from Metropolitan and local surface runoff.

agreements to transfer water from agricultural agencies to urban uses. Colorado River transactions are potentially available to supply additional water up to the CRA capacity of 1.25 million acre-feet (AF) on an as-needed basis.

Metropolitan's SWP supplies have been impacted by the ongoing restrictions on SWP operations in accordance with the biological opinions of the U.S. Fish and Wildlife Service and National Marine Fisheries Service issued on December 15, 2008 and June 4, 2009, respectively. The Drought Operations Plan prepared on April 8, 2014 lays out the proposed operations and conditions of the SWP during multiple dry years to maximize regulatory flexibility while remaining within the boundaries of existing law and regulations (U.S. Bureau of Reclamation, April 2014). In dry, below-normal conditions, Metropolitan has increased the supplies received from the California Aqueduct by developing flexible Central Valley/SWP water storage and transfer programs. The goal of the storage/transfer programs is to develop additional dry-year supplies that can be conveyed with available storage and pumping capacity to maintain deliveries through the California Aqueduct during dry hydrologic conditions and regulatory restrictions.

State and federal resource agencies and various environmental and water user entities are currently engaged in developing the Bay Delta Conservation Plan (BDCP)/California WaterFix, aimed at addressing Delta ecosystem restoration, water supply conveyance, and flood control protection and storage development.

Storage is a major component of Metropolitan's dry year resource management strategy. Metropolitan's likelihood of having adequate supply capability to meet projected demands, without implementing its WSAP, is dependent on its storage resources. In developing the supply capabilities for the 2015 UWMP, Metropolitan assumed a simulated median storage level going into each of five-year increments based on the balances of supplies and demands.

Metropolitan evaluated supply reliability by projecting supply and demand conditions for the single- and multi-year drought cases based on conditions affecting the SWP (Metropolitan's largest and most variable supply). For this supply source, the single driest-year was 1977 and the three-year dry period was 1990-1992[3]. Metropolitan's analyses are illustrated in Table 2-4, Table 2-5, and Table 2-6, which correspond to Metropolitan's 2015 UWMP's Tables 2-6, 2-4 and 2-5, respectively. These tables show that the region can provide reliable water supplies not only under normal conditions but also under both the single driest year and the multiple dry-year hydrologies for the 20-year horizon and beyond.

[3] This analysis is based on Metropolitan's Draft 2015 UWMP (March 2016).

Table 2-4: Metropolitan Average Year Projected Supply Capability and Demands for 2015 to 2035

(Metropolitan, March 2016)

Average Year

Supply Capability[1] 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]	1,760,000	1,781,000	1,873,000	1,899,000	1,899,000
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	**3,653,000**	**3,755,000**	**3,925,000**	**4,055,000**	**4,091,000**
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 Deliveries[5]	**1,860,000**	**1,918,000**	**1,959,000**	**2,008,000**	**2,047,000**
Surplus	**1,793,000**	**1,837,000**	**1,966,000**	**2,047,000**	**2,044,000**
Programs Under Development					
In-Region Supplies and Programs	43,000	80,000	118,000	160,000	200,000
California Aqueduct	20,000	20,000	225,000	225,000	225,000
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**	**343,000**	**385,000**	**425,000**
Potential Surplus	**1,856,000**	**1,937,000**	**2,309,000**	**2,432,000**	**2,469,000**

[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 deliveries 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 2-5: Metropolitan Single Dry Year Projected Supply Capability and Demands for 2015 to 2035

(Metropolitan, March 2016)

Single Dry-Year
Supply Capability[1] 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]	644,000	665,000	692,000	718,000	718,000
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	**2,537,000**	**2,639,000**	**2,744,000**	**2,874,000**	**2,910,000**
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 Deliveries[5]	**2,005,000**	**2,066,000**	**2,108,000**	**2,160,000**	**2,201,000**
Surplus	**532,000**	**573,000**	**636,000**	**714,000**	**709,000**
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	**595,000**	**673,000**	**952,000**	**1,072,000**	**1,107,000**

[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 deliveries 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: Metropolitan Multiple Dry Year Projected Supply Capability and Demands for 2015 to 2035

(Metropolitan, March 2016)

Multiple Dry-Year

Supply Capability[1] 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]	712,000	730,000	743,000	752,000	752,000
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	**2,151,000**	**2,202,000**	**2,246,000**	**2,298,000**	**2,316,000**
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 Deliveries[5]	**2,001,000**	**2,118,000**	**2,171,000**	**2,216,000**	**2,258,000**
Surplus	**150,000**	**84,000**	**75,000**	**82,000**	**58,000**
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	**193,000**	**164,000**	**279,000**	**327,000**	**344,000**

[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 deliveries 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.

2.2.2 Recycled Water

MNWD's demands for recycled water continue to increase as new services are connected to the recycled water system. MNWD has identified recycled water as its most cost effective water supply source. Recycled water represents 23% of MNWD's supply. With the planned expansion of MNWD's recycled water distribution system, recycled water will increase to about 28% of the supply by 2035.

MNWD's recycled water system currently provides irrigation supply to 1,289 meters. MNWD also has 1,326 dedicated potable irrigation meters that present an opportunity for conversion to recycled water supply. MNWD is in the process of developing a Recycled Water Master Plan to evaluate existing recycled water demands and provide a projection of ultimate recycled water demands; identify potential non-irrigation customers; assess seasonal and operational storage needs; and evaluate opportunities for MNWD to exchange recycled water supply and production with neighboring agencies. The Recycled Water Master Plan is scheduled to be completed in mid-2016.

2.2.3 Baker Water Treatment Plant

The Baker WTP will be a new 28.1 MGD plant at the existing IRWD Baker Filtration Plant site in the City of Lake Forest. The Baker WTP will treat raw imported water from Metropolitan and local surface water supplies potentially available from Irvine Lake. Given that the project is intended primarily to increase the capacity to treat imported raw water from Metropolitan, it does not create a day-to-day new supply but will provide increased water supply reliability to southern Orange County by providing locally treated water to customers of IRWD, ETWD, MNWD, SMWD and Trabuco Canyon Water District (TCWD). The Baker WTP will also minimize water supply impacts in the event of emergency conditions or scheduled maintenance on the Metropolitan delivery system such as the Diemer Filtration Plant, Lower Feeder Pipeline or AMP. Additionally, the potential exists for the project participants to treat and receive local surface water from Irvine Lake, which is supplied by untreated water from Metropolitan and local surface runoff. The quantity of potential local supply from Irvine Lake has not been determined at this time. The Baker WTP construction is expected to be completed in late 2016. MNWD has a capacity right of approximately 8.4MGD (9,400 AFY) from the Baker WTP.

3. WATER DEMANDS

This section provides an overview of MNWD's current and projected population and climate conditions which are the main drivers affecting existing and projected water demands. This section also presents the water demand projected for the Agora Arts District Downtown project.

3.1 MNWD Service Area

MNWD provides water to a population of approximately 170,000 customers throughout its 37 square mile service area. The MNWD service area is almost entirely developed encompassing most or parts of six cities in southern Orange County: Aliso Viejo, Dana Point, Laguna Hills, Laguna Niguel, Mission Viejo, and San Juan Capistrano.

The MNWD service area varies in elevation between 140 feet above sea level at its lowest point to 930 feet at its highest. Interstate 5 bisects MNWD's service area from north to south, with the higher elevations located on the west side. MNWD is bordered by ETWD to the north, Laguna Beach County Water to the west, SCWD to the south and west, San Juan Capistrano to the south and east, and SMWD to the east.

3.1.1 Population

As noted above, MNWD's current population estimate is approximately 2.3 percent lower than what was projected in MNWD's 2010 UWMP. While growth in MNWD's service area has slowed since the 2010 UWMP, the difference in projections is the result of 2010 population calculations which incorporate updated United States Census Bureau data. The service area population estimate was calculated by The Center for Demographic Research (CDR) at California State University Fullerton based on California Department of Finance data for its estimates and projections. MNWD's service area population has increased from 164,409 in 2010 to approximately 170,326 in 2015, a 3.6 percent increase.

The 2015 to 2040 projections shown in Table 3-1 are based on the 2010 census. It is expected that the growth within MNWD service area will slow to approximately 1.5 percent from 2015 to 2020, with less than one percent growth every five years through 2040.

Table 3-1: Current and Projected Service Area Population

	2015	2020	2025	2030	2035	2040
Population*	170,326	172,876	174,115	175,512	176,539	177,425

* Center for Demographic Research (CDR) at California State University, Fullerton (2012). 2015 population is current and the remaining years are projected.

3.1.2 Climate Conditions

The MNWD service area encompasses portions of south Orange County located in an area known as the South Coast Air Basin (SCAB). The SCAB climate is characterized by a "Mediterranean" climate: a semi-arid environment with mild winters, warm summers and moderate rainfall. Table 3-2 shows recent (2007-2015) climate data for the MNWD service area. The service area's average temperature ranges from 54.2°F in

December to 74.5°F in August, with an annual average of 63.0°F. The average annual rainfall is 8.41 inches and the average evapotranspiration (ET_0) is 51.79 inches, which is over six times the annual average rainfall. This translates to a high demand for landscape irrigation for homes, commercial properties, parks, and golf courses. Moreover, a region with low rainfall like Southern California is also more prone to drought conditions.

Table 3-2: Average Climate Conditions (2007-2015)*

Month	Standard Monthly Average ET_0 (inches)	Annual Rainfall (inches)	Monthly Average Temperature (°F)
January	2.60	0.91	56.7
February	2.62	1.53	55.1
March	4.06	0.69	58.0
April	4.94	0.46	60.1
May	5.57	0.33	63.1
June	5.86	0.01	66.3
July	6.29	0.08	70.1
August	6.35	0.00	74.5
September	4.99	0.36	70.7
October	3.83	0.63	66.2
November	2.71	0.91	60.4
December	1.98	2.48	54.2
Annual	**51.79**	**8.41**	**63.0**

*CIMIS Station #75

3.2 Existing Water Demands

MNWD maintains approximately 55,000 customer connections to its potable water distribution system. All connections in the service area are metered. Approximately 70 percent of MNWD's water demand is residential. Commercial/institutional and dedicated landscape sectors represent the remaining 30 percent of MNWD's water demand. Approximately 50 percent of dedicated irrigation meters are served with recycled water but about two-thirds of all dedicated irrigation water use is met with recycled water. The largest irrigation sites were first targeted for recycled water conversion due to the economy of scale in meeting larger water consumers' demands.

Table 3-3 summarizes MNWD's existing water demand for FY 2014-15.

Table 3-3: Current Water Demand (FY 2014-15)

Water Supply Sources	Fiscal Year 2014-15 (AFY)
Potable Water	26,824
Recycled Water	7,988
Total	**34,812**

3.3 Projected Water Demands

MNWD's most recently adopted 2010 UWMP did not specifically include the projected demands associated with the Agora Arts District Downtown Project. However, since the adoption of the 2010 UWMP, MNWD has more recently (in 2015) developed new water demand projections for its service area including water demands associated with the Project. Net water demands of the proposed Project are detailed below.

3.3.1 Projected Water Demands including Agora Arts District Downtown Project

Table 3-4 presents the 20-year projected water demand for MNWD with demands from the Agora Arts District Downtown Project.

Table 3-4: Projected Water Demands with Agora Arts District Downtown Project Demand

Water Supply Sources	Fiscal Year Ending (AFY)					
	2015*	2020	2025	2030	2035	2040
Potable Water	26,824	27,817	25,688	25,164	25,183	25,250
Recycled Water	7,988	8,111	10,010	9,998	9,986	9,975
Total	**34,812**	**35,928**	**35,698**	**35,162**	**35,169**	**35,225**

*Actual demand for FY 2014-2015

3.3.2 Projected Water Demands from Agora Arts District Downtown Project

As described above, the proposed Project includes new residential units and the redevelopment of the old Orange County Courthouse site and is accompanied by a net increase in water demand for MNWD's residential, commercial, and landscape irrigation customer sectors. The Project will add 200 multi-family residential units comprising a mixture of studios, one-, and two-bedroom apartments. These residential units will generate approximately 24,000 gallons per day (gpd) or 27 AFY of potable (indoor) water demands (Table 3-5). Commercial potable (indoor) water demand is estimated to increase by 100,000 gpd (112 AFY), mainly as a result of the planned restaurant space (Table 3-6). The Project will also result in an increase of approximately 71,000 sq. ft. in landscaped areas to the mall and residential areas, with an associated irrigation demand of approximately 2,000 gpd (2 AFY) (Table 3-7). Detailed description of the demand projection methodology and assumptions are shown in Appendix A.

Table 3-5: Agora Arts District Downtown Project's Residential Water Demands Projection

Use Category	Dwelling Units (DU)	Water Demand Factor* (gpd/DU)	Potable Water Demand (gpd)
Studio	50	120	6,000
One bedroom	100	120	12,000
Two bedroom	50	120	6,000
Residential	**200**	**120**	**24,000**

*Demand factor is based on MNWD's assumption of 60 GPCD and two people per apartment.

Table 3-6: Agora Arts District Downtown Project's Commercial Water Demands Projection

Use Category	Sewer Generation Factor (gpd/ksf)	Water Demand Factor* (gpd/DU)	Estimated Footprint (sq. ft.)	Potable Water Demand (gpd)
Restaurant	1,000	1,053	73,658	77,535
Retail	80	84	106,450	8,964
Health Club	80	842	9,625	8,105
Offices/Classrooms	--	57	85,267	4,894
Kiosks	--	57	4,500	258
Total Commercial		**357**	**279,500**	**99,756**

*Sewer generation is assumed to be 95% of water demand per the City of Los Angeles Amalgamated System Sewage Generation Factors.

Table 3-7: Agora Arts District Downtown Project's Landscape Water Demands Projection

Use Category	Water Use Factor (gpd/ksf)	Estimated Footprint (sq. ft.)	Recycled Water Demand (gpd)
Drought Tolerant Landscape	27	70,800	1,923
Total Landscape	**27**	**70,800**	**1,923**

Table 3-8 summarizes the 20-year estimated water demands for the proposed Project. The Project is planned to be phased, with approximately 50 percent of the total water usage expected to start in January 2019 and the full water usage by the end of 2019.

Table 3-8: Agora Arts District Downtown Project's Total Water Demands Projection

Demand by Sector	Fiscal Year Ending (AFY)					
	2015	2020	2025	2030	2035	2040
Commercial (indoor)	56	112	112	112	112	112
Residential (indoor)	13	27	27	27	27	27
Dedicated Landscape	1.1	2.2	2.2	2.2	2.2	2.2
Total Agora Arts District Downtown Project	**71**	**141**	**141**	**141**	**141**	**141**

4 SUPPLY AND DEMAND COMPARISON

This section compares water supply and demand projections to determine whether the total projected supplies available to MNWD will be sufficient to meet the projected demands associated with the proposed Project in addition to MNWD's other existing and planned future uses. Metropolitan's Draft 2015 UWMP affirms that the agency can meet 100% of the supply needs of its member agencies through 2040; as a result, MWDOC concludes in its Draft 2015 UWMP that it will be able to meet full service demands of its retail agencies under average, single-dry, and multiple-dry year conditions over the same period with 100% reliability. The assessment is done for the years 2015 to 2040 in five-year increments. The supply-demand analyses include the assessment of average-year, single dry-year, and multiple dry-year hydrologic scenarios.

4.1 Average Year

The average year represents average hydrologic conditions. The total demand presented in Table 4-1 represents the sum of MNWD's existing demand projections and the demand projections for the Project (which imposes a 141 AFY net increase in potable water, 2 AFY of which are dedicated irrigation demand).

As discussed above, MNWD has rights to receive imported water from Metropolitan, through MWDOC, via the regional distribution system. All imported water supplies identified in this section are available to MNWD from existing water transmission facilities. Table 4-1 shows supply and demand projections under normal year conditions. Additional water supplies are projected to be available from Metropolitan, but are not included here since Metropolitan's projected availability of imported supplies meet or exceed total projected demands for Metropolitan supplies.

Table 4-1: Projected Average Year Supply and Demand, Including Agora Arts District Downtown Demands

	Fiscal Year Ending (AFY)					
	2015*	2020	2025	2030	2035	2040
Total Demand	**34,813**	**35,915**	**35,701**	**35,158**	**35,154**	**35,225**
Potable Water	26,824	27,805	25,691	25,160	25,167	25,250
Recycled Water	7,989	8,111	10,010	9,998	9,986	9,975
Total Supply	**34,813**	**35,915**	**35,701**	**35,158**	**35,154**	**35,225**
Potable Water	26,824	27,805	25,691	25,160	25,167	25,250
Recycled Water	7,989	8,111	10,010	9,998	9,986	9,975

*Actual demand/supply for FY2014-15

4.2 Single Dry Year

The impacts of single dry-year conditions on water demands in this WSA were determined by the same methodology provided by MWDOC employed in MNWD's 2010 UWMP (and the 2015 UWMP in preparation).

The single dry-year condition increases the demand from the average condition. The increase can be expressed as a percent "bump" up from the normal level. The methodology focused on per-capita usage because it removes the influence of growth from the analysis. To determine the "bump factor", MNWD's per-capita usage from FY 2005-2006 through FY 2014-2015 were used. The single dry bump factor was derived using the highest per-capita usage in the analysis period, divided by average per-capita usage for that period. MNWD's single dry bump factor is 9 percent using FY 2013-14 as the single dry-year.

Table 4-2 provides supply and demand projections for a single dry water year. As indicated above, additional supplies would be available from Metropolitan, but are not included here because Metropolitan's total projected availability of imported supplies during single dry-year periods meet or exceed total projected demands for those supplies as illustrated in Metropolitan's 2015 UWMP.

Table 4-2: Projected Single Dry-Year Supply and Demand

	Fiscal Year Ending (AFY)					
	2015*	2020	2025	2030	2035	2040
Total Demand	**34,813**	**39,147**	**38,914**	**38,322**	**38,318**	**38,396**
Potable Water	26,824	31,037	28,904	28,324	28,331	28,421
Recycled Water	7,989	8,111	10,010	9,998	9,986	9,975
Total Supply	**34,813**	**39,147**	**38,914**	**38,322**	**38,318**	**38,396**
Potable Water	26,824	31,037	28,904	28,324	28,331	28,421
Recycled Water	7,989	8,111	10,010	9,998	9,986	9,975

*Actual demand/supply for FY2014-15

4.3 Multiple Dry Years

The impacts of multiple dry-year conditions on water demands in this WSA were determined by the same methodology provided by MWDOC, and as employed by MNWD in its 2010 and 2015 UWMPs (2015 UWMP in preparation). The multiple dry-year condition increases the demand from the average condition and maintains this elevated demand for three years in a row. MWDOC determined that MNWD's multiple year bump factor was 9 percent. MWDOC determined in its 2015 UWMP projections (based on Metropolitan's 2015 UWMP) that it will be capable of providing its customers all their demands for the multiple dry-year condition from 2015 through 2035. Table 4-3 shows supply and demand projections under multiple dry-year conditions.

Table 4-3: Projected Multiple Dry-Years Supply and Demand

		Fiscal Year Ending (AFY)					
		2015*	2020	2025	2030	2035	2040
First Year Supply	**Total Demand**	**34,813**	**39,147**	**38,914**	**38,322**	**38,318**	**38,396**
	Potable Water	26,824	31,037	28,904	28,324	28,331	28,421
	Recycled Water	7,989	8,111	10,010	9,998	9,986	9,975
	Total Supply	34,813	39,147	38,914	38,322	38,318	38,396
Second Year Supply	**Total Demand**	**34,813**	**39,147**	**38,914**	**38,322**	**38,318**	**38,396**
	Potable Water	26,824	31,037	28,904	28,324	28,331	28,421
	Recycled Water	7,989	8,111	10,010	9,998	9,986	9,975
	Total Supply	34,813	39,147	38,914	38,322	38,318	38,396
Third Year Supply	**Total Demand**	**34,813**	**39,147**	**38,914**	**38,322**	**38,318**	**38,396**
	Potable Water	26,824	31,037	28,904	28,324	28,331	28,421
	Recycled Water	7,989	8,111	10,010	9,998	9,986	9,975
	Total Supply	34,813	39,147	38,914	38,322	38,318	38,396

*Actual demand/supply for FY2014-15

4.4 Conclusions

In accordance with the foregoing information and analyses, and the standards set forth by Water Code section 10910 et seq., this WSA concludes that the total projected water supplies available to MNWD during average, single-dry, and multiple-dry water years over the next 20-year period will be sufficient to meet the projected water demands associated with the proposed project, in addition to MNWD's existing and planned future uses, including agricultural and manufacturing uses.

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 MNWD to provide service to its existing customers or to any future potential customers (Water Code §10914). Nor does anything in this WSA prevent or otherwise interfere with MNWD's discretionary authority to declare a water shortage emergency in accordance with Water Code section 350 et seq. and/or to take any and all related or other actions authorized by law.

Based on Metropolitan's Draft 2015 UWMP supply projections, MWDOC concludes in its Draft 2015 UWMP that it will be able to meet full service demands of its retail agencies under average, single-dry, and multiple-dry year conditions with 100% reliability.

REFERENCES

Center for Demographic Research (CDR) at California State University, Fullerton. 2012.

California Irrigation Management Information System (CIMIS) *Station #75 Irvine, California* <http://www.cimis.water.ca.gov/>

Malcolm Pirnie/ARCADIS. *Moulton Niguel Water District: 2010 Urban Water Management Plan.* June 2011.

Malcolm Pirnie/ARCADIS. *Municipal Water District of Orange County: 2010 Regional Urban Water Management Plan*. June 2011.

ARCADIS. *Municipal Water District of Orange County: Draft 2015 Urban Water Management Plan*. March 2016.

Metropolitan Water District of Southern California. *Draft 2015 Urban Water Management Plan.* March 2016.

Moulton Niguel Water District. *Draft 2015 Urban Water Management Plan.* March 2016.

Moulton Niguel Water District. *Request for Proposals: Water Supply Analysis- City of Laguna Niguel Agora Concept Project*. January 2016.

Municipal Water District of Orange County. *Draft 2015 Urban Water Management Plan.* March 2016.

PSOMAS. *Feasibility of Alternative Seawater Intakes for the Huntington Beach Seawater Desalination Project.* May 2007.

U.S. Bureau of Reclamation, California Department of Water Resources, U.S. Fish and Wildlife Service, National Marine Fisheries Service, California Department of Fish and Wildlife, State Water Resources Control Board. *Central Valley Project and State Water Project: Drought Operations Plan and Operational Forecast.* April 8, 2014

Western Regional Climate Center (WRCC) *Santa Ana Fire Station, California (047888)* <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7888>

APPENDIX A. DEMAND PROJECTION TECHNICAL MEMORANDUM

Agora Arts District Downtown Project Water Supply Assessment:

Draft Demand Projection Technical Memorandum

BACKGROUND

The Agora Arts District Downtown Project (Project) proposes to develop the old Orange County courthouse site adjacent to the Laguna Niguel City Hall into a mixed use commercial and residential complex. Approximately 279,500 sq. ft. is planned for the commercial space, including space for restaurants, retail, offices and classrooms, and kiosks. The residential use will consist of 200 multi-family residential units ranging from studios to two-bedroom apartments. The combined commercial and residential development's scale meets the definition of a "project" as defined by California Water Code Section 10912 and is subject to Senate Bill (SB) 610 requirements, codified in Section 10910 requiring the water supplier of the project to prepare a Water Supply Assessment (WSA). A WSA determines whether the projected water demand associated with the proposed project was included in the water supplier's most recent Urban Water Management Plan (UWMP) and ultimately determines if there is sufficient available supply to meet the projected project's demand in addition to existing and planned future uses for a 20-year horizon. This Technical Memorandum (TM) describes the approach and assumptions used to develop the demand projections for the Project, which will be incorporated into the WSA.

A review of Moulton Niguel Water District's (MNWD) 2010 UWMP implied that water demands from the Project were not included, thus the WSA (using the results of this TM) will determine if there is sufficient supply to meet the Project's needs.

OBJECTIVES

The goal of this TM is to estimate the water demand associated with the Project. Two specific objectives are described below:

- Determine appropriate water demand factors by use category.
- Determine net new water demand associated with the Project in terms of potable and recycled demand.

DEMAND PROJECTION APPROACH

The approach taken to develop the demand projection included the following:

- Identified water use categories (e.g. residential, commercial, landscape) and their associated footprints or quantities (dwelling units).
- Identified documents and data sources that provided water demand factors and sewer demand factors for each of the water use categories identified.
- Conducted a literature and data review to determine appropriate water demand factors that most represent the Project water use categories.

LITERATURE AND DATA REVIEW

This section describes the documents and data reviewed while determining the appropriate water demand factors to use.

MNWD's Planning Factors. MNWD has previously used certain factors for planning purposes, although some were considered to be older and possibly outdated. The factors considered are listed below:

- *Residential – Multifamily (165 gpd/dwelling unit (DU); based on 2013 data)*
- *Residential – Multifamily (315 gpd/DU; based on older data)*
- *Offices and Classrooms (57 gpd/ksf)*

MNWD's Budget-Based Rates. MNWD's rates assume apartments consume 60 gallons per capita per day (gpcd) and have two residents, resulting in 120 gpcd per apartment.

MNWD Gateway WSA (2011). MNWD adopted this plan in 2011, which documents the demands driven by a project with some similarities to the Agora Arts District Downtown Project. However, conservation measures may not be fully captured in this plan due to the time period captured. The factors considered from this WSA are listed below:

- *Retail (195 gpd/ksf)*
- *Office (60 gpd/ksf)*
- *Residential – (123 gpd/DU)*

Draft 2015 Municipal Water District of Orange County (MWDOC) UWMP. This document provided the bump factors (used to estimate dry-year demands from average year demands) specific to MNWD used to calculate single and multiple dry-year demand:

- *Single Dry-Year (+20.0%)*
- *Multiple Dry-Year (+14.5%)*

Southern California Association of Governments (SCAG) 2012 – 2035 Regional Transportation Plan/Sustainable Communities Strategy. Data published as a part of this plan showed that the City of Laguna Niguel averages 2.5 people per dwelling (regardless of the number of rooms). This supports MNWD's presumption of two people per apartment, as the City has many larger single-family homes rather than apartments.

Draft Environmental Impact Report (EIR) for the Project. The draft EIR does not address the Project's water demand per the Project's EIR consultant.

El Toro Water District Five Lagunas WSA (2015). El Toro Water District (ETWD) is a neighboring agency with similar climate and demographics, and thus is expected to experience similar water demand. The Five Lagunas project was also of similar nature, with multi-family housing and mixed use commercial space planned. All of the potable water demand factors for this project were estimated from sewer demand factors (discussed further later in this section), and are listed below:

- *Restaurant (1,053 gpd/ksf)*
- *Retail (84 gpd/ksf)*
- *Health Club (842 gpd/ksf)*
- *Residential – Studio (84 gpd/DU)*
- *Residential – 1 Bedrooms (126 gpd/DU)*
- *Residential – 2 Bedrooms (160 gpd/DU)*

City of Los Angeles Amalgamated System Sewage Generation Factors. This document was referenced in the ETWD and provided the estimated relationship between indoor potable demand and sewer demand (Sewer demand = 95% indoor potable demand).

ASSUMPTIONS

This section details the assumptions that were made in order to estimate the Project demands. Table 1 and Table 2 describe how the demand factors and the quantities (dwelling units and footprints) were developed, respectively. Additional assumptions are listed below:

- Existing demands at the project site, (the Orange County Public Library) will remain unchanged (i.e. will not be affected) by the new development.
- The current build out schedule for the project is as follows:
    - Construction planned to start in January 2018 and last two years
    - 50% of water usage is expected to start in January 2019 (commercial)
    - 100% of water usage is expected at the end of 2019.
- Some commercial water use factors were based on sewer generation factors with the assumption that sewer demands were 95 percent of indoor potable water demands per the City of Los Angeles Amalgamated Sewage Generation Factors.
- All water demand except for landscape irrigation is assumed to be potable. Landscape irrigation is assumed to be recycled water demand.
- Increase in demand for single and multiple dry years are obtained based on applying bump factors used for MNWD in the MWDOC 2015 UWMP.
    - Single dry- year: 20 percent increase
    - Multiple dry-years: 14.5 percent increase

- Water demands developed in this TM were originally intended to be compared to a demands estimated by the developer or in the Project's Environmental Impact Report (EIR). No such estimate was available, thus the demands developed herein have not been compared against another analysis for this project.

Table 1. Water Demand Factors

Category	Demand Factor (unit)	Rationale
Potable Water – Commercial		
Restaurant	1,053 (gpd/ksf)	Estimated from ETWD's Five Lagunas WSA's sewer demand factor.
Retail	84 (gpd/ksf)	Estimated from ETWD's Five Lagunas WSA's sewer demand factor.
Health Club	842 (gpd/ksf)	Estimated from ETWD's Five Lagunas WSA's sewer demand factor.
Offices/Classrooms	57 (gpd/ksf)	MNWD's typical office planning factor.
Kiosks	57 (gpd/ksf)	MNWD's typical commercial planning factor.
Potable Water – Residential		
Studios	120 (gpd/DU)	Calculated from MNWD's budget based rates assuming 60 gpcd and two residents per DU.
1 Bedrooms	120 (gpd/DU)	Calculated from MNWD's budget based rates assuming 60 gpcd and two residents per DU.
2 Bedrooms	120 (gpd/DU)	Calculated from MNWD's budget based rates assuming 60 gpcd and two residents per DU.
Potable Water – Water Features		
Pools and Fountains	129 (gpd/ksf)	Average annual pan evaporation rate from Riverside (http://www.wrcc.dri.edu/htmlfiles/westevap.final.html#CALIFORNIA); this location is likely to have higher evaporation, thus this number represents a conservative estimate.
Recycled Water – Dedicated Landscape		
Irrigation	27 (gpd/ksf)	Estimated from the California Department of Water Resources (DWR) calculator using a plant factor of 0.3 and drip irrigation. Developer stated drought tolerant plants with drip irrigation will be utilized.

Table 2. Quantities (Dwelling Units and Footprints)

Category	Quantity (unit)	Rationale
Commercial		
Restaurant	73,658 (sqft)	Estimate provided by developer.
Retail	106,450 (sqft)	Estimate provided by developer.
Health Club	9,625 (sqft)	Estimate provided by developer.
Offices and Classrooms	85,267 (sqft)	Estimate provided by developer.
Kiosks	4,500 (sqft)	Estimate provided by developer.
Residential		
Studios	50 (DU)	Estimate provided by developer.
1 Bedrooms	100 (DU)	Estimate provided by developer.
2 Bedrooms	50 (DU)	Estimate provided by developer.
Water Features		
Swimming Pool	462 (sqft)	Estimate provided by developer: 1 swimming pool with surface dimensions of 14' x 33'
Reflecting Pool	250 (sqft)	Estimate provided by developer: 1 reflecting pool with surface dimensions of 5' x 50'
Courtyard Fountains	231 (sqft)	Estimate provided by developer: 7 courtyard fountains with surface area of 33 sqft
Small Fountains	98 (sqft)	Estimate provided by developer: 14 small fountains with surface area of 7 sqft
Recycled Water – Dedicated Landscape		
Irrigation	70,800 (sqft)	Estimate provided by developer.

PROJECTED WATER DEMANDS

Average Year

Average year water demands estimated from the project are presented in Table 3; total water demands are estimated to be 141 AFY. The total recycled water demand is anticipated to be negligible (1.5% of overall demand) due in part to the use of native drought tolerant plants and drip irrigation. Potable water demand is estimated to be 139 AFY, which is primarily driven by restaurant use (63%) and the residential units (19%).

Table 3. Average Year Water Demand Projection

COMMERCIAL	Sqft	Water Use Factor (gpd/ksf)	Total Annual Demand (AFY)
Restaurants	73,658	1,053	87
Retail	106,450	84	10
Health Club	9,625	842	9.1
Offices/Classrooms	85,267	57	5.5
Kiosks	4,500	57	0.3
TOTAL	**279,500**	**357**	**112**
RESIDENTIAL	# units	Water Use Factor (gpd/DU)	Total Annual Demand (AFY)
Studios	50	120	6.7
1 Bedrooms	100	120	13
2 Bedrooms	50	120	6.7
TOTAL	**200**	**120**	**27**
WATER FEATURES	Sqft	Water Use Factor (gpd/ksf)	Total Annual Demand (AFY)
Swimming pool (1)	462	129	0.07
Reflecting pool (1)	250	129	0.04
Courtyard fountains (7)	231	129	0.03
Small fountains (14)	98	129	0.01
TOTAL	**1,692**	**129**	**0.15**
IRRIGATION	Sqft	Water Use Factor (gpd/ksf)	Total Annual Demand (AFY)
TOTAL	**70,800**	**27**	**2.2**
		TOTAL POTABLE	**139**
		TOTAL RECYCLED	**2.2**
		TOTAL PROJECT	**141**

Table 4 describes the projected impact of the project over the next 20 years.

Table 4. Projected Average Future Demands

Fiscal Year Ending:	2015	2020	2025	2030	2035	2040
Potable	69	139	139	139	139	139
Recycled	1.1	2.2	2.2	2.2	2.2	2.2
Total	**71**	**141**	**141**	**141**	**141**	**141**

An additional brief analysis was conducted using alternate residential demand factors (Table 5) based on apartment size from a neighboring utility. The results of this analysis (Table 6) indicate that the more granular data had very little impact on the results due to the even distribution of planned apartments resulting in similar demand factors (50 studios, 100 1 bedrooms, and 50 2 bedrooms result in a weighted demand factor equivalent to the 1 bedroom demand factor) and the fact that the majority of the water demand is driven by commercial use.

Table 5. Alternative Residential Water Demand Factors from Nearby Utility

Category	Demand (unit)	Rationale
Potable Water – Residential		
Studios	84 (gpd/DU)	Estimated from another south Orange County utility's sewer generation factor.
1 Bedrooms	126 (gpd/DU)	Estimated from another south Orange County utility's sewer generation factor.
2 Bedrooms	168 (gpd/DU)	Estimated from another south Orange County utility's sewer generation factor.

Table 6. Projected Average Future Demands Using Alternate Residential Water Demand Factors

Fiscal Year Ending:	2015	2020	2025	2030	2035	2040
Potable	70	140	140	140	140	140
Recycled	1.1	2.2	2.2	2.2	2.2	2.2
Total	**71**	**143**	**143**	**143**	**143**	**143**

Single Dry-Year

As described in the assumptions section, single dry-year demands are assumed to be 9% higher than average year demands. This results in the demands shown in Table 7.

Table 7. Projected Single-Dry Year Demands

Fiscal Year Ending:	2015	2020	2025	2030	2035	2040
Potable	76	151	151	151	151	151
Recycled	1.2	2.3	2.3	2.3	2.3	2.3
Total	**77**	**154**	**154**	**154**	**154**	**154**

Multiple Dry-Year

As described in the assumptions section, multiple dry-year demands are assumed to be 9% higher than average year demands. This results in the demands shown in Table 8.

Table 8. Projected Multiple-Dry Year Demands

Fiscal Year Ending:	2015	2020	2025	2030	2035	2040
Potable	76	151	151	151	151	151
Recycled	1.2	2.3	2.3	2.3	2.3	2.3
Total	**77**	**154**	**154**	**154**	**154**	**154**

LIST OF ACRONYMS/ABBREVIATIONS

AFY	acre-feet per year
DU	dwelling unit
EIR	Environmental Impact Report
gpcd	gallons per capita per day
gpd	gallons per day
ksf	thousand square feet
MNWD	Moulton Niguel Water District
MWDOC	Municipal Water District of Orange County
SB	Senate Bill
sqft	square feet
TM	Technical Memorandum
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment

ARCADIS Design & Consultancy for natural and built assets

Arcadis U.S., Inc.

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Irvine, California 92602

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moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: April 18, 2016**

FROM: **Marc Serna, Director of Engineering and Operations**
Todd Dmytryshyn, Senior Engineer

SUBJECT: **Fall Protection System – Potable Water & Recycled Water Reservoirs**

DIVISION: **Districtwide**

SUMMARY:

Issue: Staff issued Request for Proposals (RFP) for Design-Build Services for the Fall Protection System – Potable Water & Recycled Water Reservoirs, Project Nos. 2015.017 and 2015.018.

Recommendation: It is recommended that the Board of Directors award the contract for the Fall Protection System- Potable Water & Recycled Water Reservoirs, Project Nos. 2015.017 and 2015.018 to Spiess Construction Co., Inc. in the amount of $173,405; authorize the General Manager to execute the contract; and authorize the General Manager or designee to approve change orders up to 10% of the contract value.

Fiscal Impact: Project Nos. 2015.017 and 2015.018 are budgeted in Fund 14, Planning and Construction with a current combined project budget of $280,000.

BACKGROUND:

The District owns and operates 33 above-ground reservoir tanks. The roofs of these tanks range in height from 25 to 40 feet above the ground surface. District staff require access to the roofs in order to properly operate and maintain the tanks. Some examples roof maintenance activities include inspection and maintenance of tank mixers, cathodic protection ports, vents, and other rooftop appurtenances. Staff also perform visual checks of the entire roof surface for debris and damage. These activities require appropriate fall protection.

As part of the District's reservoir re-coating program, full perimeter guardrails are installed on the roofs of each tank for fall protection during re-coating projects. To date, five tanks have been retrofitted with full perimeter guardrails. Two tanks are scheduled to be retrofitted with full perimeter guardrails in Fiscal Year 2016-17 as part of re-coating projects.

This project will install Cal/OSHA compliant cable-type fall protection systems on the remaining 26 reservoirs – 23 potable water reservoirs and 3 recycled water reservoirs – to provide fall protection on the roofs of these reservoirs until full perimeter guardrails can be installed when the reservoirs are re-coated.

This project is being developed through a design-build process whereby a single contract is recommended to be awarded for all design and construction activities. This process will allow the District to complete the project faster and at a lower cost than a conventional design-bid-build process.

DISCUSSION:

On February 1, 2016, staff issued a RFP for Design-Build Services to six fall protection specialty firms. Two proposals were received and are summarized below:

Design-Build Team	**Fee**
Spiess Construction and CAI Safety Systems	$173,405
Flexible Lifeline Systems	$144,843

All firms that received proposals for this project are reputable fall protection specialty firms that offer turn-key fall protection solutions, including design and installation. However, through an investigation by District staff, it was discovered that several of the firms did not currently meet the licensing requirements of the California Contractors State License Board to perform the installation of the fall protection systems. These firms were still allowed to propose on the project by either obtaining the appropriate license classification or teaming with an appropriately licensed contractor. However, several of the firms chose not to propose.

The two proposals received were evaluated based on overall quality and contents, specific approach to accomplish the work, overall experience of the firm, proposed team, past performance and references, and proposed fees.

The proposal from the Spiess Construction and CAI Safety Systems team provides a superior approach. The proposal from Flexible Lifeline Systems contains exclusions and conditions that the District would not be able to accept.

The Design-Build Contract has been reviewed and approved by District counsel. A copy of the contract is attached.

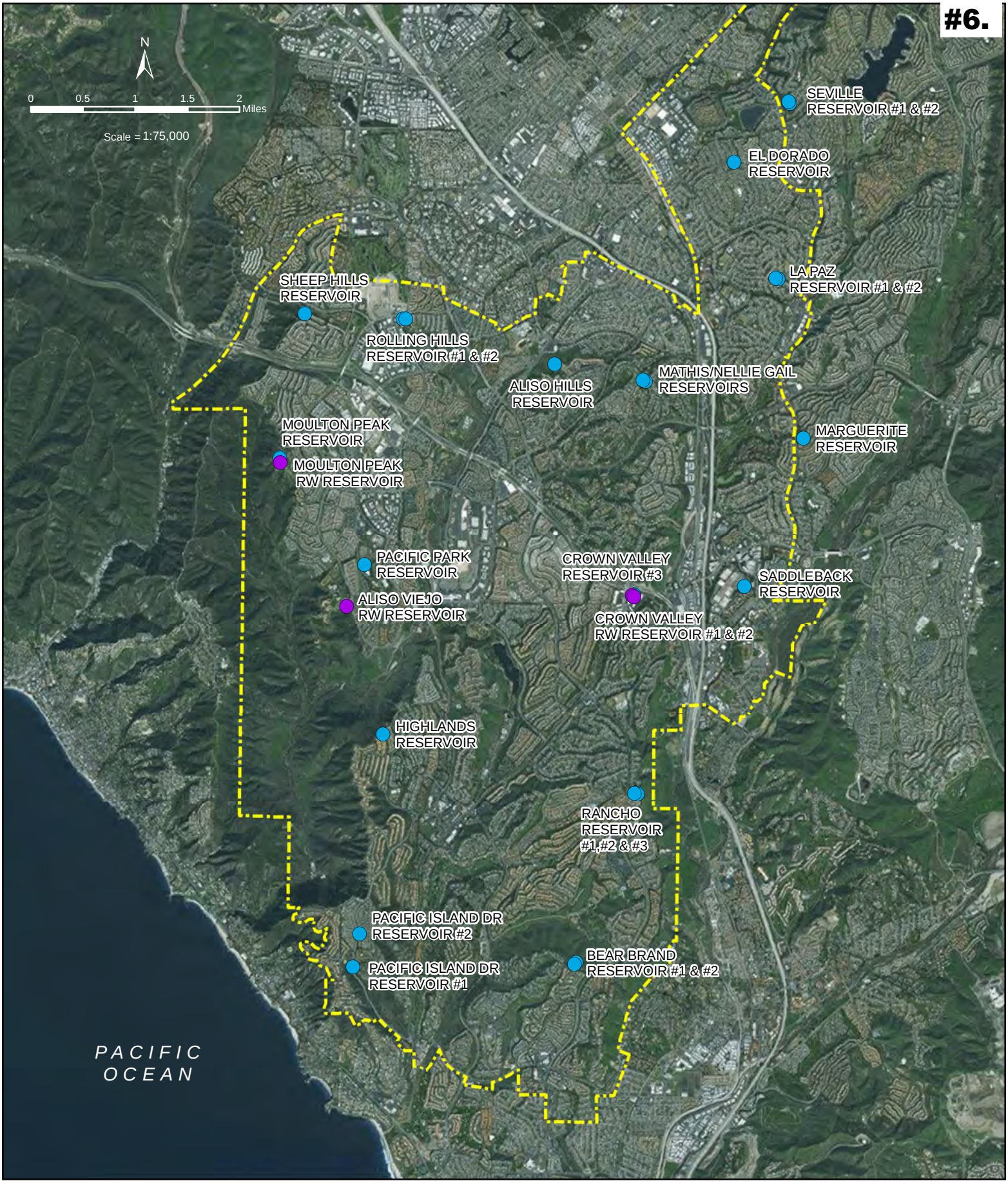
SUMMARY OF PROJECT BUDGET:

	Project Budget	Proposed / Approved Contract	Proposed / Authorized Contingency	Total Proposed / Authorized Amount
Project Items				
2015.017 – Potable Water Reservoirs	$225,000	$146,000	$14,600	$160,600
2015.018 – Recycled Water Reservoirs	$40,000	$27,405	$2,740	$30,145
Legal, District Labor	$15,000*	$15,000	$0	$15,000
Totals	$280,000	$188,405	$17,340	$205,745

* $6,868 has been expended to date.
Currently Proposed Amount

Attachments:

1. Exhibit A – Location Map
2. Exhibit B – Example Photos of Fall Protection System
3. Design-Build Contract

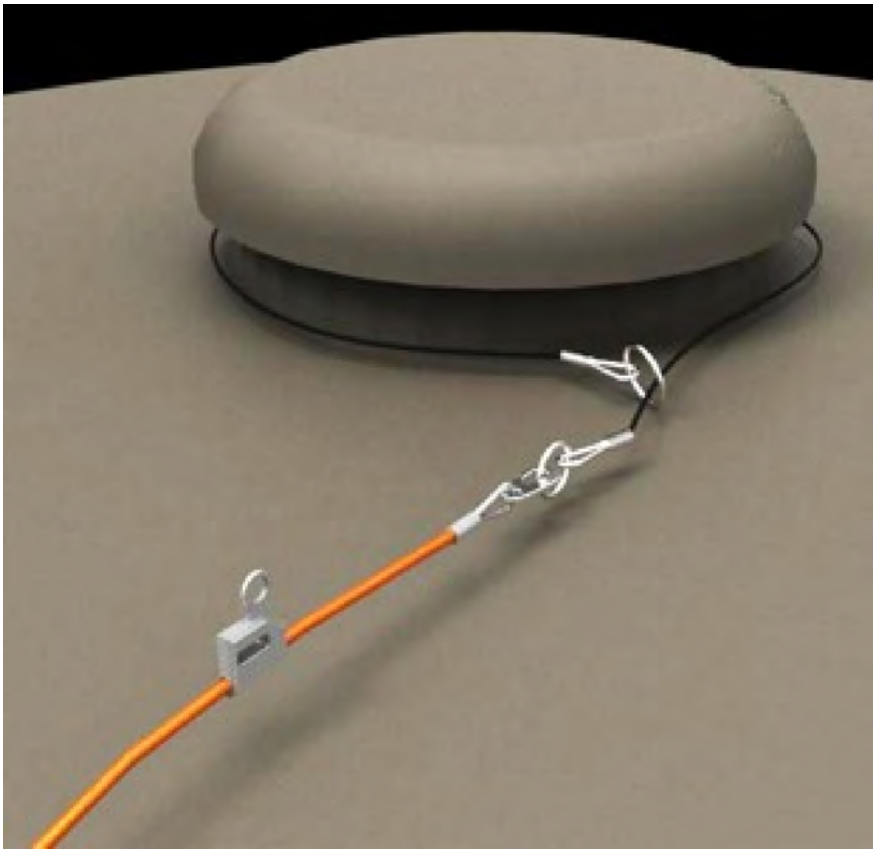


Path: G:\GIS\Projects\Projects_2016\Exhibits_T_Dymytryshyn_032016\Maps\FallProtectionExhibit.mxd

- Recycled Reservoir Site
- Potable Reservoir Site

moulton niguel water district

Exhibit "A" Location Map
Fall Protection System - PW & RW Reservoirs
Contract Nos. 2015.017 & 2015.018



DESIGN-BUILD CONTRACT BETWEEN MOULTON NIGUEL WATER DISTRICT AND SPIESS CONSTRUCTION CO., INC., FOR FALL PROTECTION SYSTEMS - PW AND RW RESERVOIRS; PROJECT NOs. 2015-017 AND 2015.018

1.1 Contract for Design and Construction.

This Design-Build Contract is effective as of the _____day of _____, 2016, by and between Moulton Niguel Water District, a county water district organized and existing under the laws of the State of California ("District"), and Spiess Construction Co., Inc. ("Design-Build Entity").

The parties agree as follows:

A. Design-Build Entity, for and in consideration of the payment to be made to Design-Build Entity as hereinafter provided, shall furnish all plant, labor, technical and professional design services, supervision, materials and equipment, other than such materials and equipment as may be specified to be furnished by the District, and perform all operations necessary to complete the Work in strict conformance with the Contract Documents (defined below) for the public work of improvement titled:

Fall Protection System – PW & RW Reservoirs Project

Design-Build Entity is an independent contractor and not an agent of the District. The Design-Build Entity and its surety shall be liable to the District for any damages arising as a result of the Design-Build Entity's failure to comply with this obligation.

B. The Design-Build Entity is made up of CAI Safety Systems, which shall function as the designer and Architect/Engineer of Record for the Project and provide all architectural/engineering design services, and Spiess Construction Co., Inc. (License No. 333989), which shall function as the general contractor for the Project and provide all construction services for the Project together with its chosen subcontractors. For purposes of this Contract, Scott A. Coleman, President, shall execute the Contract on behalf of the Design-Build Entity and shall have the authority to make all decisions necessary on behalf of the Design-Build Entity. Notwithstanding the foregoing, the District may accept bonds naming the Design-Build Entity as principal and professional liability insurance naming the member of the Design-Build Entity designated for design/architectural services as named insured.

Design-Build Entity shall perform all services required under the Contract Documents in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals qualified to perform such services in the same discipline in the State of California.

C. Time is of the essence in the performance of the Work. The Work shall be commenced by the date stated in the District's Notice to Proceed.

Time is of the essence in the performance of the Work. The Work shall be commenced by the date stated in the District's Notice to Proceed. The Design-Build Entity shall complete all Work required by the Contract Documents within 120 Calendar Days from the commencement date stated in the Notice to Proceed. Notwithstanding the foregoing, the Design-Build Entity shall complete all Work required by the Contract Documents on or before **June 30, 2017** (the "Project Completion Date").

By its signature hereunder, Design-Build Entity agrees the Project Completion Date is adequate and reasonable to complete the Work.

D. The District shall pay to the Design-Build Entity as full compensation for the performance of the Contract, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs, the Contract Price of **One Hundred Seventy-Three Thousand Four Hundred Five Dollars ($173,405)**. Payment shall be made as set forth in the General Conditions. Unless otherwise stated in the Contract Documents, the Contract Price shall pay for all costs and expenses required to design and construct the Project.

E. Design-Build Entity shall provide indemnification and defense as set forth in the General Conditions.

F. No oral agreement or conversation with any representative or employee of the District, either before or after the execution of the Contract shall affect or modify any of the terms or obligations herein contained. This Contract constitutes the entire agreement between the parties hereto and no changes, alterations or modifications hereof shall be effective unless in writing and signed by the District.

G. The "Contract Documents" include only the following documents, each of which is incorporated into this Contract by reference:

Request for Proposal ("RFP") and all addenda, attachments and appendices

Exhibit A to this Contract - Design-Build Entity Proposal in response to RFP (Scope of Work)

Design-Build Contract and all addenda

General Conditions

Special Conditions

General Requirements

District Approved Change Orders

Attachment 1 to this Contract - Performance Bond

Attachment 2 to this Contract - Payment Bond

Attachment 3 to this Contract - Escrow Agreement for Security (optional)

Completed and approved Construction Documents in accordance with the General Conditions

The Design-Build Entity shall complete the Work in strict accordance with all of the Contract Documents.

All of the Contract Documents are intended to be complementary. Work required by one of the Contract Documents and not by others shall be done as if required by all. In the event of a conflict, the various Contract Documents will be given effect in the order set forth in the General Conditions.

H. Each and every provision of law required to be included in these Contract Documents shall be deemed to be included in these Contract Documents. The Design-Build Entity shall comply with all requirements of applicable federal, state and local laws, rules and regulations, including, but not limited to, the provisions of the California Labor Code and California Public Contract Code which are applicable to this Work.

I. By my signature hereunder, as Design-Build Entity, I certify that I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

J. The parties do for themselves, their heirs, executors, administrators, successors, and assigns agree to the full performance of all of the provisions contained in this Contract. The Design-Build Entity may not either voluntarily or by action of law, assign any obligation assumed by the Design-Build Entity hereunder without the prior written consent of the District.

K. All notices hereunder and communications regarding interpretation of the terms of the Contract or changes thereto shall be provided by the mailing thereof by registered or certified mail, return receipt requested, postage prepaid and addressed as follows:

DISTRICT:	DESIGN-BUILD ENTITY:
Moulton Niguel Water District	Spiess Construction Co., Inc.
27500 La Paz Road	P.O. Box 2849
Laguna Niguel, CA 92677	Santa Maria, CA 93457-2849
Attn: Director of Engineering and Operations	Attn: Scott A. Coleman, President

Any notice so given shall be considered received by the other party three (3) days after deposit in the U.S. Mail, first class postage prepaid, addressed to the party at the above address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

L. The persons executing this Contract on behalf of their respective Parties represent and warrant that they have the authority to do so under law and from their respective Parties.

IN WITNESS WHEREOF, this Contract has been duly executed by the above-named parties, on the day and year above written.

MOULTON NIGUEL WATER DISTRICT

By: _____

Printed Name: Joone Lopez

Title: General Manager

Dated: _____

DESIGN-BUILD ENTITY

By: _____
(Authorized Representative of Design-Build Entity)

Printed Name: Scott A. Coleman

Title: President
(Attach Acknowledgment for Authorized Representative of Design-Build Entity)

License No. _____

Dated: _____

END OF CONTRACT

EXHIBIT A

Design-Build Entity Proposal

(Scope of Work)

#6.

AZ #119975 • CA #333989 • NV #0038929

Spiess Construction Co., Inc.

P.O. Box 2849
Santa Maria, CA 93457-2849
(805) 937-5859
Fax (805) 934-4432

March 18, 2016

Moulton Niguel Water District
Attn: Todd Dmytryshyn
26161 Gordon Road
Laguna Hills, 92653

Email: TDMYTRYSHYN@MNWD.COM

Re: Amended Bid Proposal for:
Fall Protection System –PW & RW Reservoirs

Subj: Statements of Confirmation and Supplemental Information

Mr. Dymtryshyn:

On behalf of Spiess Construction and CAI Safety Systems, we want to thank Moulton Niguel Water District for allowing us the opportunity to submit the attached Design-Build Proposal for the above referenced project. We have received and read your email dated 3-17-16, and herewith are resubmitting our proposal package with supplemental documents and information.

In addition to our original proposal, consisting of a PowerPoint presentation which addresses all of the key items listed in the District's RFP, along with our completed Fee Proposal Form, we have also attached are our Statements of Confirmation [ref: RFP Sect.IV], summary of key personnel, a detailed experience summary, completed proposal signature form, IRS W-9 form, and a signed Addendum No. 1 form.

We hope that you find this amended proposal to be complete, responsive and both favorable and acceptable. Should you have any questions please do not hesitate to call us at the above listed number.

Sincerely,
Spiess Construction Company, Inc.

Barry L. Matchett,
Tank Division Manager

Encls.

C:msw/bids/repairs/2016/MNWD/FallProtection/Rev1/031816

EXHIBIT B, FEE PROPOSAL

SCHEDULE A
FALL PROTECTION SYSTEM – PW RESERVOIRS, CONTRACT NO. 2015.017

ITEM NO.	APPROX. QUANTITY	UNITS	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT
A-1	1	LS	Structural assessment of the existing center vent structures at 23 potable water reservoirs, including field condition assessment and structural calculations, anchor load pull testing of the existing center vent structures, and inspection of the existing fall protection systems at eight of the 23 reservoirs	NA	$ 19,330.00
A-2	1	LS	Design of fall restraint sling-type fall protection systems at 23 potable water reservoirs, utilizing the existing center vent structures	NA	$ 9,930.00
A-3	23	EACH SYSTEM	Furnishment, fabrication, and installation of fall restraint sling-type fall protection systems at 23 potable water reservoirs, utilizing the existing center vent structures	$ 4,995.00	$ 114,885.00
A-4	1	LS	On-site training and manuals related to the inspection, use, and maintenance of the fall protection systems	NA	$ 1,855.00
			SUBTOTAL SCHEDULE A:	$ 146,000.00	

SCHEDULE B
FALL PROTECTION SYSTEM – RW RESERVOIRS, CONTRACT NO. 2015.018

ITEM NO.	APPROX. QUANTITY	UNITS	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT
B-1	1	LS	Structural assessment of the existing center vent structures at three recycled water reservoirs, including field condition assessment and structural calculations, and anchor load pull testing of the existing center vent structures	NA	$ 3,750 00
B-2	1	LS	Design of fall restraint sling-type fall protection systems at three recycled water reservoirs, utilizing the existing center vent structures	NA	$ 12,500 00
B-3	3	EACH SYSTEM	Furnishment, fabrication, and installation of fall restraint sling-type fall protection systems at three recycled water reservoirs, utilizing the existing center vent structures	$ 5,100 00	$ 15,300 00
B-4	1	LS	On-site training and manuals related to the inspection, use, and maintenance of the fall protection systems	NA	$ 1,855 00
			SUBTOTAL SCHEDULE B:	$ 27,405 00	

SUBTOTAL SCHEDULE A	$ 146,000 00
SUBTOTAL SCHEDULE B	$ 27,405 00
TOTAL FEE PROPOSAL (SUBTOTAL SCHEDULE A + SUBTOTAL SCHEDULE B)	$ 173,405 00

TOTAL AMOUNT OF FEE PROPOSAL (WRITTEN IN WORDS):

ONE HUNDRED SEVENTY-THREE THOUSAND FOUR HUNDRED FIVE & 00/100

OPTIONAL DEDUCT ITEM

The following pricing information is not included in the total fee proposal amount but may be considered by the DISTRICT as part of the proposal evaluation.

Eight of the 26 reservoirs included in this project have existing sling-type fall protection systems installed. Item No. D-1 below represents the deduction in cost if the existing fall protection system (single sling with two lifelines) is modified and reused as part of the new fall protection system. If the Design-Build Entity's engineer determines that the existing sling and lifelines are suitable for modification and reuse based on inspection of the existing fall protection systems, and the DISTRICT elects to do so, this deduction will be used as the basis of negotiating a credit to the DISTRICT.

ITEM NO.	APPROX. QUANTITY	UNITS	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT
D-1	8	EACH SYSTEM	Modification of the existing fall protection system, in lieu of installing a new sling, for one of the two slings required for the new fall protection system	$ (-) (100 00)	$ (-) (800 00)

Signature of Bidder: Scott A. Coleman
SCOTT A. COLEMAN, PRESIDENT

Company Name: SPIESS CONSTRUCTION CO., INC.

Date: 09 MARCH 2016

#6.

SCOPE OF WORK, EXHIBIT A

Work includes structural assessment, pull testing, inspection and possible modification of the existing fall protection systems, design and installation of new fall protection systems, design of anchors (if determined necessary), training, and the preparation of manuals. Work shall consist of, but not be limited to, the following tasks at a minimum:

Task 1: Structural Assessment

Design-Build Entity shall provide a structural assessment of the center vent structure on each reservoir tank. The structural assessment shall consist of a field condition assessment and the necessary structural calculations. The calculations shall determine the theoretical structural adequacy of the center vent structure, including the connection between the center vent and the reservoir, to withstand the anticipated forces to which it would be subjected by the fall protection system. The condition assessment shall be performed by qualified personnel. Structural calculations shall be performed by a competent professional civil or structural engineer, licensed in the State of California and shall be stamped and signed by the engineer. Considering the results of the condition assessment and calculations, the engineer shall make a recommendation for each reservoir whether or not to proceed with performing a pull test on the center vent structure (see Task 2).

NO EXCEPTION

Task 2: Pull Test

Pull tests shall be performed on all 26 center vent structures included in the project, unless in the opinion of the engineer, doing so would damage the center vent structure or tank or present a serious safety hazard. Design-Build Entity shall provide Cal/OSHA and ANSI (latest versions) certified anchor load pull testing on each center vent structure, as recommended by the engineer in Task 1. The pull test shall be non-destructive. Reservoir tanks shall remain in operation during pull testing. Design-Build Entity shall put in place all appropriate measures to protect the existing center vent structures, reservoir tanks, and other DISTRICT property. ~~Any damage caused to the existing center vent structures, reservoir tanks, or other DISTRICT property resulting from the pull test or other actions of the Design-Build Entity shall be immediately repaired by the Design-Build Entity at no additional cost to the DISTRICT~~. Design-Build Entity's engineer shall review the results of the pull test, together with the results of the structural verification in Task 1, and make a determination regarding the structural adequacy of each center vent structure to be used as anchorage for the fall protection system.

AS AMMENDED ABOVE.

Task 3: Inspection and Possible Modification of Existing Fall Protection Systems

Eight of the 26 reservoirs included in the project have existing sling-type fall protection systems installed. On seven of the existing systems, a single sling with two lifelines is wrapped around the center vent. On the remaining one, a single sling with two lifelines is wrapped around anchors that are welded to the tank around the center vent. Design-Build Entity shall inspect these existing installations and verify whether the existing slings and/or anchors can be re-used. If it is determined that the existing slings and/or anchors can be re-used and the DISTRICT elects to do so, the Design-Build Entity shall modify the existing systems to meet the design criteria listed in Task 4. The modifications will include the removal of one of the lifelines from the existing sling and installation of an additional sling and lifeline for each system. If it is determined that the existing slings and/or anchors cannot be re-used, the Design-Build Entity shall remove the existing systems and install new systems meeting the criteria listed in Task 4.

NO EXCEPTION

Task 4: Design of Fall Protection Systems

Design-Build Entity shall design complete fall protection systems at each reservoir satisfying the following minimum criteria:

- Fall restraint design
- Comply with all applicable requirements of Cal/OSHA and ANSI, latest versions. Where discrepancies exist among these regulations, the more stringent shall be used.
- Cable sling-type system wrapped around center vent structure with no penetrations or welding to tank, except as specified in Task 6.
- Two lifelines, each with an independent sling around the center vent and a means of preventing entanglement of the slings. Each lifeline shall be capable of rotating a full 360 degrees around the center vent without obstruction. ~~Self-retracting lifelines are preferred~~ provided that the system includes grab ropes or other means to allow the user to safely access the lifelines from the existing ladders at the edges of the reservoirs.
- All system components shall be constructed of materials which are appropriate for continuous outdoor exposure. Coated stainless steel and CPVC/composite construction is preferred. Nylon, polyester, and other web type slings will not be allowed.

Design-Build Entity shall provide all attachments, accessories, and incidentals necessary for complete and fully functional fall protection systems. Design-Build Entity is not required to provide harnesses as part of this project.

AS AMENDED ABOVE

Task 5: Installation of Fall Protection Systems

Design-Build Entity shall furnish, fabricate, and install fall protection systems meeting the criteria listed in Task 4. Installation shall be performed by qualified person installers, certified by the manufacturer of the fall protection products to be installed. All complete fall protection installations, including the center vent structures and any anchors, shall be certified by the Design-Build Entity to meet all local and federal regulations, including Cal/OSHA and ANSI, latest versions. Any existing fall protection systems that were modified per Task 3 shall also be certified in the same manner.

NO EXCEPTION.

Task 6: Design of Anchors

If it is determined in Tasks 1 or 2 that the existing center vent structure is not structurally adequate to be used as anchorage for the fall protection system, Design-Build Entity shall design bolted or welded anchors around the center vent (or other functionally equivalent approach approved by the DISTRICT) that are adequate to be used as anchorage for the fall protection system. The anchors shall meet the criteria listed in Task 4, including the requirement that the lifelines be capable of rotating a full 360 degrees around the center vent without obstruction.

If the anchor design is such that welding or coating repair work on the tank would be required for installation of the anchors, Design-Build Entity shall only complete the design phase of the work for those fall protection systems. For these systems, District intends for installation to be done in the future under separate contract.

NO EXCEPTION

Task 7: Training

Design-Build Entity shall provide on-site training related to the inspection, use, and maintenance of the fall protection systems installed for this project. The training shall cover all components of the fall protection systems. The training shall meet the criteria of Cal/OSHA and ANSI, latest versions, and any other fall protection standards, codes, and regulations. Training participants shall be issued certificates upon completion of training.

NO EXCEPTION

Task 8: Manuals

Design-Build Entity shall provide one (1) draft hard copy set for DISTRICT review and five (5) final hard copy sets (incorporating DISTRICT comments) of manuals covering the inspection, use, and maintenance of the fall protection systems installed for the project. Complete electronic searchable PDF copies of the manuals will also be required. The manuals shall cover all systems installed for this project. It will not be necessary to provide separate manuals for each site. The manuals shall be comprehensive and shall contain the serial numbers of each individual component used in the systems, all relevant calculations used in the design, and all certifications of installation and testing. Manuals shall be assembled into binders and shall be clearly organized using labels and tabs.

NO EXCEPTION

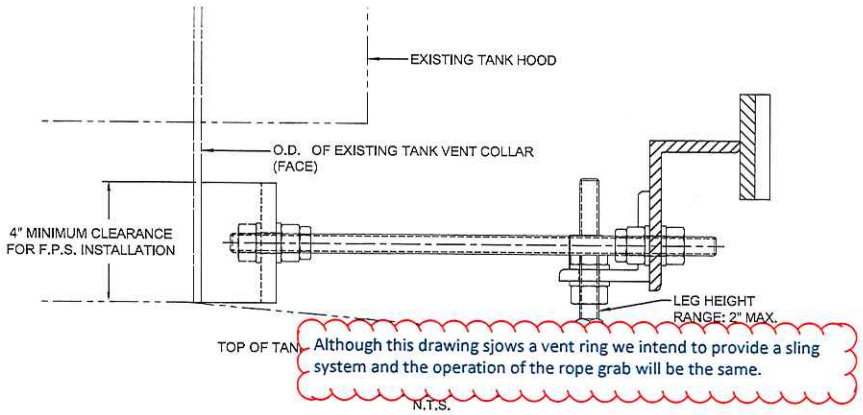
Design-Build Entities are encouraged to provide additional detail, improvements and enhancements, where appropriate, to the scope of work of this RFP.

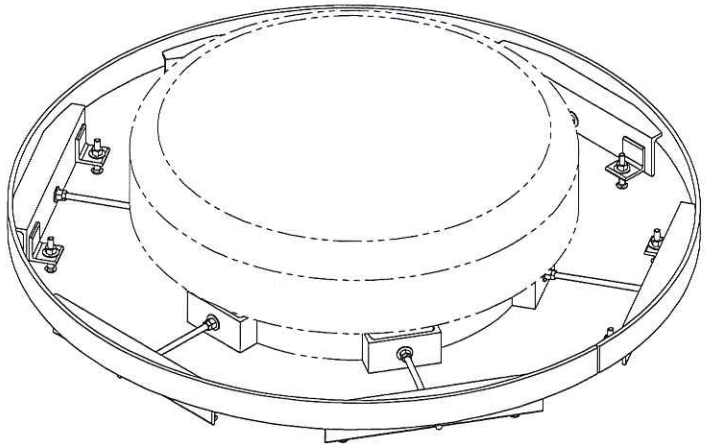
Additional Information

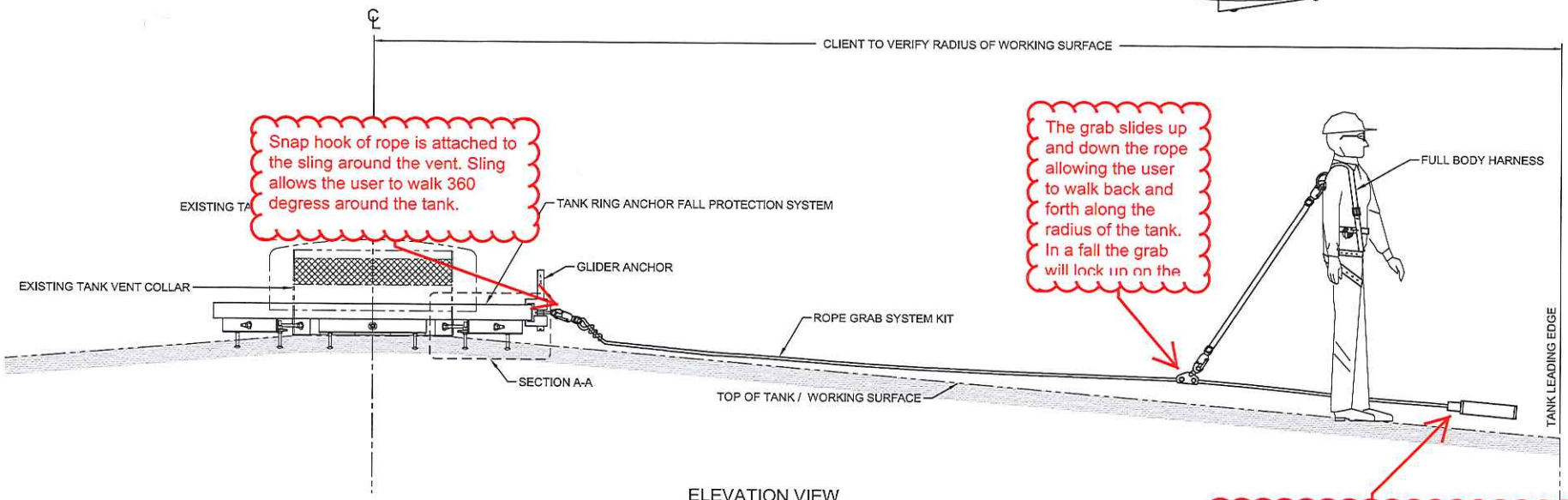
A listing of reservoirs included in the project, including approximate dimensions, is provided in Table 1. Those reservoirs having an existing fall protection system as noted in Task 3 are indicated accordingly in the table.

The DISTRICT has made available sectional maps, record drawings, shop drawings and photos of the existing center vent structures. Where discrepancies occur between record drawings and shop drawings, shop drawings should be considered more accurate. Note that only a limited number of shop drawings are available. The DISTRICT does not guarantee the accuracy of this information. The information can be accessed via the DISTRICT's ShareFile site at the following link:

https://mnwd.sharefile.com/d-sa8a6ec1297d439ca







ELEVATION VIEW
N.T.S.

We will install a weight or stopper to keep the user in fall restraint. You can also attach a tagline to the stopper to keep the rope positioned by the ladder

STANDARD 74" RING ANCHOR FALL PROTECTION SYSTEM

PROJECT #	PRODUCT FINISH	QTY	APPROVED FOR PRODUCTION
5000	RING SYSTEM - ALUM FASTENERS - S.S.	1	NAME DATE

REVISIONS			
	DESCRIPTION	BY	DATE
-	-	-	-

CAI SAFETY SYSTE
555 MONICA CIRCLE | PHONE: (951)272-6999
CORONA, CA 92880-5447 | FAX: (951)272-2207
WWW.CAISAFETY.COM

DRAWN BY:	CAI
CHECKED BY:	CAI
APPROVED BY:	CAI

TANK RING ANCHOR
FALL PROTECTION SYSTEM

SIZE	DRAWING No.	REV.	SHEET
B		0	2/2

ALE
S.
B

AZ #119975 • CA #333989 • NV #0038929

Spiess Construction Co., Inc.

P.O. Box 2849
Santa Maria, CA 93457-2849
(805) 937-5859
Fax (805) 934-4432

March 18, 2016

Moulton Niguel Water District
Attn: Todd Dmytryshyn
26161 Gordon Road
Laguna Hills, 92653

Email: TDMYTRYSHYN@MNWD.COM

Re: Amended Bid Proposal for:
Fall Protection System –PW & RW Reservoirs

Subj: Statements of Confirmation

Mr. Dymtryshyn:

Spiess Construction does hereby confirm to the following requirements:

- Spiess Construction (SCCI) and CAI Safety Systems (CAI) do confirm that if awarded a contract for the above referenced project, that we will only use competent and experienced installers that have been trained and certified by the manufacturer of the fall protection products on the products to be provided on the subject PW & RW Reservoirs.
- Spiess Construction (SCCI) and CAI Safety Systems (CAI) do confirm that if awarded a contract for the above referenced project that we will comply with Prevailing Wage requirements of the State of California Labor Code.
- Spiess Construction (SCCI) and CAI Safety Systems (CAI) do confirm that if awarded a contract for the above referenced project, that we will be able to execute the Design Build Contract (Exhibit D) without modification upon award of the contract.
- Spiess Construction (SCCI) and CAI Safety Systems (CAI) do confirm that if awarded a contract for the above referenced project, that we will certify the complete installation per Exhibit A Task 5.

Sincerely,
Spiess Construction Company, Inc.

Barry L. Matchett,
Tank Division Manager

#6.

AZ #119975 • CA #333989 • NV #0038929

Spiess Construction Co., Inc.

P.O. Box 2849
Santa Maria, CA 93457-2849
(805) 937-5859
Fax (805) 934-4432

March 18, 2016

Moulton Niguel Water District
Attn: Todd Dmytryshyn
26161 Gordon Road
Laguna Hills, 92653

Email: TDMYTRYSHYN@MNWD.COM

Re: Amended Bid Proposal for:
Fall Protection System –PW & RW Reservoirs

Subj: Key Support Staff

Mr. Dymtryshyn:

The Spiess Construction (SCCI) and CAI Safety Systems (CAI) intend to assign the following listed personnel to the subject project, and will appoint them with the functioning roles as shown below:

SCCI – Barry Matchett, Vice President, Tank Division and Project Manager - resume attached.

CAI - Peter Kavia – Director of Operations, Project Manager – resume attached

James Fox, P.E. – Project Engineer

Noah Maling – Project Manager, Design Engineer and Certifications – resume attached

Should you require additional information on or about any of the above listed personnel, please let us know.

Sincerely,
Spiess Construction Company, Inc.

Barry L. Matchett,
Tank Division Manager

Encls. (4)

C:msw/bids/repairs/2016/MNWD/FallProtection/KeySupportStaff/Rev1/031816

MOULTON NIGUEL WATER DISTRICT

ADDENDUM NO. 1

Dated: February 17, 2016

TO
REQUEST FOR PROPOSAL FOR DESIGN-BUILD SERVICES
FOR FALL PROTECTION SYSTEM – PW & RW RESERVOIRS
CONTRACT NOS. 2015.017 & 2015.018

This Addendum No. 1 is issued as a supplement to the request for proposal documents for the **Fall Protection System – PW & RW Reservoirs** project. The addendum clarifies, deletes, or adds items to the documents.

ITEM NO. 1

Scope of Work, Task 5 Installation of Fall Protection System

ADD THE FOLLOWING SENTENCE

A. The Design-Build entity shall furnish and install appropriate signage at each reservoir as part of the installation. At a minimum, signage shall be installed at ground level to indicate that a fall protection system is installed on top of the tank and also at or near the system itself to indicate capacity. Signage shall meet all applicable regulatory requirements, including Cal/OSHA and ANSI, latest versions.

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDUM NO. 1

SPIESS CONSTRUCTION CO., INC.
PROPOSER'S NAME

Barry L Matchett
SIGNATURE
BARRY L. MATCHETT, V.P.

NOTE: THIS ADDENDUM IS TO BE SUBMITTED WITH PROPOSAL DOCUMENTS.

ATTACHMENT 1

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the Moulton Niguel Water District (hereinafter referred to as "District") has awarded to _____, (hereinafter referred to as the "Design-Build Entity") an agreement for _____ (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Design-Build Entity is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Design-Build Entity is required by the Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of the Contract Documents.

NOW, THEREFORE, we, _____, the undersigned Design-Build Entity and _____ as Surety, a corporation organized and duly authorized to transact business under the laws of the State of California, are held and firmly bound unto the District in the sum of _____ DOLLARS, ($_____), the sum being not less than one hundred percent (100%) of the total amount of the Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Design-Build Entity, his or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one-year guarantee of all materials and workmanship; and shall indemnify and save harmless the District, its officers and agents, as stipulated in the Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a condition precedent to the satisfactory completion of the Project, unless otherwise provided for in the Contract Documents, the guarantee obligation shall hold good for a period of two (2) years after the acceptance of the work by the District, during which time if Design-Build Entity shall fail to make full, complete, and satisfactory repair and replacements and totally protect the District from loss or damage resulting from or caused by defective materials or faulty workmanship the above obligation in penal sum thereof shall remain in full force and effect. However, anything in this paragraph to the contrary notwithstanding, the obligations of Surety hereunder shall continue so long as any obligation of Design-Build Entity remains. Nothing herein shall limit the District's rights or the Design-Build Entity or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

ATTACHMENT 1

As a part of the obligation secured hereby and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees including reasonable attorney's fees, incurred by the District in enforcing such obligation.

Whenever Design-Build Entity shall be, and is declared by the District to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at the District's option:

1. Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or

2. Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and the District, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Design-Build Entity by the District under the Contract and any modification thereto, less any amount previously paid by the District to the Design-Build Entity and any other set offs pursuant to the Contract Documents.

3. Permit the District to complete the Project in any manner consistent with California law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Design-Build Entity by the District under the Contract and any modification thereto, less any amount previously paid by the District to the Design-Build Entity and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that the District may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Design-Build Entity.

Surety shall not utilize Design-Build Entity in completing the Project nor shall Surety accept a bid from Design-Build Entity for completion of the Project if the District , when declaring the Design-Build Entity in default, notifies Surety of the District's objection to Design-Build Entity's further participation in the completion of the Project.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of Contract. including but not limited to the provisions of Sections 2819 and 2845 of the California Civil Code.

ATTACHMENT 1

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20___.

_____
DESIGN-BUILD ENTITY/PRINCIPAL

_____
Name

By_____

SURETY:

By: _____
Attorney-In-Fact

Signatures of those signing for the Design-Build Entity and Surety must be notarized and evidence of corporate authority attached.

The rate of premium on this bond is _____ per thousand. The total amount of premium charges, $_____.
(The above must be filled in by corporate attorney.)

THIS IS A REQUIRED FORM

Any claims under this bond may be addressed to:

(Name and Address of Surety) _____

_____

_____

(Name and Address of Agent or Representative for service of process in California, if different from above) _____

_____

(Telephone number of Surety and Agent or Representative for service of process in California) _____

END OF PERFORMANCE BOND

ATTACHMENT 1

ATTACHMENT 2
PAYMENT (MATERIAL & LABOR) BOND

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the Moulton Niguel Water District (hereinafter referred to as "District ") has awarded to _____, (hereinafter referred to as the "Design-Build Entity") _____ an agreement for _____ (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Design-Build Entity is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, Design-Build Entity is required to furnish a bond in connection with the contract described above; providing that if Design-Build Entity or any of its subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of Design-Build Entity and its subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Design-Build Entity and _____ as Surety, are held and firmly bound unto the District in the penal sum of _____ Dollars ($_____) lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Design-Build Entity, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Section 9100 of the Civil Code, fail to pay for any materials, provisions or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Section 18663 of the Revenue and Taxation Code, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, all litigation expenses incurred by the District in such suit, including reasonable attorneys' fees, court costs, expert witness fees and investigation expenses.

This bond shall inure to the benefit of any of the persons named in Section 9100 of the Civil

Code so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety on this bond shall not be exonerated or released from the obligation of this bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described, or pertaining or relating to the furnishing of labor, materials, or equipment therefore, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement herein above described, nor by any rescission or attempted rescission or attempted rescission of the contract, agreement or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the District and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Section 9100 of the Civil Code, and has not been paid the full amount of his claim.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of Contract. including but not limited to the provisions of Sections 2819 and 2845 of the California Civil Code.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Design-Build Entity and Surety above named, on the _____ day of _____ 20_____ the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

(Corporate Seal of Design-Build Entity,
if corporation)

_____
Design-Build Entity/Principal

By _____
(Signature of Design-Build Entity)

(Seal of Surety)

_____
Surety

By _____
Attorney in Fact

Signatures of those signing for the Design-Build Entity and Surety must be notarized and evidence of corporate authority attached. A Power-of-Attorney authorizing the person signing on behalf of the Surety to do so must be attached hereto.

END OF PAYMENT (LABOR AND MATERIALS) BOND

ATTACHMENT 3

ESCROW AGREEMENT FOR SECURITY

This Escrow Contract is made and entered into by and between the **MOULTON NIGUEL WATER DISTRICT**, whose address is **26161 Gordon Road, Laguna Hills, California 92653** (hereinafter called the "District") and _____ whose address is _____ (hereinafter called "the Design-Build Entity") and _____ whose address is _____ (hereinafter called "Escrow Agent").

For the consideration hereinafter set forth, the District, the Design-Build Entity, and Escrow Agent agree as follows:

(1) Pursuant to Section 22300 of the Public Contract Code of the State of California, the Design-Build Entity has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by the District pursuant to the Construction Contract entered into between the District and the Design-Build Entity for the _____ Project in the amount of $_____ dated _____ (hereinafter referred to as the "Contract"). Alternatively, on written request of the Design-Build Entity, the District shall make payments of the retention earnings directly to the Escrow Agent. When the Design-Build Entity deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the District within 10 days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between the District and the Design-Build Entity. Securities shall be held in the name of the District, and shall designate the Design-Build Entity as the beneficial owner.

(2) The District shall make progress payments to the Design-Build Entity for those funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.

(3) When the District makes payment of retention earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Design-Build Entity until the time that the escrow created under this Escrow Contract is terminated. The Design-Build Entity may direct the investment of the payments into securities. All terms and conditions of this Escrow Contract and the rights and responsibilities of the parties shall be equally applicable and binding when the District pays the Escrow Agent directly.

(4) The Design-Build Entity shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the District. These expenses and payment terms shall be determined by the District, the Design-Build Entity and Escrow Agent.

(5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of the Design-

Build Entity and shall be subject to withdrawal by the Design-Build Entity at any time and from time to time without notice to the District.

(6) The Design-Build Entity shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from the District to the Escrow Agent that the District consents to the withdrawal of the amount sought to be withdrawn by the Design-Build Entity.

(7) The District shall have a right to draw upon the securities in the event of default by the Design-Build Entity. Upon seven days' written notice to the Escrow Agent from the District of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the District.

(8) Upon receipt of written notification from the District certifying that the Contract is final and complete, and that the Design-Build Entity has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to the Design-Build Entity all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

(9) Escrow Agent shall rely on the written notifications from the District and the Design-Build Entity pursuant to Sections (5) to (8), inclusive, of this Escrow Contract and the District and the Design-Build Entity shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

(10) The names of the persons who are authorized to give written notice or to receive written notice on behalf of the District and on behalf of the Design-Build Entity in connection with the foregoing, and exemplars of their respective signatures are as follows:

ON BEHALF OF THE DESIGN-BUILD ENTITY:

By:_____

Name:_____

Its:_____

ON BEHALF OF THE DISTRICT:

By:_____

Name:_____

Its:_____

ON BEHALF OF ESCROW AGENT:

By:_____

Name:_____

Its:_____

Address:_____

At the time the Escrow Account is opened, the District and the Design-Build Entity shall deliver to the Escrow Agent a fully executed counterpart of this Escrow Contract.

IN WITNESS WHEREOF, the parties have executed this Escrow Contract by their proper officers on the date first set forth above.

ON BEHALF OF THE DESIGN-BUILD ENTITY:	**ON BEHALF OF THE DISTRICT:**
By:_____	By:_____
Name:_____	Name:_____
Its:_____	Its:_____

END OF ESCROW AGREEMENT FOR SECURITY

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STAFF REPORT

TO: **Board of Directors** **MEETING DATE: April 18, 2016**

FROM: **Marc Serna, Director of Engineering and Operations**
Todd Dmytryshyn, Senior Engineer

SUBJECT: **Pradera 850 Zone Loop System Contract Award**

DIVISION: **1**

SUMMARY:

Issue: Staff issued the Notice Inviting Sealed Proposals (Bids) for the Pradera 850 Zone Loop System, Project No. 2014.013.

Recommendation: It is recommended that the Board of Directors award the construction services contract for the Pradera 850 Zone Loop System Project No. 2014.013 to Ferreira Construction Co., Inc. in the amount of $655,938; authorize the General Manager to execute the contract; and authorize the General Manager or designee to approve change orders up to 10% of the contract value.

Fiscal Impact: Project No. 2014.013 is budgeted in Fund 14, Planning and Construction with a current project budget of $370,000. The proposed project budget is $811,532. The project will be constructed next fiscal year. Adequate funds are proposed for FY 2016-17 CIP budget.

BACKGROUND:

In 2010, the District abandoned one of two easement pipelines supplying potable water from the 850-zone to a neighborhood of 58 residences. At that time, an interconnection to the 650-zone was installed to provide lower pressure water to the neighborhood in case of emergency. The new 8-inch diameter pipeline proposed in this project will improve water supply reliability and quality for this neighborhood by providing a looped system. The project was deferred until now due to paving moratoriums. The proposed project is located along La Paz Road, Pradera Drive, Pericia Drive, and Terreno Drive in the City of Mission Viejo.

Construction documents for the Pradera 850 Zone Loop System project were prepared by AKM Consulting Engineers. The work generally includes: installation of approximately 1,200 feet of C900 PVC pipe and 800 feet of ductile iron pipe, installation of valves and appurtenances, replacement of interfering curb and sidewalk, and paving.

DISCUSSION:

A request for bids was issued to six qualified contractors. On March 29, 2016, the District received 4 sealed bids. The table below summarizes the bids received:

Firm	**Bid**
Ferreira Construction Co., Inc.	$655,938
Paulus Engineering, Inc.	$683,542
Shoffeitt Pipeline, Inc.	$774,883
T.E. Roberts, Inc.	$1,105,848
Engineer's Estimate	**$691,310**

Staff has determined that the lowest responsible and responsive bidder is Ferreira Construction Co., Inc. Staff has completed its review of the contract documents and has determined that they are in order. Ferreira has performed quality work in the past for the District and is well-qualified to perform this type of work.

The increase in project budget is attributed to an increase in pipe length during design to satisfy hydraulic requirements and the restrictive work schedule required by the City of Mission Viejo to avoid local school sessions.

SUMMARY OF PROJECT BUDGET:

	Project Budget	**Proposed / Approved Contract**	**Proposed / Authorized Contingency**	**Total Proposed / Authorized Amount**
Project Items				
Engineering	$60,000*	$60,000	$0	$60,000
Geotechnical	$15,000	$15,000	$0	$15,000
Construction	$280,000	$655,938	$65,594	$721,532
Legal, Permits, District Labor	$15,000	$15,000	$0	$15,000
Totals	$370,000	$745,938	$65,594	$811,532

* $46,398 has been expended to date.
Currently Proposed Amount

Attachment: Exhibit A – Location Map

Proposed Pipe

Potable Waterline

N

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0 50 100 200 300 400 Feet

Scale = 1:2,000

Exhibit "A" Location Map
Pradera 850 Zone Loop
Contract No. 2014.013

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QUARTERLY CONSTRUCTION PROGRESS REPORT

AS OF 04/01/2016

Project : Condition Assessment of Central Intertie Pipeline
Contract No: OM 15-16.002
Contractor : Pure Technologies U.S Inc.
Engineer : District Staff

CONDITION ASSESMENT OF CENTRAL INTERTIE PIPELINE

SCOPE OF WORK : Assessment of Central Intertie Pipeline including MFL Inspection, detection and verification and repairs if needed. Also includes engineering analysis and report.

DETAILS :

Fund	01 General Fund
Contract Award	07/16/15
Est. Completion Date	02/29/16
Authorized Expense	$ 998,563
Paid To Date	$ 948,000
Percent Constructed	95%

NOTES : MFL Inspection has been completed and repairs made. Awaiting final report.

Electromagnetic Inspection of the Central Intertie Pipeline

Project : Effluent Transmission Main (ETM) Replacement
Contract No: 2009.115
Contractor : Vadnais Trenchless Services, Inc.
Engineer : Dudek

EFFLUENT TRANSMISSION MAIN (ETM) REPLACEMENT

SCOPE OF WORK : Replacement of 300 feet of 30-inch ETM pipe by micro tunneling, replacement of 130 feet of 30-inch ETM pipe by open trench construction, connections to existing 30-inch ETM pipe and existing 42-inch Chiquita Land Outfall pipe.

DETAILS :

Fund	07 Replacement and Refurbishment
Contract Award	11/19/15
Est. Completion Date	09/30/16
Authorized Expense	$ 4,226,054
Paid To Date	$ 775,715
Percent Constructed	25%

NOTES : Construction began in January. Boring is anticipated to start in mid April, 2016.

Excavation of Boring and Receiving Pits

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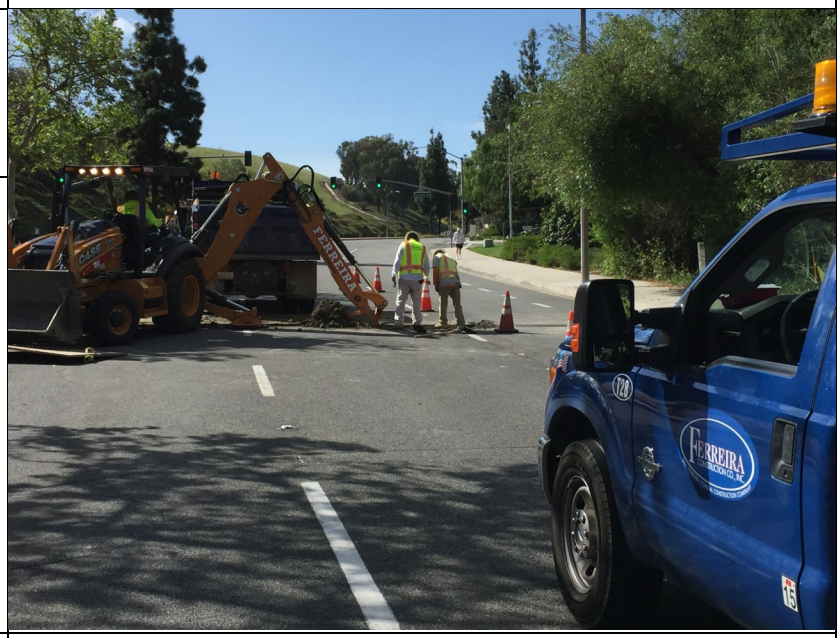
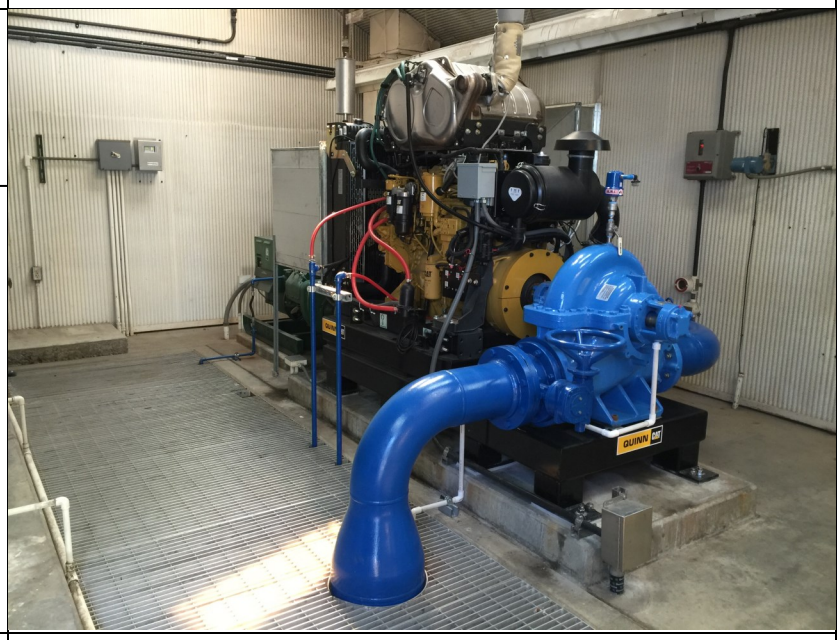
QUARTERLY CONSTRUCTION PROGRESS REPORT

AS OF 04/01/2016

Project : Recycled Water System Extension Contract No 2014.011 Contractor : Ferreira Construction Co., Inc. Engineer : Tetra Tech	**RECYCLED WATER SYSTEM EXTENSION**
SCOPE OF WORK : Installation of recycled water mainlines, recycled water services and the restoration of all landscape and hardscape.	
DETAILS : Fund 07 Replace and Refurbishment Contract Award 11/19/15 Est. Completion Date 06/30/16 Authorized Expense $ 2,146,552 Paid To Date $ 112,927 Percent Constructed 2%	
NOTES : Construction began 03/14/2016.	Recycled Water Service Installation on Alicia Parkway

Project: Beacon Hill Pump Replacement Contract No: 2012.009 Contractor : Pascal & Ludwig Constructors Engineer : Psomas	**BEACON HILL PUMP REPLACEMENT**
SCOPE OF WORK : Installation of a tier 4 diesel engine with pump. Retrofit the existing building to accommodate new equipment and site improvements.	
DETAILS : Fund 07 Replace and Refurbishment Contract Award 03/19/15 Est. Completion Date 02/15/16 Authorized Expense $ 582,054 Paid To Date $ 488,249 Percent Constructed 100%	
NOTES : Construction is complete. Notice of Completion to be filed in May 2016.	Beacon Hill Pump Station Completed Pump and Engine Installation

moulton niguel water district

QUARTERLY CONSTRUCTION PROGRESS REPORT

AS OF 04/01/2016

Project: Rehabilitation of Mathis RW Reservoir
Contract No: 2013.002
Contractor : J. Colon Coating
Engineer : Harper and Associates

REHABILITATION OF MATHIS RECYCLED WATER RESERVOIR

SCOPE OF WORK : Recoat interior and exterior of the tank, structural and corrosion repairs and safety improvements of Mathis Recycled Water Reservoir. Exterior painting of Nellie Gail Reservoir on same site.

DETAILS :

Fund	07 Replace and Refurbishment
Contract Award	08/20/15
Est. Completion Date	07/31/16
Authorized Expense	$ 800,000
Paid To Date	$ 632,437
Percent Constructed	75%

NOTES : Mathis Reservoir recoat is complete. Work has begun on the exterior coating of Nellie Gail Reservoir.

Mathis Recycled Reservoir
New Staircase

Project : Rehabilitation of Bear Brand Reservoir
Contract No: 2014.001
Contractor : Advanced Industrial Services Inc.
Engineer : Harper and Associates

BEAR BRAND RESERVOIR RE-COATING AND SAFETY IMPROVEMENTS

SCOPE OF WORK : Recoat interior and exterior of reservoir, perform structural, corrosion repairs and safety improvements.

DETAILS :

Fund	07 Replace and Refurbishment
Contract Award	10/15/15
Est. Completion Date	06/30/16
Authorized Expense	$ 865,000
Paid To Date	$ 17,102
Percent Constructed	1 %

NOTES : Work began mid February 2016.

Bear Brand Reservoir

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QUARTERLY CONSTRUCTION PROGRESS REPORT

AS OF 04/01/2016

Project :	Gallup Circle Sewer Replacement
Contract No	2013.010
Contractor :	Paulus Engineering
Engineer :	Lee & Ro Inc.

SCOPE OF WORK : Remove and replace 600-feet of existing sewer mainline.

DETAILS :

Fund	07 Replace and Refurbishment
Contract Award	09/17/15
Est. Completion Date	12/15/15
Authorized Expense	$ 321,637
Paid To Date	$ 240,569
Percent Constructed	100%

NOTES : Notice of Completion filed on 02/25/2016

GALLUP CIRCLE SEWER REPLACEMNET

Gallup Circle
Completed Project

Project:	Replace Digital Lines with Wireless Network
Contract No:	2006.038
Contractor :	Southern Contracting Co.
Engineer :	Arcon Structural Engineers, Inc.

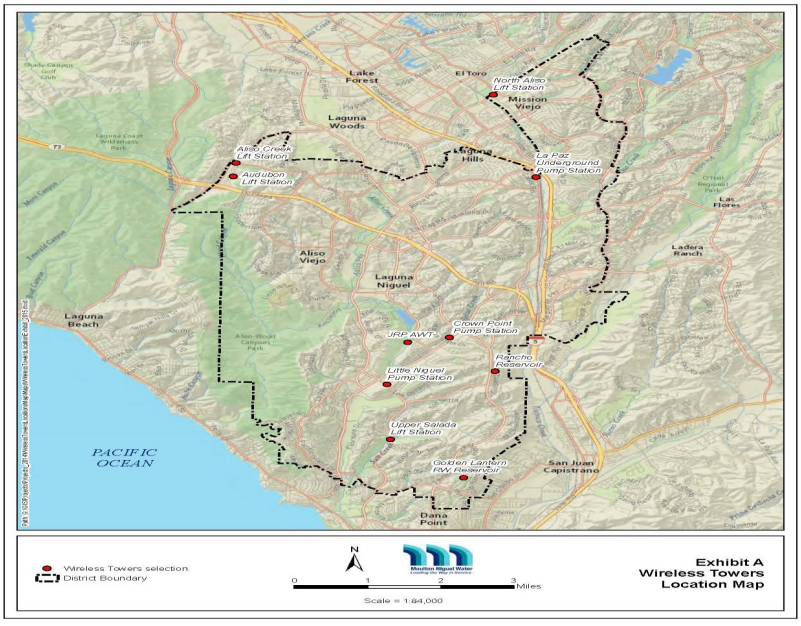
SCOPE OF WORK : Drilling holes for foundations, furnishing and installing towers ranging in height from 10 feet to 60 feet, constructing foundations, grounding the towers, furnishing and installing electrical facilities

DETAILS :

Fund	07 Replace and Refurbishment
Contract Award	11/19/15
Est. Completion Date	07/30/16
Authorized Expense , Phase III	$ 486,550
Paid To Date	$ 112,000
Percent Constructed	0 %

NOTES : Completing submittal process. Work to begin in April.

REPLACE DIGITAL LINES WITH WIRELESS NETWORK



New Wireless Towers
Location Map

moulton niguel water district

QUARTERLY CONSTRUCTION PROGRESS REPORT

AS OF 04/01/2016

Project : Manhole Rehabilitation Program FY 14/15
Contract No: 2014.009
Contractor : Ayala Engineering
Engineer : District Staff

MANHOLE REHABILITATION PROGRAM FY 14/15 - 15/16

SCOPE OF WORK : FY 14-15 and 15-16 on call service agreement to rehabilitate manholes through-out the District.

DETAILS :

Fund		07 Replace and Refurbishment
Contract Award		08/21/14
Est. Completion Date		06/30/16
Authorized Expense	FY 15-16	$ 300,000
Paid To Date		$ 100,891
Percent Constructed		33%

NOTES : Rehabilitated 35 manholes to date on the fiscal year 15-16 budget. Next phase of 42 manholes began in March 2016.

Rehabilitation of Manhole in Aliso Viejo

Project : Utility Main Breaker Replacement
Contract No: 2014.005
Contractor : Southern Contracting Co.
Engineer : Lee & Ro, Inc.

UTILITY MAIN BREAKER REPLACEMENTS LOWER SALADA AND ALISO CREEK LIFT STATION

SCOPE OF WORK : Replace two utility service sections, perform miscellaneous code updates and extended maintenance on the electrical switchgear.

DETAILS :

Fund		07 Replace and Refurbishment
Contract Award		07/16/15
Est. Completion Date		06/31/16
Authorized Expense		$ 216,700
Paid To Date		$ 65,980
Percent Constructed		5%

NOTES : Construction is anticipated to begin in April 2016.

Lower Salada Lift Station

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QUARTERLY CONSTRUCTION PROGRESS REPORT

AS OF 04/01/2016

Project : Mathis-Oso Bypass Relocation
Contract No 2010.018
Contractor : Paulus Engineering
Engineer : Tetra Tech

SCOPE OF WORK : Relocation of existing Pressure Reducing Station and upgrades to meet existing District standards.

DETAILS :

Fund	07 Replace and Refurbishment
Contract Award	11/22/14
Completion Date	04/15/16
Authorized Expense	$ 838,670
Paid To Date	$ 777,474
Percent Constructed	100%

NOTES : Notice of Completion to be filed once startup is complete.

MATHIS-OSO BYPASS PRESSURE REDUCING STATION RELOCATION

Distribution Staff Performing Startup at Mathis-Oso Bypass Pressure Reducing Station

Project: Flores Avenue 8" Water Main Installation
Contract No: 2014.018
Contractor : Ferreira Construction Co. Inc.
Engineer : Lee & Ro, Inc.

SCOPE OF WORK : Installation of 700' of new potable water mainline, including valves and hydrants and the abandonment of an existing easement pipeline.

DETAILS :

Fund	07 Replace and Refurbishment
Contract Award	07/16/15
Est. Completion Date	03/31/16
Authorized Expense	$ 222,446
Paid To Date	$ 187,417
Percent Constructed	100%

NOTES : Construction is complete. Notice of Completion to be filed in April, 2016.

FLORES AVENUE 8" WATER MAIN INSTALLATION

Flores Avenue

moulton niguel water district

QUARTERLY CONSTRUCTION PROGRESS REPORT

AS OF 04/01/2016

Project : MNWD ETWD Inter-tie Contract No: 2006.099 Contractor : T.E Roberts, Inc. Engineer : Tetra Tech, Inc.	**MNWD ETWD INTER-TIE**
SCOPE OF WORK : Interconnection of the 30' Diemer pipeline to ETWD's 24" R-6 Reservoir fill line.	
DETAILS : Fund 07 Replace and Refurbishment Contract Award 12/09/14 Notice of Completion Filed 10/27/15 Authorized Expense $ 503,140 Paid To Date $ 451,102 Percent Constructed 100%	
NOTES : Billing of $398,495 was sent to SMWD for reimbursement on 03/28/2016. Previous reimbursement of $52,607 was received in 2009.	Finished Inter-Tie Location

moulton niguel water district

STAFF REPORT

TO: **Board of Directors** **MEETING DATE: April 18, 2016**

FROM: **Marc Serna, Director of Engineering and Operations**
Eva Plajzer, Assistant Director of Engineering

SUBJECT: **Quarterly Communications License Program Report**

DIVISION: **District-wide**

SUMMARY:

Issue: Staff is responsible for administering the Communications License Program per the Communication License Agreement and License Policy adopted by the Board of Directors in December 2015.

Recommendation: Information item only.

Fiscal Impact: The Communication License Program has historically generated up to $1.7 million per year.

BACKGROUND:

In the 1990s, the Moulton Niguel Water District (District) approved the first communication facility to be constructed at one of the District's sites. As the communication industry grew, District was approached about use of District sites for cell tower equipment installations. The District developed the Communications License Program (Program) with a primary objective to provide economic benefit to District ratepayers through a monthly lease program. The District's first responsibility is to provide water and wastewater service to its customers, and development of the Program can not interfere with District's ability to provide quality service. With those objectives in place, the Board of Directors approved a Communications Lease Agreement and Lease Policy, which was implemented on January 1, 2001, and updated to a Communication License Agreement and License Policy on March 15, 2012. On December 14, 2015, the Board of Directors adopted an update to the Communication License Agreement and License Policy.

Since implementation of the Communications Lease Agreement and Lease Policy, the Program has grown to include 56 agreements with various amendments on several of those agreements. These communications facilities are distributed among 17 District sites. The Program currently generates about $1.7 million in revenue for District each Fiscal Year.

DISCUSSION:

During the period covered by this quarterly update (January, February, and March 2016) staff has performed various internal and external activities for the Program:

- There were no new applications for site modifications.
- Worked with Metro PCS and Nextel on plans to decommission existing facilities.
- Continued processing 43 existing site modification applications; 6 projects were provided consent and 1 project was completed during this reporting period.
- Continued lease amendment negotiations; 1 lease was amended.
- Continued to work with cell carriers to prepare for license renewals. 34 leases expire in late 2015/early 2016. Rather than renew the leases, they will be issued new license agreements. Due to Nextel and Metro PCS decommissioning of their facilities on many sites, it is anticipated that only 28 license agreements will need to be issued late 2015/early 2016.