AGENDA
WATER ISSUES COMMITTEE MEETING
WITH BOARD OF DIRECTORS *
ORANGE COUNTY WATER DISTRICT
18700 Ward Street, Fountain Valley, CA 92708
Wednesday, January 9, 2019, 8:00 a.m. – Boardroom

* The OCWD Water Issues Committee meeting is noticed as a joint meeting with the Board of Directors for the purpose of strict compliance with the Brown Act and it provides an opportunity for all Directors to hear presentations and participate in discussions. Directors receive no additional compensation or stipend as a result of simultaneously convening this meeting. Items recommended for approval at this meeting will be placed on the January 16, 2019 Board meeting Agenda for approval.

PLEDGE OF ALLEGIANCE

ROLL CALL

ITEMS RECEIVED TOO LATE TO BE AGENDIZED

RECOMMENDATION: Adopt resolution determining need to take immediate action on item(s) and that the need for action came to the attention of the District subsequent to the posting of the Agenda (requires two-thirds vote of the Board members present, or, if less than two-thirds of the members are present, a unanimous vote of those members present.)

VISITOR PARTICIPATION

Time has been reserved at this point in the agenda for persons wishing to comment for up to three minutes to the Board of Directors on any item that is not listed on the agenda, but within the subject matter jurisdiction of the District. By law, the Board of Directors is prohibited from taking action on such public comments. As appropriate, matters raised in these public comments will be referred to District staff or placed on the agenda of an upcoming Board meeting.

At this time, members of the public may also offer public comment for up to three minutes on any item on the Consent Calendar. While members of the public may not remove an item from the Consent Calendar for separate discussion, a Director may do so at the request of a member of the public.

CONSENT CALENDAR (ITEMS NO. 1 – 6)

All matters on the Consent Calendar are to be approved by one motion, without separate discussion on these items, unless a Board member or District staff request that specific items be removed from the Consent Calendar for separate consideration.

1. MINUTES OF WATER ISSUES COMMITTEE MEETING HELD DECEMBER 12, 2018

RECOMMENDATION: Approve minutes as presented

2. LIMITED TERM EMPLOYMENT AGREEMENT WITH JAMES KALINOWSKI FOR TECHNICAL SUPPORT SERVICES

RECOMMENDATION: Agendize for January 16 Board meeting: Authorize execution of a Limited Term Employment Agreement with James Kalinowski for an amount not to exceed $125,000 for technical consulting services for the period of March 4, 2019 to March 4, 2020
3. AMENDMENT TO AGREEMENT TO CONTECH SERVICES FOR REPAIR OF CONCRETE CRACKS IN THE GREEN ACRES PROJECT TREATMENT BUILDING

RECOMMENDATION: Agendize for January 16 Board meeting: Authorize issuance of Amendment No. 1 to Agreement No. 1328 with Contech Services, Inc. for an amount not to exceed $5,975 for additional epoxy injection repairs

4. CONTRACT NO. GAP-2019-2, 2019 GREEN ACRES PROJECT (GAP) APPURtenANCE REHABILITATION – CATEGORICAL EXEMPTION AND NOTICE INVITING BIDS

RECOMMENDATION: Agendize for January 16 Board meeting:

1) Authorize filing of a Categorical Exemption for the replacement of existing Green Acres Project appurtenances in compliance with the California Environmental Quality Act (CEQA) guidelines; and

2) Authorize publication of Notice Inviting Bids for Contract No. GAP-2019-2, Green Acres Project (GAP) Appurtenance Rehabilitation

5. MID-BASIN INJECTION: CENTENNIAL PARK – AUTHORIZE AMENDMENTS TO BUTIER CONSTRUCTION MANAGERS AND GEOTECHNICAL CONSULTANTS, INC. AND RATIFY CONSTRUCTION CHANGE ORDERS 4 AND 5 TO CONTRACT MBI-2017-1

RECOMMENDATION: Agendize for January 16 Board meeting:

1) Authorize issuance of Amendment No. 1 to Agreement No. 1168 with Butier Construction Managers for an amount not to exceed $90,000 for additional civil construction management;

2) Authorize issuance of Amendment No. 2 to Agreement No. 1164 with Geotechnical Consultants, Inc. for an amount not to exceed $23,700 for additional well construction management; and

3) Ratify issuance of Change Orders No. 4 and 5 to Contract MBI-2017-1 for a net total of $91,668.03 and no time extension for use of native soil for backfill, conflicts with existing utilities, structure cripple walls, additional well drilling and development, and other changes

6. AGREEMENT WITH DDB ENGINEERING FOR THE PREPARATION OF 2018 GWRS ANNUAL REPORT

RECOMMENDATION: Agendize for January 16 Board meeting: Authorize issuance of Agreement to DDB Engineering Inc. for an amount not to exceed $52,000 to provide consulting services for the preparation of the calendar year 2018 GWRS Annual Report
MATTERS FOR CONSIDERATION

7. ALAMITOS SEAWATER BARRIER 2019-20 OPERATIONS AND MAINTENANCE BUDGET

RECOMMENDATION: Agendize for January 16 Board meeting:

1) Approve the Alamitos Barrier 2019-20 total O&M budget in the amount of $2,465,000, and authorize payment of the District’s share not to exceed $1,102,500 payable to the Los Angeles County Department of Public Works after receipt and review of invoices; and

2) Appoint Gary Yoshiba as an OCWD alternate member of the Alamitos Barrier Joint Management Committee

8. CONSIDERATION OF AGREEMENT WITH MOULTON NIGUEL WATER DISTRICT

RECOMMENDATION: Agendize for January 16 Board meeting: Authorize: (1) execution of the attached Agreement with the Moulton Niguel Water District and (2) issuance of the two attached requests for proposals

CHAIR DIRECTION AS TO ITEMS IF ANY TO BE AGENDIZED AS MATTERS FOR CONSIDERATION AT THE JANUARY 16 BOARD MEETING

DIRECTORS’ ANNOUNCEMENTS/REPORTS

GENERAL MANAGER’S ANNOUNCEMENTS/REPORTS

ADJOURNMENT
WATER ISSUES COMMITTEE MEMBERS

Committee Members
Cathy Green
Bruce Whitaker
Vicente Sarmiento
Tri Ta
Steve Sheldon

Alternates
Dina Nguyen
Roger Yoh
Denis Bilodeau
Kelly Rowe
Jordan Brandman

In accordance with the requirements of California Government Code Section 54954.2, this agenda has been posted at the guard shack entrance and in the main lobby of the Orange County Water District, 18700 Ward Street, Fountain Valley, CA and on the OCWD website not less than 72 hours prior to the meeting date and time above. All written materials relating to each agenda item are available for public inspection in the office of the District Secretary. Backup material for the Agenda is available at the District offices for public review and can be viewed online at the District’s website: www.ocwd.com

Pursuant to the Americans with Disabilities Act, persons with a disability who require a disability-related modification or accommodation in order to participate in a meeting, including auxiliary aids or services, may request such modification or accommodation from the District Secretary at (714) 378-3233, by email at jdurant@ocwd.com by fax at (714) 378-3373. Notification 24 hours prior to the meeting will enable District staff to make reasonable arrangements to assure accessibility to the meeting.

As a general rule, agenda reports or other written documentation has been prepared or organized with respect to each item of business listed on the agenda, and can be reviewed at www.ocwd.com. Copies of these materials and other disclosable public records distributed to all or a majority of the members of the Board of Directors in connection with an open session agenda item are also on file with and available for inspection at the Office of the District Secretary, 18700 Ward Street, Fountain Valley, California, during regular business hours, 8:00 am to 5:00 pm, Monday through Friday. If such writings are distributed to members of the Board of Directors on the day of a Board meeting, the writings will be available at the entrance to the Board of Directors meeting room at the Orange County Water District office.
Director Green called the Water Issues Committee meeting to order at 8:00 a.m. in the District Boardroom. The Assistant District Secretary called the roll and reported a quorum of the Committee as follows.

Committee Members
Cathy Green  
Bruce Whitaker  
James Vanderbilt (absent)  
Vicente Sarmiento  
Tri Ta  

Alternates
Steve Sheldon  
Dina Nguyen  
Roger Yoh (absent)  
Denis Bilodeau  
Kelly Rowe  

OCWD
John Kennedy – Executive Director  
Joel Kuperberg – General Counsel  
Christina Fuller–Assistant District Secretary  

CONSENT CALENDAR
The Consent Calendar was approved upon motion by Director Ta, seconded by Director Rowe, and carried [5-0].

Ayes – Green, Sarmiento, Ta, Nguyen, Rowe

1. Minutes of Water Issues Committee Meeting Held November 14, 2018

The Minutes of the Water Issues Committee meeting held November 14, 2018 were approved as presented.

2. Contract No. TAL-2018-1, Talbert Barrier Well Redevelopment Project: Issue Change Order No. 2 And Authorize Notice of Completion

Recommended for approval at December 19 Board meeting: 1) Authorize issuance of Change Order No. 2 for a net credit of $249 and 2) Accept completion of work for Contract No. TAL 2018-1 with Layne and authorize filing Notice of Completion.

3. Request for Cost Proposals for Monitoring Wells AMD-12 and OCWD-M45 Redevelopment and Disinfection

Recommended for approval at December 19 Board meeting: Authorize issuance of a Request for Cost Proposals for services to redevelop and disinfect monitoring well AMD-12 casing #2, and well OCWD-M45 casings #4 and #5.

4. GWRS Final Expansion Project – Public Invitation to Prequalify

Recommended for approval at December 19 Board meeting: Authorize publication of Public Invitation to Prequalify to Bid for Construction of the Groundwater Replenishment System Final Expansion Project.
5. Request for Proposals for On-Call Surveying Services

Recommended for approval at December 19 Board meeting: Authorize issuance of a Request for Proposals for on-call engineering surveying services over the next two years.

6. Request for Proposals for Design Services for the Burris Basin GWRS Pipeline Outlet Project

Recommended for approval at December 19 Board meeting: Authorize issuance of a Request for Proposals for design services for the Burris Basin GWRS Pipeline Outlet Project.

7. Consultant Support for Santiago Basin Saddle Repair Project

Recommended for approval at December 19 Board meeting: Authorize issuance of Work Order to SageCrest Planning+Environmental for an amount not to exceed $18,560 to prepare environmental documentation for the Santiago Basin Saddle Repair Project.

8. Santa Ana River Environmental Enhancement – Fund 403 Termination Agreement

Recommended for approval at December 19 Board meeting: Approve the Termination Agreement, Fund 403 – Santa Ana River Environmental Enhancement with the Orange County Flood Control District.

INFORMATIONAL ITEM


Recharge Planning Manager Adam Hutchinson recalled that staff continually explores and considers options to improve the efficiency of the District’s recharge facilities in the city of Anaheim. He reported that over the past several years, staff have been testing the ability of two Treatment technologies to remove sediment from Santa Ana River water as a potential approach to increasing the recharge capacity of these facilities. Mr. Hutchinson updated the Committee on the progress to date and advised on the next steps.

CHAIR DIRECTION AS TO ITEMS IF ANY TO BE AGENDIZED AS MATTERS FOR CONSIDERATION AT THE DECEMBER 19 BOARD MEETING

It was agreed to place items No. 2-8 on the Consent Calendar at the December 19 Board meeting.

ADJOURNMENT

There being no further business, the meeting was adjourned at 8:30 a.m.

_________________________
Cathy Green, Chair
AGENDA ITEM SUBMITTAL

Meeting Date: January 9, 2019

To: Water Issues Committee
   Board of Directors

From: Mike Markus

Subject: LIMITED TERM EMPLOYMENT AGREEMENT WITH JAMES KALINOWSKI
        FOR TECHNICAL SUPPORT SERVICES

SUMMARY

James (Jay) Kalinowski will be retiring from the District as Process Control and System Manager in March 2019. An Agreement with Mr. Kalinowski is recommended so that he can provide technical support to the Water Production, Field Headquarters Recharge and Wetlands Departments. Mr. Kalinowski possesses unique knowledge and experience on electrical, process control systems (PCS), and computerized maintenance management systems (CMMS) from his 32 years of employment at the District.

Attachment: Limited Term Employment Agreement

RECOMMENDATION

Agendize for January 16 Board meeting: Authorize execution of a Limited Term Employment Agreement with James Kalinowski for an amount not to exceed $125,000 for technical consulting services for the period of March 4, 2019 to March 4, 2020.

DISCUSSION/ANALYSIS

Jay Kalinowski has been employed by OCWD for 32 years in various roles involving the management of the Instrumentation and Electrical (I&E) of Water Factory 21, Green Acres Project and GWRS. His most recent assignment has been as the Process Control and System Manager overseeing the I&E department providing electrical, PCS, CMMS and asset management oversight for GWRS, GAP, Recharge and other district facilities. During his 32 years at the District, Mr. Kalinowski has acquired unique knowledge that will be valuable to assist the Water Production and Recharge Operations staff and provide support on process control monitoring, electrical and asset management. In addition to managing these duties, Mr. Kalinowski has been the sole staff source of electrical and instrumentation support for the design of the GWRS Final Expansion (GWRSFE) and would continue in that role during construction of the project.

Mr. Kalinowski’s scope of work under this limited term contract will include the following activities:
• Provide support and guidance to the new Process Control and System Manager, Executive Director of Operations, and GWRS Program Manager

• Review and comment on the design specifications and drawings for the GWRSFE

• Provide construction management support for GWRSFE including submittals/RFI reviews.

• Assist staff with the ongoing development of the Computerized Maintenance Management System and the development of maintenance practices

• Assist with ongoing maintenance and programming of the Delta V software program for the GWRS Process Control System

• Assist the Engineering department as needed with electrical, controls, and instrumentation support for capital improvement and R&R projects

• Review GWRS power consumption and instrumentation data

• Provide general technical consulting on an as-needed basis

Mr. Kalinowski possesses specialized knowledge of OCWD facilities which will provide a unique resource. Jay has been the sole electrical and instrumentation support for district facilities and their associated issues. Mr. Kalinowski has agreed to work limited hours for the District as a consultant to assist with the activities listed above at an hourly rate of $125 per hour.

PRIOR RELEVANT BOARD ACTION(S) N/A
LIMITED TERM EMPLOYMENT AGREEMENT

(James Kalinowski)

THIS LIMITED TERM EMPLOYMENT AGREEMENT is entered into as of March 4, 2019 by and between the ORANGE COUNTY WATER DISTRICT, a political subdivision of the State of California (hereinafter, "OCWD"), James Kalinowski (hereinafter, "EMPLOYEE"), for the employment of EMPLOYEE by OCWD for the period commencing March 4, 2019 through the termination date as established in Section Three herein below, in accordance with the following terms and conditions:

SECTION ONE: EMPLOYMENT AND DUTIES OF EMPLOYEE

1.1 OCWD hereby employs EMPLOYEE, and EMPLOYEE hereby accepts employment from OCWD, in the capacity of PCS & Electrical Advisor, commencing as of March 4, 2019.

1.2 During EMPLOYEE's employment with OCWD, EMPLOYEE shall do and perform all services, acts or things necessary or advisable to fulfill the duties and responsibilities as directed by the Executive Director of Operations.

1.3 EMPLOYEE shall work not more than twenty-five (25) hours in any work week.

1.4 Unless otherwise, the employment services of EMPLOYEE shall be performed at the offices of OCWD, located at 18700 Ward Street, Fountain Valley, CA; provided, however, that OCWD may require EMPLOYEE to travel temporarily to other locations to perform services for or on behalf of OCWD.

1.5 EMPLOYEE shall, to the best of EMPLOYEE's ability and experience, loyally and conscientiously perform all of the duties and obligations required of EMPLOYEE, either expressly or implicitly by the terms of this Agreement or the provisions of the OCWD Personnel Manual (hereinafter, the "Personnel Manual"), as adopted by the Board of Directors of OCWD and as may be amended by the Board of Directors in its legislative discretion from time to time (copy of which has
been provided to EMPLOYEE); provided, however, that in the event of a conflict between this Agreement and the Personnel Manual, this Agreement shall supersede and prevail of the Personnel Manual.

SECTION TWO: COMPENSATION AND BENEFITS

2.1 As of the date of commencement of employment as set forth in Paragraph 1.1, EMPLOYEE shall receive wages based on an hourly rate of $125, with a do not exceed of $125,000 for the term of the contract.

2.2 For and during the term of employment, EMPLOYEE shall NOT be entitled to all of the benefits provided within the contract period and enjoyed by full-time or part-time employees of OCWD, as set forth in the Personnel Manual.

SECTION THREE: TERM OF EMPLOYMENT

3.1 OCWD and EMPLOYEE hereby expressly understand and acknowledge that EMPLOYEE is employed by OCWD, for a period not to exceed one-year duration.

3.2 While OCWD and EMPLOYEE anticipate that the term of employment under this Agreement shall be approximately 1 year from the date of commencement of EMPLOYEE's employment pursuant to Paragraph 1.1 hereinabove, the actual date of termination of employment shall be determined by the completion of duties as determined by the District. In this regard, OCWD shall provide EMPLOYEE at least 14 days' written notice of the termination of employment due to the completion of duties.

3.3 Notwithstanding the provisions of Paragraphs 3.1 and 3.2 hereinabove, OCWD and, EMPLOYEE each reserve the right to terminate this Agreement and the EMPLOYEE's employment with OCWD, at any time, with or without cause.
SECTION FOUR: MISCELLANEOUS

4.1 Effect of Personnel Manual: To the extent not inconsistent with the provisions of this Agreement, the Personnel Manual is incorporated herein by this reference and shall govern the terms and conditions of EMPLOYEE's employment with OCWD, and the employment relationship of EMPLOYEE and OCWD, in all matters not expressly set forth herein.

4.3 Integration: This Agreement, together with all of the provisions of the Personnel Manual not inconsistent with any of the terms and conditions herein, represents the entire understanding of OCWD and EMPLOYEE as to the employment of EMPLOYEE by OCWD; and this Agreement, as complemented by the provisions of the Personnel Manual not inconsistent with the terms and conditions contained herein, supersedes any and all other agreements and understandings, either oral or in writing, between OCWD and EMPLOYEE with respect to the employment of EMPLOYEE by OCWD. Each party to this Agreement expressly acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by any party, or any person acting on behalf of any party, which are not embodied herein, and that no other agreement, statement, representation or promise not contained in this Agreement or in the Personnel Manual shall be of any force or effect.

4.4 Construction and Amendment: This Agreement shall be governed by the laws of the State of California. This Agreement may not be modified, altered or amended except in writing signed by OCWD and EMPLOYEE.

4.5 Effective Date: This Agreement shall be deemed executed by the parties as of the date first above written.
APPROVED AS TO FORM:

By______________________________
President

By______________________________
General Manager

By______________________________
Employee

ORANGE COUNTY WATER DISTRICT

By______________________________
President

By______________________________
General Manager

By______________________________
Employee
## AGENDA ITEM SUBMITTAL

**Meeting Date:** January 9, 2019  
**Budgeted:** Yes  
**Budgeted Amount:** $5,975  
**To:** Water Issues Committee  
**Cost Estimate:** $5,975  
**Board of Directors**  
**Funding Source:** R&R  
**Program/Line Item No.** R18003  
**From:** Mike Markus  
**General Counsel Approval:** N/A  
**Staff Contact:** C. Olsen / B. Smith  
**Engineers/Feasibility Report:** N/A  
**CEQA Compliance:** N/A

### Subject:
**AMENDMENT TO AGREEMENT WITH CONTECH SERVICES FOR REPAIR OF CONCRETE CRACKS IN THE GREEN ACRES PROJECT TREATMENT BUILDING**

## SUMMARY

Cracks in the concrete walls of the Green Acres Project treatment building have been observed and were leaking water from the flocculation and filter tanks. Contech Services successfully performed epoxy injection to repair most cracks, however additional cracks and pipe wall penetrations need to be filled.

## RECOMMENDATION

Agendize for January 16 Board meeting: Authorize issuance of Amendment No. 1 to Agreement No. 1328 with Contech Services, Inc. for an amount not to exceed $5,975 for additional epoxy injection repairs.

## BACKGROUND/ANALYSIS

The District’s Green Acres Project (GAP) treatment building was constructed 30 years ago in 1989. The building’s structure is made of reinforced concrete walls and partitions to separate its treatment processes. Cracks have developed in the exterior walls of the building. Water leaks through the cracks from the flocculation and filtration treatment processes. Contech Services was contracted to perform epoxy injection of these concrete cracks to seal them and prevent further leakage. Upon completion of the contract’s scope, the walls were hydrostatically tested and additional leaking cracks and pipe wall penetrations were observed. Staff recommends issuance of an amendment to Contech for an amount not to exceed $5,975 to fill the additional cracks and penetrations with epoxy.

## PRIOR RELEVANT BOARD ACTION(S)

8/15/18, R18-8-109: Authorize issuance of Agreement to Contech Services, Inc. for Repair of Concrete Cracks in the Green Acres Project Treatment Building for an amount not to exceed $48,650.
SUMMARY

The District’s Green Acres Project (GAP) distribution system went into service in 1991. Many of the blow-off enclosure boxes have deteriorated due to rust and are no longer able to secure their lids or maintain smooth transitions in sidewalk areas. A Notice Inviting Bids is ready for a contract to replace approximately 40 of these boxes in the Cities of Costa Mesa, Fountain Valley, Huntington Beach, and Santa Ana.

RECOMMENDATION

Agendize for January 16 Board meeting:

1. Authorize filing of a Categorical Exemption for the replacement of existing Green Acres Project appurtenances in compliance with the California Environmental Quality Act (CEQA) guidelines; and


BACKGROUND/ANALYSIS

Due to the age of the GAP distribution system, annual repair and rehabilitation project budgets have been established to address its needs. Each year, Staff from the Engineering and Barrier groups determine which needs are of the greatest importance. Over the past two years, several of the blow-off enclosure boxes were replaced. This project budget was established to replace all of the remaining compromised boxes. Most of the boxes are located in sidewalk areas and are becoming trip hazards. The metal frames of the boxes have rusted to a point that their lids are no longer secure.

Staff recommends issuance of Notice Inviting Bids for Contract GAP-2019-2 to replace approximately 40 of the boxes. The project is consistent with the Categorical Exemption for Replacement or Reconstruction (Class 2) because it is replacing small existing structures in a way that maintains the original purpose and does not increase capacity. Figure 1 shows the location of the boxes to be included in this contract. Table 1 shows a summary of the expected project expenditures. The construction
inspection of this work would be performed in-house by OCWD personnel. It is anticipated that the work will be completed before June 30, 2019.

**Figure 1: Proposed Blow-Off Box Replacement Locations**

![Map of吹走箱替换位置](image)

**Table 1: Blow-Off Box Replacement Budget Summary**

<table>
<thead>
<tr>
<th>Description</th>
<th>Projected Expenditures</th>
</tr>
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<tbody>
<tr>
<td>Permitting</td>
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<tr>
<td>Construction</td>
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<tr>
<td>Construction Management</td>
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<tr>
<td>Project Contingency</td>
<td>$ 40,000</td>
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<tr>
<td><strong>Total Project Budget</strong></td>
<td><strong>$ 500,000</strong></td>
</tr>
</tbody>
</table>

**PRIOR RELEVANT BOARD ACTION(S)**

N/A
SUMMARY
On-going construction of the Mid-Basin Injection: Centennial Park Project has resulted in additional support needs for well and civil construction management services. Events necessitating addition support include extended pipeline construction, well quality controls, and Orange County Flood Control work in the Greenville-Banning channel.

RECOMMENDATION
Agendize for January 16 Board meeting:

1. Authorize issuance of Amendment No. 1 to Agreement No. 1168 with Butier Construction Managers for an amount not to exceed $90,000 for additional civil construction management;

2. Authorize issuance of Amendment No. 2 to Agreement No. 1164 with Geotechnical Consultants, Inc. for an amount not to exceed $23,700 for additional well construction management; and

3. Ratify issuance of Change Orders No. 4 and 5 to Contract MBI-2017-1 for a net total of $91,668.03 and no time extension for use of native soil for backfill, conflicts with existing utilities, structure cripple walls, additional well drilling and development, and other changes.

BACKGROUND/ANALYSIS
The District’s Mid-Basin Injection (MBI) project in Centennial Park includes construction of four wells to inject GWRS product water directly into the Principal aquifer near areas with concentrated groundwater production and relatively low groundwater levels. The project will provide additional basin recharge capacity that must be developed to support the GWRS Final Expansion Project, raise groundwater levels in the Principal aquifer, and reduce the amount of GWRS water that must be sent to the Anaheim recharge basins allowing those facilities to be concentrated on capturing Santa Ana River storm flows and recharging untreated imported water. A project site map is shown in Figure 1.
An amendment to the project’s civil construction manager, Butier, is recommended for an amount not to exceed $90,000. Loose sandy soil conditions and unmarked utilities were encountered during pipeline construction inside the park. These conditions caused the amount of days needed to construct the pipeline to extend well beyond its expected timeframe. Geotechnical inspections were employed during the pipeline work to ensure that the roadway’s sub-grade was compacted properly. Additionally, a column pipe thread issue was uncovered during inspection of the project’s well pumping components. New threads are being fabricated and a specialty inspection of the threads will be performed under the Butier contract, which cost will be reimbursed to OCWD via change order with the contractor.

An amendment to the project’s well construction manager, Geotechnical Consultants, Inc., is recommended for an amount not to exceed $23,700. Additional inspection and testing efforts were required due to a delay and re-phasing of construction activities caused by a County of Orange project taking place in the Greenville-Banning channel requiring OCWD to stop discharging well development water to the channel. Additionally, there were quality control issues with the glass beads and gravel filter pack, well sanding issues, and additional effort to clear well tubes. All issues were resolved but resulted in additional time.
Change Order Number 4 consisted of a credit to OCWD for allowance of sandy native soil for pipeline backfill, a deeper pipeline installation to avoid existing utilities, an upgrade to impact resistant drywall in the shared structures, an adjustment to door and doorframe widths, and the addition of a monitor for the skatepark camera system. The net total of these items is a credit to OCWD for $72,379.09.

Change Order Number 5 consisted of expenses associated with the delay discussed above, additional well development, modification of shared structure cripple walls, repair of unmarked existing utilities, addition of a third education sign at the Heritage Museum, an additional well video survey, and change of grating material at one of the air-gaps. The total of these items is $164,047.12.

Project Budget and Schedule

The project has been awarded a $9.1 million Proposition 1 Recycling Water Grant. Additionally, the project has been awarded a combination of low interest State Revolving Fund and Proposition 1 loans for up to $18.1 million with a 30-year repayment term and 1.8% interest rate. The project schedule summary is shown in Table 1 and the project budget is summarized in Table 2.

<table>
<thead>
<tr>
<th>Table 1: MBI Centennial Park Schedule Summary</th>
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<tbody>
<tr>
<td>Description</td>
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<tr>
<td>Award MBI-2017-1 Construction</td>
</tr>
<tr>
<td>Obtain Regional Board Permit Amendment</td>
</tr>
<tr>
<td>Begin Operation of MBI Centennial Park Wells</td>
</tr>
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<td>Complete MBI-2017-1 Construction</td>
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<table>
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<tr>
<th>Table 2: MBI Centennial Park Budget Summary</th>
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<td>Description</td>
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<tr>
<td>Pre-Design, Permitting, CEQA</td>
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<td>Change Order No. 4</td>
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</table>
Staff recommends authorizing issuance of Amendment No. 1 to Agreement No. 1168 with Butler Construction Managers for an amount not to exceed $90,000 for additional civil construction management; authorizing issuance of Amendment No. 2 to Agreement No. 1164 with Geotechnical Consultants, Inc. for an amount not to exceed $23,700 for additional well construction management; and ratifying issuance of Change Orders No. 4 and 5 to Contract MBI-2017-1 for a net total of $91,668.03.

PRIOR RELEVANT BOARD ACTION(S)
5/23/18, R18-5-55: Authorize issuance of Amendment No. 1 to Agreement No. 1244 with VCS Environmental for an amount not to exceed $33,332 for additional cultural monitoring of construction activities.

4/18/18, R18-4-44: Authorize issuance of Amendment No. 4 to Agreement No. 1090 with Tetra Tech, Inc. for an amount not to exceed $96,665 for additional construction support; and Ratify issuance of Change Orders No. 1, 2, and 3 to Contract MBI-2017-1 for a net credit to the District of $28,518 and no time extension for communication of prevailing wages, reduction in SAR-12 monitoring well bid items, and additional items to accommodate community park use.

2/21/18, R18-2-10: Issuance of Contract MBI-2017-2 Change Orders No. 2, 3 and 4 to Best Drilling and Pump, Inc. totaling an OCWD credit amount of $28,950.66 authorized for alternative water supply, additional electrical work, and bid item adjustments. Work under such contract is accepted as complete, and staff is authorized and directed to execute a Notice of Completion and record said Notice in the Office of the County Recorder. Upon expiration of the interim lien period, providing no liens have been filed, payment of the balance due under such contract shall be made.
8/16/17, M17-115: Authorize issuance of $71,734 Change Order No. 1 to Contract No. MBI-2017-2, Mid-Basin Injection: Centennial Park Well SAR-13 at Heritage Museum, with Best Drilling and Pump, Inc. for increasing casing material thickness.

6/21/17, R17-6-89: The Affidavit of Publication of Notice Inviting Bids for Contract No. MBI-2017-2, Mid-Basin Injection: Centennial Park Well SAR-13 at Heritage Museum is hereby received and filed; and the lowest responsive bid of Best Drilling and Pump, Inc. in the amount of $1,138,380 is accepted.

5/24/17, R17-5-78: The Affidavit of Publication of Notice Inviting Bids for Contract MBI-2017-1, Mid-Basin Injection: Centennial Park is hereby received and filed; the lowest responsive bid of Pacific Hydrotech Corp. in the amount of $23,107,567 is accepted and all other bids are rejected; issuance of Amendment No. 3 to Agreement No. 1090 with Tetra Tech, Inc. is authorized for an amount not to exceed $131,800 for additional architectural plans, civil design, and permitting efforts; issuance of an Agreement to VCS Environmental for archeological, paleontological, and Native American resources monitoring for an amount not to exceed $31,520; and the total project budget is reduced from $33,000,000 to $29,500,000.

4/19/17, R17-4-56: Adopt Resolution approving the SAR-13 Monitoring at Heritage Museum which includes the following items: Adopt the Final Mitigated Negative Declaration for the project, Authorize execution of Easement Deed with Santa Ana Unified School District, Authorize Amendment No. 2 to Agreement with Tetra Tech, Authorize Amendment No. 1 to Agreement with Geotechnical Consultants, Authorize Notice Inviting Bids for Contract MBI-2017-2, SAR-13 Monitoring Well at Heritage Museum, Authorize filing of the Notice of Determination.


6/15/16, R16-6-81: Approve agreements for Mid-Basin Injection: Centennial Park project: Agreement to Butier Construction Managers for an amount not to exceed $1,155,932 for Civil Construction Management Service; Agreement to Geotechnical Consultants, Inc. for an amount not to exceed $449,810 for Well Construction Management Service; and Amendment No. 1 to Agreement No. 1090 with Tetra Tech, Inc. for an amount not to exceed $45,460 for additional utility exploration and architectural treatments.

6/15/16, R16-6-80: Approve Mid-Basin Injection: Centennial Park Project Easement from Santa Ana Unified School District and License Agreement with City of Santa Ana.

5/18/16, R16-5-65: Adopt Resolutions for the Clean Water State Revolving Fund Loan application for Mid-Basin Centennial Park Injection Project: Resolution Establishing a Designee to Authorize Execution of the Financing Agreements with the State Water Resources Control Board; Resolution Establishing Dedicated Source of Revenue for Repayment of the State Revolving Fund Loan for Board approved capital improvement projects; and Reimbursement Resolution.

4/20/16, R16-4-52: Adopt Resolution approving the Mid-Basin Injection: Centennial Project which includes the following items: Certifying the Final Environmental Impact Report for the Project; Adopting the Findings of Fact and the Mitigation Monitoring Reporting Program; Approve the Project and establish the Project budget of $33,000,000; Receive and File Revised Engineer’s Report; and Authorize filing of Notice of Determination.

3/16/16, M16-45: Authorize Request for Proposals for Civil and Well Construction Management of the Mid-Basin Injection: Centennial Park Project.
6/17/15, R15-6-89: Authorize Agreement to Tetra Tech Inc. for Mid-Basin Injection: Centennial Park Project Design Services

4/15/15, R15-4-48: Receive and file Engineer’s Report for Mid-Basin Injection: Centennial Park Project and declare project duly instituted, and authorize issuance of RFP for project design services

7/16/14, R14-7-100: Approve MOU with the City of Santa Ana for Construction and Operation of Injection Wells at Centennial Park
AGENDA ITEM SUBMITTAL

Meeting Date: January 9, 2019
To: Water Issues Committee
    Board of Directors
From: Mike Markus
Staff Contact: J. Dadakis
Budgeted: Yes
Budgeted Amount: $55,000
Cost Estimate: $52,000
Funding Source: General Fund
Program/Line Item No.: 1046.53001.9922
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: AGREEMENT WITH DDB ENGINEERING FOR THE PREPARATION OF 2018 GWRS ANNUAL REPORT

SUMMARY

Staff recommends issuance of a Professional Service Agreement with DDB Engineering Inc. for the preparation of the calendar year 2018 GWRS Annual Report. Preparation of the Annual Report by an independent qualified engineer registered in California and experienced in the field of advanced wastewater treatment for groundwater recharge is a requirement of the GWRS Regional Board permit. DDB Engineering possesses the qualifications and long-standing familiarity with the GWRS project to prepare the required Annual Report efficiently.

Attachment(s): DDB Engineering Inc. proposal dated December 19, 2018

RECOMMENDATION

Agendize for January 16 Board meeting: Authorize issuance of Agreement to DDB Engineering Inc. for an amount not to exceed $52,000 to provide consulting services for the preparation of the calendar year 2018 GWRS Annual Report.

BACKGROUND/ANALYSIS

The District’s permit to operate the Groundwater Replenishment System (GWRS) was issued by the Santa Ana Regional Water Quality Control Board (RWQCB) via Order No. R8-2004-02, and subsequent amending Orders Nos. R8-2008-0058, R8-2014-0054, and R8-2016-0051 to allow for additional recharge locations and the GWRS Initial Expansion (GWRSIE). A condition of this permit requires that a calendar year Annual Report be submitted by June 30th of the following year. The Annual Report also must prepared by an independent qualified engineer registered in California and experienced in the field of advanced wastewater treatment for groundwater recharge. The purpose of the report is to present an in-depth review of GWRS treatment, Talbert Barrier, Demonstration Mid-Basin Injection, and Miller/Kraemer/Miraloma/La Palma Basin operations, performance, and water quality for the calendar year. The Annual Report is used as a primary reference by District staff and is frequently distributed to external parties seeking information about the project.
Since 2004, the GWRS Annual Report has been produced each year by DDB Engineering, Inc. (DDBE). DDBE has been involved with the GWRS treatment and permitting process since the inception of the project. Throughout design, startup, and operations of both the GWRS and GWRSIE projects, DDBE provided a range of support and engineering services for all permit applications, amendments, and compliance related issues, including development the required Operations, Maintenance, and Monitoring Plan (OMMP) and Title 22 Engineering Reports. DDBE is also providing design review and permitting services for the GWRS Final Expansion (GWRSFE) project.

DDBE is uniquely qualified to prepare the Annual Report and brings a wide range of comprehensive knowledge and direct experience with the GWRS treatment processes, as well as regulatory permit and compliance issues. Debra Burris, the firm’s principal, and her staff have done an outstanding job of helping the District to comply with GWRS reporting requirements from the RWQCB and the state Division of Drinking Water (DDW). Furthermore, DDBE’s history with the project and past experience preparing Annual Reports and earlier GWRS permits provides significant cost and time efficiencies to the District.

PRIOR RELEVANT BOARD ACTION (S)

1/17/18, R18-1-4 Authorize issuance of agreement to DDB Engineering Inc. for an amount not to exceed $49,900 to provide consulting services for the preparation of the calendar year 2017 GWRS Annual Report

11/15/17, R17-11-44 Authorize issuance of agreement with DDB Engineering for an amount not to exceed $198,000 for permitting and regulatory support services for the GWRS Final Expansion Project

1/21/15, R15-1-7 - Approve agreement with DDB Engineering for preparation of 2014-2016 GWRS annual reports.

1/18/12, R12-1-4 – Authorize issuance of Professional Service Agreement to DDB Engineering Inc. for an amount not to exceed $158,400 to provide consulting services for the preparation of the 2011-13 GWRS Annual Reports and amendments to the GWRS & Green Acres Project Regional Water Quality Control Board permits.
Orange County Water District  
Attn: Mr. Jason Dadakis, P.G., C.HG  
Executive Director of Water Quality and Technical Resources  
18700 Ward Street  
Fountain Valley, CA 92708

Subject: Groundwater Replenishment System Proposal for 2018 Annual Report

Dear Mr. Dadakis:

DDB Engineering, Inc. is pleased to submit this proposal for preparation of the 2018 Annual Report for the Groundwater Replenishment System (GWRS) for your consideration.

The Annual Report will fulfill requirements designated in the GWRS permit and associated amendments, which call for submittal of an annual report to the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) and Regional Water Quality Control Board (RWQCB) by June 30th of each year. In general, the report serves to memorialize GWRS performance. The monitoring and reporting elements of the GWRS permit require that specific information about purified recycled water production, water quality, treatment process performance, facilities' operating conditions, and groundwater monitoring be included in the report. Beyond addressing permit requirements, the Annual Report will describe how the GWRS complied with groundwater recharge requirements set forth in the Title 22 Water Recycling Criteria, and documenting pathogenic microorganism control levels achieved during the year. The report will also present water quality results for treatment process monitoring for health and performance-based chemicals of emerging concern (CECs) and surrogates per the SWRCB Revised Recycled Water Policy.

We anticipate that the organization of the 2018 Annual Report will be similar to that of the preceding year's report, featuring a clear format to document regulatory compliance with appendices of detailed supporting information about the GWRS performance. We will use flow and water quality data, monthly operating reports, hydrogeologic monitoring records, and other available information to prepare the report.

As we have done in the past, three submittals and one review meeting are envisioned for the report. Most of the initial data gathering will be handled via email or taken from monthly operations reports. The next step will be to prepare and submit the draft report for District review. We have found that electronic markups of the draft report are an efficient method to conduct the initial review. Following revisions, the revised draft report will be submitted for District review and input. At that point, we will hold a workshop with the District to address...
outstanding comments and questions. Lastly, we will prepare the final report, delivering one unbound original, stamped and signed, with an electronic copy on CD to the District for reproduction and submittal to the RWQCB and DDW before the June 30th deadline. Besides preparation of the report, our scope of work includes attending the National Water Research Institute Independent Advisory Panel meeting to address any questions about the report.

The attached spreadsheet itemizes the tasks associated with the scope of work for preparation of the 2018 Annual Report, showing the estimated level of effort and cost associated with each task.

Having worked on numerous facets of GWRS for many years, including preparation of annual reports, we believe we are uniquely positioned with the necessary project background to efficiently develop and complete the 2018 Annual Report. Brandi Thrasher, P.E., who has worked on prior annual reports, will serve as the Project Engineer; I will serve as the Principal Engineer and be responsible for the final report. We have experience working directly with District staff and coordinating the team effort required to produce the Annual Report.

We appreciate this opportunity to continue to be of service to the District. Please contact me if you have any questions or need more information.

Sincerely,

DDB Engineering, Inc.

[Signature]

Debra L. Burris, P.E., BCEE, D. WRE
Principal

Enclosure
## Estimated Labor and Fee Breakdown

<table>
<thead>
<tr>
<th>Task Description*</th>
<th>Principal Engineer</th>
<th>Project Engineer</th>
<th>Tech/Graphics &amp; Clerical</th>
<th>Miscellaneous Expenses</th>
<th>Total Estimated Fee</th>
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<tbody>
<tr>
<td><strong>2018 Annual Report</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Gather information re: operations/flows/water quality data</td>
<td>2</td>
<td></td>
<td></td>
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<td>$398</td>
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<tr>
<td>2. Analyze water quality data, process performance, operating records</td>
<td>48</td>
<td>32</td>
<td>64</td>
<td></td>
<td>$18,992</td>
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<tr>
<td>3. Prepare and submit draft report for review</td>
<td>72</td>
<td>32</td>
<td></td>
<td></td>
<td>$19,288</td>
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<tr>
<td>4. Revise report and submit revised draft report for review</td>
<td>28</td>
<td>16</td>
<td>4</td>
<td></td>
<td>$8,332</td>
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<tr>
<td>5. Meet (1) to receive and discuss comments on revised draft report</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>$836</td>
</tr>
<tr>
<td>6. Revise report and submit final report (on CD w/ hardcopy mock-up)</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>$40</td>
<td>$2,532</td>
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<tr>
<td>7. Attend NWRI Independent Advisory Panel meeting</td>
<td>8</td>
<td></td>
<td></td>
<td>$30</td>
<td>$1,622</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>170</strong></td>
<td><strong>84</strong></td>
<td><strong>72</strong></td>
<td><strong>110</strong></td>
<td><strong>$52,000</strong></td>
</tr>
</tbody>
</table>

* Notes & Assumptions:
- Table of contents for 2018 report is anticipated to be similar to that in the 2017 report.
- Water quality data, flow data, and operations reports are available from OCWD.
- Hydrogeologic evaluations by OCWD.
- Draft and revised draft submittals are electronic files. Review comments on draft and revised draft are via email.
- IAP presentation (if any) by District staff
- Expenses include postage and delivery charges, mileage, minor reproduction (major reproduction by OCWD), and other miscellaneous costs.
AGENDA ITEM SUBMITTAL

Meeting Date: January 9, 2019
To: Water Issues Committee
    Board of Directors
From: Mike Markus
Staff Contact: R. Hemdon/D. Mark

Budgeted: Yes
Budgeted Amount: $1,102,500 (FY19-20)
Cost Estimate: $1,102,500
Funding Source: General Fund
Program/Line Item No.: 1050.56026.9932
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: ALAMITOS SEAWATER BARRIER 2019-20 OPERATIONS AND MAINTENANCE BUDGET

SUMMARY

Staff recommends approval of the 2019-20 Alamitos Barrier operations and maintenance (O&M) budget of $2,465,000, of which $1,102,500 is the District’s share, as proposed by the Alamitos Barrier Joint Management Committee.

Attachment: Alamitos Barrier 2019-20 Operation and Maintenance Budget Table

RECOMMENDATION

Agendize for January 16 Board meeting:

1. Approve the Alamitos Barrier 2019-20 total O&M budget in the amount of $2,465,000, and authorize payment of the District’s share not to exceed $1,102,500 payable to the Los Angeles County Department of Public Works after receipt and review of invoices; and

2. Appoint Gary Yoshiba as an OCWD alternate member of the Alamitos Barrier Joint Management Committee.

BACKGROUND/ANALYSIS

In 1964, the District entered into an “Agreement for the Cooperative Implementation of Alamitos Barrier Project,” with the Los Angeles County Flood Control District (now part of the Los Angeles County Department of Public Works - LACDPW). Under the terms of the agreement, the LACDPW operates and maintains the Alamitos Seawater Barrier and its physical facilities under the direction of the interagency Joint Management Committee (JMC). The JMC comprises eight members, half appointed by LACDPW and half appointed by the District. LACDPW and OCWD also may each appoint up to two alternate members to the JMC to substitute for an absent member. Staff recommends appointment of senior hydrogeologist Gary Yoshiba as an OCWD alternate member of the JMC. Mr. Yoshiba has been involved with the Alamitos Barrier for over ten years and managed construction of the recently-completed Alamitos Barrier Improvement Project, including 17 new injection wells and 4 monitoring wells.
Each year the JMC reviews and recommends for approval an O&M budget for the upcoming fiscal year. The barrier O&M budget comprises several activities including injection facilities O&M and administration, monitoring well data collection and maintenance, and data analysis and reporting. The total O&M budget is divided between LACDPW and OCWD in proportion to the water injected into the barrier by each agency. With 17 new injection wells that went on line in September 2018, the District’s share of total injection (7,000 AF/year) is estimated to be about 45% or 3,150 AF/year.

On November 6, 2018, the JMC proposed a total O&M budget of $2,465,000 for 2019-20, of which the District’s estimated 45% share is $1,102,500. These amounts exclude approximately $80,000 liability insurance premiums which are shared equally between LACDPW and OCWD and paid separately. There is a lag time in receiving invoices from LACDPW, so one-half of the annual expenses is paid in FY19-20, and the other half is paid in FY20-21. Staff recommends Board approval of the O&M budget and payment of the District’s share.

PRIOR RELEVANT BOARD ACTIONS

1/17/18, M18-6 – Approve the FY2018-19 O&M budget for the Alamitos Barrier in the amount of $1,860,000 and authorize the payment of OCWD’s share in the amount of $744,000, payable to LACDPW.

9/16/15, R15-9-125 - Approve and authorize execution of Amendment to Agreement for Cooperative Implementation of Alamitos Barrier Project, Supplement No. 8 with the Los Angeles County Department of Public Works (LACDPW) to revise the District’s annual payment to LACDPW that incorporates a prorated portion of the actual costs of the Alamitos Barrier maintenance yard.

9/17/14, R14-9-126 - Approve and authorize execution of the cost-sharing Agreement for Construction of Additional Facilities for the Alamitos Barrier Project Supplement No. 7 with the LACDPW for the design and construction of injection and monitoring well facilities and payment by LACDPW to OCWD at one-half of the cost of the new facilities located between Points B and C for a total not to exceed $1,253,000; and approve an increase to the Alamitos Barrier Improvement Project budget by $4,693,000 for a revised total capital project budget of $14,752,000.

12/18/13, M13-181 – Authorize general liability insurance policy for the Alamitos Barrier for calendar year 2014 and authorize inclusion of general liability insurance premiums in future Alamitos Barrier annual O&M budgets submitted separately for Board approval.

9/16/98, R98-9-141 - Approve and authorize execution of Supplement No. 6 to Alamitos Barrier Project agreement with LACDPW. Provides for the District to construct additional barrier facilities identified in Geologist's Report on Alamitos Barrier Improvement Project Construction Unit 12, consisting of 5 new injection wells, one new extraction well, and 3 new monitoring wells.

3/17/93, R93-3-44 - Authorize execution of Supplement No. 5 to Alamitos Barrier Project agreement with Los Angeles County Flood Control District (now part of Los Angeles County Department of Public Works). Supplement provides for expansion of
Alamitos Barrier Joint Management Committee from six to eight members (LACFCD and the District each to appoint one additional member)

10/4/89, R89-10-201 - Authorize execution of Supplement No. 4 to Alamitos Barrier Project agreement with Los Angeles County Flood Control District providing for joint participation in design, construction, operation and maintenance of the Alamitos Barrier Project. Provides for the District to design and construct required additional Alamitos Barrier facilities identified in the District’s Engineer’s Report regarding Seawater Intrusion at the Alamitos Barrier, approved 5/3/89 by Resolution No. 89-5-90.

4/17/85, R85-4-41 - Approve and authorize execution of Alamitos Barrier Hydroelectric Project Site lease and Royalty Agreement with Los Angeles County Flood Control Dist. & Hydro Electric Constr. Inc.; & Supplement No. 3 to Alamitos Barrier Project Agreement to provide for construction of hydroelectric project at Alamitos Barrier.


1/20/65, R891 – Authorize Agreement with LACFCD for Geologic Services on Alamitos Barrier Project (Supplement No. 1).

6/17/64, R831 - Approve Agreement for Cooperative Implementation of the Alamitos Barrier Project.
### ABP FY19-20 Budget

#### Volume of Water (ac-ft)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>2015-16</th>
<th>2016-17</th>
<th>2017-18</th>
<th>2018-19</th>
<th>2019-20</th>
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<tbody>
<tr>
<td>Total ABP Operations and Maintenance ($)</td>
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<td>193,000</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
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<tr>
<td>Maintenance of Observation Wells ($)</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
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<td>15,000</td>
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<tr>
<td>Operations of Extraction Wells ($)</td>
<td>1,193,130</td>
<td>1,545,880</td>
<td>1,583,380</td>
<td>1,606,300</td>
<td>1,791,000</td>
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<tr>
<td>Selection of groundwater data ($)</td>
<td>115,000</td>
<td>130,000</td>
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<tr>
<td>Construction and Maintenance ($)</td>
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<td>6,000</td>
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<td>Injection Well Redevelopment ($)</td>
<td>500,000</td>
<td>500,000</td>
<td>500,000</td>
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<td>500,000</td>
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<tr>
<td>Processing of data and preparation of reports ($)</td>
<td>45,500</td>
<td>45,500</td>
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<td>Oversight of Reclaim Water Program ($)</td>
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<td>9,750</td>
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<td>9,750</td>
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<tr>
<td>Projects and Studies ($)</td>
<td>45,500</td>
<td>45,500</td>
<td>45,500</td>
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<tr>
<td>Total ABP Liability Insurance ($)</td>
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<td>37,500</td>
<td>37,500</td>
<td>37,500</td>
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<tr>
<td>Total ABP Expenditure ($)</td>
<td>2,960,385</td>
<td>3,181,912</td>
<td>3,300,000</td>
<td>3,300,000</td>
<td>3,300,000</td>
</tr>
</tbody>
</table>

#### Analysis and direction of extraction operation ($)
The Alamitos Barrier began operations in 1965, ten years before the Talbert Barrier.
Alamitos Barrier is operated and maintained by LA Co. under a 1964 Agreement with OCWD.

- 25,000 feet of pipeline
- 58 injection wells
- 234 monitoring points

Managed by Joint Management Committee

- OCWD
- LA County Dept. of Public Works
- Water Replenishment District
- Golden State Water Co.
- Long Beach

Ownership split between OCWD & LA County
The barrier traverses the 1.5-mile wide Alamitos Gap.
The wells inject fresh water into multiple aquifers to hold back seawater intrusion.
In 2008, seawater was found to be breaching portions of the barrier due to sparse well spacing.

- **2009** Built GW flow model
- **2010-15** Designed ABIP
- **2016-18** Constructed ABIP

2015 I Zone Chloride (mg/L)
OCWD has typically paid about 1/3 of barrier O&M costs based on the same proportion of injection water it purchased.
The barrier is supplied by imported and recycled water.

85%*

Imported water purchased from City of Long Beach

15%*

Recycled water purchased from WRD

3-MGD plant started in 2005 expanded in 2014

*2013-18 average

Microfiltration

Rev. Osmosis

UV Light
Key O&M Budget Items

- Injection well redevelopment & maintenance
- Pipeline, valves, telemetry maintenance
- Monitoring well maintenance
- Groundwater level and quality data collection
- Data analysis and reporting
Proposed FY 2019-20 O&M Budget

Total Budget = $2,465,000

OCWD Share (~45%)  $1,102,500
LA Co. Share (~55%)  $1,362,500

Excludes Injection Water Cost (in Water Purchase Budget)
Agendize for Jan. 16 Board Meeting:

1. Approve Alamitos Barrier 2019-20 total O&M budget of $2,465,000, and authorize payment of OCWD’s share not to exceed $1,102,500 payable to LA County Dept. of Public Works after receipt and review of invoices.

2. Appoint Gary Yoshiba as an alternate member of the Alamitos Barrier Joint Management Committee.
End of Presentation
AGENDA ITEM SUBMITTAL

Meeting Date: January 9, 2019

To: Water Issues Committee.
   Board of Directors

From: Mike Markus

Staff Contact: J. Kennedy

Subject: CONSIDERATION OF AGREEMENT WITH MOULTON NIGUEL WATER DISTRICT

SUMMARY

In August 2017 the Board broadened the District’s Water Resources Policy to allow the consideration of water storage and exchange programs with South Orange County (SOC) water agencies. In October 2018 the Board President created an ad-hoc committee of Orange County Water District (OCWD or District) and Moulton Niguel Water District (MNWD) board members to discuss the issues of developing a MNWD pilot storage account in the groundwater basin. The committee met in October and November. The attached Agreement was drafted and calls for hiring consultants to formally study the issues related to developing a potential MNWD pilot storage account in the OCWD groundwater basin. MNWD has agreed to fund this work.

Attachments:

A. Agreement
B. Request for Proposals
   a. Review of Existing Storage Programs
   b. Evaluate Conveyance Options to Distribute Water to MNWD
C. Presentation Material
D. Recent Letters
   a. December 4, 2017 IRWD Letter
   b. December 11, 2017 City of Anaheim Letter
   c. January 31, 2018 Letter from Nineteen Groundwater Producers
   d. February 20, 2018 Letter from Eight South Orange County Water Agencies
   e. April 6, 2018 Moulton Niguel Water District letter

RECOMMENDATION

Agendize for January 16 Board meeting: Authorize: (1) execution of the attached Agreement with the Moulton Niguel Water District and (2) issuance of the two attached requests for proposals.
DISCUSSION/ANALYSIS

History

In 2006 the District approved an Emergency Services Agreement with the Municipal Water District of Orange County, the Irvine Ranch Water District (IRWD), and multiple South Orange County (SOC) water agencies. The agreement calls for IRWD to provide up to 50 cubic feet per second (cfs) for up to 30 days (a total of approximately 3,000 acre-feet of water) to SOC water agencies during emergency events. IRWD’s annual groundwater production must still comply with the annual Basin Production Percentage (BPP) and Basin Equity Assessment (BEA) calculations. The amount of water IRWD can provide is slowly diminishing as water demands within IRWD increase. The agreement will expire in 15 years.

In August 2017 the Board broadened the District’s Water Resources Policy to allow the consideration of water storage and exchange programs with SOC water agencies. The concept of such a program is to allow one or more SOC water agencies to store relatively small amounts of water in the groundwater basin which would have little impact if any on the District’s operations. OCWD would receive compensation from the program which could be used to help offset future expected Replenishment Assessment increases.

In February 2018 the Water Issues Committee considered entering into a Memorandum of Understanding (MOU) with MNWD to study a potential pilot water storage and exchange agreement. The Board eventually delayed any consideration of the MOU and requested staff to: (1) assess the District’s storage needs based upon current and expected future conditions; and (2) address the January 31, 2018 Groundwater Producers letter which requested the District to consider four issues. That letter is attached and is summarized below:

1. Evaluate the current and future operating parameters of the Basin;
2. Identify potential measures to optimize the storage of water in the Basin for the benefit of the Producers;
3. Consider if / how storage accounts could be implemented for Producer agencies; then
4. Consider if / how potential storage accounts could be implemented for non-Producer agencies to the primary benefit of the Producer agencies.

In August 2018 staff completed its assessment of the District’s storage needs and presented those findings to the Board. Staff concluded the District was in relatively good condition and recommended the Accumulated Overdraft target range could be lowered from 100,000 to 150,000 acre-feet to 150,000 to 200,000 acre-feet. This recommendation was primarily based upon two factors:

1. The Groundwater Replenishment System was recently expanded to 100 mgd and there are active plans to expand the plant up to 130 mgd by 2023. This creates more reliable base supplies for the service territory.
2. Total expected ultimate 2040 water demands of the 19 Groundwater Producers have significantly decreased from 525,000 acre-feet per year to 447,000 acre-feet per year.

With this information, and based upon future modeling by staff, the District does not need to store as much water as previously believed which means the accumulated overdraft target range could be lowered.
The groundwater basin's accumulated overdraft is currently 277,000 acre-feet as of June 30, 2018. Staff will recommend annual budgets over the next three to four years that should decrease the accumulated overdraft to approximately 150,000 acre-feet which will increase available water storage supplies.

With this information, item #1 from the Groundwater Producers January 31, 2018 letter has been completed.

**Groundwater Producer January 31, 2018 Letter**

Item #2 from the January 31, 2018 Producers letter recommends the District “Identify potential measures to optimize the storage of water in the Basin for the benefit of the Producers”. Staff in generally is always working to increase storage supplies in the groundwater basin. However, this effort can be overshadowed by other Producer desires to maximize the Basin Production Percentage and/or to minimize Replenishment Assessment increases. Staff will work with the Producers to determine if any new measures to optimize water storage can be developed for Board consideration.

Item #3 from the Producers January 31, 2018 letter recommends the District “Consider if / how storage accounts could be implemented for Producer agencies”. Allowing Producers to have individual storage accounts within the OCWD groundwater basin would be a significant deviation from past District policies and practices. This issue was discussed at previous Groundwater Producers meetings during the spring of 2018. The District could generate additional revenues with this option, just as would occur with a storage program with a South Orange County water agency and as occurred with the Metropolitan Water District (MWD) conjunctive use storage program. However, this option requires more careful consideration regarding the need, the interest and basin management policies and practices.

Staff believes entering into an agreement with MNWD and studying how a small pilot storage program with MNWD could possibly be implemented at the same time OCWD is reviewing these remaining issues from the Producers January 31, 2018 letter is reasonable. With the recommended action, staff would reinitiate discussion of these issues at Producers meetings in February and March and provide a report back to the Board in April. The MNWD work effort is expected to take approximately six months and would not be concluded until late summer.

**Summary of proposed MNWD Agreement**

The goal of the Agreement is to develop a small short-term pilot program that would be considered by the Boards of OCWD and MNWD which would provide a foundational understanding to help determine the feasibility of developing a long-term MNWD storage/exchange program in the OCWD groundwater basin. The key elements of the proposed MNWD Agreement are provided below:

a. Develop an RFP (attached) and hire a consultant to study existing and potential new conveyance options for delivery of water from OCWD to MNWD.

b. Develop a second RFP (attached) and hire a second consultant to review existing water industry storage agreements to provide a bench mark and market analysis of what other water agencies have paid for storage programs.
c. Comply with the OCWD Act.

d. MNWD agrees to fund the consultants work.

e. The timeline for completion of the scope of work is estimated at 6 months from execution of the Agreement.

f. The existing ad-hoc committee created by OCWD and MNWD will work collaboratively to carry out the scope of the Agreement.

g. OCWD and MNWD will meet and work with other interested stakeholders to share information and seek input on this issue.

h. OCWD will administer the two consultant RFP and contracts.

i. OCWD is committing to consider a small pilot storage program once the studies are completed.

Existing Emergency Service and Storage Programs

The District has two existing programs which are summarized below that utilize the groundwater basin. Information regarding a third storage program, the Santa Ana River Conservation and Conjunctive Use Program is also summarized below.

1. South County Phase I Emergency Service Program Agreement

As previously mentioned, the District entered into an agreement in 2006 which allows IRWD to send up to 50 cfs of water for no more than 30 days (maximum of 3,000 af per incident) to South Orange County agencies for emergency events. The agreement is for 25 years and has been used about five times. IRWD is annually subject to the OCWD Basin Production Percentage and Basin Equity Assessment even during years when the agreement is exercised. Water sent to South County is deemed to be imported water. The amount of water IRWD is able to send to South County is slowly decreasing as IRWD experiences growth within its own service area. Any potential new program would be coordinated with this agreement. OCWD received no compensation from this program as: (1) it has no impact to the District’s operations; and (2) the District is assisting local water agencies to meet water demands during an emergency.

2. MWD Conjunctive Use Storage Program (CUP)

The CUP agreement allows for MWD to store up to 66,000 af of water in the groundwater basin. Up to 22,000 af can be annually extracted. Up to 16,500 af can be annually stored. The District received approximately $32 million in compensation from MWD and will receive approximately $20 million from the Groundwater Producers over the life of the contract. The agreement will expire in 2028. Staff will not recommend creating any new sizeable storage program(s) until this agreement terminates.
3. Santa Ana River Conservation and Conjunctive Use Program (SARCCUP)

The Santa Ana Conservation and Conjunctive Use Program is a new cooperative project with the San Bernardino Valley Municipal Water District (Valley District), Eastern Municipal Water District (EMWD), Inland Empire Utilities Agency (IEUA), and Western Municipal Water District (WMWD). SARCCUP is partially funded by a $55 million Proposition 84 grant and provides multiple regional benefits to the Santa Ana River Watershed and is made up of three elements:

- A large-scale, conjunctive use project (i.e., water bank) that utilizes storage space in the watershed’s groundwater basins allowing the banking of wet year supplies for use in dry years, facilitating the augmentation of drought and emergency water supplies;

- Habitat restoration for the Santa Ana Sucker, a threatened fish species and arundo removal, an invasive plant species that consumes large amounts of water; and

- Water use efficiency (WUE) measures to lower water demands in the watershed. The WUE element includes extending the Proposition 84 2014 Drought Round WUE program for technical support for conservation programs and public outreach.

OCWD will be participating in SARCCUP by having up to 36,000 to 45,000 af of water stored in the basin for use during dry years, such as when MWD allocates limited imported water supplies (allocations).

Water removed from the SARCCUP during MWD allocation periods could be considered “extraordinary” which means the water would be added to the local water supplies that are available and the amount of MWD water that was allocated to an agency.

PRIOR RELEVANT BOARD ACTIONS:

10/3/18: OCWD MNWD ad-hoc committee created

8/15/18, M18-104: Directed staff to update the 2007 Report on Orange County Groundwater Basin Storage and Operational Strategy to reflect the recommended basin operating changes and to limit any potential future storage agreements to within the 36,000 acre-foot Santa Ana River Conservation and Conjunctive Use Program until the Metropolitan Water District Conjunctive Use Storage Program expires in 2028.

8/2/17, R17-8-107: Broadened the District’s Water Resources Policy to allow the consideration of water storage and exchange programs with SOC water agencies.

3/21/07, M07-44: Receive and file staff report titled, “Evaluation of Orange County Groundwater Basin Storage and Operational Strategy;” adopt the three-layer storage change methodology along with the associated new full-basin condition that will serve as a benchmark for calculating the basin accumulated overdraft; and adopt the proposed basin operating
strategy including a basin operating range spanning the new full condition to an accumulated overdraft of 500,000 af, and an optimal range from a target level of 100,000 to 150,000 af of accumulated overdraft, with the understanding that specific operational scenarios will be further developed and evaluated cooperatively by the District and Producers.
INTERAGENCY AGREEMENT

This Interagency Agreement ("Agreement"), is entered into between the Orange County Water District ("OCWD") and the Moulton Niguel Water District ("MNWD"), collectively herein referred to as the PARTIES.

I. PURPOSE

The purpose of this Agreement is to work collaboratively to evaluate the potential joint benefits of developing a storage/exchange program between the PARTIES by:

a. Exploring existing and potential new conveyance methods for delivery of stored water in the OCWD groundwater basin to MNWD, and;

b. Evaluating potential revenue and economic benefits to OCWD to offset projected future Replenishment Assessment increases without creating a negative operational impact.

The goal of this Agreement is to develop a short-term pilot program that would be considered by the PARTIES which would provide a foundational understanding to help determine the feasibility of developing a long-term MNWD storage/exchange program in the OCWD groundwater basin.

II. GUIDING PRINCIPLES

The following guiding principles will be adhered to by the PARTIES in completing any work to develop a pilot program:

a. Comply with the OCWD Act, and;

b. OCWD will receive a net benefit from any storage or exchange program, and;

c. OCWD’s ability to store water and operate the groundwater basin will not be harmed, and;

d. MNWD understands that direct conveyance of stored water from the groundwater basin does not exist at this time, but will evaluate options for conveyance as part of this work, and;

e. OCWD and its members will not subsidize any work that will solely benefit MNWD as part of the analysis or implementation of any program.

III. SCOPE OF WORK

The scope of work to be performed as a part of the Agreement shall include:
a. Evaluate potential pumping and conveyance options to deliver water from the OCWD groundwater basin and/or proposed Huntington Beach Poseidon Resources Ocean Desalination Plant to MNWD utilizing existing or new facilities.

b. Review and analyze various groundwater banking and exchange programs throughout the state that may serve as models for development of a pilot program between the PARTIES.

c. The PARTIES will collectively develop two Request for Proposals for the work described in paragraphs III.a and III.b above. The PARTIES will review the proposals and develop a joint recommendation for consideration of award of professional service contracts.

d. MNWD agrees to provide funding to perform the scope of work identified as a part of the Agreement.

IV. DELIVERABLES & SCHEDULE

a. The deliverables anticipated as a part of the Agreement includes two separate reports for each scope item:
   i. Infrastructure review of pumping and conveyance alternatives
   ii. Groundwater banking and exchange program review

b. The timeline for completion of the scope of work is estimated at 6 months from execution of the Agreement.

V. OVERVIEW

a. The existing ad-hoc committee created by the PARTIES will work collaboratively to carry out the scope of this Agreement.

b. The ad-hoc committee will meet to review progress and any draft work product that may be available.

c. The PARTIES will meet and work with other interested stakeholders to share information and seek input on this issue.

VI. OTHER

a. The PARTIES understand the scope of work identified in this Agreement is the extent of the agreed upon analysis and acknowledge that any future pilot storage program will require mutual consent of the PARTIES.

b. This agreement may be terminated by either PARTY with thirty (30) days written notice. Upon termination, the PARTIES will be responsible for any outstanding financial commitments for any contracts entered into at the time of termination.
IN WITNESS WHEREOF, the PARTIES hereby execute this Interagency Agreement.

ORANGE COUNTY WATER DISTRICT

By: ________________ Date: ________________
Vincente Sarmiento, President
for Orange County Water District

MOULTON NIGUEL WATER DISTRICT

By: ________________ Date: ________________
Donald R. Froelich, President
for Moulton Niguel Water District
DRAFT REQUEST FOR PROPOSALS

REVIEW OF EXISTING WATER STORAGE PROGRAMS

ORANGE COUNTY WATER DISTRICT

SINCE 1933

moulton niguel water district
ORANGE COUNTY WATER DISTRICT and
MOULTON NIGUEL WATER DISTRICT

PROPOSALS DUE:
February 22, 2019
2:00 P.M.
INTRODUCTION
The Orange County Water District (OCWD; the District) and the Moulton Niguel Water District (MNWD) are seeking proposals from qualified consultants to provide a review, summary and analysis of existing water storage programs in Southern California (Study).

In general, the Study consists of providing a market analysis and/or benchmark of what other water agencies are paying to store water. This information will be used by OCWD and MNWD to assist in the potential development of a pilot storage program whereby MNWD will compensate OCWD to store water in the OCWD groundwater basin.

The selected consultant should have an individual with significant experience, water industry contacts and knowledge in the area of water resources management to provide expert advice to assist both agencies in potentially developing a water storage program.

This Request for Proposals (RFP) describes the Study, the required scope of services, Study milestones, consultant selection process, and the minimum amount of information that must be included in the proposal. Failure to submit information in accordance with these requirements and procedures may be cause for disqualification.

STUDY BACKGROUND
MNWD lies outside of the OCWD groundwater basin in south Orange County as shown on the following figure. MNWD is seeking to develop a small storage program to assist in improving the water reliability of its service territory. OCWD manages the Orange County groundwater basin which has a useable volume of approximately 500,000 acre-feet. The OCWD Act Section 2.1 allows for storage programs with agencies outside of the OCWD boundaries. OCWD would provide a relatively small amount of storage space to MNWD and potentially other South Orange County water agencies in exchange for appropriate compensation.

OCWD and MNWD first wish to develop and consider a small short-term 5,000 acre-feet pilot storage program which if implemented, would be used to determine if a long-term storage arrangement can be consummated.

STUDY DESCRIPTION
Many storage programs have been developed in Southern California and the western United States over the past 30 years. The selected consultant will evaluate all storage programs listed below. Consultants should also propose other storage programs they believe are comparable to the likely exchange arrangement being contemplated by OCWD and MNWD.

- Metropolitan Water District (MWD) Arvin Edison
- MWD Semi Tropic
- Santa Margarita Water District Upper Chiquita Reservoir
- Antelope Valley East Kern Water Agency
- OCWD MWD Conjunctive Use Storage Program.
These storage programs are generally developed to provide water during dry hydrologic periods and/or for emergency purposes. It will be important to differentiate the purpose of the storage program to allow for accurate comparisons. The consultant should also determine if there is any significant difference between storage programs for retail water agency versus wholesale agency. Additionally, other material terms of these storage programs such as “put” or “take” restrictions along with any hydrology and/or water quality constraints should be noted.

OCWD and MNWD water district’s wish to develop a fee that MNWD will pay to store water in the OCWD groundwater basin that is fair and reasonable to both agencies. The fee can be in the form of money or water left behind (a storage exchange program) to OCWD or both. At this time the compensation to the District is likely to be in the form of water purchased by MNWD but left behind in the OCWD groundwater basin.

The possible 5,000 acre-feet of water to be stored by OCWD for MNWD in the initial pilot program being contemplated could be MWD untreated imported water that is purchased and recharged by OCWD at its field headquarters in the city of Anaheim. This water currently cost $695/acre-foot and will increase in cost to $731/acre-foot on January 1, 2019. Alternatively, to avoid any impact to its groundwater recharge operations, OCWD may implement an in-lieu type arrangement with one or more Groundwater Producer(s) to not pump up to the Basin Production Percentage (BPP) by a total of 5,000 acre-feet to indirectly store water in the groundwater basin. OCWD
would pay the Basin Equity Assessment which averages $539/acre-foot as compensation to a Producer not pumping up to the BPP to store water in this manner.

SCOPE OF WORK
The Consultant shall perform the Scope of Work as described below:

- Review existing water industry storage programs and interview the appropriate staff of the agencies involved.
- Perform a literature review. Obtain and coordinate the Study with other similar reports that have been prepared and/or are being prepared by other agencies.
- Develop a summary table whereby the key elements of each storage program can be summarized for comparison with other programs.
- Develop a generic, generally accepted and appropriate financial methodology to calculate the unit cost ($/af) of each storage program to allow it to be compared with other programs. This methodology should take into account exchange programs whereby agencies storing water leave behind a percentage of water as compensation for storing water.
- When comparing storage programs, determine if and how programs for water retailers should be differentiated from programs for water whole sellers.
- When comparing storage programs, determine if and how programs that provide emergency water system supplies should be differentiated from programs providing water during dry hydrologic cycles (dry year yield).
- Summarize the purpose of each storage program. For example, is water being stored for emergency purposes? Is water being stored for drought periods?
- Document the parameters for storing and calling upon water.
- Provide an outline of the technical paper, an approximate 50% draft and a final draft of the Study paper for review and comment by OCWD and MNWD.
- Determine what existing storage programs provide a representative and comparable match to the storage program being contemplated by OCWD and MNWD.
- Provide a final technical paper and a presentation summarizing the results of the study.
- Coordinate this work with other surveys and reports that have been completed by other water agencies to avoid any duplication of effort.
- Plan on three meetings with OCWD and MNWD staff. Plan on providing separate presentations to the MNWD and OCWD Boards.

SCHEDULE
The proposed project schedule is as follows:
Elements of Proposal

Please include the following in your proposal:

1. Cover letter.

2. Study approach, expanding or revising the scope of work provided herein if necessary. Any deviations from the scope herein shall be clearly designated in the proposal, including associated man-hours.

3. Project team description (with resumes at the back of the proposal), emphasizing experience and capabilities of designated project manager, and support staff related to the outlined scope of work. Indicate the percentage of time each member will contribute to the project. The Study consultant shall also include the home office and location of each project team member.

4. A matrix table of the estimated man-hours for the Study broken down by individual staff and any sub-Consultants.

5. Description of the Study team’s past record of performance on similar study’s for which your firm has provided services. Also include client references that may be contacted by OCWD.

6. Project schedule with milestones and completion deadlines, modifying the proposed schedule herein, based on your project approach and experience.

7. A statement that the Consultant has read and can execute the District’s standard professional services contract and can comply with the insurance requirements.

8. Fee proposal submitted in a separate sealed envelope. The fee proposal shall show estimated hours and cost for each task and subtask, including meeting obligations. The fee proposal shall be based on services provided on an hourly-rate basis, with a total not-to-exceed fee. Provide a rate schedule for proposed services. On a separate sheet, please provide a fee proposal for the study.

The proposal is limited to 7 pages, exclusive of cover letter, resumes, and preprinted materials. Interested firms shall deliver four paper copies of the proposal, one
Selection of the Consultant will be based upon the proposal contents, prior experience of the firm, and specific experience and capabilities of the designated project manager and support staff. The firm, and in particular the project manager, must be fully capable in all areas outlined under the scope of work above. The nature of this study includes working with and obtaining information from numerous water agencies. The selected firm and project manager will have good working relations with many agencies in the water community.

Based upon this information, OCWD staff will recommend a firm to OCWD’s Board of Directors for award of contract. The selected firm must be able to begin work immediately upon award of contract and must be able to maintain the required level of effort to meet the proposed schedule.

The evaluation criteria listed in the OCWD Proposal Evaluation Form (Exhibit A) will be used to evaluate each Consultant. Depending on the response to the RFP, oral interviews may or may not be a part of the selection process.

PRE-SUBMITTAL ACTIVITIES

Questions Concerning Request for Proposals
All questions regarding the RFP should be presented in writing to:

Orange County Water District
Attn: John Kennedy
18700 Ward Street, Fountain Valley, CA 92708
Phone: (714) 378-3304
JKennedy@ocwd.com

Pre-Proposal Meeting
The February 11, 2019 meeting at 2:00 p.m. will be held at the OCWD headquarters in Fountain Valley. This meeting is optional.

SPECIAL CONDITIONS

Revision to the Request for Proposals
The District reserves the right to revise the RFP prior to the date the Proposals are due. The District reserves the right to extend the date by which the Proposals are due.
Reservations
This RFP does not commit the District to award a contract, to defray any costs incurred in the preparation of a Proposal pursuant to this RFP or to procure or contract for work.

Public Records
All Proposals submitted in response to this RFP become the property of OCWD and are public records and as such may be subject to public review.

Right to Cancel
The District reserves the right to cancel, for any or no reason, in part or in its entirety, this RFP including but not limited to: selection schedule, submittal date, and submittal requirements. If the District cancels or revises the RFP, the District will notify all the known Proposers in writing.

Additional Information
The District reserves the right to request additional information and/or clarifications from any or all Proposers.

Public Information
Release of Public Information selection announcements, contract awards, and all data provided by the District shall be protected from public disclosure. Proposers desiring to release information to the public must receive prior written approval from the District.

Professional Services Agreement
The selected Consultant will be required to sign the attached Professional Services Agreement (Exhibit B) and to provide the Insurance Certificates and all other required documentation within 10 calendar days of notice of award.

Insurance Requirements
The minimum insurance requirements are: $2 million ($4 million aggregate) for Commercial General Liability insurance, $1 million for Automobile Liability insurance (including Additional Insured endorsement for both General Liability and Automobile Liability insurance), $1 million for Workers’ Compensation insurance (including Waiver of Subrogation endorsement for Workers’ Comp), and $1 million for Professional Liability (Errors and Omissions) insurance.

Equal Employment Opportunity and Affirmative Action Requirements
The Proposers shall provide a Statement of Equal Employment Opportunity/Affirmative Action. The Consultant and each subcontractor shall not discriminate in the employment of persons on the work because of race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, sexual preference or sex of such persons except as permitted by Section 12940 of the California government Code. The Consultant is expected to maintain policies similar to those of the District regarding equal employment opportunities and affirmative action as set forth in the OCWD’s Administrative Policies.
EXHIBIT A

PROPOSAL EVALUATION FORM
EXHIBIT B

SAMPLE PROFESIONAL SERVICES AGREEMENT
DRAFT REQUEST FOR PROPOSALS

EVALUATION OF GROUNDWATER CONVEYANCE OPTIONS

ORANGE COUNTY WATER DISTRICT

SINCE 1933

moulton niguel water district
ORANGE COUNTY WATER DISTRICT and
MOULTON NIGUEL WATER DISTRICT

PROPOSALS DUE:
February 22, 2019
2:00 P.M.
INTRODUCTION
The Orange County Water District (OCWD; the District) and the Moulton Niguel Water District (MNWD) are seeking proposals from qualified consultants to provide a review, summary and analysis of conveyance options from the Orange County Groundwater basin to South Orange County and in particular, MNWD.

In general, the goal of this project is to evaluate the potential infrastructure and property acquisition required to convey water from the Orange County Groundwater Basin to Moulton Niguel Water District’s system. This information will be used by OCWD and MNWD to assist in the potential development of a pilot storage program whereby MNWD will compensate OCWD to store water in the OCWD groundwater basin and ultimately convey stored water to MNWD during emergencies or water shortage conditions.

This Request for Proposals (RFP) describes the Study, the required scope of services, Study milestones, consultant selection process, and the minimum amount of information that must be included in the proposal. Failure to submit information in accordance with these requirements and procedures may be cause for disqualification.

STUDY BACKGROUND
MNWD lies outside of the OCWD groundwater basin in south orange county as shown on the following figure.
MNWD is seeking to develop a small storage program to assist in improving the water reliability of its service territory. OCWD manages the Orange County groundwater basin which has a useable volume of approximately 500,000 acre-feet. The OCWD Act Section 2.1 allows for storage programs with agencies outside of the OCWD boundaries. OCWD would provide a relatively small amount of storage space to MNWD and potentially other South Orange County water agencies in exchange for appropriate compensation.

OCWD and MNWD first wish to develop and consider a small short-term 5,000 acre-feet pilot storage program which if implemented, would be used to determine if a long-term storage arrangement can be consummated.

**STUDY DESCRIPTION**

Moulton Niguel Water District currently has an emergency interconnection through Irvine Ranch Water District which can move up to 50 cfs of water to serve South Orange County. Moulton Niguel Water District owns 58.93 percent of the capacity of the interconnection. Due to growth in Irvine Ranch Water District, expiration of the capacity rights in the interconnection facilities, and uncertainty in the ability to convey water into the future, Moulton Niguel Water District is interested in alternative conveyance options to move water from the groundwater basin to MNWD through a potential exchange program. MNWD currently receives imported water from the East Orange County Feeder #2 and/or the Allen-McCulloch Pipeline as shown on the following figure.
The study should evaluate potential costs of land acquisition, building new transmission mains and/or pumping plants, utilization of existing available groundwater well capacity or construction of new wells, and connecting transmission mains to the East Orange County Feeder #2 and/or the Allen-McCulloch Pipeline.

 AVAILABLE DATA
Moulton Niguel Water District will provide GIS shapefiles with the regional pipeline infrastructure including Metropolitan Water District pipelines, the Joint Regional Water Supply System, South County Pipeline and Eastern Transmission Main.
Orange County Water District will provide GIS files with the location of existing groundwater pumping wells. Historical production amounts from the wells will also be provided.

 SCOPE OF WORK
The Consultant shall perform the Scope of Work as described below:

- Review and meet with staff of the agencies involved to discuss existing conveyance facilities, well production facilities, and desired capacity and conveyance goals.
- Develop alternative conveyance approaches of groundwater which shall include:
  - Identification of 3-4 alternative locations for developing the desired pumping capacity utilizing either existing available well capacity or developing new well capacity;
  - Evaluation of existing infrastructure to convey stored water from the identified pumping locations to either the East Orange County Feeder #2, Allen-McColloch Pipeline, or the Joint Transmission Main;
  - Identification of any new infrastructure necessary to convey stored water to either the East Orange County Feeder #2, Allen-McColloch Pipeline or the Joint Transmission Main.
- Evaluation of potential property needed to build any additional infrastructure, i.e. well facilities, pumping plants.
- Evaluation of probable construction costs for each of the proposed conveyance alternatives.
- Provide a final technical paper and a presentation summarizing the results of the study.
- Plan on three meetings with OCWD and MNWD staff. Plan on providing separate presentations to the MNWD and OCWD Board of Directors.
- Review similar work the Municipal Water District of Orange County is performing regarding pumping groundwater into the EOCFD#2.
- Coordinate this work with the possible transmission of Poseidon Resources Ocean Desalination water to South Orange County via the EOCFD#2. OCWD will provide relevant information to the consultant.

Future work will need to be completed to evaluate the hydraulic constraints of regional infrastructure as well as water quality impacts. This initial work does not contemplate those work products.

**SCHEDULE**

The proposed project schedule is as follows:

<table>
<thead>
<tr>
<th>Task</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Study RFP Issued</td>
<td>January 18, 2019</td>
</tr>
<tr>
<td>Optional meeting with OCWD &amp; MNWD</td>
<td>February 4, 2019 - 2:00 p.m. @ OCWD</td>
</tr>
<tr>
<td>Proposals Due, 2:00 P.M.</td>
<td>February 22, 2019</td>
</tr>
<tr>
<td>Interviews, if necessary</td>
<td>March 4 – 6, 2019</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>ELEMENTS OF PROPOSAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please include the following in your proposal:</td>
</tr>
</tbody>
</table>

1. Cover letter.

2. Study approach, expanding or revising the scope of work provided herein if necessary. Any deviations from the scope herein shall be clearly designated in the proposal, including associated man-hours. Project team description (with resumes at the back of the proposal), emphasizing experience and capabilities of designated project manager, and support staff related to the outlined scope of work. Indicate the percentage of time each member will contribute to the project. The Study consultant shall also include the home office and location of each project team member.

3. A matrix table of the estimated man-hours for the Study broken down by individual staff and any sub-Consultants.

4. Description of the Study team’s past record of performance on similar study’s for which your firm has provided services. Also include client references that may be contacted by OCWD.

5. Project schedule with milestones and completion deadlines, modifying the proposed schedule herein, based on your project approach and experience.

6. A statement that the Consultant has read and can execute the District’s standard professional services contract and can comply with the insurance requirements.

7. **Fee proposal submitted in a separate sealed envelope.** The fee proposal shall show estimated hours and cost for each task and subtask, including meeting obligations. The fee proposal shall be based on services provided on an hourly-rate basis, with a total not-to-exceed fee. Provide a rate schedule for proposed services. On a separate sheet, please provide a fee proposal for the study.

The proposal is limited to 7 pages, exclusive of cover letter, resumes, and preprinted materials. Interested firms shall deliver four paper copies of the proposal, one electronic PDF file, and one sealed fee proposal on or before February 22, 2019 at 2:00 pm. Proposals shall be mailed or delivered to:

Orange County Water District  
Attention: John Kennedy  
18700 Ward Street
SELECTION PROCESS

Selection of the Consultant will be based upon the proposal contents, prior experience of the firm, and specific experience and capabilities of the designated project manager and support staff. The firm, and in particular the project manager, must be fully capable in all areas outlined under the scope of work above. Based upon this information, OCWD staff will recommend a firm to OCWD’s Board of Directors for award of contract. The selected firm must be able to begin work immediately upon award of contract and must be able to maintain the required level of effort to meet the proposed schedule.

The evaluation criteria listed in the OCWD Proposal Evaluation Form (Exhibit A) will be used to evaluate each Consultant. Depending on the response to the RFP, oral interviews may or may not be a part of the selection process.

PRE-SUBMITTAL ACTIVITIES

Questions Concerning Request for Proposals
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Orange County Water District
Attn: John Kennedy
18700 Ward Street, Fountain Valley, CA 92708
Phone: (714) 378-3304
JKennedy@ocwd.com

Pre-Proposal Meeting
The February 4, 2019 meeting at 2:00 p.m. will be held at the OCWD headquarters in Fountain Valley. This meeting is optional.

SPECIAL CONDITIONS

Revision to the Request for Proposals
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Reservations
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Professional Services Agreement
The selected Consultant will be required to sign the attached Professional Services Agreement (Exhibit B) and to provide the Insurance Certificates and all other required documentation within 10 calendar days of notice of award.

Insurance Requirements
The minimum insurance requirements are: $2 million ($4 million aggregate) for Commercial General Liability insurance, $1 million for Automobile Liability insurance (including Additional Insured endorsement for both General Liability and Automobile Liability insurance), $1 million for Workers’ Compensation insurance (including Waiver of Subrogation endorsement for Workers’ Comp), and $1 million for Professional Liability (Errors and Omissions) insurance.

Equal Employment Opportunity and Affirmative Action Requirements
The Proposers shall provide a Statement of Equal Employment Opportunity/Affirmative Action. The Consultant and each subcontractor shall not discriminate in the employment of persons on the work because of race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, sexual preference or sex of such persons except as permitted by Section 12940 of the California government Code. The Consultant is expected to maintain policies similar to those of the District regarding equal employment opportunities and affirmative action as set forth in the OCWD’s Administrative Policies.
EXHIBIT A

PROPOSAL EVALUATION FORM
EXHIBIT B

SAMPLE PROFESSIONAL SERVICES AGREEMENT
Proposed Agreement with Moulton Niguel Water District

Water Issues Committee

January 9, 2019
History

- August 2017 Board - Broadened the District’s Water Resources Policy to allow the consideration of water storage and exchange programs with South Orange County (SOC) agencies
- February 2018 Water Issues Committee
  - Reviewed draft MOU with Moulton Niguel Water District (MNWD) to study issue
  - Staff directed to review the storage needs of OCWD and consider a letter from the Groundwater Producers
History

• August 2018 WIC
  – Reviewed OCWD storage needs provided
  – Recommended lowering the Accumulated Overdraft target range
• October 2018 Board – Established OCWD MNWD ad-hoc Committee
• October/November 2018
  – Two meetings of ad-hoc Committee
  – Developed attached agreement
MNWD Agreement Terms

- Develop an RFP (attached) and hire a consultant to study existing and potential new conveyance options for delivery of water from OCWD to MNWD.
- Develop a second RFP (attached) and hire a second consultant to review existing water industry storage agreements to provide a benchmark and market analysis of what other water agencies have paid for storage programs.
- OCWD would administer the two consultant RFP and contracts.
- MNWD agrees to fund the consultants work.
MNWD Agreement Terms

• The timeline for completion of the scope of work is estimated at 6 months from execution of the Agreement.
• The existing ad-hoc committee created by OCWD and MNWD would work collaboratively to carry out the scope of the Agreement.
• OCWD and MNWD would meet and work with other interested stakeholders to share information and seek input on this issue.
• OCWD is committing to consider a small short-term pilot water storage program once the studies are completed.
Potential Pilot Storage Program

- ~ 5,000 afy
- ~ Five year duration
- Store imported water supplies from the Metropolitan Water District
- Water available for MNWD use during drought periods/emergencies
Why Consider South Orange County (SOC) Water Agency Storage Accounts?

- OCWD can generate additional income to offset future expected Replenishment Assessment increases
- Relatively small amount of storage space - No impact to OCWD Operations
- Cost effective way for SOC agencies to secure their water supply reliability needs
Summary of Existing Storage/Emergency Programs

1. **MWD CUP Storage Program**
   - 66,000 af
   - OCWD received
     - ~ $32 M from MWD
     - ~ $20 M from Producers
   - Expires in 2028

2. **SOC Emergency Service Agreement**
   - 50 cfs for up to 30 days (~3,000 af)
   - No compensation
   - Expires in 2033

3. **Santa Ana River Conservation & Conjunctive Use Program**
   - 36,000 to 45,000 af
   - To Be Determined
Producers Summary

• Discussed issue at several meetings in spring of 2018 and fall of 2019
• January 2018 letter from the Groundwater Producers attached
  1. Evaluate the current and future operating parameters of the basin;
  2. Identify potential measures to optimize the storage of water in the basin for the benefit of the Producers;
  3. Consider if / how storage accounts could be implemented for Producer agencies; then
  4. Consider if / how potential storage accounts could be implemented for non-Producer agencies to the primary benefit of the Producer agencies.
• Continue Producer discussions - report back to Board in March or April 2019
• Previous separate letters from IRWD and City of Anaheim
Recommendation

Agendize for January 16 Board meeting:
Authorize:
(1) execution of the attached Agreement with the Moulton Niguel Water District and
(2) issuance of the two attached requests for proposals
End of Presentation
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<td>2020</td>
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Accumulated Overdraft Since 1969

June 2018
277,000 AF

MWD CUP – 66,000 af
SARCCUP – 36,000 af
### General Schedule/Potential Board Actions

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<tr>
<th>Task</th>
<th>Date</th>
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<tr>
<td>Consider Agreement/Issue RFP</td>
<td>January 2019</td>
</tr>
<tr>
<td>Hire Consultants to Study Issues</td>
<td>March 2019</td>
</tr>
<tr>
<td>Consider Small Pilot Storage Program</td>
<td>~November 2019</td>
</tr>
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</table>
Metropolitan Water District
Conjunctive Use Program (CUP)

- 25 year program approved in 2003
- Terminates in 2028
- MWD can store 66,000 af of water
- Store 16,500 afy / Extract 22,000 afy
- MWD able to cycle the program ~ 3 times
- OCWD compensation from MWD - $32 million
- Total OCWD compensation ~ $53 million
Santa Ana River Conservation & Conjunctive Use Program (SARCCUP)

- 180,000 af storage program in the SAR Watershed
- OCWD, EMWD, SBVMWD, WMWD, IEUA
- OCWD portion - 36,000 af
- $100 million total cost / $50 million state grant received
- Store excess SBVMWD water supplies
- Provide “Extraordinary Supplies” during a MWD allocation
- Expect formal consideration to approve in spring 2019
- 25? Year program
South Orange County (SOC) Emergency Services Agreement

- Approved in 2006 - Terminates in 2033
- Provide water supplies to SOC agencies via IRWD water system during emergency events
- Up to 50 cfs for 30 days (3,000 af) – small program
- IRWD still needs to comply with annual BPP/BEA
- IRWD ability to provide SOC water decreasing as demands within their system increase
- Water sent to SOC considered imported water
- No OCWD compensation – SOC agencies reimbursed IRWD for necessary improvements to send water south
District Act – Section 2.1

- Groundwater storage; agreement between entity and district; use priorities; limitation of parties; waivers of replenishment and basin equity assessments; allocation consideration written findings

- (a.) All groundwater storage by entity other than the district shall be conducted pursuant to a groundwater storage agreement between that entity and the district.

- (b.) Use of the groundwater basin within the district for the purpose of replenishing and managing the groundwater supplies of the district shall have priority over the use of the groundwater basin for storage of water.

- (c.) The groundwater storage agreement shall be limited to public and private entities distributing water to consumers for domestic, municipal, industrial, and agricultural use within their boundaries, which are located wholly or partially within the district, except that, where the primary benefits accrue to persons or property within the District, the agreement may include other public and private entities, including, but not limited to, the Metropolitan Water District of Southern California and the Department of Water Resources.

- (d.) The groundwater storage agreements may include provisions that provide for the waiver of replenishment assessments or basin equity assessments, or both, on stored water that is extracted pursuant to the agreement.

- (e.) In allocating the use of the groundwater basin storage space, the district shall consider and protect the quality of the groundwater and the reasonable water supply needs of the district. The district shall impose such limitation on the quality of the water to be stored as shall be necessary to protect the quality of the groundwater in the district.

- (f.) The district shall include written findings supporting its conclusions in its record of consideration of a proposed groundwater storage agreement.
The groundwater storage agreement shall be limited to public and private entities distributing water to consumers for domestic, municipal, industrial, and agricultural use within their boundaries, which are located wholly or partially within the district, except that, where the primary benefits accrue to persons or property within the District, the agreement may include other public and private entities, including, but not limited to, the Metropolitan Water District of Southern California and the Department of Water Resources.
Extraordinary Supplies

- Imported Water Supplies become scarce
- MWD decides to allocate imported water - Complicated formula
- Allocation is based upon a water agencies need for water
- Accounts for local water supplies – the more local supplies you have reduces your need for imported water
- With the MWD water provided and the available local water supplies, an agency may only have 80 to 90% of water supplies needed to serve its customers
- “Extraordinary” water supplies are additional
Proposed Basin Management Policies

- 150,000 AF
  - Increase BPP;
  - Reduce or stop purchases of imported water

- 200,000 AF
  - No BPP change; Purchase 65,000 afy of imported water

- 350,000 AF
  - No BPP change; Purchase 65,000 afy of imported water; Reduce the overdraft

- 400,000 AF
  - Purchase additional imported water and/or Reduce BPP to reduce overdraft

- 500,000 AF
  - Purchase additional imported water and Reduce BPP to reduce overdraft

Target Accumulated Overdraft Range

MWD CUP 66,000 AF
SARCCUP 36,000 AF
December 4, 2017

Mr. Michael Markus, P.E.
General Manager
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Subject: Proposed Pilot Water Storage and Exchange Program in Orange County

Mike:

We have received a draft agreement describing a proposed Pilot Water Storage and Exchange Agreement between Orange County Water District (OCWD), Moulton Niguel Water District (MNWD) and Irvine Ranch Water District (IRWD) sent on November 16, 2017. While IRWD has been and remains an advocate for storage accounts and exchange programs within the Orange County Groundwater Basin (the Basin) to improve local water supply reliability, we do not believe that an initial pilot program with one non-groundwater producer agency is an appropriate approach.

IRWD’s recommended approach to developing a Pilot Water Storage and Exchange Program within the Basin is as follows:

1. Concepts, policies, terms, and processes for implementing any water storage and exchange programs must first be vetted with the Groundwater Producer Agencies;
2. Before developing a program to benefit water agencies outside of the Basin, a storage and exchange program should first be developed for potential participation by interested Producer Agencies, recognizing that each of these agencies has a vested interest in maximizing the use of storage in the Basin;
3. A water storage and exchange program to benefit South County (non-Basin) agencies can be developed after the needs of the Producer Agencies have been met; and
4. The implementation of any storage and exchange programs must be consistent with the OCWD District Act, the requirements of the California Environmental Quality Act and should not infringe upon the jurisdiction of other Orange County agencies.

When developing terms for a potential water storage and exchange program, an In-lieu Exchange Program, as described in IRWD’s August 10, 2016 letter on this topic (attached) should be considered as an option.
Furthermore, to the extent a water storage and exchange program would require the use of IRWD facilities, the following considerations must be addressed while developing such a program:

1. Existing contractual arrangements, such as the Dyer Road Well Field Agreement and the South County Interconnection Agreement, would take priority over any subsequent arrangements;
2. Use of IRWD’s infrastructure should provide for the recovery of a proportional share of IRWD capital, operations, maintenance and replacement costs; and
3. Use of IRWD infrastructure by other agencies is subject to current and future availability, with the needs of IRWD’s customers taking top priority.

Finally, with the current legal dispute between IRWD and OCWD still pending resolution, I recommend that IRWD and OCWD staff and legal counsel work to identify issues associated with the legal action that could have a bearing on the development of terms for storage and exchange program(s).

IRWD supports efforts to improve the water supply reliability of all agencies in Orange County. In addition to the meeting described above, I also believe that an Ad Hoc meeting with a few members from the OCWD Board and two members of the IRWD Board to discuss concepts of water supply reliability could be beneficial as well. Feel free to give me a call at (949) 453-5590 if you wish to pursue this matter further at this time.

Sincerely,

[Signature]

Paul A. Cook, P.E.
General Manager

Attachment
August 10, 2016

Mr. Mike Markus, P.E.
General Manager
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Subject: Methods to Restore Groundwater Levels in the Orange County Basin

Mike:

At the July 2016 Joint Planning Committee meeting of the Board of Directors of Orange County Water District (OCWD) and Municipal Water District of Orange County (MWDOC), IRWD was requested to prepare an overview of how groundwater levels in the Orange County Basin could be restored to traditional (much higher) levels. The purpose of this letter is to share concepts for expanding on the list of approaches to refilling the Basin as follows:

1. Lower the Basin Production Percentage (BPP), in accordance with the OCWD Board-approved Groundwater Management Plan.
2. Purchase the maximum amount of imported water available to benefit the basin directly through recharge and indirectly through a traditional in-lieu program.
3. Establish a new In-lieu Exchange Program through which groundwater producer agencies can voluntarily store water without financially impacting OCWD.

Management of the Basin Production Percentage (BPP):

In 2013, the OCWD Board of Directors adopted a policy to establish a stable BPP with the goal of achieving an average BPP of 75%. For the purpose of sustainably managing the Basin for current and future generations, OCWD has established within its Groundwater Management Plan the Storage Management Actions presented in the following table:

<table>
<thead>
<tr>
<th>Accumulated Overdraft</th>
<th>Basin Management Actions to Consider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 100,000 acre-feet</td>
<td>Raise the BPP.</td>
</tr>
<tr>
<td>100,000 to 300,000 acre-feet</td>
<td>Maintain and/or raise BPP towards 75% goal.</td>
</tr>
<tr>
<td>300,000 to 350,000 acre-feet</td>
<td>Seek additional supplies to refill Basin and/or lower the BPP.</td>
</tr>
<tr>
<td>Greater than 350,000 acre-feet</td>
<td>Seek additional supplies to refill Basin and lower the BPP.</td>
</tr>
</tbody>
</table>

* OCWD Board-adopted Policy
The current estimated accumulated overdraft of the Basin is 370,000 acre-feet (AF). By June 30, 2017, OCWD staff predicts that the accumulated overdraft will be reduced to 353,000 AF in part due to purchases of 50,000 AF of water from Metropolitan Water District of Southern California (Metropolitan). These purchases are included in OCWD’s Fiscal Year 2016-17 Operating Budget.

Taking Action Now:

In accordance with OCWD’s Groundwater Management Plan, actions should have already been taken to reduce the BPP and to seek additional supplies of water to fill the basin. We understand that OCWD is currently taking water from Metropolitan at full direct recharge capacity. OCWD could be taking full advantage of additional existing supplies that are currently available from Metropolitan through the implementation of a multi-year in-lieu recharge program. Under such a program, the Producers that volunteer to participate would pay OCWD the Replenishment Assessment (RA) ($402 per acre-foot) and the avoided cost of pumping ($97 per acre-foot) while OCWD would pay the cost of the Full Service Treated Tier-1 water and associated costs to Metropolitan ($1,044 per acre-foot). Since the Producer would have paid to OCWD the RA for the same amount of water had it been produced from the Basin, the payments to the OCWD by each participating producer would not offset OCWD costs of the full-service water from Metropolitan. This would result in a net cost to OCWD of $947 per acre-foot ($1,044 – $97) that would need to be budgeted for and recovered through corresponding increases in the Replenishment Assessment (RA).

To implement an in-lieu recharge program in a way that is cost neutral to OCWD, it is recommended that OCWD consider implementing an In-lieu Exchange Program as described below.

Conceptual In-lieu Exchange Program:

The OCWD Act allows for the execution of exchanges in the Basin. A hybrid in-lieu recharge program could be created that incorporates exchange concepts for the purpose of allowing individual producers to improve reliability by storing water in the Basin. Conceptual principles associated with the implementation of such an In-lieu Exchange Program are described in the following:

- The Producers would have the option to voluntarily purchase Full-Service Tier-1 treated water from Metropolitan in-lieu of pumping groundwater.
- The reduction in pumping by the participating Producers would result in additional water in storage in the aquifer that would be received by OCWD in exchange for the Producers’ right to recover an equivalent amount of water in the future to offset future pumping above the BPP.
- The participating Producers would pay Metropolitan the cost of the Full-Service Tier-1 treated water and associated costs ($1,044 per acre-foot).
- The participating Producers would also pre-pay the RA to OCWD for the future recovery of the water at the current OCWD Board adopted rate ($402 per acre-foot).
OCWD would provide the participating producers a credit for the future recovery of the water for use in-lieu of paying RA and Basin Equity Assessments on future pumping above the BPP.

OC WD could extinguish the credits by reimbursing a participating Producer for the Full-Service Tier-1 treated rate that was previously paid by the Producer ($1,044 per acre-foot).

Under this program, OCWD would be cost-neutral.

An overview of the how such an In-lieu Exchange Program would work financially is provided in Exhibits “A” and “B”. This concept would provide a creative solution to increasing the amount of water stored in the Basin, improving water supply reliability to the producing agencies, while ensuring that OCWD remains cost-neutral.

We hope that the concepts described above will assist you in your discussion with the OCWD Board of Directors Administration / Finance Issues Committee meeting on August 11, 2016 where you will be presenting options to refill the Basin. We look forward to working with you and your staff as well as the interested producer agencies in refining the In-Lieu Exchange Program concepts presented above. Please contact me at (949) 453-5590 or cook@irwd.com so that we can schedule a meeting to discuss these concepts.

Sincerely,

Paul A. Cook, P.E.
General Manager
EXHIBIT "A"

Example of Recharge of Water Through In-Lieu Exchange

- Costs of Recharge -

OCWD Issues Credit to Producer Allowing Future Recovery of In-Lieu Water

Producer Pays OCWD RA for Water Recovered From Basin ($402/AF)

Orange County Water District

Groundwater Producer

Does Producer Exercise Option to Initiate In-Lieu Exchange?

No

Producer Pre-Pays OCWD RA for Future Recovery of Water Recharged In-Lieu of Pumping ($402/AF)

Producer Pays For MWD Full Service Tier-1 Treated Water ($1,044/AF)

MWDOC, Santa Ana, Fullerton, Anaheim

Yes

Delivers of Tier-1 Treated Water to Producer In-lieu of Pumping Groundwater
EXHIBIT "B"

Example of Recovery of Water Recharged Through In-Lieu Exchange

-Costs of Recovery-

Groundwater Producer

When Producer Pumps Above BPP Does it Hold Exchange Credits from OCWD?

No

Producer Pays OCWD BEA for Water Recovered From Basin Above the BPP ($52?/AF)

Yes

Orange County Groundwater Basin

Producer Pumps Water Previously Recharged Thru In-Lieu Exchange and Pays Pumping Costs ($97/AF)

Orange County Water District
City of Anaheim  
PUBLIC UTILITIES DEPARTMENT  
Administration  

December 11, 2017  

Mr. Michael Markus, P.E.  
General Manager  
Orange County Water District (OCWD)  
18700 Ward Street  
Fountain Valley, CA 92708  

Subject: Proposed South Orange County Pilot Water Storage and Exchange Programs  

Mr. Markus,  

This letter addresses the upcoming Water Issues Committee agenda item for consideration of proposed South Orange County Pilot Water Storage and Exchange Programs.  

I recommend the Committee defer action on this agenda item at this time. While OCWD staff’s recommendation may have merit at some point, OCWD should first consider allowing water storage and exchange programs with its member agencies before considering such programs for agencies outside the basin.  

I understand several of the Groundwater Producers would be interested in discussing the potential merits of water storage and/or exchange programs with the District. These types of programs would improve local supply reliability and potentially provide OCWD with additional resources for the benefit of the basin and all its member agencies.  

While the Producers fully support the OCWD Board’s prior establishment of the emergency program for South County, I believe expanding or supplementing it to provide additional storage or exchange provisions would be premature. Instead, I recommend OCWD first engage with the Groundwater Producers to discuss the potential merits of such programs with your member agencies.  

Sincerely,  

Michael Moore, P.E.  
Assistant General Manager, Water
January 31, 2018

Mr. Michael Markus, P.E.
General Manager
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Subject: Proposed Memorandum of Understanding for a Water Storage and Exchange Program between OCWD and Moulton Niguel Water District

Mike:

On January 25, 2018, your staff sent a reminder notice for the next meeting of the Orange County Groundwater Producer Agencies to discuss the concept of storage accounts in the Orange County Groundwater Basin. This notice included a draft of a potential Memorandum of Understanding (MOU) between OCWD and Moulton Niguel Water District (MNWD). As was clearly articulated at the first meeting of the Producers regarding this topic on January 10, 2018, the Producers strongly believed that executing an MOU with MNWD at this time is not appropriate. In this letter, all 19 Producer Agencies are unanimously requesting that OCWD table this proposed MOU with MNWD from further consideration. We also recommend that OCWD undertake a process for evaluating the potential for storage accounts using the following process:

1) Evaluate the current and future operating parameters of the Basin;
2) Identify potential measures to optimize the storage of water in the Basin for the benefit of the Producers;
3) Consider if / how storage accounts could be implemented for Producer agencies; then
4) Consider if / how potential storage accounts could be implemented for non-Producer agencies to the primary benefit of the Producer Agencies.

Concepts for water storage accounts in the Orange County Groundwater Basin have been discussed for many years, including the “MWD CUP” with Metropolitan Water District of Southern California and a potential “SARRCUP” program. Other storage programs could be considered in the future, but only after considering all relevant factors. This analysis, which we believe can be completed by the very knowledgeable OCWD staff, should evaluate the operating parameters of the Basin including seasonal fluctuations, current and future sources of water, demands, recharge capacity, and current and future facilities, just to name a few considerations. The Producers are ready, willing, and able to assist in this effort, providing data and other information as requested.

The Groundwater Producer Agencies of Orange County support efforts to improve the water supply reliability of all agencies in Orange County. We look forward to working in conjunction with OCWD staff to maximize the use of the tremendous water resource asset known as the Orange County Groundwater Basin.
Staff from the following agencies have each provided concurrence with the statements and recommendations contained in this letter:

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<td>City of Anaheim</td>
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<td>City of Fullerton</td>
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<td>Golden State Water Company</td>
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cc: OCWD Board of Directors
February 20, 2018

Mr. Michael Markus, P.E.
General Manager
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Subject: Support for Proposed Analysis for Potential Storage Accounts in the Orange County Groundwater Basin

Dear Mr. Markus:

The undersigned agencies are very appreciative of the recent discussion among the Groundwater Producer Agencies about water supply reliability and emergency supplies. As you know, by agreement with Orange County Water District (OCWD), Municipal Water District of Orange County, and Irvine Ranch Water District, many agencies in South Orange County have the ability to exchange water in an emergency through the Dyer Road Wellfield for up to 30 days. Over the years, OCWD and the South County agencies have discussed various alternatives for storage or exchange agreements and emergency supplies utilization of the groundwater basin as a potential alternative delivery of emergency water and the storage or exchange of longer term emergency supplies.

Recently the OCWD Producer Agencies suggested storage programs could be considered in the future, but only after considering several factors and issues. The proposed analysis would evaluate the operating parameters of the Basin including seasonal fluctuations, current and future sources of water, demands, recharge capacity, and current and future facilities using the following process:

1) Evaluate the current and future operating parameters of the Basin;
2) Identify potential measures to optimize the storage of water in the Basin for the benefit of the Producers;
3) Consider if / how storage accounts could be implemented for Producer agencies; then
4) Consider if / how potential storage accounts could be implemented for non-Producer agencies to the primary benefit of the Producer Agencies.

We believe this is a prudent approach and would all be willing participants in the discussions on future sources of water and non-producer storage accounts, when the time is appropriate. We appreciate your periodic attendance and participation in discussions at the South County Agencies’ Group and welcome the opportunity to have further discussions.
We support efforts to improve the water supply reliability of all agencies in Orange County. We look forward to working with OCWD staff to maximize the use of the tremendous water resource asset known as the Orange County Groundwater Basin.

Staff from the following agencies have each provided concurrence with the statements and recommendations contained in this letter:

City of San Juan Capistrano
El Toro Water District
Emerald Bay Service District
Irvine Ranch Water District
Laguna Beach County Water District
Santa Margarita Water District
South Coast Water District
Trabuco Canyon Water District

cc: OCWD Board of Directors
April 6, 2018

Mr. Michael Markus, P.E.
General Manager
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Subject: Support for Proposed Analysis for a Potential Pilot Exchange Agreement in the Orange County Groundwater Basin

Dear Mr. Markus:

Moulton Niguel Water District (MNWD) appreciates the visionary leadership by Orange County Water District’s (OCWD) Board of Directors to amend its policy on local water supplies and begin discussions for a potential pilot groundwater exchange program. Over the years, OCWD has been a key partner of South Orange County in jointly signing on to the Emergency Services Agreement in 2006 to provide South Orange County including MNWD with the ability to exchange water in an emergency, at no compensation to OCWD.

As a follow up to the policy amendment, MNWD has been working with your staff to develop a memorandum of understanding to jointly study opportunities in the basin for both OCWD members and non-OCWD members, where MNWD would help fund the cost of these studies to gain information and evaluate the feasibility of future opportunities. Understandably, these matters take time, and we appreciate the willingness of the OCWD Board and its member agencies to engage with MNWD in discussing the potential for opportunities within the groundwater basin that could provide county-wide benefits, including economic benefits to all of the OCWD member agencies.

Recently, several agencies in South Orange County sent a joint letter expressing their similar appreciation for your efforts. The concept of an exchange agreement is not new; however with Metropolitan Water District recently noting that over 1.2 million acre feet have been depleted from groundwater basins over the past decade in Southern California, the time is ripe to work towards optimization of local resources like the Orange County Basin. MNWD acknowledges the historical investment that OCWD and its member agencies have paid in their proactive management of the basin and applauds the past work such as the Groundwater Replenishment System.
Any program would need to ensure that OCWD members receive an appropriate benefit and that it improves the overall health of the basin.

In recent discussions, a number of key factors were suggested to be evaluated as part of the development of a pilot exchange agreement. MNWD supports the process and following analysis for consideration by OCWD Board and staff, if appropriate:

1) Evaluate the current and future operating parameters of the Basin;
2) Identify potential measures to optimize the storage of water in the Basin for mutual county-wide benefit;
3) Consider if / how exchange agreements could be implemented

We appreciate the ongoing discussions as well as OCWD’s willingness to consider further analysis and support the evaluation of future sources of water as well as exchange agreements. MNWD supports your efforts to work collaboratively across the county to increase the water reliability for all Orange County agencies. We look forward to working with your staff and further discussions on the potential opportunities towards county-wide benefit.

Sincerely,

Joone Lopez
General Manager

cc: OCWD Board of Directors