



STANISLAUS REGIONAL WATER AUTHORITY

156 S. Broadway, Ste. 270, Turlock, CA 95380
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Special Board Meeting Agenda

May 3, 2017 at 3:00 p.m.
Ceres Community Center
2701 Fourth Street, Ceres, CA

NOTE LOCATION CHANGE

Table with 4 columns: Chair (Gary Soiseth), Vice Chair (Chris Vierra), Director (Ken Lane), Director (Amy Bublak), Interim General Manager (Michael Brinton), Board Secretary (Tish Foley), Interim Legal Counsel (Phaedra A. Norton)

NOTICE REGARDING NON-ENGLISH SPEAKERS: The Stanislaus Regional Water Authority (SRWA) meetings are conducted in English and translation to other languages is not provided. Please make arrangements for an interpreter if necessary.
EQUAL ACCESS POLICY: If you have a disability which affects your access to public facilities or services, please contact the Board Secretary. The Board is committed to taking all reasonable measures to provide access to its facilities and services. Please allow sufficient time for the Board to process and respond to your request.
NOTICE: Pursuant to California Government Code Section 54954.3, any member of the public may directly address the Stanislaus Regional Water Authority Board on any item appearing on the agenda, including Consent Calendar and Scheduled items, before or during the Board's consideration of the item.
AGENDA PACKETS: Prior to the Stanislaus Regional Water Authority Board meeting, a complete Agenda Packet is available for review on the SRWA's website at www.stanrwa.org and in the Board Secretary's Office at 156 S. Broadway, Suite 230, Turlock, during normal business hours. Materials related to an item on this Agenda submitted to the Board after distribution of the Agenda Packet are also available for public inspection in the Board Secretary's Office. Such documents may be available on the SRWA's website subject to staff's ability to post the documents before the meeting.

- 1. A. CALL TO ORDER
B. SALUTE TO THE FLAG
2. RECOGNITIONS, APPOINTMENTS, ANNOUNCEMENTS & PRESENTATIONS: None
3. A. SPECIAL BRIEFINGS: None
B. STAFF UPDATES
1. Interim General Manager Updates (Brinton)
2. Finance Director Report (Lorenzi)
C. CONSULTANT UPDATES
1. West Yost Associates will provide the Board with a project status update. (Nakano)

**D. PUBLIC PARTICIPATION**

This is the time set aside for members of the public to address the Stanislaus Regional Water Authority Board concerning any item that has been described in the notice for the meeting, including Consent Calendar items, before or during consideration of that item. You will be allowed five (5) minutes for your comments. If you wish to speak regarding an item on the agenda, you may be asked to defer your remarks until the Board addresses the matter.

**4. DECLARATION OF CONFLICTS OF INTEREST AND DISQUALIFICATIONS**

**5. CONSENT CALENDAR**

Information concerning the consent items listed hereinbelow has been forwarded to each Board member prior to this meeting for study. Unless the Chair, a Board member, or member of the audience has questions concerning the Consent Calendar, the items are approved at one time by the Board. The action taken by the Board in approving the consent items is set forth in the explanation of the individual items.

A. Accepting minutes of Regular Meeting of February 23, 2017

**6. PUBLIC HEARINGS: None**

**7. SCHEDULED MATTERS**

A. Request to concur with the recommendations of the Executive TAC and TAC to utilize lump sum design-build to deliver the regional intake pump station, raw water pipeline, and water treatment plant, with an additive bid item to include the design and construction of the finished water transmission mains to Ceres and Turlock. *(Smith, Lindsay)*

**Recommended Action:**

*Motion:* Concurring with the recommendations of the Executive TAC and TAC to utilize lump sum design-build to deliver the regional intake pump station, raw water pipeline, and water treatment plant, with an additive bid item to include the design and construction of the finished water transmission mains to Ceres and Turlock.

B. Request to concur with the TAC's recommendation to proceed with further evaluation of two treatment process alternatives, namely a conventional treatment process featuring pre-ozonation, and a membrane filtration process featuring ozone; and to allow consideration of either option by proposers for the future design and construction of the water treatment plant. *(Smith, Andy)*

**Recommended Action:**

*Motion:* Concurring with the TAC's recommendation to proceed with further evaluation of two treatment process alternatives, namely a conventional treatment process featuring pre-ozonation, and a membrane filtration process featuring ozone; and to allow consideration of either option by proposers for the future design and construction of the water treatment plant.

C. Request to authorize the Interim General Manager to execute non-monetary agreements and sign documents related to obtaining permits, easements, right-of-way acquisitions on behalf of the SRWA and pay associated fees for processing these items up to an amount of \$5,000 per occurrence or up to the appraised value of the easements and right-of-way. *(Brinton)*

**Recommended Action:**

*Motion:* Authorizing the Interim General Manager to execute non-monetary agreements and sign documents related to obtaining permits, easements, and right-of-way acquisitions on behalf of the SRWA and pay associated fees for processing these items up to an amount of \$5,000 per occurrence or up to the appraised value of the easements and right-of-ways.

*Resolution:* Appropriating \$50,000 to account number 950-53-552.43332 "Permitting" to provide funding for permitting fees related to the wet well project to be funded via equal contributions from the Cities of Ceres and Turlock.

*Resolution:* Appropriating \$30,000 to account 950-53-552.51001 "Property Acquisitions" to provide funding for private appraisal reimbursements, and easements and right-of-way acquisitions related to the wet well project to be funded by contributions from the City of Ceres, City of Turlock, and Turlock Irrigation District (TID) with the following percentages: Turlock: 53.3%, Ceres: 26.7%, TID: 20.0%.

- D. Request to approve appropriations totaling \$2,975 to various administrative accounts as outlined in the Resolution to provide for proper accounting of the Authority's administrative costs during fiscal year 2016-17. Appropriations to be funded equally by contributions from the Cities of Ceres and Turlock. (*Lorenzi*)

**Recommended Action:**

*Resolution:* Appropriating \$2,975 to various administrative accounts to provide for proper accounting of the Authority's administrative costs during Fiscal Year 2016-17, to be funded via equal contributions from SRWA participating agencies.

**8. MATTERS TOO LATE FOR THE AGENDA**

**9. BOARD ITEMS FOR FUTURE CONSIDERATION**

**10. BOARD COMMENTS**

Board members may provide a brief report on notable topics of interest. The Brown Act does not allow discussion or action by the legislative body.

**11. NEXT MEETING DATE:** May 25, 2017 – Regular Meeting

**12. CLOSED SESSION**

**13. ADJOURNMENT**

The foregoing meeting is hereby called by Chair Soiseth at the above mentioned date and time pursuant to California Government Code §54956.



Gary Soiseth, Chair

**Item 3.B.1**

April 20, 2017

To: SRWA Board

From: Michael Brinton, Interim General Manager

Subject: Interim General Manager Report

The members of the Technical Advisory Committee (TAC) have continued to meet with West Yost Associates and their sub-consultants on various items in preparation of the design of the raw water supply infrastructure, water treatment facility, treated water transmission mains and local distribution systems. The items covered since the last SRWA Board meeting includes the following:

- Finalized and submitted January and February Monthly Status Reports
- Attended meeting with SRF Staff on March 2<sup>nd</sup>
- Continued to collect and analyze raw water samples
- Provided overview of 50% design documents to TAC
- Continued support of Horizon's CEQA documentation for both the EIR and IS/NMD for the Wet Well Project
- Continued coordination with Associated ROW and GDR regarding appraisal maps, easement agreements and responded to a few questions from the public based on the treated water transmission main alignments shown in the NOP
- Continued development of treatment train process alternatives and information for presentation to TAC in a Technical Memorandum
- Prepared cost estimates for trench replacement vs County fees
- Met with Executive TAC regarding treatment trains and financing methods
- NOP published with State Clearinghouse and County Clerk
- Received and reviewed 50% design comments from TID
- Reviewed preliminary appraisal maps
- Continued development of treatment unit process cost comparison information
- Provided updated rate model to the cities of Ceres and Turlock
- Attended Executive TAC workshop on project delivery alternatives
- Consulted with Gualco regarding potential use of AB 851
- Continued design of 90% drawings and specifications for Raw Water Wet Well
- Responded to requests for information regarding the NOP
- Conducted workshop on water quality and treatment alternatives

Mr. Nakano will provide a more in depth review of these items. I will be happy to answer any questions.

**February 23, 2017 at 10:00 a.m.**  
**156 S. Broadway, Turlock, CA**  
**2<sup>nd</sup> Floor – Yosemite Community Room**

***DRAFT Minutes***  
***Regular Meeting***  
***SRWA Board***

1. **A. CALL TO ORDER:** Chair Soiseth called the meeting to order at 10:03 a.m.  
**PRESENT:** Director Bublak, Vice Chair Vierra, Chair Soiseth  
**ABSENT:** Director Lane
  
- B. SALUTE TO THE FLAG**
  
2. **RECOGNITIONS, APPOINTMENTS, ANNOUNCEMENTS & PRESENTATIONS:** None
  
3. **A. SPECIAL BRIEFINGS:** SED Status Update. Michael Brinton, no report at this time.
  
- B. STAFF UPDATES:**
  1. Interim General Manager Mike Brinton provided an update of items discussed at recent Technical Advisory Committee (TAC) meetings, including:
    - Coordinated with Gualco regarding SRWA proposed legislation
    - Continued laboratory analysis and bench-scale testing of raw water samples, including samples collected during high river flows (due to TID releases and high rainfall runoff)
    - Continued preparation of 50% design drawings and technical specifications for the Wet Well
    - Refined wet well access road alignment to minimize impact to elderberry shrubs
    - Set up task orders for right of way and survey subconsultants
    - Completed refined cost estimate for the raw water facilities and treated water transmission mains, and discussed at TAC
    - Completed initial Ceres and Turlock preliminary analysis of the potential average impact to monthly water bills with and without the proposed Project
    - Solicited TID data on historical and 2017 Don Pedro releases
    - Provided Project status update to Mr. Gary Nazareno.
  
  2. Marie Lorenzi reported provided information on revenue and expenditures for Fiscal Year 2016-17 through February 21, 2017.
  
- C. CONSULTANT UPDATES:**
  1. Gerry Nakano of West Yost Associates provided a project status update including the following:
    - AB 52 notifications regarding the proposed Project were sent out to Native American Groups
    - Environmental Team is publishing the Notice of Preparation (NOP) for the EIR to start the 30-day public comment period.
    - Presented aerial site photos of the infiltration gallery and wet well location and compared it to recent photos showing the effects of a levee breach which flooded the Nazareno property. The location of the Water Treatment Plant was not flooded.

- Surveying and ROW acquisitions moving forward, but delayed due to the closure of Fox Grove Park due to flooding.
- SB 373 has been introduced by Senator Cannella which could assist the Project's use of SRF funding.

2. Michael Stevenson of Horizon Water and Environmental provided a verbal report on environmental issues associated with the Project. The Notice of Preparation is the first step of the public scoping period. Development of the Project Description and impact analysis will follow. Discussed recent changes in the permit requirements. Most permits have already been obtained through TID. The presence of elderberry shrubs in the vicinity of the construction area may affect construction start date. Mitigation requirements may kick in. Will meet with Fish and Wildlife Service to discuss the Project further with the goal to gain authorization to proceed with the infiltration gallery and proceed with mitigation.

**D. PUBLIC PARTICIPATION:** None

**4. DECLARATION OF CONFLICTS OF INTEREST AND DISQUALIFICATIONS:** None

**5. CONSENT CALENDAR:**

**Action:** Motion by Director Bublak, seconded by Vice Chair Vierra, to adopt the consent calendar and approve the minutes of the Regular Meeting of January 26, 2017. Motion carried 3/1 by the following vote:

Director Lane	Director Bublak	Vice Chair Vierra	Chair Soiseth
Absent	Yes	Yes	Yes

**6. PUBLIC HEARINGS:** None

**7. SCHEDULED MATTERS:**

**A.** West Yost Associates Andy Smith presented an update on the Water Quality Sampling Program. Source water sampling has provided a wide range of valuable water quality data. Sampling will continue through 2018. Bench-scale testing has yielded useful results regarding process feasibility and design criteria. Testing will continue through 2017. High flows in the Tuolumne River since January have coincided with degraded water quality that may impact process design. Treatment process alternatives will be submitted to the Technical Advisory Committee in March.

Chair Soiseth opened public participation. There being no public response, Chair Soiseth closed public participation.

**Action:** None. Information only.

**B.** West Yost Associates Andy Smith presented an update on the Design of the Wet Well. An Open Wet Well configuration will allow for a modest footprint, good access for maintenance and inspection, and removal of settleable solids. A robust ground stabilization system will prevent lateral migration of groundwater through porous soils and facilitate a safe and successful evacuation. Infiltration gallery development and testing activities in conjunction with wet well construction will leverage equipment and expertise of the general contractor.

Concerns regarding the need for peer review above that of TAC were discussed and it was agreed that a third party may be brought in, if necessary.

Chair Soiseth opened public participation. There being no public response, Chair Soiseth closed public participation.

**Action:** None. Information only.

8. **MATTERS TOO LATE FOR THE AGENDA:** None
9. **BOARD ITEMS FOR FUTURE CONSIDERATION:** None
10. **BOARD COMMENTS:** None
11. **NEXT MEETING DATE:** March 23, 2017 – Regular Meeting
12. **CLOSED SESSION:** None
13. **ADJOURNMENT:** Motion by Director Bublak, seconded by Vice Chair Vierra, to adjourn at 10:40 a.m. Motion carried 3/1.

RESPECTFULLY SUBMITTED

**DRAFT**

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Tish Foley, Board Secretary

From: West Yost Program Management Team

Prepared by: Lindsay Smith, West Yost Associates

**1. ACTION RECOMMENDED:**

Motion: Concurring with the recommendations of the Executive TAC and TAC to utilize lump sum design-build to deliver the regional intake pump station, raw water pipeline, and water treatment plant, with an additive bid item to include the design and construction of the finished water transmission mains to Ceres and Turlock.

**2. DISCUSSION OF ISSUE:**

As part of the Surface Water Supply Project (Project) definition phase, the Stanislaus Regional Water Authority (SRWA) evaluated alternatives for procuring and delivering different elements of the Project. The different Project elements include the wet well, the intake pump station, the raw water pipeline, the water treatment plant, and the finished water transmission mains. The Board previously concurred with the recommendation to complete the wet well project using the traditional project delivery method of design-bid-build, therefore, this staff report will only address the procurement of the remaining Project elements.

The choice of delivery/procurement method involves some set of tradeoffs between cost, innovation, SRWA participation during design, contractor selection, allocation of risk, and SRWA responsibility during operations. Following an initial review of alternatives by the Technical Advisory Committee (TAC) and legal counsel, the project delivery alternatives of construction manager-at-risk and progressive design-build were eliminated. The following four options remained and were considered by the TAC and the Executive TAC (comprised of Chair Soiseth, Vice Chair Vierra, Ceres City Manager Toby Wells, and Turlock Municipal Services Director Michael Cooke) and Agency Legal Counsel Phaedra Norton and special legal counsel Dick Shanahan:

- Design-Bid-Build (DBB)
- Lump Sum Design-Build (DB)
- Design-Build-Operate (DBO)
- Design-Build-Operate-Finance-Maintain (DBOFM/P3)

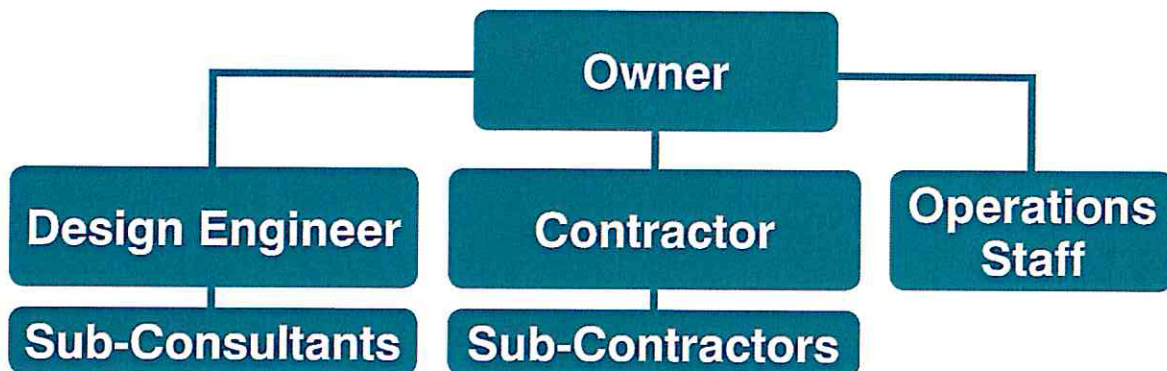
An overview of the procurement/delivery alternatives, including a listing of the key advantages and disadvantages, and a graphic showing the contractual relationship of each alternative is included below.



### Design-Bid-Build

DBB is the traditional delivery method for infrastructure projects. For this method, the designer and contractor remain entirely separate and both work directly for the owner (see Figure 1 for the DBB contractual relationship). The engineer is selected by the owner through a qualifications-based process, and the design engineer, with input from the SRWA, then develops the project design to the 100 percent design level. A contractor is then selected based on the submitted lowest qualifying bid, typically without negotiation.

**Figure 1. Design-Bid-Build Contractual Relationship**



An advantage of traditional DBB is that, due to being the most historically common method of procurement, the procedures for implementing DBB are well-understood and generally unambiguous. In addition, DBB allows the owner to maintain a high level of participation in the project design due to its contractual relationship with the design engineer.

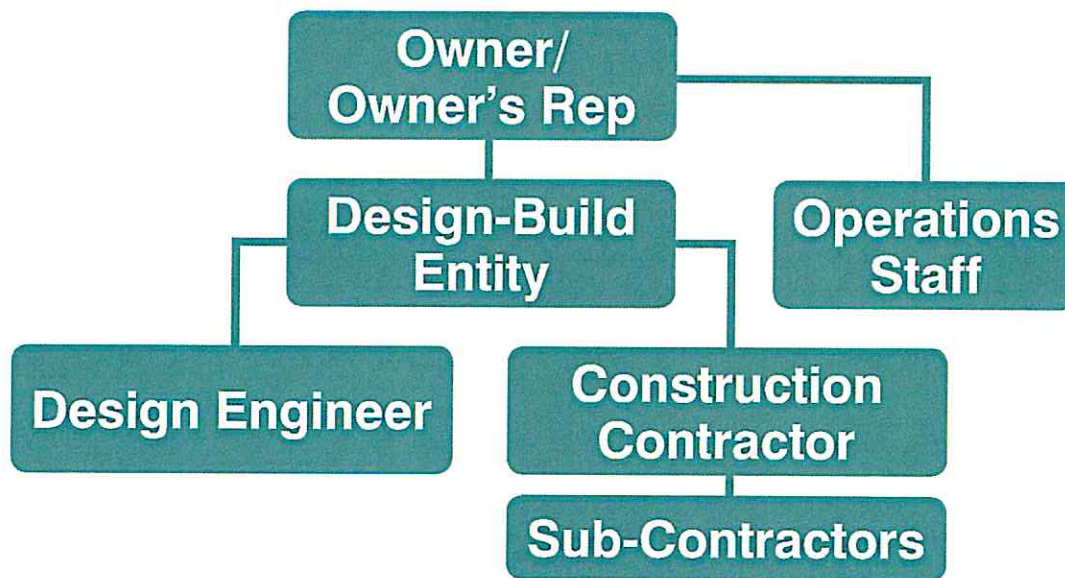
A key disadvantage of the traditional DBB approach is that the ability to prequalify contractors is very limited, which gives the owner very little opportunity to select a contractor based on past performance, experience, innovation, or other considerations. In addition, the designer and the contractor do not have a direct cooperative working arrangement for delivery of the project, the result of which can sometimes create an adversarial relationship between the two. In addition, the owner has limited opportunity to transfer risks associated with design liability and project performance. Finally, DBB has a high potential for change orders, which can be costly to the owner, time-consuming, and difficult to negotiate. Below is a more detailed list of the key advantages and disadvantages of DBB procurement:

- Advantages of DBB procurement/delivery
  - Engineer works directly for owner
  - More owner control during design
  - Contractor works directly for owner
  - Known procurement method
  - Owner-hired construction manager
  - Public operations (if desired by owner)
- Disadvantages of DBB procurement/delivery
  - Low bid can lead to contentious environment or low quality
  - Higher change order potential
  - Owner holds all risk for performance and budget
  - Owner in middle of all disputes
  - Construction cost unknown until design complete
  - Linear process leads to long timeline

### Lump Sum Design-Build

For DB, a given project is usually designed to a conceptual level, and then a designer-contractor team is selected for a lump sum price to design and construct the project (see Figure 2 for the DB contractual relationship). The selected designer-contractor team then work together to finalize the design. The process involves the development of detailed procurement documents, which are distinct from the plans and specifications required under the traditional DBB approach, but nevertheless constrain and direct the designer-contractor in ways required by the owner by setting minimum design and construction standards.

**Figure 2. Lump Sum Design-Build Contractual Relationship**



A major advantage of the DB approach is that, unlike traditional DBB, the selection of the designer-contractor team is qualifications-based. This advantage assures that the designer-contractor team meets the owner's goals in terms of past performance, experience, innovation, and project-specific design concepts. Additionally, the fact that the designer and contractor are a single entity brings the dual advantages of risk allocation to the entity most capable of controlling the risk, coupled with the absence of adversarial relations between designer and contractor that often characterize traditional DBB projects. Another advantage to DB is that it is possible to prepare multiple design packages on different schedules, thus allowing elements of the project to be done sequentially. Finally, the DB method often gives the designer-contractor team the opportunity to offer innovative approaches that still meet the design requirements established in the procurement documents.

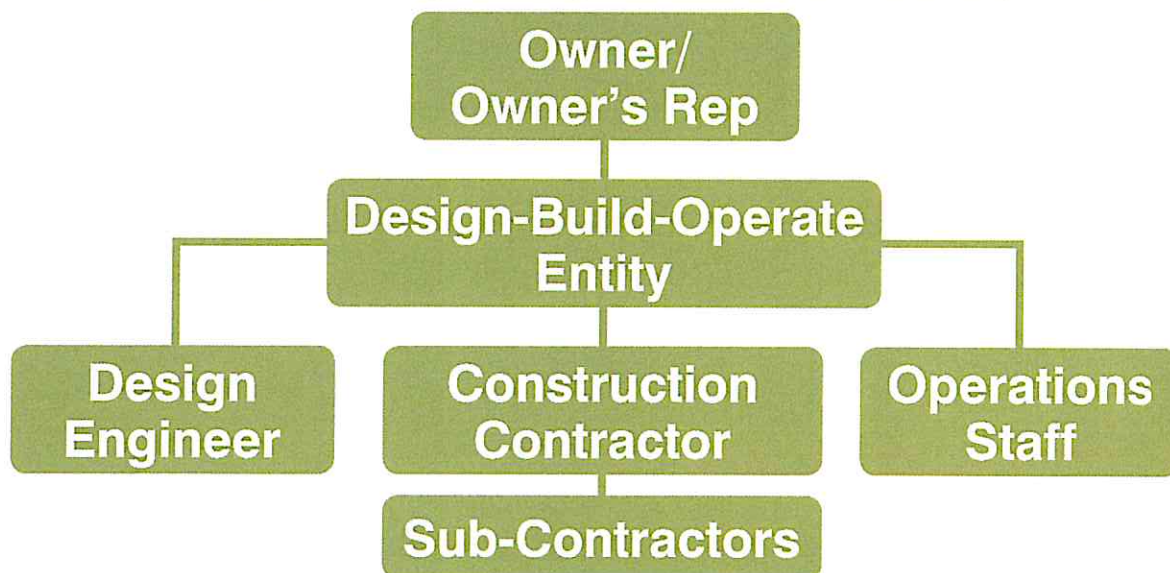
A disadvantage of a DB approach is that this procurement method is new to the SRWA partner agencies and deviates from typical owner involvement during the design process. To ensure that SRWA's preferences are incorporate into the design, upfront effort and time is needed to develop a robust set of procurement documents for the design-build entities to propose on. Finally, although risk allocation is a benefit of this procurement method, there is a cost associated with the transference of risk to the DB entity. Below is a more detailed list of the key advantages and disadvantages of DB procurement:

- Advantages of DB procurement/delivery
  - Schedule efficiencies associated with concurrent design and construction activities
  - Cost savings associated with the integration of design and construction (requiring less design and contract administration)
  - Technical innovation
  - Qualifications-based selection
  - Single-entity responsibility
  - Guaranties for price, schedule, quality & performance
  - Risk allocated to entity most capable of controlling the risk
  - Reduced change orders and claims
  - Collaborative contract negotiation process
  - Public operations (if desired by owner)
- Disadvantages of DB procurement/delivery
  - Reduction in control over design and construction quality control
  - Any owner scope changes will likely result in change orders
  - Cost associated with risk transfer to the DB entity
  - Costs will need to include some contingencies due to less defined project scope
  - Procurement process is time consuming
  - New procurement method to SRWA member agencies

### Design-Build-Operate

The advantages and disadvantages listed under DB are the same for DBO with the additions listed here. Because operations are included as part of the DBO entity's responsibilities, there is a single point of responsibility not only for design and construction but also for a defined period of time during the operational phase of the project. This contractual relationship (see Figure 3 for the DBO contractual relationship) transfers the long-term performance risk to the DBO entity. Also, there are more opportunities for innovation because decision making is based on guaranteed long-term life-cycle costs.

Figure 3. Design-Build-Operate Contractual Relationship



There is some concern about the level of interest and, therefore, the cost competition in the DBO market. Although recent indications show renewed interest from private operations firms in DBO projects, past experience has shown that interest in this procurement method has fluctuated.

Some owners are interested in operating their own facilities, and therefore DBO is not an appropriate procurement method in such cases. In the case of SRWA, there is an interest by the TAC and Executive TAC in publicly operating the facilities, which will tend to make DBO procurement less appealing.

Below is a more detailed list of the key advantages and disadvantages of DBO procurement:

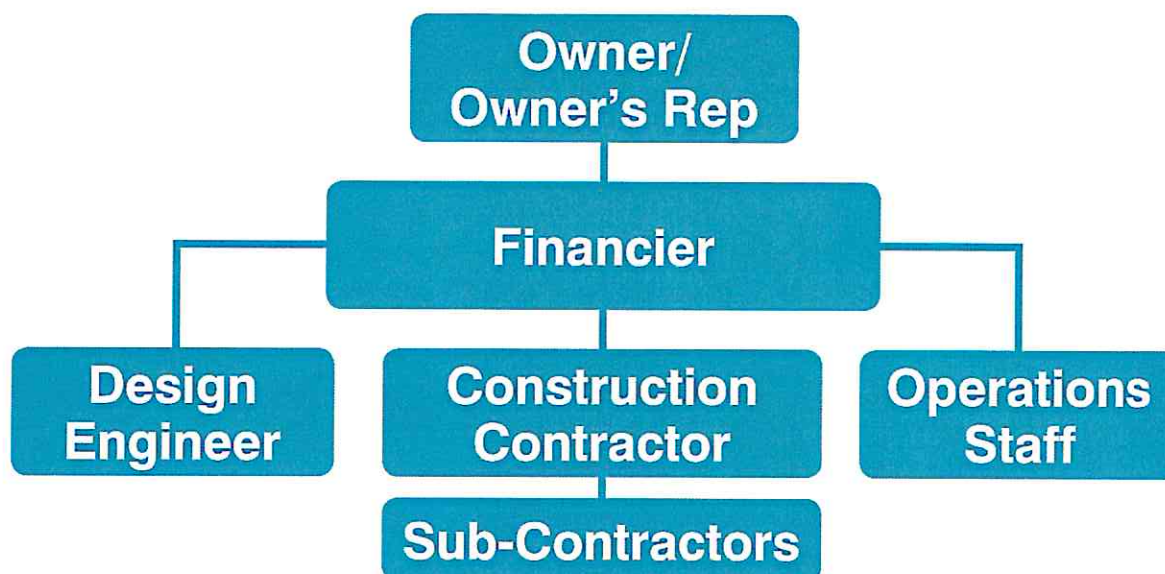
- Advantages of DBO procurement/delivery
  - Same advantages as DB
  - Decision making based on long-term life-cycle costs
  - Risk for long-term performance shifted to DBO operator
  - Long-term operating costs are fixed
  - Provides access to technical/operations resources at lower price
  - Regional project avoids debates over which agency/entity runs facilities
  - More potential for innovation
  - Design considers most efficient long-term maintenance and operations
- Disadvantages of DBO procurement/delivery
  - Same disadvantages as DB
  - Concerns with competition for project delivery method
  - Private operations (if owner desires public operations)

#### **Design-Build-Operate-Finance-Maintain**

DBOFM (or P3) procurement adds a financier as a member of the DBO team. The contracting relationship can be configured in many ways. Figure 4 shows one of many variations. DBOFM is a project delivery method that is not often utilized in the US water/wastewater industry because of the increased interest rates associated with private equity and financing. There are, however, instances where this type of procurement makes sense for a public entity. These instances usually involve the need for private funding because, for example, the public agency(ies) do not have the bonding capacity necessary to implement a needed project. Fortunately, SRWA's member agencies have both the bonding capacity as well as a good lead on low interest financing through the State Revolving Fund loan program. Below is a more detailed list of the key advantages and disadvantages of DBOFM procurement:

- Advantages of DBOFM procurement/delivery
  - Same advantages as DBO
  - Private financing can be used to level out rate increases
  - Can combine private financing with public funding sources
  - Financial backing of long-term performance guarantees
  - Frees up bonding capacity for other projects
- Disadvantages of DBOFM procurement/delivery
  - Same disadvantages as DBO
  - Higher interest rates for private equity and financing
  - Additional operations costs associated with private finance entity
  - Complex team structure with finance entity usually in the middle

Figure 4. Design-Build-Operate-Finance-Maintain Contractual Relationship



#### Recommendation

The TAC and Executive TAC rigorously evaluated the advantages and disadvantages of each project delivery alternative as it pertains to this Project and the SRWA member agencies. In the end it is the recommendation of both the Executive TAC and TAC that the DB procurement method be used for this Project primarily for the following reasons:

- SRWA would like to publicly operate the Project facilities because:
  - Turlock has a good track record of successfully operating its wastewater facilities.
  - Public agency staff will have the customer's best interests in mind.
  - Decisions will be based on long-term operational efficiencies.
  - Public operations is perceived to be more cost effective due to the absence of a profit motive.
- DB allows for qualifications-based selection, including selection of individual team members.
- Selection is based on evaluation of design solutions on specific project issues versus design consultant qualifications utilized in DBB procurement.
- DB provides for a collaborative 30% design & contract negotiation process.
- There is single-entity responsibility.
- Risk is allocated to the entity most capable of controlling the risk.
- The contractor and designer are working together in a manner that should bring value to both the design and the construction.
- There is typically a reduced number of change orders and claims in DB procurements as compared with DBB.

The use of DB for water resource infrastructure projects is not currently allowed by Government Code § 22160, however, SRWA is currently working with Senator Cannella's office on Senate Bill 373 that would allow for the use of DB for the SRWA Surface Water Supply Project. It is anticipated that the proposed legislation will be successful and confirmation is expected in Fall 2017.

**3. FISCAL IMPACT / BUDGET AMENDMENT: N/A**

**4. INTERIM GENERAL MANAGER'S COMMENTS:**

The interim General Manager supports the delivery of the Surface Water Supply Project utilizing lump sum design-build and recommends the Board concur with the recommendations of the TAC and the Executive TAC to procure the project using the DB project delivery method.

**5. ENVIRONMENTAL DETERMINATION: N/A**

**6. ALTERNATIVES:**

The Board may consider any of the other procurement methods identified in this staff report as an alternate way to deliver the Project.

From: West Yost Program Management Team

Prepared by: Andy Smith, West Yost Associates

**1. ACTION RECOMMENDED:**

Motion: Concurring with the TAC's recommendation to proceed with further evaluation of two treatment process alternatives, namely a conventional treatment process featuring pre-ozonation, and a membrane filtration process featuring ozone; and to allow consideration of either option by proposers for the future design and construction of the water treatment plant.

**2. DISCUSSION OF ISSUE:**

The TAC and Project Management (PM) Team have continued to refine and evaluate available water treatment processes for the SRWA Surface Water Supply Project, which were initially documented in *Available Treatment Process Alternatives Technical Memorandum 1* (TM 1). After TM 1 was finalized in September 2016, source water sampling and bench-scale testing efforts began in October 2016, allowing a number of information gaps to be filled. Based on these initial sampling and testing activities, *Draft Treatment Process Alternatives Technical Memorandum 2* (TM 2) was drafted on March 28, 2017, and provides expanded discussion, comparison, planning-level cost information and evaluation of treatment processes. The TAC and PM Team participated in a workshop on March 30, 2017 to discuss TM 2 and select treatment processes for further evaluation.

A summary of major topics discussed in TM 2 and during the March 30<sup>th</sup> workshop, as well as an outline of the TAC and PM Team's findings, is provided below:

Initial Source Water Sampling and Bench Testing Results

A total of 11 raw water sampling events took place between October 31, 2016 and March 30, 2017. From those events, TM 2 summarizes results for a variety of parameters, including general water quality parameters, nutrients, disinfection byproducts, iron and manganese, microbiological parameters, pesticides and other synthetic organic chemicals. Similarly, TM 2 summarizes results from a total of five (5) bench testing events which took place between November 28, 2016 and March 13, 2017, including coagulation jar tests, ozone demand tests, simulated distribution system disinfection byproduct tests and manganese removal tests.

The results of both sets of tests provide valuable information about the applicability of a variety of treatment processes and trains for this source water. Notable results include the need to remove organic carbon during portions of the year and the likelihood that SRWA will be subject to pathogen treatment requirements greater than regulatory minimums for unimpaired waters. TM 2 acknowledges that certain parameters have yet to be detected (e.g., algal toxins and most pesticides), potentially due to the lack of sampling events from periods when specific constituents may be more likely to be present, if at all.

### Winter 2017 and Historical Tuolumne River Flows

TM 2 provides a summary of recent and historical flows in the Tuolumne River below La Grange Dam, and discusses the correlation of recent high flows (namely January through March 2017) with measurements for turbidity and total organic carbon (TOC). Using the recent flow and water quality data as a guide, the historical flow data indicate that the selected SRWA treatment train will need to be capable of handling seasonally elevated concentrations of TOC in order to restrict formation of disinfection byproducts.

### Development of Refined Treatment Train Alternatives

TM 2 presents seven (7) treatment train alternatives developed and refined based on anticipated minimum requirements for pathogen treatment and previous TAC feedback. The updated list of alternatives includes trains with and without ozone, trains with and without direct filtration, and trains with and without membranes, as shown below:

1. Conventional treatment with pre-ozonation
2. Conventional treatment with intermediate ozonation
3. Conventional treatment without ozone
4. Direct filtration with ozone
5. Direct filtration without ozone
6. Membrane filtration with ozone
7. Membrane filtration without ozone

### Comparison of Unit Processes and Treatment Trains

TM 2 describes and compares key unit processes on the basis of typical components, advantages, disadvantages and planning-level construction cost estimates. Construction cost information for overall treatment trains, including processes and facilities which would be common to any of the identified alternatives, are presented for each of the seven trains.

### Risk Assessment and Recommendations

The PM Team identified four issues, or areas of risk, associated with the performance of the treatment train alternatives:

1. Exceedance of regulatory limits for disinfection byproducts with use of free chlorine as a secondary disinfectant
2. Taste and odor complaints and/or inadequate treatment of algal toxins (if present)
3. Inadequate treatment of pesticides (if present)
4. Inadequate control of manganese (if present)

The PM Team provided assessments of the relative probability of such issues arising under each alternative. Based on TAC and PM Team discussion of these risks, in conjunction with comparison of planning-level cost information, the TAC identified the following treatment process requirements:

1. Select a treatment train that utilizes ozone treatment
2. Select a treatment train that utilizes free chlorine for secondary disinfection
3. Do not pursue direct filtration further



Based on TAC feedback, two treatment train alternatives (listed below) remain under consideration and are recommended for further evaluation. Such evaluation will include the development of preliminary design criteria, site layouts and construction schedules; development of refined cost estimates for construction, operation and maintenance; and development of criteria, and cost and schedule information for pilot testing (where required for permit approval by the Division of Drinking Water). The TAC further recommends that proposers for the design and construction of the water treatment plant be allowed to consider and propose on either treatment train alternative.

Alternative No. 1: Conventional treatment with pre-ozonation

Alternative No. 6: Membrane filtration with ozonation

Before finalizing TM 2, the TAC has requested that the PM Team develop additional information about operation and maintenance costs and expandability options for Alternatives 1 and 6.

**3. FISCAL IMPACT / BUDGET AMENDMENT:**

The estimated water treatment plant capital costs of the two alternatives recommended for further evaluation are within approximately 4% of one another. The relative impact on monthly single family water bills of one alternative over the other is expected to be negligible.

By structuring the Design-Build procurement documents to allow either of Alternatives 1 and 6 as part of a Design-Build proposal, the Authority will encourage innovation and price competition among proposers.

**4. INTERIM GENERAL MANAGER'S COMMENTS:**

The interim General Manager supports moving forward with the continued evaluation of Alternatives Nos. 1 and 6, and recommends the Board concur with the recommendations of the TAC and PM Team.

**5. ENVIRONMENTAL DETERMINATION: N/A**

**6. ALTERNATIVES:**

The Board may consider any of the other five (5) treatment train alternatives described in TM 2.

From: Michael F. Brinton, Interim General Manager

Prepared by: Michael F. Brinton, Interim General Manager

**1. ACTION RECOMMENDED:**

Motion: Authorizing the Interim General Manager to execute non-monetary agreements and sign documents related to obtaining permits, easements, and right of way acquisitions on behalf of the SRWA and pay associated fees for processing these items up to an amount of \$5,000 per occurrence or up to the appraised value of the easements and rights of way

Resolution: Appropriating \$50,000 to account number 950-53-552.43332 "Permitting" to provide funding for permitting fees related to the wet well project to be funded by contributions from the Cities of Ceres and Turlock and Turlock Irrigation District (TID), consistent with the TID/SRWA Water Sales Agreement, with the following percentages: Turlock: 53.3%, Ceres: 26.7%, TID: 20%

Resolution: Appropriating \$30,000 to account number 950-53-552.51001 "Easement Acquisitions" to provide funding for private appraisal reimbursements, and easement and right of way acquisitions related to the wet well project to be funded by contributions from the Cities of Ceres and Turlock and TID, consistent with the TID/SRWA Water Sales Agreement, with the following percentages: Turlock: 53.3%, Ceres: 26.7%, TID: 20%

**2. DISCUSSION OF ISSUE:**

In order to efficiently manage this project it is desirable to process the paperwork associated with permits, easements and other right of way items. Permits that are anticipated to be needed related to the wet well project include the following:

- ✓ California Department of Fish and Wildlife Section 1600 Streambed Alteration Agreement
- ✓ Central Valley RWQCB Section 401 Certification
- ✓ General Permit for Construction Stormwater Discharge
- ✓ Stanislaus County Fire Marshal Review
- ✓ Stanislaus County Encroachment Permit (under Geer Road)
- ✓ Stanislaus County Building Permit
- ✓ Stanislaus County Grading Permit
- ✓ Stanislaus County Land Use Permit
- ✓ California Department of Fish and Wildlife Access Permit
- ✓ Easement and right of way acquisitions

With the exception of the building permit from Stanislaus County and the Central Valley RWQCB Section 401 Certification, each of the permits is currently anticipated to cost \$5,000 or less. At this time the County is reviewing the plans and will be letting the Authority know (1) if a permit is required and (2) the cost.

Easement and right of way acquisition includes an estimated budget for purchasing a one-acre easement and a roughly 3.25-acre temporary construction easement. Also included are the costs for providing the land holder, at their request, compensation for a private appraisal of the easement area.

Requiring Board approval for each individual item would result in delays in processing permits and obtaining necessary right of way.

**3. FISCAL IMPACT / BUDGET AMENDMENT:**

Permitting fees were not included in the original 2016-17 budget adopted by the Board. At this time Staff requests the appropriation of \$50,000 to account number 950-53-552.43332 "Permitting" to provide funding for anticipated permitting fees related to the wet well project. This cost will be funded by contributions from the Cities of Ceres and Turlock and Turlock Irrigation District (TID), consistent with the TID/SRWA Water Sales Agreement, with the following percentages: Turlock: 53.3%, Ceres: 26.7%, TID: 20%

Easement and right of way acquisition costs were not included in the original 2016-17 budget adopted by the Board. At this time Staff requests the appropriation of \$30,000 to account number 950-53-552.51001 "Easement Acquisitions" to provide funding for private appraisal reimbursements, and easement and right of way acquisitions related to the wet well project to be funded by contributions from the Cities of Ceres and Turlock and TID, consistent with the TID/SRWA Water Sales Agreement, with the following percentages: Turlock: 53.3%, Ceres: 26.7%, TID: 20%

**4. INTERIM GENERAL MANAGER'S COMMENTS:**

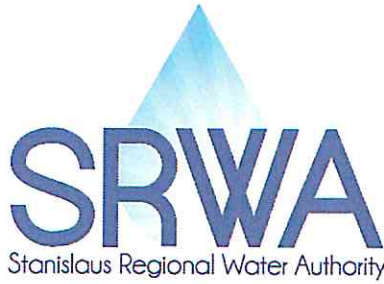
Recommend approval.

**5. ENVIRONMENTAL DETERMINATION:**

N/A

**6. ALTERNATIVES:**

The alternative to the recommended process would be to bring each individual item to the Board for approval. This would result in delays in completing the acquisition of the necessary permits and right of way transfers.



**BEFORE THE BOARD OF THE STANISLAUS REGIONAL WATER AUTHORITY**

**IN THE MATTER OF APPROPRIATING \$50,000  
TO ACCOUNT NUMBER 950-53-552.43332  
“PERMITTING” TO PROVIDE FUNDING FOR  
PERMITTING FEES RELATED TO THE WET  
WELL PROJECT TO BE FUNDED VIA EQUAL  
CONTRIBUTIONS FROM THE CITIES OF  
CERES AND TURLOCK**

**RESOLUTION NO. 2017-XXX**

**WHEREAS**, in order to proceed with the wet well portion of the project, various permits will need to be obtained; and

**WHEREAS**, it is currently estimated that the total cost of the necessary permits for the wet well project will not exceed \$50,000; and

**WHEREAS**, the costs for permits for the wet well project were not included in the 2016-17 budget previously adopted by the Board

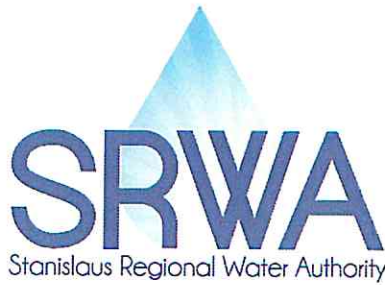
**NOW, THEREFORE, BE IT RESOLVED** that the Board of the Stanislaus Regional Water Authority does hereby appropriate \$50,000 to account number 950-53-552.43332 “Permitting” to provide funding for permitting fees related to the wet well project to be funded via equal contributions from the Cities of Ceres and Turlock.

**PASSED AND ADOPTED** at a special meeting of the Board of the Stanislaus Regional Water Authority this 3<sup>rd</sup> day of May, 2017, by the following vote:

AYES:  
NOES:  
NOT PARTICIPATING:  
ABSENT:

ATTEST:

\_\_\_\_\_  
Tish Foley, Board Secretary



**BEFORE THE BOARD OF THE STANISLAUS REGIONAL WATER AUTHORITY**

**IN THE MATTER OF APPROPRIATING \$30,000  
TO ACCOUNT NUMBER 950-53-552.51001  
"PROPERTY ACQUISITIONS" TO PROVIDE FUNDING  
FOR PRIVATE APPRAISAL REIMBURSEMENTS, AND  
EASEMENT AND RIGHT-OF-WAY ACQUISITIONS  
RELATED TO THE WET WELL PROJECT TO BE  
FUNDED BY CONTRIBUTIONS FROM THE CITY OF  
CERES, CITY OF TURLOCK, AND TURLOCK  
IRRIGATION DISTRICT (TID) WITH THE FOLLOWING  
PERCENTAGES: TURLOCK: 53.3%, CERES: 26.7%,  
TID: 20%**

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**RESOLUTION NO. 2017-XXX**

**WHEREAS**, in order to proceed with the wet well portion of the project, various easements and right of way acquisitions will need to be obtained; and

**WHEREAS**, it is currently estimated that the total cost for these acquisitions for the wet well project will not exceed \$30,000; and

**WHEREAS**, the costs of easements and right of way acquisitions for the wet well project were not included in the 2016-17 budget previously adopted by the Board

**NOW, THEREFORE, BE IT RESOLVED** that the Board of the Stanislaus Regional Water Authority does hereby appropriate \$30,000 to account number 950-53-552.51001 "Property Acquisitions" to provide funding for obtaining easements and right of way acquisitions related to the wet well project to be funded via equal contributions from the Cities of Ceres and Turlock.

**PASSED AND ADOPTED** at a special meeting of the Board of the Stanislaus Regional Water Authority this 3<sup>rd</sup> day of May, 2017, by the following vote:

AYES:  
NOES:  
NOT PARTICIPATING:  
ABSENT:

ATTEST:

\_\_\_\_\_  
Tish Foley, Board Secretary

From: Marie Lorenzi, Senior Accountant

Prepared by: Marie Lorenzi, Senior Accountant

**1. ACTION RECOMMENDED:**

Resolution: Appropriating \$2,975 to various administrative accounts to provide for proper accounting of the Authority's administrative costs during Fiscal Year 2016-17, to be funded to be funded via equal contributions from SRWA participating agencies.

**2. DISCUSSION OF ISSUE:**

When the Authority's 2016-17 fiscal year budget was prepared, appropriations for minor administrative costs were omitted. Staff is now asking for appropriations totaling \$2,975 to be approved to provide for proper accounting of the Authority's non-Staff time administrative costs. The majority of the requested appropriation is \$2,500 for postage associated with a mailing of certified "Notice of Project" letters to 450 property owners and/or agencies. This notice pertains to the preparation of a draft environmental impact report for the surface water project. The cost of these additional appropriations will be funded equally by the Cities of Ceres and Turlock.

**3. FISCAL IMPACT / BUDGET AMENDMENT:**

As noted above, the 2016-17 budget for the Authority did not include sufficient budgets for various minor expenses for 2016-17. The following table delineates the additional appropriations requested by Staff to finish out the 2016-17 fiscal year.

Account #	Description	2016-17		2016-17
		Current Budget	Requested Additions	Amended Budget
950-53-552.44035	Photocopies	\$ 100	\$ 50	\$ 200
950-53-552.44040_000	Postage	\$ 50	\$ 2,500	\$ 2,550
950-53-552.47010	Bank Charges	\$ -	\$ 50	\$ 50
950-53-552.47040_000	Dues	\$ -	\$ 375	\$ 375

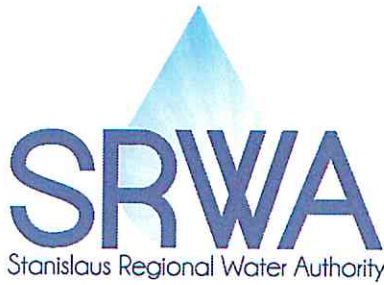
**4. INTERIM GENERAL MANAGER'S COMMENTS:**

Recommend approval.

**5. ENVIRONMENTAL DETERMINATION: N/A**

**6. ALTERNATIVES:**

No alternative is recommended as the above appropriations will provide for funding of various administrative costs associated with the Authority's activities.



**BEFORE THE BOARD OF THE STANISLAUS REGIONAL WATER AUTHORITY**

**IN THE MATTER OF APPROPRIATING \$2,975 TO } RESOLUTION NO. 2017-XXX  
 VARIOUS ADMINISTRATIVE ACCOUNTS TO }  
 PROVIDE FOR PROPER ACCOUNTING OF THE }  
 AUTHORITY'S ADMINISTRATIVE COSTS DURING }  
 FISCAL YEAR 2016-17, TO BE FUNDED EQUALLY }  
 BY CONTRIBUTIONS FROM SRWA PARTICIPATING }  
 AGENCIES }**

**WHEREAS**, when the 2016-17 budget was prepared, appropriations for various minor non-Staff administrative costs were omitted; and

**WHEREAS**, Staff would now like to amend the 2016-17 budget for the costs noted in the table below; and

**WHEREAS**, these additional appropriations will be funded equally by contributions from the Cities of Ceres and Turlock.

**NOW, THEREFORE, BE IT RESOLVED** that the Board of the Stanislaus Regional Water Authority does hereby approve the appropriations noted in the table below to be funded via equal contributions from the Cities of Ceres and Turlock.

Account #	Description	2016-17		2016-17
		Current Budget	Requested Additions	Amended Budget
950-53-552.44035	Photocopies	\$ 100	\$ 50	\$ 200
950-53-552.44040_000	Postage	\$ 50	\$ 2,500	\$ 2,550
950-53-552.47010	Bank Charges	\$ -	\$ 50	\$ 50
950-53-552.47040_000	Dues	\$ -	\$ 375	\$ 375

**PASSED AND ADOPTED** at a special meeting of the Board of the Stanislaus Regional Water Authority this 3<sup>rd</sup> day of May, 2017, by the following vote:

AYES:  
 NOES:  
 NOT PARTICIPATING:  
 ABSENT:

ATTEST:  
 \_\_\_\_\_  
 Tish Foley, Board Secretary