EXECUTIVE COMMITTEE MEETING | Agenda

APRIL 15, 2019
9:00 AM
KAWEAH DELTA WATER CONSERVATION DISTRICT - CONFERENCE ROOM
2975 FARMERSVILLE BLVD, FARMERSVILLE, CA 93223

1. CALL TO ORDER/ROLL CALL – (TANTAU)

2. APPROVAL OF THE AGENDA – (TANTAU)

3. PUBLIC COMMENT / PUBLIC PRESENTATIONS – (TANTAU)
   Public comment is welcome at this time on any matter within the jurisdiction of the Board that is not on the agenda. Under the State's open meeting law - the Brown Act - no action may be taken on any item not on the agenda. Public comment on items on the agenda will be allowed at the time the Board considers the item.

4. ACTION ITEMS (2 MINUTES)
   A. Approval of the Minutes – Executive Committee meeting of March 20, 2019.

5. BOARD RECOMMENDATIONS (90 MINUTES)
   A. Friant-Kern Canal Subsidence Correction Project. (DeFlitch, Stantec)
      Consider a recommendation as to: (1) preferred design alternative; (2) design capacity; (3) scope of design and permitting to be obtained; (4) preparation of construction documents; (5) contract bid scheduling; and (6) development of right-of-way acquisition plan.
   B. Operations, Maintenance and Replacement (OM&R) Cost Recovery Methodology Revision. (DeFlitch)
      Consider a recommendation based on input from recent workshops as to the methodology (i.e., single column approach) for each contractor’s obligations to pay OM&R costs for the Friant-Kern Canal.
   C. Water Quality Plan. (DeFlitch)
      Consider a recommendation from the Water Quality Ad Hoc Group on modeling and methodology.
6. **DISCUSSION/DIRECTION (75 MINUTES)**

   A. Capacity Correction Project - Local Funding Component and Cost Limit for Self-Financing (DeFlitch)
   B. Subsidence - Plans to Prevent and Address Future Subsidence (DeFlitch)
   C. Update on Reconsultation. (Payne)
   D. Update on Temperance Flat Reservoir Project. (Payne, Fukuda)
   E. San Joaquin Valley Blueprint Update. (Ewell/Amaral)
   F. Update on Sponsored and Tracked Legislation (Biering)

7. **CLOSED SESSION ITEMS (30 MINUTES)**

   7. **CONFERENCE WITH LEGAL COUNSEL - EXISTING LITIGATION**
      (Government Code section 54956.9(d)(1))
      NRDC v. Murillo, U.S. District Court, Eastern District of California (Sacramento Division), Case No. 88-cv-01658-JAM-GGH.

   8. **CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION**
      (Government Code section 54956.9(d)(2))
      Significant Exposure to Litigation: Two potential matters.

   9. **CONFERENCE WITH LEGAL COUNSEL-INITIATION OF LITIGATION**
      (Government Code section 54956.9(d)(4))
      Initiation of Litigation: Two potential cases.

10. **RECONVENE INTO OPEN SESSION**

11. **ADJOURNMENT**

**Public Participation Information**

Agenda reports and other disclosable public records related to each Open Session agenda item are available on FWA’s website under "Calendar" at Friantwater.org and at FWA’s main office, 854 N. Harvard Ave., Lindsay, CA 93247, during regular business hours. Under the Americans with Disabilities Act, if you require a disability-related modification or accommodation to participate in this meeting, including auxiliary aides or services, please contact Toni Marie at 559-562-6305 at least 48 hours prior to the meeting.
1. CALL TO ORDER/ROLL CALL – Chair Chris Tantau called the meeting to order at 9:00 a.m. Committee members present: Tantau, Stephens, Loeffler, Kisling, Erickson, Borges; Staff present: DeFlitch, Marie, Biering, Willard, Phillips, Luce, Payne, Ewell, Hickernell, Garcia, Bezdek. Others: BAILEY, Bennett, Morrissey, Muhar, Collup, Wallace, Dalke, Geivet, Fukuda, Larsen; Vanden Heuvel. Committee members absent: Camp

2. APPROVAL OF THE AGENDA – The agenda was approved. (Kisling/Erickson); approved unanimously - Ayes – Tantau, Stephens, Erickson, Loeffler, Tantau, Kisling; Nays – none; Absent – Camp

3. PUBLIC COMMENT / PUBLIC PRESENTATIONS – None

4. ACTION ITEMS
   A. Approval of the Minutes – Executive Committee meeting of February 11, 2019. The minutes were approved. (Stephens/ Kisling); approved unanimously - Ayes – Tantau, Stephens, Erickson, Loeffler, Tantau, Kisling; Nays – none; Absent – Camp

5. RECOMMENDATIONS
   A. 2019 Friant-Kern Canal Drawdown for Maintenance. (DeFlitch)
      The EC considered and approved a recommendation to the Board of Directors to defer draw down and maintenance following the 2019 irrigation season as outlined in the agenda report. (Stephens/ Loeffler); approved unanimously - Ayes – Tantau, Stephens, Erickson, Loeffler, Tantau, Kisling; Nays – none; Absent – Camp

   B. Operations, Maintenance and Replacement (OM&R) Cost Recovery Methodology Revision– (DeFlitch)
      The EC considered and took no action on a recommendation to the Board of Directors as to the methodology for including Unreleased Restoration Flows (URFs) and Restoration Water Account (RWA) supplies as part of each contractor’s obligations to pay OM&R costs for the Friant-Kern Canal since a workshop on the subject wasn’t being held until later in the week. The EC suggested that Staff bring the March 21 workshop conclusions and report the outcome at the Board of Directors’ March 28 meeting. Depending on the outcome of the workshop, a recommendation on the methodology may or may not be included on the Board agenda.
C. Cost Recovery Methodology For Extraordinary OM&R. (Willard)
The EC considered and approved a recommendation to the Board of Directors that all contractors pay for extraordinary OM&R costs in a manner consistent with the OM&R Cost Allocation Methodology as follows:

1. That all OM&R costs, including extraordinary maintenance, repairs, and replacement, be allocated utilizing the same methodology that has historically been used for routine O&M activities. (Kisling/Loeffler); approved unanimously - Ayes – Tantau, Stephens, Erickson, Loeffler, Tantau, Kisling; Nays – none; Absent – Camp;

2. That the OM&R definition be included in the 60-day notice that will be sent to all contractors for the proposed modification to the cost share methodology to include Restoration Water Account (RWA) and Unreleased Restoration Flow (RF) water pending the outcome at the workshop on Wednesday. (Loeffler/Borges); approved unanimously - Ayes – Tantau, Stephens, Erickson, Loeffler, Tantau, Kisling; Nays – none; Absent – Camp;

3. That the Board of Directors authorizes up to $5M in pre-construction costs for the Subsidence Project, to be considered OM&R and direct staff to budget accordingly. (Stephens/Kisling); approved unanimously - Ayes – Tantau, Stephens, Erickson, Loeffler, Tantau, Kisling; Nays – none; Absent – Camp

D. San Luis Mendota Water Authority Proposed 2019 O&M Rates and Reserve. (Willard)
The EC considered and approved a recommendation to the Board of Directors to adopt SLDMWA 2019 O&M Rates and increase SLDMWA Reserve in the amount of $1,500,000 as outlined in the agenda report. (Loeffler/Borges); approved unanimously - Ayes – Tantau, Stephens, Erickson, Loeffler, Tantau, Kisling; Nays – none; Absent – Camp

E. Position on SB 417. (Biering)
GAC Biering reported on SB 417 as outlined in the agenda report. This bill would create a new agricultural and rural assistance role in the California Department of Food and Agriculture and require a study of the economic impacts of the Sustainable Groundwater Management Act by 2022. CEO Phillips recommended that this Bill be forwarded to the San Joaquin Blueprint Group for its Legislative Committees’ analysis and direction. The EC considered and agreed to table any action on SB 417 and forward the bill onto the Blueprint Group.

6. DISCUSSION/DIRECTION (75 MINUTES)
A. Friant-Kern Canal and Madera Canal Title Transfer. (DeFlitch/Bezdek)
COO DeFlitch and Special Counsel Bezdek gave an update on the MOU process with the Bureau of Reclamation where ongoing discussions continue. Focus right now is on potential post-title transfer governance issues including whether there will be any potential for Reclamation to change the point of diversion for contractors on the FKC and Madera Canals once title is transferred. The EC also discussed the Dennis Keller memo related to potential
risks and concerns also outlined in the agenda report. CEO Phillips said it would be helpful to
have the Board’s support to pursue title transfer of the canal and other facilities by
requesting that staff complete a draft MOU with Reclamation and have staff continue to
refine the benefits of transfer and respond to any concerns; such as those outlined in the
Keller memo.

B. Friant-Kern Canal Subsidence Correction Project Updates. (DeFlitch)
   COO DeFlitch gave an update on the project as outlined in the agenda report. He noted
   that the liner extension was well onto its way to being completed by the end of March. He
   also said that he hoped to have information from the workshop that will help the Board
   continue to narrow down the alternatives.

C. Fiscal Year-End Audit Status Report. (Willard)
   CFO Willard reported that the audit was moving forward as expected. He also said that the
   new accounting position had been filled.

D. San Joaquin Valley Blueprint. (Ewell)
   Austin Ewell gave a brief update on the SJV Water Blueprint Group as outlined in the
   agenda report. The Group held its second meeting on March 8th; the next meeting has
   been scheduled for April 5th.

CLOSED SESSION ITEMS (60 MINUTES)

7. CONFERENCE WITH LEGAL COUNSEL - EXISTING LITIGATION
   (Government Code section 54956.9(d)(1))
   NRDC v. Murillo, U.S. District Court, Eastern District of California (Sacramento Division), Case
   No. 88-cv- 01658-JAM-GGH.

8. CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION
   (Government Code section 54956.9(d)(2)
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9. CONFERENCE WITH LEGAL COUNSEL-INITIATION OF LITIGATION
   (Government Code section 54956.9(d)(4)) Initiation of
   Litigation: Two potential cases.

10. RECONVENE INTO OPEN SESSION
    There was no reportable action taken during closed session.

11. ADJOURNMENT
    The meeting adjourned at 11:33 a.m.
DATE: April 15, 2019
TO: Executive Committee
FROM: Douglas DeFlitch, Chief Operating Officer
SUBJECT: Friant-Kern Canal Subsidence Correction Project Preferred Alternative Recommendations

SUMMARY:
The FKC Subsidence Correction Project (Project) is to correct the conveyance capacity problems caused by subsidence and original project design deficiency from MP 88 (Fifth Avenue Check) to MP119 (Lake Woollomes Check). Pre-construction efforts to address this problem have involved studying a range of alternatives and undertaking other preliminary steps that will allow for the expeditious design and construction of the Project. The major elements of the Project include alternative analyses, feasibility level investigations, engineering design, environmental compliance, permitting, bidding, and construction management services.

In the attached Memorandum, Stantec has provided a list of recommendations to expeditiously guide this Project forward towards a bid and construction phase.

Summary of Recommendations
Here are Stantec’s recommendations:
1. Select Alternative 5 - Parallel Canal for continued project design.
2. Design the parallel canal for the maximum design capacity at flood freeboard.
3. Design and permit the entire Middle Reach project.
4. Prepare construction documents, i.e. 100% bid-ready documents, for the entire Middle Reach.
5. Once funding availability is known, prepare an advertisement for bids for a “Schedule” of the work that matches the funding availability. Note the entire set of drawings may be issued but only the portion outlined in the bid schedule would be constructed.
6. Develop Right-of-Way (ROW) acquisition plans that include sufficient land to accommodate raising the canal embankments to respond to future subsidence.

Staff Concurrence & Discussion
There are several identified tasks that create a risk to accomplishing the Project on an expedited schedule. They are as follows:
2. Historic/Cultural Resources Permitting and Compliance.
3. Biological Resources Consultation and Coordination.
4. NEPA/CEQA Permitting and Compliance.

FWA staff and Stantec will continue to develop a better understanding of the work required and the timing of these tasks through meetings and contacts with the applicable regulatory or governing agencies.

However, in order to move forward, and to focus our land acquisition plan and environmental permitting, both the consultant and staff need to define the initial project. We believe that the above recommendations
will provide the team the necessary scope to continue to develop this Project while recommendation 5 will provide the flexibility necessary to size the Project to available funding. Staff concurs with the engineering consultants’ recommendations and would recommend refining the FKC Subsidence Correction Project based on these recommendations.

**RECOMMENDED ACTION:**

The Executive Committee recommend to the Board of Directors to accept the recommendations of staff and Stantec as described in the attached memo and to refine the FKC Subsidence Correction Project based on these recommendations.

**SUGGESTED MOTION:**

The Executive Committee recommend to the Board of Directors to refine the FKC Subsidence Correction project based on the recommendations.

**BUDGET IMPACT:**

Unknown at this time— for reference there is an appraisal level project cost alternative submitted as Table 1 in the memorandum.

**ATTACHMENTS: STANTEC MEMO ON RECOMMENDED SELECTION OF A PROJECT ALTERNATIVE**
Reference: Recommended Selection of a Project Alternative

Stantec has completed technical analysis of several alternatives to correct capacity reductions due to subsidence in the Middle Reach of the Friant Kern Canal (FKC). Information has been prepared to support selection of a project alternative that will be further refined through design development. This paper briefly describes the development and analysis of project alternatives to date and presents a recommended approach to select a project alternative.

ALTERNATIVES DEVELOPMENT

The development and evaluation of alternatives for the project followed a structured approach that progressively evaluated and screened alternatives, as illustrated in Figure 1 and described below.

The analysis of project alternatives began by developing a hydraulic model of the existing FKC from Friant Dam to the Kern River and establishing a design hydraulic grade line (HGL). The hydraulic model is used to estimate canal capacity under various conditions. The design HGL is used to establish the objective water surface elevation that provides continuity with the upper and lower reaches.

Seven Initial Alternatives that included gravity flow and pumping solutions were developed and evaluated to achieve maximum design capacity at normal freeboard. This capacity was selected to serve as an upper limit, or bookend, so that potential constraints associated with the Initial Alternatives could be identified before further refinement proceeded. Features in the Initial alternatives were sized based on existing and future subsidence conditions, and appraisal-level cost estimates were prepared. The Initial Alternatives were evaluated and compared under a set of criteria that addressed constructability, cost, schedule, environmental constraints, and long-term operations and maintenance, using the level of detail for the alternatives that was available at the time.
Based on the evaluation and comparison of Initial Alternatives, the Friant Water Authority (FWA) Board of Directors (BOD) in October 2018 selected two Initial Alternatives (Alternative 1 – Enlarge FKC; and Alternative 5 – Parallel Canal) for further analysis to identify potential sequencing opportunities and constraints. To support the sequencing analysis, Initial Alternatives 1 and 5 were evaluated at three additional capacities: historical delivery at flood freeboard; normal design flow at standard freeboard; and maximum flow at flood freeboard. Historical delivery means the highest flows recorded over the time period selected.

Based on the sequencing analysis evaluations, the FWA BOD in November 2018, selected Alternative 1/Option 1 (Enlarge FKC improvements to re-establish historical capacity with flood freeboard) and Alternative 5/Option 3 (Parallel Canal at maximum flow capacity with flood freeboard) for detailed evaluation at a feasibility level.

The feasibility analysis of Alternatives 1 and 5 was based on extensive coordination with Friant Division contractors and included several refinements to Initial Alternative project designs and details, including:

- Options for gravity and pump station turnouts that avoid potential effects to water diversions and distribution systems;
- Siphons at road crossing to provide for pressurized flow to avoid significant county road modifications and significant constructability issues. Additionally, these siphons provide adaptability for future potential subsidence.
- Greater detail on alignment constraints, canal earthwork mass haul, utility replacement, and right-of-way (ROW) requirements; and
- Increased detail on constructability requirements, including flow limitations during construction and sequencing.

Cost estimates for alternatives evaluated at a feasibility level were developed using a similar method as cost estimates prepared for Initial Alternatives, and therefore are identified as appraisal-level.

**SELECTION OF A PROJECT ALTERNATIVE**

The analysis of Feasibility Alternatives is nearing completion, and information is now available to support the selection of a project alternative to be advanced through design and environmental compliance. The selection of a project alternative is influenced by three related but distinct considerations: canal alignment; design capacity; and project phasing. Each of these considerations is described below.

**Canal Alignment Decision**

A decision on canal alignment is effectively a choice between raising the existing FKC or constructing a parallel canal through the most subsided area. Stantec provides an Engineer’s Recommendation to construct a parallel canal through the most subsided area, which is primarily located in Segment 2 (Tule River to Deer Creek) and Segment 3 (Deer Creek to White River). The basis for this recommendation is described below through a discussion of Alternative 1 and Alternative 5. Because Alternative 1 was evaluated at a lower capacity than Alternative 5, Stantec makes this recommendation based on a comparison of Alternative 1 to Segments 2 and 3 of Alternative 5. These segments would be modified in both alternatives. To achieve the maximum design capacity evaluated in Alternative 5, modifications would also be required in Segment 1 (5th Avenue to Tule River) and Segment 4 (Whiter River to Lake Woollomes). These segments would require little to no modification to achieve maximum historical flows, as determined in the analysis of Alternative 1.
Alternative 1 – Canal Improvements to Re-Establish Maximum Historical Flows

Maximum historical flow capacity can be achieved by raising the canal lining through the most subsided area of FKC. Thus, this alternative would involve raising the existing FKC to re-establish the original design HGL. The original canal lining was constructed on a slope of 1.25:1 to a depth of about 17.5 feet. Continued raising of the lining foundation on this slope may lead to embankment instability and ultimately a lining failure in the lower portions of the original lining. To address this issue, a bench would be constructed to establish a setback that provides slope stability for the canal lining foundation after the lining raise.

The current geotechnical recommendation is to completely remove the 1970’s lining raise from approximately milepost (MP) 99 to MP 116 and construct a new concrete-lined bench starting at the top of the original canal lining. This recommendation is based, in part, on observed seepage in this section of the canal. The structural integrity of FKC embankments has been reduced over the years from several factors, including animals that have created burrows in the embankment. When water levels in the canal are elevated, FWA staff closely watch for signs of seepage and undertake mud-jacking as needed to stop seepage and protect embankment stability. Replacing the existing horizontal cold joint with a new joint with an improved water stop joint would reduce but not avoid seepage risks. Raising the FKC lining by as much as seven additional feet would increase water pressure on the lower portion of the canal prism and increase seepage risk. Additional mud-jacking to stop seepage and stabilize the embankments would be required, however the extent of embankment rehabilitative measures is not known at this time. In addition, the original concrete liner that forms the deepest portion of the FKC would be approximately 70 years old when the canal raise is constructed and would need to function through a service life of an additional 100 years.

The volume of excavation required for construction of Alternative 1 is approximately 3.6 million cubic yards. This volume includes the portion of the existing embankment that would be excavated and reworked to provide a suitable engineered soil foundation so that the canal embankments could be safely raised for the current design and also support a potential additional raise to preserve canal capacity with additional future subsidence.

Constructing the new bench and reworking the existing embankment would require, at a minimum, lowering the water level in the FKC to a level of about 1.5 feet below the top of the original liner to provide a safe working environment. It is estimated that the operating capacity at this depth would be about 600 cubic feet per second (cfs) or less. This reduced water level and capacity would significantly limit water deliveries in the affected reach and to all portions of the canal downstream of the work area. It is possible that all canal operations would need to be suspended in the reach under construction and the remaining downstream reaches of the FKC. To mitigate this, it might be possible to provide reduced water deliveries during construction by using numerous temporary pumps and bypasses; however, the location, size, operational requirements, and cost of temporary pumps and bypasses to achieve this has not been evaluated. Figure 2 illustrates the hydraulic conditions during construction at a maximum canal flow of 600 cfs and depicts numerous turnouts that would be “out of the water” during construction. However, canal water seepage into the existing bank during bank construction may require that the canal operational water levels be dropped even lower to depths below existing grade at the canal bank toe. If this were to occur, operating capacity in the canal would be reduced to nearly no flow.
Figure 2 – Hydraulic Conditions during Construction for Alternative 1 at 600 cfs
Deliveries upstream from the work area would be maintained and it may be possible to use downstream portions of the FKC as well. For example, if the construction activity is underway in the reach of the canal between the Deer Creek Check and the White River Check, canal deliveries above the Deer Creek Check could be maintained. In addition, with the White River Check closed, deliveries would be possible by utilizing the proposed pump back facilities if they are completed and operational at the time, otherwise temporary pumping may be necessary.

It is currently assumed that construction of canal benches, banks, and in-canal features of Alternative 1 would occur during periods when canal operations are suspended. If it is assumed that no more than two months of canal shutdown could be tolerated each year, it is expected that construction of Alternative 1 would require a minimum of 4 to 6 years of incremental construction. Sequencing would commence with earthwork only the first year. The annual earthwork step would be completed such that the embankments would be re-worked and raised to the design elevation while leaving the canal lining intact until the canal lining step is undertaken during the following year. During the second year, the top portion of the existing lining would be removed, the bench would be excavated, and new canal lining operations would occur in the area that the earthwork was completed during year one. At the same time, earthwork would continue in preparation for third year canal lining operations, and so on until the project is completed.

Completing 3.6 million cubic yards of earthwork over 4 to 6 two-month periods would require excavating and compacting over 10,000 cubic yards per day during the work periods. Cost impacts for the staggered construction of canal modifications are difficult to evaluate but clearly would be greater than estimated costs based on continuous construction, as presented later in this paper. In addition, the extent of work that could be accomplished in any year would be dependent on hydrologic conditions, which could cause an increase in the overall construction duration. Extended wet and rainy weather would limit the ability to perform earthwork, and dry winters with higher than normal temperatures could reduce the duration of a shutdown that growers could tolerate.

Alternative 1 also includes several small bypass sections, or shoe-flies, around existing pumping plant diversions. These would be constructed so that the elevated HGL would not adversely impact pumping plant operations. A small section of the FKC in the vicinity of each pumping plant would be converted into a pumping pool that would be served by gravity diversion from the shoe-fly. Many of these shoe-fly features would also include siphons below roads that cross the FKC to avoid the need for bridge construction. Construction of features that are not located in the FKC could be constructed during the operational season without restrictions, however tie-ins would need to be scheduled to occur during shutdown periods.

**Alternative 5 – Parallel Canal to Achieve Maximum Design Capacity**

This alternative involves construction of a parallel canal east of and immediately adjacent to the FKC through the most subsided portion of the FKC, and modifications to those portions of the FKC in the Middle Reach that are upstream and downstream from the parallel canal section. The Parallel Canal includes siphons below county roads and small pools for pump stations, similar to those described for Alternative 1. The construction of the Parallel Canal can be accomplished with minimal to no interruption of FKC deliveries. It is anticipated that the duration of construction would be about one-third to one-half of the time anticipated for Alternative 1.

Excavation for the parallel canal as described above would be approximately 4.9M cubic yards as compared to 3.6M cubic yards for Alternative 1. However, the excavated material would all come from canal excavation for the new canal and excavation of existing canal embankments that make up the existing canal. Therefore, no offsite borrow would be required.

The Parallel Canal design has been evaluated from the Tule River Check to just upstream of Lake Woollomes. However, it is now clear that options for Segment 4, from the White River Check to Lake Woollomes, should be re-evaluated during the next phase of design. Segment 4 differs considerably from
upstream segments through the subsided area. The greatest difference is that nearly all of Segment 4 is in a deep “cut” section. This geometry minimizes or eliminates geotechnical concerns related to tall embankments that must be constructed in the upstream segments. Construction of a parallel canal through Segment 4 would require the purchase of right of way to dispose of over 1M cubic yards of excess earth.

One method for deciding the total length of the parallel canal is to choose balance points for earthwork which correspond with the economic limits for a parallel canal. The southerly balance point for the portion of FKC commencing just downstream of the Tule River Check occurs just downstream of the White River Check. A decision on specific modifications to Segment 4 could be included along with the reach from Lake Woollomes to the Kern River.

**Decision on Design Capacity**

A decision on design capacity will affect many elements, including the width of the canal and associated right of way requirements. Stantec recommends advancing the design of the parallel canal using the maximum design capacity and flood freeboard (as evaluated in Alternative 5). This approach would ensure that potentially affected features on adjacent lands would be identified and addressed in design and ROW acquisition processes. If FWA decides to reduce the design capacity later in the design process, the bottom width of the canal would be narrowed, and the new eastern embankment moved slightly inward. Reducing capacity along the same alignment is easier to accommodate in the design process than increasing the capacity. Regardless of the actual capacity selected, the designers will be performing further optimization of the canal prism geometry during the next design phase to achieve optimal economy (reduced costs). This optimization will consider costs for excavation, hauling, and concrete lining. For example, in the areas of deepest subsidence, a deeper canal section with a smaller bottom width likely will be more economical.

**Decision on Project Phasing**

Stantec recommends that the entire Middle Reach project for the Parallel Canal alternative be designed and permitted so that the entire Project is construction-ready. However, project construction may need to be completed in phases to accommodate financing availability. The first phase would include construction of a parallel canal in the most severely subsided section, however the geographic extent of Phase 1 would depend on available funds and a final decision by FWA on canal capacity.

Preliminary considerations for Phase 1 limits range from a minimum section from MP 102.7 to 112.9 (i.e. Segment 3) to a maximum section from MP 95.71 to 116 (i.e. all of Segments 2 and 3 and a portion of Segment 4). It is recommended that an initial definition of Phase 1 be prepared based upon further technical analyses for this reach. Within this reach, the design team would identify the sequencing of all major features, including checks, siphons, turnouts, and the canal. Borrow sites for Phase 1 would include canal sections that would be constructed in subsequent phases.

Stantec also recommends that FWA base ROW acquisition plans on a project footprint that can accommodate canal raising at a later time if future subsidence reduces constructed capacity below acceptable levels.
Project Alternative Cost Summary

Table 1 summarizes cost estimate results for Alternative 1 and Alternative 5 based on Stantec’s April 2019 Appraisal Level Opinion of Probable Construction Costs (OPCC). The cost estimate for the selected alternative will be subject to further refinement during preparation of a Feasibility Level OPCC.

Table 1. Appraisal-Level Project Cost Estimates

<table>
<thead>
<tr>
<th>Segment Number and Description</th>
<th>Alternative 1 – Canal Enlargement (Historical Max Capacity)</th>
<th>Alternative 5 – Parallel Canal (Max Design Capacity)</th>
<th>Incremental Capacity from Alternative 1 to Alternative 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 5th Ave to Tule River</td>
<td>$0</td>
<td>$0-$42M 5</td>
<td>500 cfs</td>
</tr>
<tr>
<td>2 – Tule River to Deer Creek</td>
<td>$74M</td>
<td>$85M</td>
<td>500 cfs</td>
</tr>
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<td>3 – Deer Creek to White River</td>
<td>$144M</td>
<td>$139M</td>
<td>1,100 cfs</td>
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<td>4 – White River to Woollomes</td>
<td>$20M</td>
<td>$20M - $91M 5</td>
<td>1,000 cfs</td>
</tr>
<tr>
<td>Total Estimated Project Cost</td>
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<td>Cost Range (+/- 20%)</td>
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<td>$195M - $429M</td>
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<tr>
<td>Total Canal Improvement</td>
<td>20.3 Miles</td>
<td>33.3 Miles</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. All costs in millions of dollars.
2. Results are from April 2019 Appraisal OPCC. Subject to further refinement.
3. Project costs include:
   a. 20% Construction Contingency
   b. Owners Soft Costs including: Land Acquisition at $30k per acre, Environmental Mitigation at 5% of Field Costs (FC), Engineering and Construction Management at 10% of FC, and Legal and Administrative at 2% of FC.
4. The Opinion of Probable Construction Cost (OPCC) is classified as a Class 4 cost estimate per AACE guidelines. Stated accuracy range = -20% to +20%.
5. Segments 1 and 4 would require relatively minor to no modifications to achieve maximum historical flows, as determined in the analysis of Alternative 1. The cost range provided for Segments 1 and 4 for Alternative 5 represent the estimated range of costs for these segments, using costs based on historical flow design criteria (Alternative 1) as the low range and costs based on maximum flow design criteria (Alternative 5) as the high range.

SUMMARY OF RECOMMENDATIONS

This memorandum makes the following recommendations regarding a project alternative:

1. Select Alternative 5 - Parallel Canal for continued project design.
2. Design the parallel canal for the maximum design capacity at flood freeboard.
3. Design and permit the entire Middle Reach project.
4. Prepare construction documents, i.e. 100% bid-ready documents, for the entire Middle Reach.
5. Once funding availability is known, prepare an advertisement for bids for a “Schedule” of the work that matches the funding availability. Note the entire set of drawings may be issued but only the portion outlined in the bid schedule would be constructed.
6. Develop ROW acquisition plans that include sufficient land to accommodate raising the canal embankments to respond to future subsidence.
A draft proposed revised cost recovery methodology was presented at the December 14, 2018 Board of Directors meeting. This proposed methodology covered both routine and extraordinary operations and maintenance for the remainder of Fiscal Year 2019 and subsequent years and for recovery of the costs associated with the anticipated program of operation and maintenance for the Delta-Mendota Canal and the Tracy and O’Neil Plants as those costs are applied to the delivery of water on behalf of Friant Division contractors to meet the obligations for providing an alternative supply of water as contemplated under the Contract for Exchange of Waters to the Exchange Contractors and for San Joaquin River Water Rights Settlement Contractors. The intent of this agenda report was to concentrate on provisions for adding Restoration Water Account (RWA) water and Unreleased Restoration Flows (URFs) back into the calculation, however at the workshop held on March 21st with interested contractors there was a desire to change the base calculation, and not just the incorporation of URF and RWA water types. A follow-up workshop was held on April 12th with interested contractors to discuss details of the single column methodology where an agreement in principle was achieved for revisions to how local conveyance, SLDMWA conveyance and SLDMWA pumping costs could be allocated.

**DISCUSSION:**

Revisions to the Policy have been requested to account for waters that are being delivered to contractors as part of the San Joaquin River Settlement and Public Law 111-11. Section 16 of the Settlement made Restoration Water Account (RWA) supplies available during wet years at a reduced price, incentivizing that use before Section 215. There are also waters being delivered that were not intended to go down the canal system, but because of constriction on the San Joaquin River and the delayed construction of projects on the San Joaquin River are being made available as Unreleased Restoration Flows (URFs).

**Changed Cost Recovery Methodology**

As a result of a deeper dive into the methodology, it became apparent to the participants of the March 21st workshop had a desire to change the fundamental premise of the methodology by removing the reliance on the full Central Valley Project (CVP) deliveries. These seemed to be the remnant of procedure used by Reclamation that, while likely how they recover costs for storage, no longer is applicable to the post-9D contractors of the Friant Division. After conducting a second workshop on April 12th, the group found consensus on the following principles for a revised cost recovery:
Principle 1: Friant-Kern Canal (FKC) Local Conveyance Cost: stated that FKC Conveyance costs should be based on FKC deliveries. And that all water types (except Warren Act water) should be included in the calculation. Calculation should be based on USBR rate schedule A-13 by contractor and include 215 Water deliveries as reported annually by the South-Central Area Office, RWA and URF deliveries as reported by the San Joaquin River Restoration Program. FKC local conveyance costs should be based on total volume of water (regardless of color) delivered to an individual contractor as a percentage of total water delivered to all Friant Kern Canal Contractors.

Principle 2: San Luis Delta Mendota Water Authority (SLDMWA) Pumping Costs: stated that SLDMWA pumping costs should be based solely on FKC and Madera Canal (MC) contractual allotments of Class 1 to Friant Division Contractors, and not based on any performance.

Principle 3: San Luis Delta Mendota Water Authority (SLDMWA) Pumping Costs: stated that SLDMWA Conveyance costs should be based on FKC and MC deliveries. And that all water types (except Warren Act water) should be included in the calculation. Calculation should be based on USBR rate schedule A-13 by contractor and include 215 Water deliveries as reported annually by the South-Central Area Office, RWA and URF deliveries as reported by the San Joaquin River Restoration Program. SLDMWA conveyance costs should be based on total volume of water (regardless of color) delivered to an individual contractor as a percentage of total water delivered to all Friant Division Contractors.

Revision Notice:
Under Article 11(b)(3) of the Transfer Agreement, FWA is required to provide notice of changes to the OM&R Cost Recovery Methodology Policy to all affected Friant Division contractors with obligations under Article 11 of the Transfer Agreement at least 60 days prior to the effective date of any amendment. The proposed amendments must also be submitted concurrently to Reclamation for review and comment.

RECOMMENDED ACTION:
The Executive Committee directs staff to revise the draft OM&R policy with the principles (above) including the previously accepted definitions of Extraordinary O&M and recommend to the Board of Directors to provide notice of changes to the OM&R Cost Recovery Policy to all affected Friant Division Contractors and for a 60-day review period.

SUGGESTED MOTION:
The Executive Committee recommend to the Board of Directors to provide notice of changes to the OM&R Cost Recovery Policy to all affected Friant Division Contractors and for a 60-day review period.

BUDGET IMPACT:
The proposed amendments to the OM&R Cost Recovery Methodology Policy will allow for equitable cost allocations arising from the conveyance of RWA supplies and URFs.

ATTACHMENTS: None
DATE: April 15, 2019
TO: Executive Committee
FROM: Douglas DeFlitch, Chief Operating Officer
SUBJECT: FKC Water Quality Monitoring Plan and Approach

SUMMARY:

The Friant-Kern Canal Water Quality Ad Hoc group is assisting with the development of a water quality plan for the Friant-Kern Canal. This document is paramount to completion of the Long-Term Recapture and Recirculation Programs for the San Joaquin River Restoration Program settlement, as well as for the environmental document for the Friant-Kern Canal Reverse flow pumpback project. The Ad Hoc is made up of Friant Contractor directors and district managers from Arvin-Edison Water Storage District (AEWSD), Delano-Earlimart Irrigation District (DEID), Kern-Tulare Water District (KTWD), Lindsay Strathmore ID (LSID), Lower Tule River ID (LTRID), Pixley ID, Porterville ID, Shafter-Wasco ID (SWID), Saucelito ID, and Terra Bella ID (TBID).

The approach has been to develop a Water Quality Mitigation Ledger that tracks and accounts for inputs and deliveries on the Friant-Kern Canal in order to determine required mitigation for water quality differences from background flows and inputs. A percent volume mitigation required will be determined from a composite rating curve of Total Dissolved Solids (TDS) as a mass. The mitigation will be in the form of additional surface water needed to offset potential issues in the agricultural rooting zone. The basic assumptions of the ledger and process are detailed in the attached strawman approach.

Along with policy decisions, the Ad Hoc Water Quality Group is developing a Friant-Kern Canal water quality monitoring program for key constituents of concern, testing and reporting timelines, and communications protocols. To assist with forecasting and communicating canal water quality to districts, the Ad Hoc Water Quality Group has requested a water quality model be developed for the Friant-Kern Canal. The Friant-Kern Canal Water Quality Model will need to make short-term water quality forecasts to evaluate the effect (i.e. change in water quality) of proposed actions (e.g. forecasted operations) and will be used episodically during pump in and pump-back operations.

Stantec has been providing technical support to a smaller group of managers who have been tasked with taking the Water Quality Mitigation Ledger concept to create a water quality mitigation program. Stantec has also provided the Authority with a cost estimate to develop a FKC Water Quality Model.

DISCUSSION:

A nexus exists between the development of a Water Quality Plan and both the FKC Pumpback Project and Recapture and Recirculation Programs. In order to make those programs resilient and the future of additional supplies available in the Friant-Kern Canal the Water Quality Ad Hoc group recommends taking the Water Quality Mitigation Ledger from concept to development. They are also recommending the development of a FKC Water Quality Model to assist in the monitoring and informative nature of water quality in the canal. It’s
the opinion of Staff that any work necessary to develop the Mitigation Program, or to develop the water quality Model initially be born by the Reverse Flow Pumpback Project.

RECOMMENDED ACTION:

The Executive Committee recommend that staff draft amendments to the Professional Service Agreement (PSA) with Stantec on the Pumpback Project to include the revised scopes based on the recommendations of the Water Quality Ad Hoc Group.

SUGGESTED MOTION:

The Executive Committee recommend to the Board of Directors to amend the Professional Services Agreement with Stantec and include the revised scope.

BUDGET IMPACT:

This is an unbudgeted modification. It is expected that this would impact the pump-back project budget by ~$350K.

ATTACHMENTS:  FRIANT-KERN CANAL WATER QUALITY LEDGER PRORAM (STRAWMAN)  STANTEC PROPOSAL FKC WATER QUALITY MODEL
Small Group Memo

Friant-Kern Canal Water Quality Ledger Program

DRAFT – STRAWMAN

The Water Quality Mitigation Ledger tracks and accounts for Puts and Takes on the Friant-Kern Canal in order to determine required mitigation for changes in water quality. A percent volume mitigation is determined from a composite rating curve of TDS mass by additional surface water needed. The basic assumptions of the ledger and process are detailed below.

1. The Water Quality Mitigation Ledger accounts for all Puts into the Friant-Kern Canal, including pump-ins and recirculated water, and all Takes from the Friant-Kern Canal.
2. Mitigation is required for any Put that has water quality above the negotiated baseline. This negotiated baseline value may be fixed or represent a water quality range that will be informed by water quality rating curves and could fluctuate depending on season or year-type. Puts are summed, and a proportion ratio is calculated to determine which districts or contractors are responsible for mitigation.

<table>
<thead>
<tr>
<th>Put proportion ratio calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Convert all Puts into the canal to mass</td>
</tr>
<tr>
<td>( P_1 ) (tons) = Volume (AF) * Water Quality (mg/L) * 0.00136</td>
</tr>
<tr>
<td>( Conversion \ factor \ to \ convert \ mg-AF/L \ to \ tons = 0.00136 )</td>
</tr>
<tr>
<td>Step 2: Sum all puts to quantify ( P_{total} )</td>
</tr>
<tr>
<td>( P_{total} = P_1 + P_2 + P_3 + \ldots + P_n )</td>
</tr>
<tr>
<td>Step 3: Determine Put proportions</td>
</tr>
<tr>
<td>Put proportion = ( P_n / P_{total} )</td>
</tr>
</tbody>
</table>

3. Mitigation is calculated based on salt mass of the Take using a developed composite rating curve based on imported TDS mass.
Calculating mitigation based on salt mass of the Take

Step 4: Calculate Required Percent Mitigation

The water quality of the canal at the district’s turnout ($Q_c$) and the volume of the district’s Take ($T_{V, District}$) are used to calculate the mass associated with the Take ($T_{M, District}$). $T_{M, District}$ is used to lookup the required percent volume mitigation using the rating curve.

$$T_{M, District} = Q_c \times T_{V, District} \times 0.00136$$

$T_{M, District}$: Mass associated with district Take, measured in tons

$Q_c$: Water quality in the canal at district’s turnout, measured in mg/L TDS

$T_{V, District}$: Volume of district’s take, measured in AF

*Conversion factor to convert mg-AF/L to tons = 0.00136*

Calculated $T_{M, District}$ is plugged into the rating curve to get the % Volume Mitigation for the District’s take.

Step 5: Convert Percent Volume Mitigation to Volume Mitigation

$$V_{M, District} = \% \text{ Volume Mitigation} \times T_{V, District}$$

$V_{M, District}$: Total volumetric mitigation that taking District will receive

Step 6: Calculate Put Proportion Responsibility

$$M_{Pn, District} = V_{M, District} \times \left(\frac{P_n}{P_{total}}\right)$$

$M_{Pn, District}$: Mitigation responsibility of individual District with a Put
4. Because mitigation is based on takes and will be influenced by a number of factors including source, dilution, and timing of other actions on the FKC, required mitigation will be variable.
5. Mitigation will be a driver in determining windows for pump-ins and pump-back.
6. Because Puts and Takes are converted to mass, volumetric balance in the canal is not calculated as part of the ledger.
7. Ledger is balanced daily and reported out at a decided time frequency (i.e. monthly)

Parking Lot:
The assumptions above outline the basic set-up for the ledger-based mitigation program, however there are several challenges and next steps that must be considered:

- Program should evaluate various example scenarios to determine needs for refinement.
- The salt-neutral rating curves to date have been developed to date to maintain the TDS concentration for the entire upper aquifer of AEWSD under various scenarios as an example only. The effect of this mitigation should be considered when evaluating effects to the root zone and long-term salt loading of the groundwater basin.
- Time lag or expiration for mitigation should be defined. In addition, because operations on the canal are continuous it should be described how actions that span multiple time-steps will be accounted for.
- Program should discuss how mitigation would be administered. The rating curves are dependent on the source of mitigation, which could be based on sending and receiving district preferences.
- Program should detail how background flows, baseline conditions, and the dilution effect are incorporated (e.g., “free parking”, grandfathering).
- Because the ledger will account for bi-directional flow and multiple Puts – weighted mitigation and mitigator responsibility may need to be defined for takes in the upper canal, the lower canal, and at the mixing pool.
- Implementation and daily management level of effort should be considered.
- FWA’s authority to implement such a program needs to be addressed.
- Board approvals of such program may require additional environmental compliance outside of the Pump-Back CEQA/NEPA compliance.
The salt-neutral rating curves have been developed to date to maintain the TDS concentration for the entire upper aquifer of AEWSD under various scenarios as an example only.
Ledger Example with Calculations:

Note: This example is purely hypothetical. All numbers are completely made up for the purpose of showing the process involved in calculating mitigation using the proposed ledger program. The example shown represents a very simplified version of the system. As described above, the program should evaluate various example scenarios including scenarios that include bidirectional flow and takes from the mixing pool.

Variable Definitions:

- \( P_n, \text{District} \): Put from individual district converted to mass
- \( P_{total} \): Sum of all Puts from all districts
- \( T_M, \text{District} \): Mass associated with district
- \( T_V, \text{District} \): Volume of district’s take, measured in tons
- \( Q_c \): Water quality in the canal at district’s turnout, measured in mg/L TDS
- \( V_M, \text{District} \): Total volumetric mitigation that taking District will receive
- \( M_p, \text{District} \): Mitigation responsibility of individual District with a Put

Note: This example is purely hypothetical. All numbers are completely made up for the purpose of showing the process involved in calculating mitigation using the proposed ledger program. The example shown represents a very simplified version of the system. As described above, the program should evaluate various example scenarios including scenarios that include bidirectional flow and takes from the mixing pool.
Example: Calculating Mitigation

**Put proportion ratio calculation**

**Step 1: Convert all Puts into the canal to mass**

\[ P_n (\text{tons}) = \text{Volume (AF) } \times \text{Water Quality (mg/L)} \times 0.00136 \]

*Conversion factor to convert mg-AF/L to tons = 0.00136*

\[ P_{1, \text{District A}} = 400 \text{ AF} \times 300 \text{ mg/L} \times 0.00136 = 163.2 \text{ tons} \]

\[ P_{2, \text{District B}} = 500 \text{ AF} \times 450 \text{ mg/L} \times 0.00136 = 306 \text{ tons} \]

**Step 2: Sum all puts to quantify P_{total}**

\[ P_{total} = P_1 + P_2 + P_3 + ... + P_n \]

\[ P_{total} = P_{1, \text{District A}} + P_{2, \text{District B}} = 163.2 \text{ tons} + 306 \text{ tons} = 469.2 \text{ tons} \]

**Step 3: Determine Put proportions**

\[ \text{Put proportion} = \frac{P_n}{P_{total}} \]

District A = \[ \frac{P_{1, \text{District A}}}{P_{total}} = \frac{163.2}{469.2} = 0.35 \]

District B = \[ \frac{P_{2, \text{District B}}}{P_{total}} = \frac{306}{469.2} = 0.65 \]

**Calculating mitigation based on salt mass of the Take**

**Step 4: Calculate Required Percent Mitigation**

The water quality of the canal at the district’s turnout (Q_c) and the volume of the district’s Take (T_V, District) are used to calculate the mass associated with the Take (T_M, District). T_M is used to lookup the required percent volume mitigation using the rating curve.

\[ T_M, \text{ District} = Q_c \times T_V, \text{ District} \times 0.00136 \]

\[ T_{M, \text{ District A}} = 107 \text{ mg/L} \times 350 \text{ AF} \times 0.00136 = 51 \text{ tons (District-to-District transfer, no mitigation)} \]

\[ T_{M, \text{ District C}} = 217 \text{ mg/L} \times 2,000 \text{ AF} \times 0.00136 = 590 \text{ tons (% Volume Mitigation = 15.5 %)} \]

Calculated \( T_{M, \text{ District}} \) is plugged into the rating curve to get the % Volume Mitigation for the District’s take.
Step 5: Convert Percent Volume Mitigation to Volume Mitigation

\[ V_{M,District} = \% \text{ Volume Mitigation} \times T_{V_{District}} \]

\[ V_{M,District \ B} = 15.5\% \times 2,000 \text{ AF} = 310 \text{ AF} \]

Step 6: Calculate Put Proportion Responsibility

\[ M_{Pn, District} = V_{M, District} \times \left( \frac{P_{n}}{P_{\text{total}}} \right) \]

\[ M_{P1, \ District \ A} = 310 \text{ AF} \times 0.35 = 108.5 \text{ AF} \]
\[ M_{P2, \ District \ B} = 310 \text{ AF} \times 0.65 = 201.5 \text{ AF} \]

<table>
<thead>
<tr>
<th>District</th>
<th>Put Volume (AF)</th>
<th>Put Mass (tons)</th>
<th>Proportion</th>
<th>Take District</th>
<th>Mass of Take (T_{M, \ tons})</th>
<th>Mitigation Volume (V_{M, \ AF})</th>
<th>Mitigation District, Volume (AF)</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>400</td>
<td>163.2</td>
<td>.35</td>
<td>A</td>
<td>51</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>500</td>
<td>306</td>
<td>.65</td>
<td>C</td>
<td>590</td>
<td>310</td>
<td>District A = 108.5, District B = 201.5</td>
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<tr>
<td>Total:</td>
<td>900</td>
<td>469.2</td>
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<td>641</td>
<td>310</td>
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</table>
A. PURPOSE

This Scope of Work (SOW) provides a description of required tasks for Stantec Consulting Services Inc. (Contractor) that will be necessary to develop a Friant-Kern Canal Water Quality Model for Friant Water Authority (FWA).

B. BACKGROUND

FWA is a California Joint Powers Authority that operates and maintains the Friant-Kern Canal through a contract with the U.S. Department of the Interior, Bureau of Reclamation (Reclamation). Members and customers of the FWA include agricultural irrigation districts, water districts, water storage districts, municipal utility districts and municipalities. Friant Division long-term contractors (Friant Contractors) possess water contracts with Reclamation on the San Joaquin River through contracts with the Friant Division of the Central Valley Project (CVP) (Friant Division). The Friant-Kern Canal stretches approximately 152 miles from Millerton Lake behind Friant Dam to the Kern River near Bakersfield, and provides a conveyance mechanism for supplying over 75 percent of the Friant Division water to Friant Contractors.

Existing Friant-Kern Canal pump-in programs are used to convey local groundwater and surface water from eastside San Joaquin Valley rivers, and include:
• Gould Canal (MP 27.67) – Fresno Irrigation District,
• Kings River (MP 29.16) – Delta Lands,
• Wutchumna Ditch (MP 69.15) – Lindsay-Strathmore Irrigation District,
• St. John’s River (MP 69.45) – Delta Lands,
• Tule River (MP 95.64) – Delta Lands,
• North Kern Lateral 8-25 (MP 131.33) – Cawelo Water District,
• North Kern Lateral 8-17 (MP 133.42) – Cawelo Water District,
• North Kern Pipelines (MP 129.93, 133.39, and 144.90) – North Kern Water Storage District, and
• Other farmer pump-ins

Existing and proposed reverse flow pump-back facilities would be used to convey CVP water purchased from Reclamation pursuant to Cross Valley Canal Contracts, San Joaquin River Settlement Paragraph 16(a), and other water obtained from Kern River and the State Water Project (SWP) under Warren Act contracts, and to recover water from banking projects during dry years.

These water management actions are needed in the San Joaquin Valley to improve water management flexibility and water supply reliability for Friant Contractors. Past drought conditions have led to groundwater overdraft and land subsidence in the San Joaquin Valley, causing damage to the Friant-Kern Canal and other local infrastructure. The Project will lessen the reliance on local groundwater by increasing access to water banks, in addition to recaptured Restoration Flows and other water supplies that would be conveyed in the Cross Valley Canal.

Friant Contractors have expressed concern with these water management actions as they would degrade Friant-Kern Canal water quality due to the importation of more Delta water and groundwater with, among other constituents, higher salinity concentration. The buildup of such salts in groundwater basins could adversely affect beneficial uses. Increased salt loading is expected to affect, among other things, the following:

1. Existing water management programs (e.g., water transfer and exchange agreements);
2. Operation and maintenance of conveyance infrastructure;
3. On-farm operations, including agricultural production/crop yields; and
4. Quantity and quality of recharge to groundwater, and thus groundwater levels and quality (i.e.,
   accelerate salt accumulation and importation of nitrates).

An Ad Hoc Water Quality Group was organized in early 2018 to address these Friant Contractor concerns
and develop a water quality plan for the Friant-Kern Canal made up of Friant Contractor directors and
district managers from Arvin-Edison Water Storage District (AEWSD), Delano-Earlimart Irrigation District
(DEID), Kern-Tulare Water District (KTWD), Lindsay Strathmore ID (LSID), Lower Tule River ID (LTRID),
Pixley ID, Porterville ID, Shafter-Wasco ID (SWID), Saucelito ID, and Terra Bella ID (TBID). The Ad Hoc
Water Quality Group is developing a Friant-Kern Canal water quality monitoring program for key
constituents of concern, testing and reporting timelines, and communications protocols.

To assist with forecasting and communicating canal water quality to districts, the Ad Hoc Water Quality
Group has requested a water quality model be developed for the Friant-Kern Canal. The Friant-Kern Canal
Water Quality Model will need to make short-term water quality forecasts to evaluate the effect (i.e. change
in water quality) of proposed actions (e.g. forecasted operations) and will be used episodically during pump-
in and pump-back operations.

C. SCOPE

The Contractor will perform the following tasks.

Task 1 – Project Management
This task provides time for administrative tasks, as well as the oversight and management of the technical
team, such that the work is completed consistent with the scope of work, within established budgets, and
in accordance with the project schedule.

The Contractor will provide monthly invoices and progress reports to FWA’s Project Manager (PM)
presenting technical, budget, and schedule status for all active tasks through December 2019. This will
include task accomplishments, deliverables, work to be accomplished during the next reporting period,
critical path items, and potential problems/solutions to maintain critical path through performance period.
Project schedule and forecast will be updated monthly to assess work to be completed and milestones.
This task also includes establishing and maintaining project files of correspondence, decisions, memos,
reports, technical evaluations, and other information used to support the Project. Contractor will manage
team; schedule, plan and conduct monthly progress meetings; and prepare agendas and meeting notes.
The Contractor will also support FWA’s PM by providing recommended adjustments/modifications to
study scope, tasks, schedules, and related project management tools.

Monthly Project coordination meetings will occur among Project team members from FWA to review
progress, technical status, coordinate work efforts, and plan future activities through December 2019.
Weekly meetings are anticipated to be via teleconference provided by the Contractor.

Task 1 – Deliverables
1. Monthly invoices and progress reports
2. Maintenance of project files
3. Meeting preparation, participation, and summaries

Task 2 – Model Concept Development
The Contractor will develop a Friant-Kern Canal Water Quality Model concept through coordination and
feedback from FWA staff and key stakeholders to determine:

- Model data needs,
- Inputs and outputs requirements,
• Preliminary data-flow and model schematic,
• Preliminary dashboard, and
• Current and future data storage needs.

This task assumes one in-person meeting with FWA staff and one follow-up conference call to discuss model data needs and current data storage; one conference call with CVC model owners to discuss existing CVC water quality model methodology and data availability. Following these coordination meetings, the Contractor will develop a Draft Model Concept Technical Memorandum (TM) for review by FWA and the Ad Hoc Water Quality Group. This task assumes one in-person meeting with FWA staff and the Ad Hoc Water Quality Group to solicit feedback on the draft model concept. Following this meeting, the Contractor will develop the Final Model Concept TM for review by FWA and the Ad Hoc Water Quality Group. The level of effort for this task will be dependent on feedback from FWA staff, Ad hoc Committee, available data, and data needs.

Task 2 – Deliverables
• Meeting preparation, participation, and summaries
• Draft Model Concept TM
• Final Model Concept TM

Task 3 – Model Development
The Contractor will develop the Friant-Kern Canal Water Quality Model based on the model concept developed under Task 2. This task will include the development of the internal computations of model, which will include the following:

• Modeling schematic and physical canal information (i.e. turnout, pump-in, canal cross sections, and pool disaggregation),
• Computation methods and model assumptions,
• Gather initial operations and water quality data (all puts and takes), and
• Model validation and sensitivity analysis.

This task assumes the model will be a volumetric mass-balance with perfect mixing by pool (as opposed to a physical model) for all inflows and outflows over the whole length of the Friant-Kern Canal. The pool sizes will be dependent on the model timestep and hydraulic assumptions. The model will need to be able to handle pump-back operations (bi-directional), as well as conditions of no flow or “dead stick” (e.g. upper portion of canal flowing south, middle section hydraulically disconnected, and lower section flowing north), and variations in Woollomes Reservoir operations. This task assumes all canal flows and water quality are averaged over a daily time-step (typically updated every 48 hours) will be readily available and/or anticipated to be developed as part of the monitoring program provided by FWA. This task does not include incorporation of potential modifications to the Friant-Kern Canal related to the Capacity Correction Project.

This task will also include development of the input and output dashboard(s), which is assumed to be excel-based and will utilize a localized database without remote access. This task does not include development of a remote access database with dashboard(s). A Draft and Final Model Development TM will be prepared to document the internal model computation and dashboard development for review by FWA staff and the Ad Hoc Water Quality Group.

Task 3 – Deliverables
• Friant-Kern Canal Water Quality Model
• Draft Model Development TM
• Final Model Development TM
Task 4 – Model Handoff and Training
The Contractor will develop a user manual to accompany the Friant-Kern Canal Water Quality Model developed under Task 3. In addition, this task assumes one in-person meeting with FWA staff and one follow-up conference call to train users on the model.

Task 4 – Deliverables
- User Manual
- Meeting preparation, participation, and summaries

Task 5 – Follow-on Model Support
This task assumes the Contractor will provide up to 60 hours of as-needed, follow-on model support to FWA. Estimate assumes model handoff to FWA with follow-on support up to 60 hours.

Schedule
### Friant-Kern Canal Reverse Pump-Back Project
#### Cost Estimate
4-Apr-19

<table>
<thead>
<tr>
<th>Task</th>
<th>Stantec Labor</th>
<th>Travel</th>
<th>Total Cost</th>
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<td>Task 1. Project Management</td>
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<td>Task 2. Model Concept Development</td>
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## Stantec Labor and ODCs

4-Apr-19

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<thead>
<tr>
<th>Classifications</th>
<th>Principal Professional</th>
<th>Professional</th>
<th>Associate Professional</th>
<th>Assistant Professional</th>
<th>Administrative Assistant</th>
<th>Level of Effort</th>
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### Stantec Labor and ODCs
#### 4-Apr-19

#### Task 1. Project Management
- Budget, invoicing, and team coordination
- Status update meetings

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#### Task 2. Model Concept Development
- Meetings with FWA staff to determine needs
- Meeting with CVC model owners
- Draft Model Concept TM
- Meetings with FWA staff and Ad Hoc WQ Group
- Final Model Concept TM

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#### Task 3. Model Development
- Modeling schematic and physical canal information
- Computation methods and model assumptions
- Gather initial operations and water quality data
- Model validation and sensitivity analysis
- Input/output dashboard(s)
- Model Development TM

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#### Task 4. Model Handoff and Training
- User Manual
- Meetings with FWA staff

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#### Task 5. Follow-on Model Support
- As-needed support (up to 60 hours)

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#### Total T&M Base Tasks

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DATE: April 15, 2019

TO: Executive Committee

FROM Douglas DeFlitch, COO

SUBJECT: Local Cost Share for FKC Subsidence Correction Project

SUMMARY:
The success and resiliency of constructing a correction to the capacity loss from subsidence along the Friant-Kern Canal is predicated upon funding. The public benefits of restored design capacity to the canal make it eligible for federal, state and local funding sources. There is an opportunity with this project to maximize benefits through cost-sharing. In order to start the three-way cost-sharing conversation with federal and state officials, an understanding of the limits of local cost sharing is needed. Staff would like to discuss a process and timeline to achieving that understanding, including how to message that position appropriately.

BACKGROUND:
The FKC Subsidence Correction Project (Project) is to correct the conveyance capacity problems caused by subsidence and original project design deficiency from MP 88 (Fifth Avenue Check) to MP121.5 (Lake Woollomes Check). Staff and the consultants have studied a range of alternatives and taken such necessary actions that will allow for the expeditious design, permitting and construction of the Project. It’s expected that this Project will cost somewhere between $238-$357M to construct.

DISCUSSION:
Staff is recommending an Ad Hoc group approach to finding the various partners and volumes for the local cost share component for the FKC Subsidence Correction Project. Details of the needed timeframe continue to develop, but it should be the goal of the Ad Hoc group to have a consensus understanding to share with the Board of Directors by the June meeting.

BUDGET IMPACT:
None at this time

ATTACHMENTS:
None
DATE: April 15, 2019

TO: Executive Committee

FROM: Douglas DeFlitch, COO

SUBJECT: Plan for Future Subsidence

SUMMARY:
As the Authority is expeditiously working to construct the FKC Subsidence Correction Project (Project) from MP 88 (Fifth Avenue Check) to MP121.5 (Lake Woollomes Check), it is unknown how we would plan for the potential for future subsidence. Currently, the 30% design does not account for future subsidence and is based upon survey information from August 2018. There is an opportunity to refine this over the next 10-12 months as we move forward with the 75 and 100% Design packets. Furthermore, as Groundwater Sustainability Plans (GSPs) for the Tule Sub-basin are being drafted, we have an opportunity and obligation to provide input as a stakeholder. Staff would like to discuss creating an approach, on how to manage the potential for future subsidence along the Friant-Kern Canal.

BACKGROUND:
Subsidence along the FKC is not new. A corrective action was completed by Reclamation in the late 1970s to restore capacity to a subsided canal section. Currently, the FKC Subsidence Correction Project (Project) is being designed to correct the conveyance capacity problems caused by subsidence and original project design deficiency from MP 88 (Fifth Avenue Check) to MP121.5 (Lake Woollomes Check). Staff and the consultants have studied a range of alternatives and taken such necessary actions that will allow for the expeditious design, permitting and construction of the Project. It’s expected that this Project will cost somewhere between $238-$357M to construct. However, as potential cost-share partners have pointed out, solely constructing a correction to the current levels of subsidence would leave the Project with decreased capacity as soon as the project was finished. The Project needs to contain some component of over-engineering for future subsidence, or some recourse to mitigate for future subsidence.

DISCUSSION:
A strategy approach is necessary as the Authority moves towards financing and constructing the FKC Subsidence Correction Project. Input is welcomed on the development of this strategy.

BUDGET IMPACT:
None at this time
DATE: April 15, 2019

TO: Friant Water Authority Executive Committee

FROM: Jeff Payne, Director of Water Policy

SUBJECT: UPDATE on Reconsultation for Long-Term Operations (aka ROC on LTO)

SUMMARY:

In implementation of the President’s Memorandum, the Endangered Species Act consultation process for the combined long-term operation of the Central Valley Project (CVP) and State Water Project (SWP) has been moving forward at an unprecedented pace and remains on-schedule for a Biological Opinion to be issued this June, and for implementation to occur by the end of the calendar year.

Friant Water Authority signed an agreement to be a cooperating agency, allowing for its review of the documents being developed as part of the consultation effort in parallel with the other agencies working on the project. Review times are compressed for the documents (typically 1 calendar week), and at this time Friant is concurrently reviewing (a) the project description, which defines the operation that is planned for the CVP and SWP, (b) the Environmental Impact Statement (EIS) which defines the anticipated range of environmental effects on the project, and (c) initial findings from resource agencies (US Fish and Wildlife Service and NOAA Marine Fisheries Service). Friant is conducting its own adequacy review of these documents, and coordinating comments and responses where appropriate with other public water agencies.

ATTACHMENTS:

1. Memorandum of Understanding between Friant and Reclamation “Cooperating Agency”
MEMORANDUM OF UNDERSTANDING
BETWEEN
THE UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION
AND
FRIANT WATER AUTHORITY

FOR
COORDERATIVE DEVELOPMENT OF THE ENVIRONMENTAL IMPACT STATEMENT
FOR THE REINITIATION OF CONSULTATION ON THE COORDINATED LONG-TERM
OPERATION OF THE CENTRAL VALLEY PROJECT AND STATE WATER PROJECT
(ROC on LTO EIS)

This Memorandum of Understanding (MOU) is entered into this 1ST day of APRIL, 2019,
jointly by the following parties: the Bureau of Reclamation (Reclamation) and FRIANT
WATER AUTHORITY (Cooperating Agency).

I. Purpose

The purpose of this MOU is to formalize the commitment among the parties to work
collaboratively in preparation of the Environmental Impact Statement for the reinitiation of
Endangered Species Act (ESA) Section 7 consultation with U.S. Fish and Wildlife (USFWS) and
National Marine Fisheries Service (NMFS) on the Coordinated Long-term Operation of the
Central Valley Project (CVP) and State Water Project (SWP) in compliance with the National
Environmental Policy Act (NEPA). This MOU is intended to clarify and define the roles and
responsibilities of Reclamation as NEPA lead agency and the Cooperating Agency in preparation
of the ROC on LTO EIS on this aggressive timeline.

II. Introduction

Reclamation is the lead agency in accordance with NEPA in preparing the ROC on LTO EIS.
On August 2, 2016, Reclamation requested reinitiation of consultation with USFWS and NMFS
under Section 7 of the ESA on the Coordinated Long-term Operation of the CVP and SWP.

III. Statutory and Regulatory Authority

This MOU is being entered into pursuant to NEPA, 42 U.S.C. Section 4331, et seq., the Council
on Environmental Quality’s NEPA regulation regarding cooperating agencies, 40 C.F.R.
§ 1508.5, the U.S. Department of the Interior’s NEPA regulations, 43 C.F.R. § 46 et seq., and its
regulation regarding cooperating agencies, 43 C.F.R. § 46.225(d). 40 C.F.R. § 1508.5 authorizes
the NEPA lead agency to request participation from any qualified Federal agency in the
development of an environmental impact statement by virtue of its specialized expertise. Any
non-Federal agency (State, tribal, or local) with similar qualifications may, by agreement, be a
Cooperating Agency. The purpose of this MOU is to document the roles, responsibilities and
commitments of Reclamation, as the NEPA lead agency and the Cooperating Agency, pursuant
to NEPA and implementing regulations.
IV. Responsibilities

The parties to this MOU herein commit as follows:

a. Reclamation

As NEPA lead agency, Reclamation is responsible for the preparation, quality, content, selection, and implementation of alternatives in the Draft and Final ROC on LTO EIS. Other Reclamation responsibilities in this process include:

1. Providing invitations and notice for meetings;
2. Preparing or overseeing the preparation of all aspects of the EIS in compliance with NEPA and the NEPA implementing regulations;
3. Providing direction to and reviewing consultant work products in preparation of the EIS;
4. Clearly identifying and acknowledging the roles and responsibilities of all NEPA cooperating agencies in the ROC on LTO EIS;
5. Informing the public and decision-makers of the potential direct, indirect, and cumulative impacts of the alternatives analyzed in the EIS;
6. Identifying opportunities to avoid, minimize, or compensate for significant adverse effects due to Federal actions;
7. Providing preliminary EIS deliverables, as appropriate, to the Cooperating Agency for review and comment;
8. Providing technical analyses and information to the Cooperating Agency, as appropriate, for review and comment, particularly with respect to key subject areas pertaining to issues within the Cooperating Agency’s jurisdiction by law or special expertise;
9. Providing documents such as the Administrative Draft EIS to be reviewed by the Cooperating Agency, as determined to be appropriate by Reclamation, as the NEPA lead agency.
10. Ensuring compliance with all applicable laws and regulations pertaining to preparation of the ROC on LTO EIS;
11. Considering input, and making all final decisions on the content of documents;
12. Informing the Cooperating Agency of schedule changes that could affect its input to the ROC on LTO EIS or ability to provide timely review of the document; and
13. Making all decisions contained in the Record of Decision (ROD).

b. Cooperating Agency

As a Cooperating Agency pursuant to NEPA for the ROC on LTO EIS, to the extent that its fiscal, staff and other resources permit, the responsibilities of the Cooperating Agency include taking the following actions in a timely manner consistent with the schedule for developing and completing the EIS and with direction provided by Reclamation:

1. Devoting staff resources sufficient to provide technical assistance to fulfill its role as a Cooperating Agency;
2. Attending meetings as appropriate and identified in advance by Reclamation, as the NEPA lead agency;
3. Providing timely review and comment on preliminary EIS deliverables as appropriate;
4. Providing responses to data requests pertaining to issues within its jurisdiction by law or special expertise in a timely manner;
5. Providing timely technical information and expertise directly associated with its statutory responsibilities or related experience, including review of technical analyses of key subject areas, as requested by Reclamation;
6. Raising issues as early in the process as possible to avoid delay and inefficiency;
7. Identifying data and analysis in the EIS that may be needed to fulfill its role as potential regulatory agencies and any other requirements regarding jurisdictional permits and/or other approvals required for implementation of the project;
8. Providing review and comment on the Administrative Draft EIS that pertain to subjects within the scope of Cooperating Agency’s jurisdiction or expertise prior to public review of the Draft EIS, as requested by Reclamation;
9. Providing review of portions of the Administrative Final EIS that pertain to subjects within the scope of the Cooperating Agency’s jurisdiction or expertise prior to public release of the Final EIS, as requested by Reclamation;
10. Complying with the confidentiality requirements and procedures specified below for all documents received as a part of this MOU, and
11. Except as funds may be made available pursuant to 40 C.F.R. § 1501.6(b)(5), funding its own expenses associated with its participation in the NEPA process, including attending meetings, developing and reviewing information, and providing comments on the EIS pertaining to the Cooperating Agency’s jurisdiction and special expertise as outlined above.

V. Representation

Reclamation and the Cooperating Agency shall designate a representative for purposes of this MOU. The representatives shall be responsible for ensuring that the information sharing, collaboration, and document review procedures established by this MOU are implemented: (1) by the employees and consultants directly responsible for the technical analyses and preparation of the environmental documents, and (2) by the employees and consultants of the Cooperating Agency.

The Cooperating Agency shall designate one representative and one alternate responsible for regular attendance at all meetings requested by Reclamation. Changes to the identified representative and/or alternate shall be provided in writing and subject to approval by Reclamation.

VI. Confidentiality

The Cooperating Agency agrees to keep all documents, including drafts, confidential, to the maximum extent allowed by law, so long as the document(s) was provided by Reclamation to Cooperating Agency in accordance with its Cooperating Agency status and pursuant to this MOU. The Cooperating Agency will provide notice to Reclamation before disclosing any document required by law to be disclosed to outside parties that has been shared with the Cooperating Agency in accordance with its Cooperating Agency status and pursuant to this MOU.
Notwithstanding the foregoing, the Cooperating Agency may disclose such materials to its officers, members of its staff, and its contractors, who are also subject to the confidentiality requirements of this MOU.

VII. Additional Provisions

1. **Effect of MOU.** This MOU shall take effect as to the Cooperating Agency when signed by the Cooperating Agency and Reclamation.

2. **Termination of the MOU.** This MOU shall terminate upon issuance of the ROD by Reclamation, or upon written agreement of the parties.

3. **Withdrawal from the MOU.** Any party may withdraw from the MOU with 30 days written notice. If the Cooperating Agency withdraws from this MOU it will no longer be considered a Cooperating Agency for the purposes of the ROC on LTO EIS.

4. **Modification of the MOU.** This MOU may be modified by written agreement of the parties.

5. **Contingent on Apportionment or Allotment of Funds.** The expenditure or advance of any money or the performance of any obligation of the United States under this MOU shall be contingent upon appropriation or allotment of funds. No liability shall accrue to the United States for failure to perform any obligation under this MOU in the event that funds are not appropriated or allotted.

6. **Liability of the Cooperating Agency.** The Cooperating Agency may have limited fiscal, staff, and other resources to devote to the performance of its obligations hereunder. Consequently, the Cooperating Agency may not be able to fully or timely perform its obligations hereunder. By executing this MOU, the Cooperating Agency commits only to participate as a Cooperating Agency to the extent that it reasonably determines to be feasible. No liability shall accrue to the Cooperating Agency for failure to perform any obligation under this MOU.

7. **Reservation of Rights.** The Cooperating Agency waives no rights under NEPA or other law to comment upon, dispute, or otherwise challenge the EIS.

8. **Conflicts of Interest.** Nothing in this document, nor any of the activities undertaken by the Cooperating Agency under this document, shall constitute, be asserted as, or construed as, a conflict of interest or representation by any office holder, employee, or agent of the Cooperating Agency under Federal or California law.

9. **Counterparts.** This MOU may be signed in counterparts.

VIII. Conclusion

In signing this MOU, the undersigned recognize and accept the roles and responsibilities assigned to each party. Each of the parties agrees to pursue maximum cooperation and
communication to ensure that the EIS fully complies with all applicable Federal requirements and minimizes duplication of effort and avoids project delays.

BUREAU OF RECLAMATION

By: _______________________________ Date: _______________

FRIANT WATER AUTHORITY

______________________________ (Cooperating Agency)

By: _______________________________ Date: __April 1, 2019__
DATE: April 15, 2019

TO: Friant Water Authority Board of Directors

FROM: Jeff Payne

SUBJECT: Update on Temperance Flat

SUMMARY:
Friant Water Authority (Friant) Staff are tracking a variety of efforts related to Temperance Flat, enumerated below. Updates on relevant activities are included:

1. Temperance Flat Reservoir Authority (TFRA) – the new agency formed to administer the Temperance Flat Reservoir project through construction, including financing by project proponents

   The first Board meeting is being scheduled for TFRA in the next month. Agenda items will include:
   - initiation of new members, including SJVWIA and City of Fresno
   - action to accept (from SJVWIA) responsibility the responsibilities of cost-share partnership with Reclamation for the ongoing Feasibility Study
   - initiation of a process to consider planning principals, as required by the JPA language

2. Temperance Flat MOU Group – ongoing technical analysis to determine project costs and water supply benefits, for consideration by agencies that elect to be project proponents

   A small group comprised of east- and westside water district managers has been formed to evaluate the potential range of benefits in east-west transfers, as part of the Temperance Flat Project. The Draft evaluation is scheduled to be completed in early summer 2019. The completion of this report will likely be the final activity of the MOU group, which will have produced tools that water agencies can use to describe the range of costs and water supply benefits that may be derived from Temperance Flat Reservoir, when built.

3. San Joaquin Valley Water Infrastructure Authority (SJVWIA) – transition of the applicant status for the State’s Water Storage Investment Program (aka Prop 1) to TFRA

   The SJVWIA has formally transitioned the applicant status for the Temperance Flat Prop 1 application to TFRA. They considered transfer of the MOU they hold with Reclamation on cost-share of the planning study at this month’s BOD meeting, on April 12.
4. Bureau of Reclamation’s Federal Feasibility Study

Friant Water Authority, TFRA, and the SJVWIA are engaging with Reclamation to develop a strategy for finalizing the Federal Feasibility Study this calendar year. If and when the cost share MOU with SJVWIA is transferred to TFRA, their participation will occur through the TFRA.

ATTACHMENTS:
Agenda Report

DATE: April 15, 2019
TO: Jason Phillips, CEO or Executive Committee
FROM Austin Ewell or Jason Phillips
[PREPARED BY]: Austin Ewell
SUBJECT: SJV Water Blueprint

SUMMARY:
The SJV Water Blueprint Group (Group) held its third meeting on April 5. The Group consisted of approximately 29 representatives from the San Joaquin Valley and Sacramento. There were directors of Farm Bureaus, Water Authorities, Districts, Growers, Trade Associations, Refuges, Fresno State and GSAs in attendance. The Group recognized that it needs to come up with a supportable plan that the SJV (broad coalition) can advocate for and that focuses on a solution in coordination with key stakeholders and eventual support from the Governor and his Administration. The Group participated in an exercise to create a mission statement, the draft generally includes “The Water Blueprint for the San Joaquin Valley is a locally driven plan to create water balance that improves the communities, habitats and working landscapes in the San Joaquin Valley” it is an ongoing effort to succinctly summarize and provide common messaging for the Blueprint. The Group is looking to meet again in May.

The Group previously established 4 committees and those committees presented summaries of their due diligence on the areas and subjects of their committees to date. Some of the main takeaways from the 4 committees are:

1) Regional Representation & Technical Support: A regional chairs list was prepared and discussed and will look to begin additional outreach. Immediate technical support is needed to have a summary document created and called “Blueprint”. Will help hone in on impacts and effects and assist with discussions.

2) Engagement and Outreach (i.e. Disadvantaged Communities, Environmental Organizations): A simplified white paper with less engineering to assist with discussions focusing on socioeconomic impacts. It is also important to further engage PPIC and look for some assistance with adding credit and value to Blueprint effort especially with the DACs and eNGOs.

3) Funding, Finance & Governance: Committee will look to determine topline number for cost estimate of budget in the next 3-6 months, develop near term funding partners and need to establish entity to collect monies, look to CV Foundation for use and establishment of a subaccount. Develop line item budget for funding.
4) Advocacy & Public Relations: Looking for ways to fold Blueprint efforts into the update to California Water Action Plan with a possible portfolio approach. Focus on setting up a Valley meeting for key statewide stakeholders which is currently being discussed with the parties in the administration.

**RECOMMENDED ACTION:**

There is no recommended action at this time. The Committee gave initial direction to pursue this collective effort and report back on its status.

**SUGGESTED MOTION:**

There is no motion at this time.

**BACKGROUND:**

The Blueprint concept was first discussed by the Board of Directors during their 2018 Board Retreat in late November and at the December 2018 meeting the Board directed FWA staff and consultants to scope out the potential effort developing such a plan would include. Since that time the following activities have occurred:

- Outreach to stakeholders and others to identify individuals or groups who may be potential partners.
- Meetings in January, March and April with water districts, commodities groups, growers, and other regional stakeholders to describe the Blueprint concept, obtain initial support, and identify potential partners.
- As indicated the group will look to meet again May with the addition of key partners that are currently being identified and contacted by the Engagement Committee. The goal will be to have a mission statement finalized, formation and funding lined out and a strategy to address and succeed on the goals identified.

**DISCUSSION:**

The committee will be presented with the approach and strategy that the Group identifies in the next meeting which is expected to include an approach for funding and contribution.

**BUDGET IMPACT:**

None

**ATTACHMENTS:**

None
DATE: April 15, 2019
TO: Executive Committee
FROM Alex Biering, Government Affairs and Communications Manager
SUBJECT: Government Affairs and Communications Update

1. SUMMARY:
   Update on State and Federal legislation and communications activities.

2. RECOMMENDED ACTION:
   None; informational only.

3. SUGGESTED MOTION:
   None; informational only.

4. DISCUSSION:
   - Status of FWA-sponsored bills (SB 487 and SB 559), including progress with coalition support, media outreach, and hearings.
   - Review of tracked legislation.
   - 2019 Annual Meeting recap.

5. BUDGET IMPACT:
   None.

6. ATTACHMENTS:
   Bill Tracker (updated 4/15/19).
# Legislative Tracker

**FRIANT WATER AUTHORITY**

*April 15, 2019*

## State Bills

<table>
<thead>
<tr>
<th>Bill</th>
<th>Title (Author) &amp; Date</th>
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<tr>
<td>AB 134</td>
<td>Safe, clean, affordable, and accessible drinking water (Bloom) – 3/25/19 version</td>
<td>Would state findings and declarations relating to the intent of the Legislature to adopt policies to ensure that every Californian has the right to safe, clean, affordable, and accessible drinking water.</td>
<td>NYC</td>
<td>Watch</td>
<td>New York City Lawmakers supported the previous version. It will be opposed unless amended in Appropriations Committee (4/1).</td>
<td>Passed Environmental Safety and Toxic Materials Committee on 3/26; in Appropriations Committee (3/27).</td>
</tr>
<tr>
<td>AB 217</td>
<td>Safe Drinking Water for All Act (Garcia) – 3/28/19 version</td>
<td>Would enact the Safe Drinking Water for All Act and would establish the Safe and Affordable Drinking Water Fund in the State Treasury and would provide that moneys in the fund are continuously appropriated to the board to provide a source of funding to secure access to safe drinking water for all Californians, while also ensuring the long-term sustainability of drinking water service and infrastructure. This bill contains the Newsom-supported proposal that the Governor released with his budget in January, and is essentially the same as SB 623 (2017).</td>
<td>PRO: Conservation groups, moderate enviro NGOs, EJ groups, healthcare advocates, RCAC OPP: Fertilizer and household product manufacturers</td>
<td>NYC, though Supported previous bill</td>
<td>Oppose Unless Amended</td>
<td>In Appropriations Committee (4/1).</td>
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1. Updates since the last version are included in **bold text**.
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<td>AB 382</td>
<td>Integrated regional water management plans: grant funding: upper watershed health (Mathis) – 2/5/19 version</td>
<td>Current law provides that an integrated regional water management plan is eligible for funding allocated specifically for implementation of integrated regional water management. Current law requires certain state agencies to include in any set of criteria used to select projects and programs for funding, a criterion that provides a preference for regional projects or programs. This bill would require the department to include in any criteria used to select a project or program for grant funding authorized on or after January 1, 2020 a criterion that provides a preference for a regional water management group undertaking a project improving upper watershed health upstream and outside of the defined geographical area covered by the group’s plan.</td>
<td></td>
<td>NYC</td>
<td>NYC</td>
<td>Passed out of Water, Parks, &amp; Wildlife Committee on 3/12. Put on suspense file in the Appropriations Committee.</td>
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<tr>
<td>AB 417</td>
<td>Agriculture and Rural Prosperity Act – (Rivas) – 2/7/19 version</td>
<td>The bill would authorize the Secretary of Food and Agriculture to carry out various activities to support rural communities and further the development of rural agricultural economies in California, including, among other things, consulting with government agencies and members of the public and private sectors to identify opportunities and partnerships to further the development of rural agricultural economies, and disseminating information on the department’s internet website.</td>
<td>PRO: Commodities groups, Ag Council, NCWA, RCDs, RCRC. OPP: None.</td>
<td>NYC</td>
<td>Favor</td>
<td>Passed out of Agriculture Committee on 3/27; in Appropriations Committee.</td>
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<tr>
<td>AB 441</td>
<td>Water: underground storage (Eggman) – 3/27/19 version</td>
<td>This bill would revise the beneficial use doctrine for water rights to additionally provide that certain uses of groundwater storage constitute beneficial use. These include protection of water quality and recovery of groundwater levels. It also removes the forfeiture period of a water right (5 years) for water being beneficially used, or being held in storage, for a later use.</td>
<td>PRO: CFBF OPP: None (but SWP users are opposing)</td>
<td>NYC</td>
<td>Watch</td>
<td>Passed out of Water, Parks, &amp; Wildlife Committee on 3/26; in Appropriations Committee, hearing postponed.</td>
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<tr>
<td>AB 637</td>
<td>State Water Resources Control Board: regional water quality control boards: severely disadvantaged communities: drinking water supplies (Gray) – 3/19/2019 version</td>
<td>Would prohibit the State Water Resources Control Board or a regional board from adopting or implementing any policy or plan that results in a significant reduction to the drinking water supplies that serve a severely disadvantaged community, as defined. Bill is part of a larger water package introduced by Mr. Gray that also includes AB 636 and AB 638.</td>
<td>PRO: Stanislaus County. OPP: None.</td>
<td>NYC</td>
<td>Watch</td>
<td>Passed out of Environmental Safety and Toxic Materials Committee; in Appropriations Committee (4/11).</td>
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<td>AB 638</td>
<td>Department of Water Resources: water storage capacity (Gray) – 2/15/19 version</td>
<td>Current law requires the Department of Water Resources to update every 5 years the plan for the orderly and coordinated control, protection, conservation, development, and use of the water resources of the state, which is known as The California Water Plan. This bill would require the department, on or before January 1, 2021, with updates every 2 years thereafter, to identify the statewide water storage capacity, the adverse impacts to the capacity from the effects of climate change, and the mitigation strategies for anticipated adverse impacts.</td>
<td>NYC</td>
<td>Watch</td>
<td>Passed out of Water, Parks, &amp; Wildlife Committee on 3/26; in Appropriations Committee suspense file.</td>
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<td>AB 658</td>
<td>Water rights: water management (Garcia) – 4/2/19 version</td>
<td>Would authorize a groundwater sustainability agency or local agency to apply for, and the State Water Resources Control Board to issue, a conditional temporary permit for diversion of surface water to underground storage for beneficial use that advances the sustainability goal of a groundwater basin, as specified. <strong>Recent amendments strike any originally proposed changes to section 1242 of the water code, which defines beneficial use.</strong></td>
<td>NYC</td>
<td>Support if Amended</td>
<td>Passed out of Water, Parks, &amp; Wildlife Committee on 3/22; in Appropriations Committee.</td>
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<td>ACA 3</td>
<td>Clean Water for All Act (Mathis) – 3/20/19 version</td>
<td>Would require, commencing with the 2021–22 fiscal year, not less than 2% of specified state revenues to be set apart for the payment of principal and interest on bonds authorized pursuant to the Water Quality, Supply, and Infrastructure Improvement Act of 2014; and for water supply, delivery, and quality projects administered by DWR, and water quality projects administered by the SWRCB, as provided. Funds would be continuously appropriated and distributed as follows: 5% to pay down Prop. 1; 57% to be disbursed by DWR for water supply, delivery, and quality projects, including for conveyance, recharge, subsidence abatement, and storage; 38% to the SWRCB for water quality projects. DWR would be required to give priority to projects that address deferred maintenance; the SWRCB couldn’t use the funding to address water quality enforcement actions.</td>
<td>NYC</td>
<td>NYC</td>
<td>In Water, Parks, and Wildlife Committee (3/21).</td>
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<tr>
<td>SB 1</td>
<td>California Environmental, Public Health, and Workers Defense Act of 2019 (Atkins) – 12/3/18 version</td>
<td>Establishes specified minimum federal environmental, public health, and labor standards as state baselines in the event the Congress or President repeals or weakens corresponding federal standards, and prohibits the corresponding California standards from falling below those baselines. In the event that new federal standards fall below the baseline, this bill allows private citizens to enforce state standards under specific circumstances (not including endangered or threatened species). It sunsets in 2025, corresponding with the end of a theoretical second term for President Trump.</td>
<td>PRO: Enviro NGOs OPP: Commodities groups, growers’ groups, Cal Chamber, Cal BIA, realtors</td>
<td>Oppose Unless Amended</td>
<td>NYC</td>
<td>Passed out of Natural Resources &amp; Water Committee on 4/9; in Judiciary Committee (4/10).</td>
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<td>SB 19</td>
<td>Water resources: stream gages (Dodd) – 2/28/19 version</td>
<td>Would require the Department of Water Resources and the State Water Resources Control Board, upon an appropriation of funds by the Legislature, to develop a plan to deploy a network of stream gages that includes a determination of funding needs and opportunities for modernizing and reactivating existing gages and deploying new gages, as specified. The bill would require the department and the board, in consultation with the Department of Fish and Wildlife, the Department of Conservation, the Central Valley Flood Protection Board, interested stakeholders, and, to the extent they wish to consult, local agencies, to develop the plan to address significant gaps in information necessary for water management and the conservation of freshwater species.</td>
<td>PRO: Environmental and conservation NGOs, NCWA, ACWA, MWD, SCVWD, CMUA, RCRC, groundwater groups</td>
<td>NYC</td>
<td>Support</td>
<td>Passed out of Natural Resources &amp; Water Committee on 3/12; in Appropriations Committee suspense file.</td>
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<tr>
<td>SB 45</td>
<td>Wildfire, Drought, and Flood Protection Bond Act of 2020 (Allen) – 4/4/19 version</td>
<td>Would enact the Wildfire, Drought, and Flood Protection Bond Act of 2020, which, if approved by the voters, would authorize the issuance of bonds in an unspecified amount pursuant to the State General Obligation Bond Law to finance projects to restore fire damaged areas, reduce wildfire risk, create healthy forest and watersheds, reduce climate impacts on urban areas and vulnerable populations, protect water supply and water quality, protect rivers, lakes, and streams, reduce flood risk, protect fish and wildlife from climate impacts, improve climate resilience of agricultural lands, and protect coastal lands and resources. Bond total is $4.3 B and funding categories focus heavily on watersheds, forests, and climate resiliency.</td>
<td>PRO: Enviro NGOs, conservation groups, EJ groups</td>
<td>NYC</td>
<td>Favor</td>
<td>Referred to Natural Resources &amp; Water, Environmental Quality, and Governance and Finance committees (1/16). Passed out of Natural Resources &amp; Water Committee on 3/26; now in Governance and Finance Committee.</td>
</tr>
<tr>
<td>SB 62</td>
<td>Endangered species: accidental take associated with routine and ongoing agricultural activities: state safe harbor agreements (Dodd) – 4/4/19 version</td>
<td>Would extend for five years an exemption under the California Endangered Species Act for “accidental take” of listed species that occurs on a farm or a ranch in the course of otherwise lawful routine and ongoing agricultural activities. The current exemption expires January 1, 2020. Any take would need to be reported to DFW within 10 days.</td>
<td>PRO: Cal Chamber of Commerce, CFBF, CCM, Defenders of Wildlife, Western Growers, Ag Council, other commodities groups OPP: None.</td>
<td>Support</td>
<td>Favor</td>
<td>Passed out of Natural Resources and Water Committee; now in Appropriations Committee, hearing set for 4/22.</td>
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<tr>
<td>SB 200</td>
<td>Safe and Affordable Drinking Water Fund (Monning) – 3/11/19 version</td>
<td>Would establish the Safe and Affordable Drinking Water Fund in the State Treasury and would provide that moneys in the fund are available, upon appropriation by the Legislature, to the State Water Resources Control Board to provide a stable source of funding to secure access to safe drinking water for all Californians, while also ensuring the long-term sustainability of drinking water service and infrastructure.</td>
<td></td>
<td>NYC</td>
<td>Not Favor</td>
<td>Passed out of to Environmental Quality Committee (3/20); in Natural Resources &amp; Water Committee, hearing set for April 23.</td>
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<td>SB 474</td>
<td>Department of Water Resources: appropriations of water (Stern) – 2/21/19 version</td>
<td>Under existing law, the Department of Water Resources is required to make and file with the State Water Resources Control Board applications for the appropriation of any water that, in the department’s judgment, is or may be required in the development and completion of all or part of a general or coordinated plan for the development, utilization, or conservation of the water resources of the state. Existing law gives those applications priority, as of the date of filing the application, over any subsequent application and exempts certain water rights diligence provisions from generally applying to the applications. This bill would eliminate the exemption from the application of the diligence provisions as of January 1, 2021.</td>
<td>PRO: Association of California Water Agencies, Friant Water Authority, Modesto Irrigation District, Northern California Water Association, California Municipal Utilities Association, Mammoth Community Water District, Kings River Water Association, Tulare Irrigation District, San Francisco Public Utilities Commission, Tulare Irrigation District, South Valley Water Association, Kaweah-Delta Water Conservation District, Kern-Tulare Water District, Lindsay-Strathmore Irrigation District</td>
<td>NYC</td>
<td>Watch</td>
<td>Hearing in Natural Resources &amp; Water Committee set for 4/23.</td>
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<tr>
<td>SB 487</td>
<td>Department of Water Resources: aerial snow survey (Caballero) – 2/21/19 version</td>
<td>Would require the Department of Water Resources’ California snow survey program to conduct aerial surveys of the snowpack in the Trinity Alps and Sierra Nevada Mountains, including hydrologic areas that drain or supply water to certain major reservoirs and lakes. The bill would require the department to collect the aerial survey data up to 10 times per year in each hydrologic area and to summarize and make publicly available the data obtained and digital products used to produce runoff forecasts, as specified.</td>
<td>Opp: None.</td>
<td>Sponsor</td>
<td>Favor</td>
<td>Passed out of Natural Resources &amp; Water Committee passed on 3/26 (9-0); in Appropriations Committee, hearing set for 4/22.</td>
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<td>SB 559</td>
<td>Department of Water Resources: Friant-Kern Canal conveyance restoration (Hurtado) – 2/22/19 version</td>
<td>Would appropriate $400 million from the General Fund for actions to restore conveyance capacity on the Friant-Kern Canal.</td>
<td>PRO:</td>
<td>Sponsor</td>
<td>Favor</td>
<td>Passed out of Natural Resources &amp; Water Committee on 4/9 (7-0); in Appropriations.</td>
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## Federal Bills

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<tr>
<td>S. 47</td>
<td>Natural Resources Management Act (Murkowski and Cantwell) – 1/8/19 version</td>
<td>Addresses multiple Title VIII, “Water and Power,” includes the Reclamation title transfer provisions negotiated with the House during last Congress.</td>
<td></td>
<td></td>
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<td>Signed by the President on 3/13.</td>
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