CALLEGUAS MUNICIPAL WATER DISTRICT
2100 Olsen Road, Thousand Oaks, California 91360
www.calleguas.com

SPECIAL BOARD OF DIRECTORS MEETING
October 10, 2018, 9:00 a.m.

AGENDA

Written communications from the public must be received by 8:30 am on the Thursday preceding a regular Board meeting in order to be included on the agenda and considered by the Board at that meeting. Government Code Section 54954.2 prohibits the Board from taking action on items not posted on the agenda except as provided in Subsection 54954.2(b).

A. CALL TO ORDER, PLEDGE OF ALLEGIANCE, AND ROLL CALL

BOARD OF DIRECTORS
Thomas Slosson, President
Andres Santamaria, Vice President
Scott H. Quady, Treasurer
Andy Waters, Secretary
Steve Blois, Director

B. MINUTES

C. ORAL COMMUNICATION

Members of the public may address the Board on items within the jurisdiction of the Board that do not appear on the agenda. Please limit remarks to three minutes.

D. ENGINEERING AND CONSTRUCTION

1. Discussion regarding approval of professional services by Kennedy/Jenks Consultants to perform Phase 2.2 of the Water Supply Alternatives Study for an amount not to exceed $2,491,673
   Action: It is recommended that the Board approve the professional services.

E. FUTURE AGENDA ITEMS

F. ADJOURNMENT to October 17, 2018 at 5:00 p.m.

Pursuant to Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and applicable federal rules and regulations, requests for disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting, should be made to the Secretary to the Board in advance of the meeting to ensure the availability of the requested service or accommodation. Notices, agendas, and public documents related to the Board meetings can be made available in appropriate alternative format upon request.

Board Meeting Agenda Memo
October 10, 2018

** An asterisk indicates that additional paperwork is provided in the packet or will be sent out later to supplement the packet as noted.*

D. ENGINEERING AND CONSTRUCTION

1. Discussion regarding approval of professional services by Kennedy/Jenks Consultants to perform Phase 2.2 of the Water Supply Alternatives Study for an amount not to exceed $2,491,673
   Action: It is recommended that the Board approve the professional services.

   Calleguas has undertaken the Water Supply Alternatives Study (WSAS) to identify and evaluate potential water supplies to enable Calleguas to continue to cost effectively provide a reliable water supply to its service area, particularly during outages when imported water is not available. Calleguas does not currently have sufficient local supplies to meet demands during a 6 month outage of imported water, particularly in the higher demand summer months. After Lake Bard is depleted (less than 6 weeks when the Lake Bard Water Filtration Plant is operating at full capacity), Calleguas would be unable to meet water demands for health and safety. With existing and planned sources, the estimated shortfall in supply under outage conditions is 80 to 110 cubic feet per second, depending on the level of demand reduction achieved during the outage.

   Previously, Calleguas worked with its purveyors and the public to develop a list of potential alternatives that could help address this supply shortfall; Phase 1 determined which of those alternatives were feasible. Alternatives deemed feasible were refined into projects through meetings with major purveyors and other nearby water agencies. Phase 2.1 "piloted" the project evaluation approach for a limited number of projects to verify its effectiveness. With Phase 2.1 largely complete, Phase 2.2 is ready to begin.

   A list of the projects is provided in the packet. For each project, the work includes:
   - Gathering information from Calleguas, purveyors, and other sources.
   - Estimating the water supply made available.
   - Identifying the facilities/improvements needed.
   - Preparing conceptual level costs.
   - Preparing a written summary of the analysis and results.
   - Preparing a "Fact Sheet" summarizing key features, including:
     - Conceptual level description of infrastructure needed and its location
     - Water source(s)

    - Cost
    - Potential to be operational following a seismic event
    - Potential yield and duration of yield
        - 6-month high-demand period (May to October)
        - 6-month low-demand period (November to April)
        - Capacity Charge (CC) Period (May to September) in cases where CC Period operation could create a cost savings
    - Geography where supply would be available
    - Technical complexity
    - Institutional arrangements needed
    - Anticipated environmental compliance requirements
    - Timeframe to implement
    - Other ancillary benefits
    - Risks and vulnerabilities

Additionally, the work includes the following:

- Addressing demand reductions during outages by:
    - Determining how much reduction in demand could be achieved with extreme measures for conservation, cutbacks, or allocations in an outage.
    - Developing an implementation approach to achieve that reduction in demand.
    - Calculating how much demand remains to be met.
- Evaluating moving water from lower hydraulic grade lines (HGLs) to higher HGLs, both from Lower Zone to Upper Zone and around pressure regulating stations.
- Identifying projects that:
    - Are near-term
    - Are mutually exclusive (e.g., they rely on the same source water, meet the same demands)
    - Have the shortest timeframe to implement
    - Have the greatest potential yield
    - Are most cost effective
    - May benefit from being built together or share common conveyance facilities
- Compiling and summarizing the results into a comprehensive report.

K/J successfully performed Phase 1 of the WSAS and has nearly completed Phase 2.1. Their work has demonstrated a strong understanding of local water supply issues and the cost is reasonable for the work involved. The Manager of Engineering will present the scope of work, schedule, and budget for Phase 2.2, including each of the projects to be evaluated.

Water Supply Alternatives Study, Phase 2
Projects List

- Projects 1a-1n – Additional Aquifer Storage and Recovery (ASR)
    - Project 1a – ASR in the Arroyo Santa Rosa Basin
    - Project 1b – ASR in the Tierra Rejada Basin
    - Project 1c – ASR in the Simi Valley Basin
    - Project 1d – ASR in the Conejo Valley Basin
    - Project 1e – ASR in the West Las Posas Basin
    - Project 1f – ASR in the South Las Posas Basin
    - Project 1g – ASR in the Pleasant Valley Basin
    - Project 1h – ASR in the Oxnard Plain Pressure Basin
    - Project 1i – ASR in the Oxnard Plain Forebay Basin
    - Project 1j – ASR in the Tapo/Gillibrand Basin
    - Project 1k – ASR in the Thousand Oaks Basin
    - Project 1l – ASR in the Santa Paula Basin
    - Project 1m – ASR in the Fillmore Basin
    - Project 1n – ASR in the Piru Basin
- Projects 2a-2c – Additional Groundwater from Thousand Oaks Area
    - Project 2a – Utilize Groundwater from Lake Sherwood Area
    - Project 2b – Utilize Groundwater from Oak Park Area
    - Project 2c – Utilize Groundwater from North Ranch Area
- Projects 3a-3d – New Bedrock Wells
    - Project 3a – New Bedrock Wells in Arroyo Santa Rosa Groundwater Basin
    - Project 3b – New Bedrock Wells in Tierra Rejada Groundwater Basin
    - Project 3c – New Bedrock Wells in Simi Valley Groundwater Basin
    - Project 3d – New Bedrock Wells in Conejo Valley Groundwater Basin

- Project 4 – Additional Groundwater Pumping by Ventura County Waterworks District 19
- Project 5 – Groundwater Supply from Crestview Mutual Water Co.
- Projects 6a-c – Groundwater Projects with the City of Camarillo
    - Project 6a – North Pleasant Valley (NPV) Desalter + Groundwater Replenishment
    - Project 6b – Increase NPV Desalter Capacity
    - Project 6c – New Springville Area Well + Agreement to Deliver Water During an Outage
- Project 7 – Camarillo Recycled Water Storage
- Projects 8a-f – Projects Related to a Santa Rosa Valley Desalter
    - Project 8a – Santa Rosa Valley Desalter
    - Project 8b – Santa Rosa Valley Desalter + Replenishment with Camrosa Non-Potable Water at Hill Canyon Road
    - Project 8c – Santa Rosa Valley Desalter + Replenishment with Camrosa Non-Potable Water at Tract 5347
    - Project 8d – Santa Rosa Valley Desalter + Replenishment with Stormwater at Hill Canyon Road
    - Project 8e – Santa Rosa Valley Desalter + Replenishment with Stormwater at Tract 5347
    - Project 8f – Increase Santa Rosa Valley Desalter Capacity
- Projects 9a-c – Projects Related to the Tierra Rejada Groundwater Basin
    - Project 9a – New Tierra Rejada Well
    - Project 9b – New Tierra Rejada Well(s) + Recharge with Recycled Water
    - Project 9c – New Tierra Rejada Well(s) + Recharge with Stormwater
- Projects 10a-b – Other Projects with Camrosa Water District
    - Project 10a – Preservation of Groundwater Supplies through Arundo Removal
    - Project 10b – Seasonal Storage of Recycled Water
- Project 11 – Oak Park Stormwater for Potable Reuse
- Project 12 – Diversion of Stormwater to Create Additional Recycled Water at the Simi Valley Water Quality Control Plant
- Projects 13a-g – Simi Valley Desalter
    - Project 13a – Simi Valley Desalter

    - Project 13b – Simi Valley Desalter + Replenishment with Recycled Water
    - Project 13c – Simi Valley Desalter + Replenishment with Advanced Treated Water
    - Project 13d – Simi Valley Desalter + Replenishment with Stormwater
    - Project 13e – Simi Valley Desalter + Replenishment with Recycled Water Enhanced with Stormwater
    - Project 13f – Simi Valley Desalter + Replenishment with Advanced Treated Water Enhanced with Stormwater
    - Project 13g – Increase Simi Valley Desalter Capacity
- Projects 14a-b **–** Projects Related to the Los Robles Desalter
    - Project 14a – Los Robles Desalter
    - Project 14b – Increase Los Robles Desalter Capacity
- Projects 15a-e **–** Projects Related to Use of Water from the Conejo Valley Groundwater Basin
    - Project 15a – Reactivation of Newbury Park Wells
    - Project 15b – Reactivation of Newbury Park Wells + Treatment
    - Project 15c – Newbury Park Well Water Delivery to Purewater Plant
    - Project 15d – Library Well Desalter
    - Project 15e – Increase Library Well Desalter Capacity
    - Project 15f – Library Well Water Delivery to Purewater Plant
- Projects 16a-b **–** Replenish Lake Bard with Advanced Treated Water
    - Project 16a – Replenish Lake Bard with Advanced Treated Water from the Hill Canyon Treatment Plant
    - Project 16b – Replenish Lake Bard with Advanced Treated Water from the Simi Valley Water Quality Control Plant
- Project 17 **–** Transfer Fairview Well to Ventura County Waterworks District 1
- Project 18 **–** Interruptible Service Agreements
- Project 19 **–** Fallowing Agreements with Entities Affected by ASR Operation
- Project 20 **–** Modification to Wells Affected by ASR Operation
- Project 21 **–** Abandon Some ASR Wells and Drill Replacement ASR Wells
- Projects 22a-e **–** Projects Related to Alternative Delivery Mechanisms for Imported Water
    - Project 22a – Raw Water Pipeline + Storage in Lake Piru

    - Project 22b – Conveyance through Piru Creek + Storage in Lake Piru
    - Project 22c – Raw Water Supply Pipeline + Storage in Piru Basin
    - Project 22d – Conveyance through Piru Creek + Storage in Piru Basin
    - Project 22e – Raw Water Supply Pipeline + Storage in Fillmore Basin
- Project 23 **–** Improvements to United Oxnard-Hueneme Pipeline
- Projects 24a-b **–** Interconnections with United Water Conservation District
    - Project 24a – UWCD Interconnection at Price Road
    - Project 24b – UWCD Interconnection in Somis
- Project 25 **–** South Oxnard Plain Brackish Water Treatment Facility
- Project 26 **–** Storage in Lake Cachuma and Connection to Calleguas
- Projects 27a-c **–** Projects with Casitas Municipal Water District and City of Ventura
    - Project 27a – Direct Connection to Casitas
    - Project 27b – Enhancements to Ventura's System to Increase Interconnection Flows to Calleguas
    - Project 27c – Store Water in Lake Casitas
- Projects 28a-b **–** Increase Capacity of Lake Bard
    - Project 28a – Deepen Shallow Parts of Lake Bard
    - Project 28b – Remove Peninsula
- Projects 29a-c **–** Install Pumps to Enable Use of More of Lake Bard's Capacity
    - Project 29a – Lake Bard Barge Pumps
    - Project 29b – Lake Bard Booster Pumps
    - Project 29c – Lake Bard Regrading
- Project 30 **–** Cover Lake Bard
- Projects 31a-b **–** New Storage Reservoir
    - Project 31a – New Storage Reservoir with New Surface Water Treatment Plant
    - Project 31b – New Storage Reservoir with Raw Water Transfer to Lake Bard

- Project 32 – Additional Pumping from the Oxnard Advanced Water Purification Facility ASR Project
- Project 33 – Purchases in a Groundwater Market
- Projects 34a-b – Temporary/Portable Seawater Desalination
    - Project 34a – Truck Desalinated Water to Lake Bard
    - Project 34b – Deliver Desalinated Water Directly to Oxnard and Port Hueneme
- Projects 35a-b – Water Hauling
    - Project 35a – Hauling Colorado River Water from Eagle Rock
    - Project 35b – Hauling SWP Water from Santa Barbara
- Projects 36a-c – Use of Graywater to Offset Demand
    - Project 36a – Provide Financial Incentives for Residential Graywater System Installation
    - Project 36b – Install Graywater Systems at Local Colleges
    - Project 36c – Promote Changes to Building Code to Facilitate Gray Water System Installation
- Project 37 – On-Site Stormwater Capture and Use
- Projects 38d-f – Additional Long-Term Water Use Efficiency Measures
    - Project 38a – High-Efficiency Toilets
    - Project 38b – High-Efficiency Clothes Washers
    - Project 38c – Audits of High Water Users
    - Project 38d – High-Efficiency Sprinkler Nozzles
    - Project 38e – Weather-Based Irrigation Controllers
    - Project 38f – Commercial, Institutional, and Industrial Improvements