

**Borrego Springs Interim Watermaster
Technical Advisory Committee Meeting
October 27, 2020 @ 9:00 a.m.**

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AGENDA

Items with supporting documents in the TAC Meeting Package are denoted with a page number.

I. OPENING PROCEDURES

- A. Roll Call
- B. Committee Member Introductions
- C. Committee Meeting Guidelines

II. PUBLIC COMMENTS

This is an opportunity for members of the public to address the TAC on items included on the agenda. Comments will be limited to three minutes per commenter. If you wish to comment, please join the meeting five minutes early to request to speak (verbally or via GoTo meeting Chat feature).

III. OBJECTIVES AND OPERATION OF THE TECHNICAL ADVISORY COMMITTEE

Objective: Provide an overview of the TAC’s purview and duties as defined by the Judgment and Rules & Regulations and provide recommended operating procedures for TAC meetings and reporting to the Board of Directors.....**Page 2**

IV. METER READING PROGRAM

Objective: Develop recommendation on a meter reading program that will produce pumping data to support the technical requirements of the Judgment and GMP.....**Page 5**

V. TAC SCHEDULE FOR FY 2021

Objective: Discuss and develop a recommendation to the Board on the approximate meeting date(s) and technical topics for subsequent TAC meetings in WY 2021 to execute required duties as described in the memo included for Agenda Item III of this TAC agenda; Discuss information needed to support next TAC agenda.

VI. PUBLIC COMMENTS (time permitting).

This is an opportunity for members of the public to address the TAC on items discussed during the meeting. Comments will be limited to three minutes per commenter, time permitting.

VII. ADJORNMENT

**Interim Borrego Springs Watermaster
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AGENDA ITEM III**

To: Technical Advisory Committee (TAC)
From: Andy Malone, PG (WEI), Lead Technical Consultant
Date: October 22, 2020
Subject: Objectives and Operation of the Technical Advisory Committee

Objective

The objective of this memorandum is to provide an overview of the TAC's purview and duties as defined by the Judgment and Rules & Regulations and provide recommended operating procedures for TAC meetings and reporting to the Board of Directors.

Background

Section IV.G of the Judgment and Article III of the Rules & Regulations provides for the formation of a Technical Advisory Committee (TAC). The Judgment defines the TAC as (Section I.A.58):

The advisory body established pursuant to Section IV.G(1) of this Judgment to study technical aspects of the Basin and to issue recommendations to Watermaster based on such technical study for the purpose of achieving Sustainable Groundwater Management in the Basin in an effective and efficient manner, consistent with the rights and obligations of the Parties established by this Judgment.

The Judgment defines the TAC's duties and responsibilities as (Section IV.G.2):

The Technical Advisory Committee's responsibilities will include, without limitation, making recommendations based on best science and data collected regarding the Water Budget and the avoidance of Undesirable Result, determined by the TAC based on best available data, including without limitation information generated from BVHM model runs. Such assessment must consider all inflows and outflows from the Basin, including without limitation mountain front underflow and flux into the Borrego Springs Basin across the Coyote Creek fault and all other underflows, agricultural and recreational irrigation return flows; specific yield differences of the three aquifers (upper, middle and lower) within the different Management Areas of the Basin; and other matters approved by the Watermaster to improve upon initial assumptions regarding the Water Budget that will enable better Adaptive Management of the Basin.

Section IV.E.7 calls for the TAC to meet at least semi-annually to review Watermaster activities pursuant to the Judgment. The types of activities within the subject matter expertise of the TAC on which recommendations are to be made to the Watermaster pursuant to the Judgment include:

Determination of Sustainable Yield (Section II.E; Section III.F). Section III.F on pages 18-20 of the Judgment describes the detailed process and schedule for re-determining Sustainable Yield and the implementation of the Rampdown through 2040. The near-term duties of the

TAC include providing a recommendation on the scope of work and budget for technical work to be performed through September 30, 2023 to support the next redetermination of Sustainable Yield, which must be adopted by the Watermaster by January 1, 2025. An agreed upon scope of work is due to the Board for approval by June 1, 2021.

Evaluation of Carryover (Section III.B). The Carryover provision for unused annual allocations of pumping rights must be re-evaluated by January 1, 2025, in consultation with the TAC.

BPA transfers (Section III.I.5). The Watermaster will seek input from the TAC if it seeks to restrict Permanent Transfers and Leases to specific areas of the Basin. This is an as-needed duty of the TAC.

Selection of Watermaster staff (Section IV.C). This is an as-needed duty of the TAC.

Water quality monitoring plan (Section VI.B). A Water quality monitoring plan must be developed with TAC input within 24 months of entry of the Judgment. The TAC will also support the Watermaster's evaluation of water quality data and any findings of impacts on beneficial uses and associated remedies.

With regards to making recommendations to the Board, Section IV.G.1 of the Judgment states that:

...The Technical Advisory committee will endeavor to decide all matters by consensus. If consensus cannot be achieved, the Technical Advisory Committee will present a report to the Watermaster describing the differences of opinion and arguments in support thereof, with a draft of the report circulated for comment and input by all Technical Advisory Committee members prior to submission of the report to Watermaster.

The Rules & Regulations define the TAC's duties (Article III, Section 3.5). The TAC shall:

- Meet on a regular basis as defined in the Judgment.
- Review Watermaster's activities within the subject matter expertise described in the Judgment on at least a semi-annual basis.
- Make recommendations on best science and data collected, consistent with the provisions of the Judgment and other matters as directed by the Watermaster.

Operation of the TAC and Reporting to the Board of Directors

Watermaster staff recommends the following general operating procedures for the TAC:

- TAC meetings and the associated agenda for discussion will be determined by the Watermaster Board, with input from the TAC.
- TAC meetings and agenda packages will be noticed by Watermaster Staff no less than 72 hours prior to the scheduled TAC meeting. The meetings will be noticed via email to the Watermaster's distribution list and will be posted to the Watermaster's website.
- The TAC meetings will be led by Watermaster's Technical Consultant.
- TAC meetings will be open to the public, with an opportunity for the Public to comment at the start of the meeting on items included on the agenda. Time permitting, the public will also

have an opportunity for additional comments at the end of the meeting on items discussed during the meeting.

- During the discussion of TAC agenda items, all non-TAC member meeting attendees must remain in a listening mode unless requested to speak by the TAC members.
- Meeting minutes will be recorded by Watermaster staff, circulated for review by the TAC, and included as an information item on the agenda of a subsequent Regular meeting of the Watermaster Board.
- Watermaster's Technical Consultant will be responsible for documenting the TAC's recommendations to the Board in one or more memorandums following each TAC meeting. The Technical Consultant will prepare a draft memorandum and circulate it amongst the TAC members for review and editing. The final memorandum will be prepared and will document the consensus of the TAC pursuant to Section IV.G.1 of the Judgment.

**Interim Borrego Springs Watermaster
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AGENDA ITEM IV**

To: Technical Advisory Committee (TAC)
From: Andy Malone, PG (WEI), Lead Technical Consultant
Date: October 22, 2020
Subject: Watermaster Meter Reading Program

Objective

The objective of this memorandum is to provide background information to support the TAC's development of a recommendation to the Borrego Springs Watermaster Board (Board) for a frequency of well meter reading/reporting that will support the implementation of the Judgment and Groundwater Management Plan (GMP). This memorandum also includes a draft recommendation for consideration by the TAC. Feedback from the TAC will be used to prepare a memorandum to the Board with the TAC's recommendation. The recommendation memorandum is due on November 6, 2020 for inclusion in the November 12, 2020 Board meeting agenda package.

Background

Section VI.A of the Stipulated Judgment requires that: "Parties holding BPA will install and maintain, at their own expense, meters approved by Watermaster that can electronically transmit a recording of the amount of Groundwater Pumped from the Basin and other data to the Watermaster in real time on a schedule as determined by the Watermaster. This meter program will result in cost savings by avoiding the need for the Watermaster to physically read, inspect and validate the accuracy of meters. Alternatively, any Party holding BPA may elect to install and maintain, at its own expense, other meters approved by Watermaster on condition that: (i) the Watermaster physically read the meters on the schedule determined by the Watermaster and the Party pay all costs associated with the Watermaster's reading, accounting and reporting related to such meters; and (ii) the Party has executed an Entry Agreement as specified in Exhibit "8" for the purpose of allowing Watermaster access to the Party's well."

Section 4.24 of the Rules & Regulations states that the Watermaster Technical Consultant shall propose, and the Watermaster Board shall adopt and maintain, rules and regulations regarding metering and data collection consistent with the provisions of the Judgment. At its July 30, 2020 Special meeting, the Board established an interim meter-reading program to ensure collection of an initial meter read for the start of Water Year 2021 at all wells operated by the parties to the Settlement Agreement (Settling Parties). The initial meter-read date was established as September 30, 2020. Also during this meeting, the Board directed that the TAC should be convened after the completion of the initial meter read event to develop a recommendation for an ongoing meter reading program, including the frequency at which the meters should be read and the protocols for collecting the meter reads.

At its September 10, 2020 Special meeting, the Board adopted Resolution 20-05 establishing protocols for documenting manual meter reads collected by Watermaster (attached). At its September 24, 2020 Special meeting, the Board approved execution of a contract with the Borrego Water District to perform the initial meter reading event at Settling Party wells with manual read meters. The Settling Parties with manual meters must reimburse Watermaster for the costs to have the BWD read the meters. Per the contract, the cost is \$45.63 per hour including field work, scheduling, and reporting. In addition, the District will be reimbursed for direct costs incurred and a 10% administrative charge will be applied to the total invoice amount.

There are 20 Settling Parties with a total of 52 active pumping wells in the Basin. Of these wells, 33 have manual-read meters and 19 have smart meters connected to telemetry. All of the manual-read meters were read by BWD on behalf of the Watermaster between September 28th and 30th. The smart meters were read remotely by Watermaster staff.

Discussion

The purpose of reading meters is to collect and document the information needed to calculate total groundwater pumping for the water year (or any other time period of interest) at each active pumping well of the BPA Parties. The assignment for the TAC members is to make a recommendation to the Watermaster on the frequency at which the meters should be read and the protocols for collecting the meter reads to support the implementation of the Judgment and the GMP.

The GMP is an integral part of the Physical Solution of the Stipulated Judgment. The GMP provides a roadmap for how sustainability is to be reached in the Borrego Springs Subbasin, including projects and management actions (PMAs) to be taken. The GMP calls for the use of pumping data for:

- Annual Reporting
 - Groundwater extraction data shall be reported for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector, and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.
 - A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.
- Five-Year Evaluation of the GMP
 - Description of GMP implementation and progress toward sustainability goals, such as the ramp-down in pumping to mitigate critical overdraft.
 - A re-evaluation of the basin setting in light of significant new information or changes in water use, and an explanation of any significant changes, including the water budget of the basin.

- An assessment of monitoring network with an analysis of data collected to date, identification of data gaps, and the actions necessary to improve the monitoring network. Accurate pumping data was identified as a major data gap prior to the implementation of the Judgment and the GMP. As of October 2020, most of the major pumping wells in the Borrego Springs Subbasin are now metered.
- A description of significant new information that has been made available since GMP implementation. The description shall include whether new information warrants changes to any aspect of the Plan's implementation, including the evaluation of the basin setting, measurable objectives, minimum thresholds, or the criteria defining undesirable results.
- Periodic Update of the Groundwater Model. The groundwater model will be used to assist in several of the activities listed above, including the re-assessment of the water budget and progress towards and future projections of meeting interim milestones and achieving long-term sustainability goals. Accurate groundwater pumping data is critical information to update and recalibrate the groundwater model.

Frequency. Regarding frequency of meter reading, annual reads are the minimum necessary to satisfy annual reporting requirements. However, monthly meter reads would provide valuable information for more effective implementation of the GMP for the following reasons:

- Month pumping data can be used in future model updates that run on a monthly stress period and time steps. Ultimately, the model could be calibrated to seasonal changes in stress and basin response, which would likely increase model accuracy and confidence in its use to make basin management decisions, including reevaluating the sustainable yield.
- Knowledge of the magnitudes and patterns of pumping by well may better support other projects and programs, such as the Pumping Reduction Program, the Water Trading Program, and the Intra-Subbasin Water Transfers Program.

Cost. The cost of monthly meter reading and reporting will be greater than annual meter reading and will need to be balanced against the benefits. Self-reporting of meter reads between formal meter read events performed by Watermaster can mitigate the increased costs associate with monthly meter reading.

Quality Control. The accuracy of the meter reading program is a concern considering the errors that are sometimes associated with start-up of the new meter-reading program, broken/damaged meters, self-reporting, and telemetry. These concerns can be mitigated through the implementation of:

- interim meter-read events performed by Watermaster in the first year of the meter-reading program
- the annual meter-testing requirement
- periodic meter reading by Watermaster or an independent third party contracted by Watermaster.

Recommendation to the TAC

Based on the above discussion, Watermaster Staff recommends the following meter reading program as a starting point for discussion with the TAC:

- Watermaster should establish a monthly frequency for meter reading and data collection to support the effective implementation of the GMP.
- Not all meter reads need to be collected by Watermaster. Self-reporting of meter reads is acceptable between official Watermaster meter read events.
- Official Meter Read Events: For WY 2021, Watermaster should perform official meter read events on or about: November 30, 2020, March 31, 2021, and September 30, 2021.
- Self-Reporting Meter Read Events: Parties should read and report meter reads on or about the last day of the month in December 2020 and January, February, April, May, June, July, and August 2021.
 - For Parties with telemetry, they can provide Watermaster staff with a print out of the meter reads from the telemetry dashboard for the reporting period, or they can request Watermaster staff to read the smart meters via telemetry on the first day of each month.
 - For Parties with manual-read meters, they can provide Watermaster staff with an email of the reporting period meter read, including the date and time of the read and a photograph of the meter face as evidence of its readout value.
- The frequency of official Watermaster meter reads for WY 2022 (and potentially for the remainder of WY 2021) should be revisited by the TAC in April 2021 based on effectiveness of the self-reporting by the Parties through March 31, 2021.
- The Watermaster should use its staff, or an independent third party, to perform at least one meter read during WY 2021 at the BWD meters to audit the meter reads that have been performed up to that point. Based on the results, Watermaster staff can recommend the future need for such audits of BWD should it continue to provide meter reading services to the Watermaster.

Encl.

Exhibit 1 – Meter Read Protocols and Required Documentation