TODD GROUNDWATER

April 19, 2018

REVISED DRAFT MEMORANDUM

To: Robert Parris, Chair
Antelope Valley Watermaster Board of Directors

Dennis LaMoreaux, Chair
Antelope Valley Watermaster Advisory Committee

cc: Craig Parton, Price Postel & Parma LLP
Legal Counsel

From: Phyllis Stanin, Vice President/Principal Geologist
Kate White, Senior Engineer
Todd Groundwater, Watermaster Engineer

Re: Draft Groundwater Storage Agreements Section for the Rules and Regulations

The proposed process and procedures for implementing Storage Agreements in compliance with the Final Judgment are presented on the following pages. This draft text is provided for final comments, edits, and subsequent inclusion in the Antelope Valley Watermaster Rules and Regulations (R&Rs). Previous drafts of this text have been reviewed by the Advisory Committee and the Watermaster Board; comments and additional minor edits have been incorporated into this revised draft. Pending legal review, a 30-day comment period, and final edits, the Board will hold a public hearing to consider approval of the text for use in the R&Rs. The text will then be presented to the Court for approval.

SECTION X – GROUNDWATER STORAGE AGREEMENTS

1. **Purpose**. All Parties to the Judgment have the right to store water in the Basin pursuant to a Storage Agreement with the Watermaster. Stored water is defined as "water held in storage in the Basin, as a result of direct spreading or other methods, for subsequent withdrawal and use pursuant to agreement with the Watermaster and as provided for in this Judgment." (¶3.5.49). All Stored Water shall be covered by a Storage Agreement. These Storage Agreements provide for how the Stored Water will be recharged, recovered and used. The provided information will be used by the Watermaster Engineer to track water use, to support a basin-wide water balance, and to ensure no Material Injury.

2. **Water Sources and Methods**. Storage Agreements can be used for direct recharge of various water sources including imported water, recycled water, or other water not part of the Native Safe Yield. Storage Agreements are also required to convert Carry Over Water generated by non-use of Native Safe Yield to Stored Water at the end of the ten-year Carry Over period. Carry Over Water includes Native Safe Yield not Produced due to in-lieu purchases of imported water (¶15.1), Native Safe Yield not Produced for other reasons (¶15.3), and Imported Water Return Flow rights that are not Produced (¶15.2). Carry Over Water[1] is not Stored Water, although Carry Over Water can be converted to Stored Water at the end of the Carry Over period by entering into a Storage Agreement.

3. **Basis**. Storage Agreement rules shall be uniformly applicable. The Watermaster shall promptly enter into Storage Agreements with the Parties at their request, provided that all past due assessments, interest, and penalties have been settled prior to the date of the agreement. The Watermaster shall not enter into Storage Agreements with non-Parties unless such non-Parties become expressly subject to the provisions of this Judgment and the jurisdiction of the Court. Storage Agreements shall expressly preclude operations which will cause a Material Injury on any Producer (¶14).

4. **Accounting**. Parties that store water shall provide the Watermaster sufficient information so that the Watermaster Engineer can calculate additions, extractions and losses of water stored under Storage Agreements and maintain an Annual account of all such water. A portion of the Stored Water will likely be unrecoverable. Accounting done by the

[1] Producers may carry over rights to its unproduced portion of its Production Rights and its unproduced portion of its Imported Water Return Flows for up to ten years. Carry Over Production Rights and Imported Water Return Flows not Produced by the end of the tenth year revert to the benefit of the Basin and the Producer no longer has a right to this Carry Over Water unless it is stored pursuant to a Storage Agreement.

Watermaster Engineer under this Paragraph shall be considered ministerial (¶18.5.14 and ¶14).

5. **General Conditions Governing Storage Agreements**. Storage Agreements shall be for the utilization of the groundwater storage capacity of the Basin.

   a. **Preexisting Banking**. Nothing in the Judgment limits or modifies operation of the preexisting banking projects[2] as listed in the Paragraph 14 of the Judgment. Preexisting banking projects in operation as of the date of the Final Judgment include:
      - AVEK's Westside Water Bank (formally referred to as Water Supply Stabilization Project No. 2 (WSSP-2)) and Eastside Water Bank
      - Antelope Valley Water Storage LLC's Willow Springs Water Bank (WSWB) (formerly called the Antelope Valley Water Bank)
      - Tejon Ranchcorp and Tejon Ranch Company's Tejon Water Bank.

   b. **Preexisting Exchange Agreements**. Nothing in the Judgment limits or modifies performance of preexisting exchange agreements of the Parties. Preexisting agreements that may involve storage are listed below:
      - District 40 – AVEK Lease Agreement (signed 2/10/15)
      - LCID and PWD Agreement (revised 12/22/92)
      - AVEK and LCID Exchange Agreement (2006-2016) (updated annually)
      - AVEK and Tejon Exchange Agreement (2008 and 2009).

   c. **Submittal of Agreements**. For all types of pre-existing banking or exchange agreements, the relevant Parties shall submit copies of any agreements or supporting documents to the Watermaster Engineer. These will be available for review by other Parties to the Judgment.

   d. **Export of Stored Water**. If Littlerock Creek Irrigation District or Palmdale Water District stores water in the Basin, it shall not export that Stored Water from its service area (¶14). AVEK, Littlerock Creek Irrigation District or Palmdale Water District may enter into exchanges of their State Water Project "Table A" Amounts. Any Stored Water that originated as State Water Project water imported by AVEK, Palmdale Water District or Littlerock Creek Irrigation District may be exported from the Basin for use in a portion of the service area of any city or public agency, including State Water Project Contractors, that are Parties to this action at the time of this Judgment and whose service area includes land outside the Basin. AVEK may export any of its Stored State Project Water to any area outside its jurisdictional boundaries and the Basin provided that all water

[2] The Judgment has a list of preexisting banking projects: AVEK, District No. 40, Antelope Valley Water Storage LLC, Tejon Ranchcorp and Tejon Ranch Company, Sheep Creek Water Co., Rosamond Community Services District and Palmdale Water District. The banking projects listed in the text above are the ones that were in operation on 12/23/15.

demands within AVEK's jurisdictional boundaries are met. Any Stored Water that originated as other imported water may be exported from the Basin, subject to a requirement that the Watermaster Engineer make a technical determination of the percentage of the Stored Water is unrecoverable and that such unrecoverable Stored Water is dedicated to the Basin.

e. **Use of Stored Water for Replacement Water Obligations**. If, pursuant to a Storage Agreement, a Party has provided for pre-delivery or post-delivery of Replacement Water for the Party's use, the Watermaster shall credit such water to the Party's Replacement Water Obligation at the Party's request (¶14). Pre-delivery could occur when a Party transfers existing water in storage to the Watermaster prior to pumping water that otherwise would incur a Replacement Water Assessment. Post-delivery could occur when a Party provides written confirmation that a firm supply of that Party's water for storage within the year following the production that resulted in a Replacement Water Obligation will be transferred to the Watermaster when available. (see Replacement Water Obligation Section XX of the R&Rs for more detail)

f. **Material Injury Determination**. Approval of Storage Agreements will be based on the determination that there will be no Material Injury. Material Injury could include overdraft, water quality degradation, liquefaction, land subsidence, and other injury caused by lowering or elevating groundwater levels or changes in groundwater in storage. The analysis will also consider project benefits and policies of the State Water Resources Control Board and Regional Water Boards to enhance groundwater recharge.

g. **Storage and Use of Stored Water**. A Party subject to a Storage Agreement must report annually to the Watermaster the sources and amounts of water stored pursuant to a Storage Agreement and the amount of Stored Water recovered in the prior year.

6. **Storage Agreement Contents.** Groundwater Storage Agreements shall include, but not be limited to, the following:

- Source(s) and quality of the water to be stored.
- Identification of lands to be used for recharge, if applicable.
- General description of the delivery and recharge methods, projected annual delivery rates, methods of measurement (i.e., metering), and projected infiltration rates.
- Conceptual design of applicable recharge facilities including locations, depths, and construction details of spreading basins, trenches or infiltration galleries, vadose zone wells, injection wells, or other methods.
- General description of the extraction methods and facilities, including identification of the well or wells used for recovery (including well construction and capacity).
- Agreement to provide the Watermaster, prior to recovery, with the anticipated recovery quantity, rate of recovery, and other details sufficient to determine that the operations will not cause a Material Injury.

- Agreement to provide the Watermaster, by March 15 of each year, with an annual accounting of source(s), volumes, and locations of water recharged and/or stored and the entities for whom water was stored the previous calendar year. Water quality reporting can be extended to April 15 if data are not available by March 15.
- Agreement to provide the Watermaster, by March 15 of each year, with an annual accounting of volumes and locations of recovery and place and purpose of use of recovered water the previous calendar year.
- For Carry Over Water converted to Stored Water the details requested above for recovery should be included; details relating to recharge as listed above are not applicable.
- Agreement to a pre-determined loss of the total amount of stored water by a technical determination by the Watermaster of the percentage of the Stored Water that is unrecoverable[3]. The pre-determined loss will not apply to Carry Over water that is converted to a Storage Agreement at the end of the ten-year Carry Over period (see item 2 above).
- Details sufficient to establish that the operations will not cause a Material Injury.
- Terms and conditions determined by the Watermaster Engineer to prevent future operations from causing a Material Injury, if any.
- Storage Agreements with preexisting banking projects as defined in the Judgment will contain a provision that the agreement does not limit or modify operations, as required by the Judgment (¶14).

7. **Watermaster Investigation**. The Watermaster may request additional information and investigate any existing or proposed Storage Agreement, including physical inspection of the storage project, if additional information is needed to understand the recharge and extraction operation to determine potential impacts of such operation on potential Material Injury or to define the losses associated with storage. Any party to the Storage Agreement may be requested to confer and cooperate with the Watermaster Engineer or staff, and to provide such additional information, data, and/or physical access, as may be reasonably required to complete the investigation.

8. **Water Stored without a Storage Agreement.** Water stored without a Storage Agreement will be deemed abandoned and left for the benefit of the basin.

[3] Preexisting banking projects have agreed to a 10 percent loss based on previous analyses. This value will be reviewed and may be used by the Watermaster Engineer as a minimum loss for a new storage agreement to account for significant uncertainty associated the project such as exact timing of recovery (when losses would vary) or loss from subsurface outflow.