



June 27, 2018

REVISED 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. If approved by the Court, this final revised text will be included in the Antelope Valley Watermaster Rules and Regulations (R&Rs). Previous drafts of this text have been reviewed more than four times each by the Advisory Committee and the Watermaster Board. A 30-day comment period as required by the Judgment was initiated on April 20, 2018 and a public hearing was held on May 23, 2018 to consider approval of the text for use in the R&Rs. At the May hearing, representatives of Antelope Valley-East Kern Water Agency (AVEK) requested additional time for consideration and comments; on June 15, 2018, edits were made to the text to incorporate AVEK comments. The revised text was approved at the Watermaster Board meeting on June 27, 2018, where final minor edits were made based on additional comments discussed at the meeting. This final revised memorandum will 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. Storage Agreements provide a method for accounting 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 that the Stored Water is managed according to the Storage Agreement.
- 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, typically referred to as water banking. 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 Water¹ 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

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.

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 may be unrecoverable. Accounting done by the 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 accounting of the groundwater storage capacity of the Basin.
 - a. Preexisting Banking.** Nothing in the Judgment limits or modifies the existing operation of the preexisting banking projects as listed in the Paragraph 14 of the Judgment, which includes preexisting banking projects of “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” (§14). Further, the Judgment states that it does not limit or modify the “performance of preexisting exchange agreements of the Parties” (§14). To identify the projects to which these conditions apply, preexisting banking projects will be required to provide information to the Watermaster Engineer that demonstrates existing operations as of the date of the Final Judgment.
 - b. Submittal of CEQA Documents and Storage/Use Documents.** For pre-existing banking facilities and projects, the owner shall submit copies of any CEQA and storage/use documents to the Watermaster Engineer. These will be available for review by other Parties to the Judgment.
 - c. 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 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 that is unrecoverable and that such unrecoverable Stored Water is dedicated to the Basin.

- d. 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)
- e. 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 may also consider project benefits, as well as the State Water Resources Control Board Recycled Water Policy and other policies that are in place to encourage and enhance groundwater recharge.
- f. 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 Agreements for Water Storage Facilities (Water Banking).

Groundwater Storage Agreements for water banking facilities shall be an

agreement between the owner/operator and the Watermaster and may include conditions to assure that no Material Injury will occur. Groundwater Storage Agreements may include 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.
- Environmental documentation and associated hydrology and geologic studies for the proposed project.
- General description of the extraction methods and facilities, including identification of the well(s) used for recovery (including well construction and capacity).
- Provide the Watermaster, prior to recovery, with the anticipated recovery quantity, rate of recovery, and location and construction of wells used for recovery (if not provided in the bulleted item above).
- 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 amount of water that has been stored specifically for export out of the adjudicated area, when known. Water quality reporting can be extended to April 15 if data are not available by March 15.
- Provide the Watermaster, by March 15 of each year, with an annual accounting of volumes and locations of recovery and the amount of the recovery, if any, that is delivered outside of the adjudicated area.

- 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 unrecoverable².
- Details sufficient to establish that the operations will not cause a Material Injury.
- The Watermaster Engineer may include conditions of approval for the proposed water banking facilities and operations that requires future documentation that the project remains in compliance with the original non-Material Injury determination.

7. Storage Agreements for Carry Over Water. Carry Over Water converted to Stored Water is already part of the Native Safe Yield in the groundwater basin and is not subject to the documentation requirements for source water and recharge facilities as listed for the water banking projects in item 6 above. In addition, Carry Over water converted to Stored Water would not be subject to the losses that may be associated with surface recharge (e.g., evaporation). Documentation of the recovery of Stored Water applies as follows:

- General description of the extraction methods and facilities, including identification of the well(s) used for recovery (including well construction and capacity).
- Provide the Watermaster, prior to recovery, with the anticipated recovery quantity, rate of recovery, and location and construction of wells used for recovery (if not provided in the bulleted item above).
- Provide the Watermaster, by March 15 of each year, with an annual accounting of volumes and locations of recovery.
- The Judgment specifically limits transfers of water by Antelope Valley United Mutuals Group (AVUMG) (as listed in ¶3.5.5 of the Judgment), including any transfer of Carry Over water converted to a Storage Agreement (¶16.3). Such a transfer by a member of the AVUMG may only be to or amongst other members of the AVUMG (¶16.3), unless a

² It is the understanding of the Watermaster Engineer that preexisting water banking projects in the Antelope Valley adjudicated area use a 10 percent loss factor based on previous analyses. This value may be used by the Watermaster Engineer as a minimum loss for a new storage agreement to account for significant project uncertainty such as exact timing of recharge/recovery (when losses would vary) or loss from subsurface outflow.

Public Water Supplier assumes service of an AVUMG member's shareholders (§16.3.1).

- 8. Watermaster Investigation.** The Watermaster may request additional information and investigate any existing or proposed Groundwater Storage Project, including physical inspection of the storage and/or recovery facilities. Storage Agreement parties 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.