

Appendix B: Potential Imbalanced Exchange Scenarios

Potential Imbalanced Exchange Scenarios

Scenario 1 – Evaporation and Conveyance Losses

In some cases the exchange parties are miles apart or the exchanged water is temporarily stored resulting in losses of water due to evaporation and/or seepage. Consequently, one (or more) recipient does not receive the entire amount of water. The parties would enter into mutually agreeable terms to compensate for such losses.

Scenario 2 – Differing Hydrological Conditions

The hydrological conditions in the State of California are sporadic. Northern California could receive higher precipitation and snow-pack to fill reservoirs compared to Southern California. Annual allocations are based on snowmelt and runoff for Central Valley Project (CVP) contractors, including Cross Valley and Friant Contractors. These varying conditions could result in less water being available to complete the exchanges. The exchange arrangements between the parties typically include mutually agreeable terms for compensation if such conditions occur.

Scenario 3 – Timing of Water Deliveries

Cross Valley Contractors' CVP water is delivered to State Water Project (SWP) facilities when an opportunity exists for the California Department of Water Resources (DWR) to convey this water. This opportunity is often outside of the growing season when the water is not needed for crops in the Cross Valley Contractors' service areas. In these cases, the Cross Valley Contractors could enter into exchange agreements with an exchange partner that is able to take the water at the time it is available. Later during the growing season, an amount of water would be returned to the Cross Valley Contractor. The amount returned to the Cross Valley Contractor would be less than the amount delivered to the exchange partner to compensate the partner for the service of providing this water to the Cross Valley Contractor at a time it is needed.

Scenario 4 – Differing Values of Water During the Year

Scenario 4 is similar to Scenario 3. However the imbalanced exchange is due to other timing issues other than restrictions by DWR to convey the Cross Valley Contractor's CVP water. The value of water is typically much higher between June and September. Exchange agreements could include an imbalanced exchange of water based on unpredictable timing constraints to offset the difference in the value of the water when it is delivered.

Potential Exchange Mechanisms

Historical Exchanges with Arvin-Edison Water Storage District

1. Reclamation allocates CVP water to the Cross Valley Contractor(s) from the Delta.
2. If capacity is available at the Jones Pumping Plant, the San Luis and Delta-Mendota Water Authority (SLDMWA) conveys the Cross Valley Contractors' CVP water in CVP facilities to O'Neill Forebay (Reclamation provides Federal power at Jones Pumping Plant). DWR then wheels the Cross Valley Contractor(s) CVP water in State Water Project (SWP) facilities from O'Neill Forebay to Arvin-Edison Water Storage District (Arvin-Edison) under the following scenarios (Reclamation provides Federal power at Dos Amigo Pumping Plant):
 - Directly to Arvin-Edison via their existing turnouts off the California Aqueduct.
 - Directly to the Cross Valley Canal turnout off the California Aqueduct where it is conveyed by Kern County Water Agency (KCWA) to Arvin-Edison's turnout off of the Cross Valley Canal.
3. If capacity is available at Banks Pumping Plant, DWR conveys the Cross Valley Contractor(s) CVP water in SWP facilities directly to Arvin-Edison under the following scenarios (Reclamation provides Federal power at Banks and Dos Amigo Pumping Plants):
 - Directly to Arvin-Edison via their existing turnouts off the California Aqueduct.
 - Directly to the Cross Valley Canal turnout off the California Aqueduct where it is conveyed by KCWA to Arvin-Edison's turnout off of the Cross Valley Canal.
4. Arvin-Edison provides Friant CVP water from Millerton Lake in exchange for the Cross Valley Contractor CVP water received. The point(s) of delivery for Friant CVP water are the Cross Valley Contractors' existing turnouts off of the Friant-Kern Canal. The exchanges may be unbalanced (up to 2:1 average exchange ratio over a 10-year period).

Exchange with Other Friant CVP Contractors

1. Reclamation allocates CVP water to the Cross Valley Contractor(s) from the Delta.
2. If capacity is available at the Jones Pumping Plant, SLDMWA conveys the Cross Valley Contractors' CVP water in CVP facilities to O'Neill Forebay (Reclamation provides Federal power at Jones Pumping Plant). DWR then wheels the Cross Valley Contractors' CVP water in SWP facilities from O'Neill Forebay to the Cross Valley Canal (Reclamation provides Federal power at Dos Amigo Pumping Plant). KCWA then conveys the Cross Valley Contractors' CVP water through the Cross Valley Canal/Friant-Kern Canal Intertie for introduction into the Friant-Kern Canal. The Cross Valley Contractors' CVP water enters the Friant-Kern Canal as CVP water subject to Reclamation Law with no requirement for a

Warren Act contract. The Friant Water Authority (FWA) delivers the Cross Valley Contractors' CVP water to Friant Division contractors.

3. If capacity is available at the Banks Pumping Plant, DWR conveys the Cross Valley Contractors' CVP water in SWP facilities directly to the Cross Valley Canal (Reclamation provides Federal power at Banks and Dos Amigo Pumping Plants). KCWA then conveys the Cross Valley Contractors' CVP water through the Cross Valley Canal/Friant-Kern Canal Intertie for introduction into the Friant-Kern Canal. The Cross Valley Contractors' CVP water enters the Friant-Kern Canal as CVP water subject to Reclamation Law with no requirement for a Warren Act contract. FWA delivers the Cross Valley Contractors' CVP water to Friant Division contractors.
4. Friant Division CVP contractors provide Friant CVP water from Millerton Lake in exchange for the Cross Valley Contractor CVP water received. The point(s) of delivery are the Cross Valley Contractors' existing turnouts off of the Friant-Kern Canal. The exchanges may be unbalanced (up to 2:1 average exchange ratio over a 10-year period).

Exchange with SWP Contractors

1. Reclamation allocates CVP water to the Cross Valley Contractors from the Delta.
2. Point of delivery for the Cross Valley Contractors CVP water to SWP Contractors is in the Delta.
3. SWP Contractors convey the Cross Valley Contractors' CVP water under Article 55 of their SWP contract to their existing turnouts off the California Aqueduct (Reclamation provides Federal power at Banks and Dos Amigo Pumping Plants).
4. SWP Contractors provide water to the Cross Valley Contractors under the following scenarios:
 - SWP contractors convey SWP water through SWP facilities to the Cross Valley Canal. KCWA then conveys the water through the Cross Valley Canal/Friant-Kern Canal Intertie for introduction into the Friant-Kern Canal. The water enters the Friant-Kern Canal as CVP water subject to Reclamation Law with no requirement for a Warren Act contract. FWA delivers the water to the Cross Valley Contractors.
 - SWP contractors provide previously banked CVP, SWP, Kern River, 215, or abandoned water as recovered groundwater to the Cross Valley Canal. KCWA then conveys the water through the Cross Valley Canal/Friant-Kern Canal Intertie for introduction into the Friant-Kern Canal. The water enters the Friant-Kern Canal as CVP water subject to Reclamation Law with no requirement for a Warren Act contract. FWA delivers the water to the Cross Valley Contractors.

- The point(s) of delivery are the Cross Valley Contractors' existing turnouts off of the Friant-Kern Canal. The exchanges may be unbalanced (up to 2:1 average exchange ratio over a 10-year period).

Exchange with Tulare Lake Basin Water Storage District

1. Reclamation allocates CVP water to the Cross Valley Contractors from the Delta.
2. Point of delivery for the Cross Valley Contractors' CVP water to Tulare Lake Basin Water Storage District (TLBWSD) is in the Delta.
3. TLBWSD conveys the Cross Valley Contractors' CVP water under Article 55 of their SWP contract to their existing turnouts off the California Aqueduct (Reclamation provides Federal power at Banks and Dos Amigo Pumping Plants).
4. TLBWSD delivers non-CVP water from Pine Flat, Kaweah or Success Reservoirs to Friant Division CVP contractors located along the same local systems. The Friant Division Contractors then deliver a like amount of Friant Division CVP water to the Cross Valley Contractors.
5. The point(s) of delivery are the Cross Valley Contractors' existing turnouts off of the Friant-Kern Canal. The exchanges may be unbalanced (up to 2:1 average exchange ratio over a 10-year period).