

24 July 2013

## **Memorandum**

To: Mr. Jeff Davis, General Manager  
San Geronio Pass Water Agency

From: Mary Lou Cotton / Lynn Takaichi

Subject: Update Evaluation of Potential Water Transfer Opportunities  
K/J 1289037\*00

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San Geronio Pass Water Agency (SGPWA) is one of 29 State Water Project (SWP) contractors, and was established by the State Legislature in 1961. Its mission is to import supplemental water and to protect and enhance local water supplies for use by present and future water users and to sell imported water to local water districts within the SGPWA service area. SGPWA is able to import supplemental water from whatever sources provide the highest quality at the lowest price, including the SWP as well as other potential sources. SGPWA also works with local water retailers and others to manage local and regional water resources in a sustainable manner, in an effort to end groundwater overdraft in the SGPWA service area. SGPWA's boundaries extend through the cities of Calimesa, Beaumont, and Banning and Riverside County areas from Cherry Valley to Cabazon.

Over the past few years SGPWA has been assessing its future water supply demands and is interested in obtaining water supplies in addition to its current State Water Project Table A Amount of 17,300 acre-feet per year (AFY). The objectives of this review and update are to provide a critical evaluation of the key assumptions and parameters that form the basis for the need for an additional water supply, and to identify potential available sellers and the issues associated with various potential supplies. A qualitative review of the administrative processes attendant to obtaining a supplemental water supply is also provided herein.

## **Background and Objectives**

The Kickoff Meeting was held via conference call on February 6, 2013. Items discussed during the meeting included growth trends and projections in the SGPWA service area, various local policy-related issues regarding growth, possible conjunctive use projects within the SGPWA service area, SWP and other local transmission facilities and capacity issues, and financing options.

Various documents have been reviewed to obtain and evaluate existing information and to develop key assumptions. These include:

- Water Supply Contract between the State of California Department of Water Resources (DWR) and SGPWA (including amendments). It should be noted that DWR and the SWP Contractors, including SGPWA, have entered into negotiations to extend the term of the Water Supply Contracts beyond the existing 2035 end date. These negotiations,

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subject to the “public participation process” of the Monterey Settlement Agreement, are ongoing as of the date of this report.

- SGPWA Act
- East Branch Extension Phase 1 – Original Capacities (Vann, 2004)
- SGPWA 2010 Urban Water Management Plan (2010)
- SGPWA Strategic Plan (2012)
- SGPWA website

SGPWA's contractual SWP Table A Amount is 17,300 AFY. Due to capacity limitations in the East Branch of the California Aqueduct, SGPWA is currently limited to maximum deliveries of 8,650 AFY. Full Table A deliveries could commence after completion of the environmental documentation and physical improvements of the next phase (Phase II) of the East Branch Extension, in approximately 2011[MLC1]. However, like all SWP contractors, SGPWA's SWP supplies are subject to the delivery reliability limitations described in the DWR State Water Project Delivery Reliability Report (2011), and are not 100 percent available in all hydrologic year types. At 2031 levels of demand by all SWP contractors, average year delivery reliability is approximately 60 percent (SGPWA allocation: 10,380 acre-feet [AF]), multiple dry year reliability is approximately 34 percent (5,882 AF) and single dry (“critical” worst-case) year reliability is approximately 11 percent (1,903 AF).

Recent analyses of forecasted “build out” demands in the SGPWA service area have assumed that SWP Table A Amount would be utilized to meet these demands. It is estimated that at service area build-out (2035[MLC2]), demand for SGPWA's imported supplies will reach approximately 34,000 to 40,000 AFY[MLC3]. Therefore, SGPWA must obtain approximately 17,000 to 23,000 AFY[MLC4] of additional imported supply. To meet the requirements of SB610 and 221, SGPWA must provide proof of water supply contracts and supply availability to local planning agencies for various developments above a certain defined size thresholds. This report discusses potential other, non-SWP supplies, which may not be subject to the reliability limitations of the SWP. Non-SWP supplies may have other limitations or restrictions that could impact their delivery reliability. This letter report also discusses potential reliability supplies and dry-year supplies.

### **Potential Long-term (Permanent) Water Supplies**

Long term supplies are defined herein as those that are suitable for new development within an agency's service area and that can serve a portion of ultimate build out demands. Such supplies may have varying levels of delivery reliability and thus may require augmentation by

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reliability programs or conjunctive use with local supplies (that is, supplies located within an agency's service area).

### **Permanent Transfer of SWP Table A Amount**

Various SWP contractors (or their member agencies) hold contractual SWP Table A Amounts in excess of their demands. Due to the high annual fixed costs of SWP Table A Amount, these agencies may wish to sell this excess to another contractor. Such Table A Amount would be subject to the SWP annual allocation and SWP delivery and reliability constraints. Potential sellers include various contractors and/or their member agencies. Potential buyers include various southern California and Bay Area water agencies, as well as real estate interests and developers, who would finance the transfer for a water agency that would subsequently serve their residential or commercial development projects.

Financial terms: the terms are variable, but recent "face value" costs range from \$1,500/AF to nearly \$6,000/AF. The buyer assumes all prospective SWP Transportation Minimum, Capital, O&M and variable power cost payments to DWR from the time the Table A sale is effective, through the life of the SWP contract (to 2035 and beyond, as negotiated). Table A Amount may be eligible for cost recovery through property taxes collected by SGPWA.

### **Long-term Purchase Agreement for San Bernardino Valley Municipal Water District (Valley District) Table A Amount**

Valley District has a contractual Table A Amount of 102,600 AFY, which is in excess of its current service area demand. The District also has a variety of local water supplies that it can use conjunctively with its Table A Amount, thus providing reliability for its service area.

Valley District would make available for long-term sale a portion of its Table A Amount, which could then be "pre-delivered" to SGPWA on an annual basis. SGPWA could recharge the water into local groundwater basin aquifers located within its service area, and would store it there in an increasing water bank account for use in later years when its demand has increased. Deliveries from Valley District would be subject to the SWP Table A Amount annual allocation and would be less than the full long-term sale amount in those years when the allocation was below a certain negotiated threshold percentage.

Financial Terms: Valley District would finance the energy, commodity and wheeling costs of the Table A Amount. Wheeling cost is set at \$48/AF (MLC5); other costs would be negotiated. SGPWA would pay for water pre-delivered in any given year, up to the negotiated maximum contract amount.

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### **Cadiz Valley Water Conservation, Recovery and Storage Project**

Operation of 12-25 groundwater wells (six already in place) located exclusively on private property owned by Cadiz that will extract 50,000 acre-feet of groundwater over a 50-year period under a groundwater extraction plan approved and enforced by the County of San Bernardino.

Water from this project would be conveyed through a 43-mile pipeline entirely buried entirely within a right-of-way owned by Arizona California Railroad (ARZC) to the Metropolitan Water District (MWD) Colorado River Aqueduct (CRA). Once in the CRA the native groundwater will be comingled with Colorado River water and exchanged by MWD for use within Southern California. Participation by SGPWA in this project would require an exchange or wheeling agreement between SGPWA and MWD so that SGPWA could take delivery of water from the CRA.

Financial Terms: \$500 AFY at the wellhead; escalation to be determined, plus \$200 AFY capital recovery (30 year amortization schedule) and \$75 AFY incremental operations and maintenance, for a total of \$775 AFY. These terms could change depending on project status; i.e., with increased participation and/or regulatory approvals, these terms could be re-negotiated.

Other Negotiable Benefits: Intentionally Created Surplus; Carry-Over Storage; Imported Water Storage. Terms TBD.

### **Nickel Water**

In 2000, the Kern County Water Agency (KCWA) and Nickel Family Farms, LLC (Nickel), executed an agreement that allowed KCWA to receive 10,000 AFY of Nickel pre-1914 Kern River water supplies in exchange for a like amount of KCWA's SWP Table A Amount, which Nickel can sell to third parties. Since it is based on a Kern River water right, this Table A Amount is 100 percent firm, that is, it is available in all hydrologic year types and is not subject to the SWP annual allocation. All 10,000 AFY has now been optioned.

The seller has an initial 35-year term, plus rights to another 35-year term, for a total of 70 years. The first term started in 2009, so four years of the initial 35-year period have passed. However, water from 2011 has been placed in storage on behalf of one buyer. According to representatives of one of the buyers, portions of the supply may be available for purchase at various terms.

Most Recent Financial Terms: The basic unit price is \$500/AF delivered at Tupman turnout in the California Aqueduct. This unit price is adjusted each year using southern California CPI or 3 percent, whichever is greater. Payment is required each year whether water is taken or not.

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Buyer can elect to pay an up-front amount to reduce or eliminate the annual water rate adjustment. This supply is joined to the term of the SWP contract (to 2035 and beyond, as negotiated).

### **Buena Vista Water Storage District (Buena Vista)/Rosedale-Rio Bravo Water Storage District (Rosedale) Water Banking and Recovery Program**

This program consists of high-flow Kern River water supplies available to Buena Vista through its pre-1914 Kern River water right. This high-flow water is stored in Kern County in the local Kern River Fan aquifer and is available for export out of Kern County to third parties, including other SWP contractors, although in most hydrologic year types the water would be delivered by exchange of Buena Vista's and Rosedale's SWP Table A Amounts through KCWA. This water supply is 100 percent firm, that is, it is available in all hydrologic year types and is not subject to the SWP annual allocation. Castaic Lake Water Agency (CLWA) has purchased the initial 11,000 AFY in the program; Buena Vista had intended to conduct CEQA analysis for an additional 9,000 AF (and potentially more) of available annual water supply.

However, recent staff changes at Buena Vista have put expansion of these projects on hold. It is anticipated that one interim program (for "a few thousand acre-feet per year") will begin CEQA analysis in the fall of 2013, with other projects following in 2014. According to staff, details of these projects will be forthcoming.

Most Recent Financial Terms: The basic unit price is \$448/AF for the entire 11,000 AF, paid annually, with an averaged ten-year "look-in" escalator tied to Southern California CPI and KCWA's SWP costs, whichever is higher. This supply is joined to the term of the SWP contract (to 2035 and beyond, as negotiated).

### **Various Central and Northern California Water Rights Holders**

Several water districts and private entities have water for sale, both on a long-term and short-term basis. Depending on water rights or contract terms, geographic location and access to infrastructure, water can be delivered directly or may require an exchange agreement.

### **Potential Reliability Supplies**

Reliability supplies are those defined as being available in certain hydrologic year types (generally dry periods) or that are available in event of outages, and that can be delivered on a relatively short-term basis to meet service area demands for an interim period. They often serve to augment the reliability of long-term supplies by providing a "backup" to supplies available in average/normal hydrologic conditions.

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### **San Bernardino Valley Municipal Water District (Valley District)**

This program would be an update to an existing program that Valley District currently has with the Metropolitan Water District of Southern California (MWDSC), executed in 2000, which allows access to Valley District's excess SWP Table A allocation in certain year types.

The agreement with MWDSC expires in 2014 and Valley District may wish to re-negotiate the terms with MWDSC and/or add new partners. Preliminary discussions with Valley District indicate that SGPWA could access approximately 5,000 AF in certain year types when excess Table A is available.

Financial Terms: TBD. The existing agreement calls for MWDSC to pay \$150/AF for the excess Table A Allocation, plus a "base year energy cost," adjusted annually. At the time of the agreement execution, energy costs were approximately \$55/AF.

### **Semitropic Water Storage District**

Several participants in the Semitropic Water Storage District (Semitropic) groundwater storage program may wish to sell all or part of their banked supplies ("shares" in the banking program). These participants include the Newhall Land and Farming Company and various SWP contractors, including Metropolitan Water District of Southern California and Santa Clara Valley Water District. These banked supplies represent either Table A Amount banked "in-lieu" by overlying pumpers within Semitropic, or previously stored groundwater supplies that were purchased in-place.

Note that since this report was first prepared in 2007, Semitropic has merged its storage programs so that all of them are able to share the storage and return capacities of the others. These include the original Semitropic groundwater storage program, the Stored Water Recovery Unit, and the Semitropic-Rosamond Water Bank Authority.

Financial Terms: Amounts of water stored and attendant costs vary based on the contribution to capital and O&M negotiated by the participants at the time they join the Semitropic program. There is also a "second priority" program that requires no capital or O&M contribution and lower up front costs and participation fees, but which also has lower delivery priority during periods in which other, higher priority participants may be taking delivery of their previously banked supplies. Participants may opt for a long-term storage account joined to the term of the SWP contract (2035 and beyond, as negotiated), or may opt for a shorter term.

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### **Semitropic Water Storage District Stored Water Recovery Unit**

Semitropic has expanded its water banking facilities through the development of the Stored Water Recovery Unit (SWRU). The SWRU has available 450,000 AF of storage capacity. Annual recovery yield of 150,000 AF can be provided through pumping stored water out of the water bank and delivering it directly to the California Aqueduct ("pumpback"). Annual recharge capacity of 50,000 AF can be provided through expansion of its existing In-Lieu Service Area ("in-lieu recharge"). Additional recharge capacity of 180,000 to 200,000 AFY is often available through the existing facilities including Semitropic's partial ownership of the Kern Water Bank.

Financial Terms: As above. The SWRU is located in an area known to contain naturally-occurring arsenic, and thus the program terms include some obligations for the costs of treatment to remove arsenic prior to introducing water into the California Aqueduct.

### **Rosedale-Rio Bravo Water Storage District**

This water banking program is located immediately adjacent to the Kern Water Bank in Kern County. Currently, the only banking partner is CLWA. This is a typical water banking program that takes delivery of surface water through canals and percolates the water into the underlying groundwater basin aquifers through bermed recharge ponds.

Most Recent Financial Terms: the terms include a lump sum of \$6 million for 200,000 AF of total storage and recovery, plus power costs if recovered water must be pumped and conveyed through the KCWA Cross Valley Canal to the California Aqueduct (instead of the usual delivery method of exchange with Rosedale's SWP Table A Amount, which requires no additional power). Annual limits of 20,000 AF on both storage and recovery capacity.

### **Irvine Ranch Water District (IRWD) Strand Ranch Project**

IRWD purchased land (the former Strand Ranch) located west of Bakersfield, to develop water banking facilities. The property is located adjacent to the Rosedale-Rio Bravo Water Storage District (RRBWSD) water banking facilities. The project augments RRBWSD program, and provides IRWD with priority rights to recharge and recovery facilities, subject to certain terms of use. Water recovered by IRWD is conveyed to the KCWA Cross Valley Canal and ultimately to IRWD via the California Aqueduct and MWD supply system via exchange agreements.

IRWD has water exchange agreements with various sources to store surplus water supplies for water banking, including Kern River floodwaters and Buena Vista Water Storage District.

IRWD funded construction of the Strand Ranch facilities and owns the facilities. RRBWSD will operate and maintain the facilities under a long term partnership agreement.

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Strand Ranch facilities occupy about 502 acres of the property and consist of 20 recharge basins, 7 recovery wells, two water supply channels, three turn-ins to the Cross Valley Canal, and about 10,000 feet of associated piping systems.

Water Banking Terms of Use (based on CEQA document): IRWD may recharge and recover up to 17,500 AFY; recharge must precede recovery. IRWD's cumulative banking allotment is 50,000 AF. IRWD can extract up to 36 cfs from the well field. The wells and pipelines are designed to provide this capacity at lower static water levels.

Approximately 1,000 acres of additional properties have been purchased and will be the subject of CEQA review as to potential facilities and operations. This potential "Stockdale Integrated Banking Project" would incorporate the Strand Ranch project and other properties in the nearby area. Initial estimates are for approximately 150,000 AFY of additional storage and 60-75 AFY of additional recovery capacity.

Financial Terms: Cost to construct the original Strand Ranch wells was about \$2.8 M. Cost to equip the wells and construct the piping systems was about \$3.3 M. Terms for partners in the program are TBD.

### **Kern Delta Water District**

The District's major partner is MWDSC and currently very little additional capacity is available to other parties. However, the District is willing to discuss options with interested parties as long as the terms are understood to allow the District to have flexibility on dry-year payback provisions. One potential partner has offered a two-for-one banking option (i.e., for every two acre-feet banked the District returns one acre-foot to the partner).

Financial Terms: TBD.

### **Other Potential Kern County Supplies**

Several other water districts in Kern County are in the process of developing water banking programs. Some have progressed to the point where they have entered into agreements with banking partners. Some may be seeking additional partners (e.g., Kern Delta Water District, North Kern Water Storage District).

In addition, certain Kern County districts have entered into (and continue to seek out) short term sales of their available unused supplies. For example, Tehachapi-Cummings County Water District has entered into a five-year agreement (through 2016) with several other Kern County districts for the use of SWP Table A Amount declared as 'surplus' by its board of directors. It may seek additional or other partners in the future.



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Financial Terms: TBD.

### **Potential Programs South of the Tehachapi Mountains**

Several entities located generally in southern California are in the process of developing water banking programs. These include Antelope Valley-East Kern Water Agency. While some of these programs are not yet operational, one factor common to all of them is their location south of Edmonston Pumping Plant. In the event of an SWP outage caused by Delta levee failure or an earthquake-related break on the main stem of the California Aqueduct, water stored in these southerly locations would be available to contractors located along the east and west branches of the Aqueduct.

Financial Terms: TBD.

### **Semitropic-Rosamond Water Bank Authority (SRWBA)**

This project contains two water banks, the Antelope Valley Water Bank and a portion of the Semitropic Water Storage District Stored Water Recovery Unit. Together these total 800,000 AF of storage capacity. The SWRBA became operational in 2011 and currently has two partners, the San Diego County Water Authority (40,000 AF) and the Rosamond Community Services District (30,000 AF).

Financial Terms: Of the total 800,000 AF available, 200,000 “shares” were offered and 16,000 have been optioned, with a remainder of 184,000 shares. Shares are priced based on water in storage plus capital, O&M costs and annual fees, as follows:

- Capital Payments (Adjusted downward 1.2% per ENR December 2009)
- Cost per unit/share: Negotiable (For 1 – 6,999)
  - \$2,078 per share (For 7,000 to 19,999 shares)
  - \$1,870 per share (For 20,000 to 49,999 shares)
  - \$1,662 per share (For 50,000 to 200,000 shares)
- Annual Payments (Adjusted 0.4% per CPI as of November 2010)
- Management Fee - \$12.85 per Share per Year
- Maintenance Fee - \$11.75 per Share per Year

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- Usage Fee (Includes mitigation of impacts on existing adjacent pumpers)
- Recharge - \$77.99 per AF when water is received for storage to either facility.
- Recovery - \$77.99 per AF plus actual energy when water is recovered from storage and conveyed to California Aqueduct from either facility.

Full terms of the rate structure are available.

### **Castaic Lake Water Agency**

As noted above, CLWA has purchased rights to 11,000 AFY of the Buena Vista/Rosedale supply. At this time, CLWA does not have demands for the full amount, and has sold a portion of it to other parties within the SWP service area on a short-term basis. In the future, the amount of water and length term of this sale would be subject to increases in CLWA's demands through time; therefore the amount available for purchase is subject to reduction through time.

Financial Terms: TBD.

### **SGPWA Local Groundwater Basin Banking Program (MLC6)**

SGPWA has already begun recharge of its Table A supplies on a small scale. An agreement with Valley District would allow SGPWA to access additional capacity in the East Branch Extension of the California Aqueduct, thus making feasible full-scale banking programs based on storage of SGPWA's Table A Amount. Table A supplies available in average and wet years could be percolated into the local Beaumont Basin and/or the Cabazon Basin and stored there for recovery by wells during dry periods when Table A allocations are reduced.

Financial Terms: TBD

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### **Article 21 Water**

This water (defined in Article 21 of the water supply contracts, formerly called “Interruptible Water”) is offered only periodically, usually in wet hydrologic year types, when excess flows are available in the Delta. It is described in the DWR State Water Project Delivery Reliability Report as a supply that can be used to augment reliability of SWP Table A Amount, if it can be delivered during the short time it is available to offset service area demands or to banking programs where it can be stored for later withdrawal during dry periods. Due to the short duration of its availability and capacity constraints at Edmonston Pumping Plant, Article 21 water is generally delivered most readily to agricultural contractors and to San Joaquin Valley banking programs.

Financial Terms: The basic rate is the current SWP variable power rate (no SWP fixed costs are assessed).

### **Potential Dry-year Water Supplies**

In general, dry year supplies are those that are purchased on a short-term basis for delivery during dry periods only. They tend to be provided to the competitive open water market from areas of origin in northern California. They are usually contracted on a year to year basis as an “option,” but it is becoming more common for export area water agencies to contract for them for longer terms in anticipation of dry periods, thus utilizing them in a manner similar to “insurance.”

### **Western Canal Water District**

Western Canal Water District has developed a dry year water purchase program, based on Sacramento River water rights and in-district groundwater supplies. Palmdale Water District (Palmdale) is currently the only participant, for 7,500 AFY for a ten-year term (total 75,000 AF). The water is paid for every year and can be called upon in any year, but Palmdale does not have to take delivery every year. There are carriage losses once the water travels down the Sacramento River to the SWP pumping plant in the Delta (where it will be pumped into the California Aqueduct), so the total amount delivered to Palmdale at its turnout on the East Branch will be less than 7,500 AF.

Financial Terms: The basic unit price is \$135/AF each year (\$10,125,000 for the ten-year term).

### **State Water Contractors Dry-year Water Purchase Program (“Dry Year Water Transfer Program”)**

This program has historically operated only in years when the SWP allocation is below 50 percent, or when a potentially dry hydrologic season is combined with expected low SWP

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carryover storage; it thus provides a contingency supplemental water supply. The Dry-Year Water Transfer Program enables willing buyers (State Water Project contractors) with options (contracts) to buy water, if such hydrologic conditions exist, from willing sellers within the northern Sacramento Valley region. One basic tenet of the program is that all buyers participate as a "group" buyer with all sellers, and all quantities made available by various sellers are proportioned in relation to the buyer's initial requested quantity. If an individual buyer decides to reduce or terminate their initial optioned amount during the course of the program, their quantity of optioned water is offered to the remaining buyers, also in proportioned amounts.

Most Recent Financial Terms (2008): Initial sign-up deposits of \$10/AF were collected with the execution of a participation agreement. An additional \$5/AF was deposited to and held by the SWC to cover administrative costs for operations and for 50 percent of the sellers' incurred regulatory documentation costs, with the condition that any unused portions of the administrative cost would be refunded to the buyer at the end of the Dry-year Program. The remaining \$10/AF of the deposit would be paid to the seller as an option payment within 30 days of signing a buyer-seller agreement. The \$10/AF option payment would guarantee the requested quantity of water would be available for a "call" on April 1 for a total price of \$200/AF (including the \$10 option). Individual Agreements were established with each of the sellers and were signed by each of the buyers.

### **SWP Turnback Pools**

The SWP water supply contracts contain provisions wherein contractors with excess Table A Amount in a given hydrologic year may sell that excess to other contractors via the mechanism of "Turnback Pools." This provision is available in all year types, but is most in demand during dry periods, when Table A allocations are low and almost all contractors are seeking additional supplies. Of course, in those year types, less water is made available to the Turnback Pools.

The program is administered by DWR and requires selling and buying contractors to adhere to a specific schedule by which options to water must be exercised. The total amount of water placed into the pools by the selling contractors is allocated to the participating buying contractors based on their contractual Table A Amounts.

Most Recent Known Financial Terms (2012): the water supply contract provides for Turnback Pools in a given water year. Pool "A," which must be purchased by March 1, is priced at 50 percent of the current SWP Delta water rate and the later Pool "B", which must be purchased by April 1, is priced at 25 percent of the current Delta water rate. In 2012, the Delta water rate was approximately \$46/AF.

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### **State Water Project Contractors/DWR Multi-year Pool (MYP)**

A new program, the DWR Multi-Year Pool (MYP) has been proposed by the SWP Contractors and initiated by DWR to improve management of limited SWP Table A supplies. The initial term of a demonstration MYP will be two years, to distinguish it from the Turnback Pool and to not conflict with SWP Water Supply Contract terms. At the end of this two-year term, DWR and the SWP contractors could determine whether to initiate subsequent MYPs of two or more years.

The MYP's key attributes are ensuring that all SWP contractors can: (1) market a portion of their Table A supplies via the MYP at prices exceeding Turnback Pool prices; and (2) have access to MYP supplies. The MYP would operate independent of the Turnback Pool, which would continue to facilitate one-year sales of allocated Table A supplies.

Financial Terms: Compensation is tied to the June 1 SWP allocation with compensation increasing as the SWP allocation decreases (varying prices at 5% allocation levels). If the June 1 SWP allocation is  $\leq 35$  percent, participating SWP contractors would negotiate prices based on a program schedule to be determined. Prices for the demonstration program range from \$25/AF at high allocation levels (96-100 percent) to \$253/AF at 31-35 percent allocations.

### **Various Central and Northern California Water Rights Holders**

Several water districts and private entities have water for sale, both on a long-term and short-term basis. Depending on water rights or contract terms, geographic location and access to infrastructure, water can be delivered directly or may require an exchange agreement. Recent examples of these transactions, which have been conducted on a direct seller to buyer basis (i.e., outside of the SWC Dry year program), have had the following terms:

A water district member agency within the Yuba County Water Agency (but that is not part of the Yuba Accord) has indicated interest in selling groundwater substitution water. Quantity would be between 6,000 and 12,000 AF (dependent on how many local groundwater pumpers sign-up and when the program is started).

Financial Terms: approximately \$160/AF.

Another north-of-delta water district has expressed interest in selling 5,000 to 10,000 AF of transfer water to SWP contractors. The source is also essentially a groundwater substitution.

Financial Terms: the requested price would be at least the price of Yuba Accord C4 groundwater; approximately \$190/AF in 2013.

It should be noted that the major issue with these supplies (and all other north-of-Delta supplies) is the very limited capacity to export the water from the Delta within the reduced timeframe for

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transfers (July and September); however, agreements could include terms for water deliveries to be "cut off" with three days' notice if capacity prohibits export.

### **Potential Water Transfer Issues**

There are issues associated with all of the potential supplies described above. These issues can be categorized as follows:

#### **Capacity and Delivery Priority in the California Aqueduct and Other SWP Facilities**

SWP contractors, via their water supply contracts with DWR, are allocated specified shares of "reach repayment" capacity in various reaches of the SWP system, starting at Banks Pumping Plant in the Delta and proceeding through the main stem of the Aqueduct and the Aqueduct branches to each contractor's delivery turnout(s). This share of capacity pertains to SWP supplies only, and provides each contractor with delivery priority for its SWP supplies. The water supply contracts also provide for the delivery of non-SWP supplies through the SWP system, provided that other contractors are not coincidentally utilizing all available capacity; these non-SWP supplies are delivered at a lower priority than SWP supplies.

Reach repayment capacity is often less than the actual constructed physical capacity of SWP facilities. Depending on location within the SWP system, some areas have ample capacity to move both full SWP Table A Amounts (including all of Metropolitan Water District's Table A Amount plus other contractors full Table A Amounts) plus other non-SWP supplies. Other points in the system, notably the Edmonston Pumping Plant and the East Branch, have considerable physical capacity limitations.

In addition, recent regulatory constraints on SWP pumping from Banks Pumping Plant in the Delta to protect fish species have limited the ability to move non-project water from north of the Delta into San Luis Reservoir. There is now very limited capacity to export the water from the Delta within the restricted timeframe for transfers to take place (July and September). Any other SWP contractors engaging in transfers from northern California are attempting to move water within this window of time. This has complicated the sharing of capacity among contractors.

Therefore, SGPWA will need to evaluate the delivery reliability of the various supplies described herein vs. SWP capacity limits and non-SWP delivery priorities. For example, SWP Table A Amount obtained by a permanent transfer from another contractor would provide delivery capacity to SGPWA through the original delivery reaches of that Table A Amount (usually through the service area boundary or to a turnout of the seller), and could be moved with highest priority through SGPWA's reach repayment capacity and any other available capacity, from that point on to SGPWA's turnouts(s). However, SWP Table A Amount will not be

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100 percent available in all hydrologic year types. A non-SWP supply, such as Buena Vista or north-of-Delta water, would be introduced into the delivery system at a certain point along the SWP and then moved in whatever capacity might be available to SGPWA at that time (and this capacity could vary with time), and at a lower priority than other contractors' SWP supplies (that is, other contractors' SWP supplies would be delivered prior to SGPWA's non-SWP supplies). In certain high-demand year types, this could force SGPWA to accept deliveries at non-ideal times (such as off-peak demand periods), or to lose delivery time altogether.

It is generally accepted among the SWP contractors that, based on future demand forecasts for all contractors, wet years (which tend to lower service area demands), will result in ample capacity in the southerly reaches of the SWP system, even though Table A allocations are high (i.e., not all water will be needed in the contractors' service areas, and much of it will be banked in other locations or sold into the SWP Turnback Pools). Dry years (which tend to cause higher service area demands), will cause capacity constraints as southern contractors take water from the various banking programs in the San Joaquin Valley or from various dry year supply programs and attempt to deliver them within the same window of time (i.e., peak demand periods), even though Table A allocations are low. It is also generally accepted that all contractors in a given repayment reach will work cooperatively with DWR and each other to attempt delivery of all requested supplies, whether SWP or non-SWP. As additional contractors obtain additional supplies through time, this cooperative arrangement will be tested.

SGPWA faces additional capacity constraints due to its location near the terminus of the East Branch and its existing limited capacity in SBVMWD's Foothill Pipeline. The East Branch Extension Phase II project will considerably augment SGPWA's ability to take delivery of imported supplies by increasing its delivery capacity in all reaches of the East Branch system. If additional capacity is required in the future, it might be obtained through an agreement with SBVMWD for use of some of its unused capacity.

## **Potential Litigation**

Several SWP urban contractors in recent years have faced considerable opposition, and in some cases litigation, to their acquisition of additional water supplies, due to the perception that availability of reliable water supplies fosters urban growth. SGPWA is located in a high-growth area where local stakeholders have expressed concerns about rates of development, so may face challenges to its efforts to improve water supply reliability in its service area in response to growth trends.

A common means of challenging water supply reliability projects is via the California Environmental Quality Act (CEQA). Since most water supply projects will require CEQA coverage to assess various potential impacts, a CEQA document, often an Environmental Impact Report, must be produced by the project proponent (in this case, the proponent/lead

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agency would be SGPWA). CEQA litigation usually centers on whether this assessment of impacts is “adequate,” particularly in regard to growth-inducing impacts and whether the new supply (or increased supply reliability) may foster growth.

Legislation has attempted to address the issues of growth (land use) and water supply and requires city and county land use planning agencies to coordinate with water suppliers when considering approval of certain new developments. Two laws, SB 610 and SB 221, require planning agencies to obtain confirmation of water supply availability and reliability from the water agencies that will supply the proposed developments. Confirmation consists of description, called a Water Supply Assessment (SB 610) or a Written Verification (SB 221), based on the water suppliers’ most recent Urban Water Management Plans, of all water supplies and reliability programs that will be utilized to serve the development through build out, plus the contracts and agreements that support the water supplies. The governing board of the water supplier must approve the documents prior to submittal to the planning agency. Litigation has occurred regarding disagreement with the facts as presented in the description.

### **Costs and Financing**

All the supplies described herein are expensive and will require large capital outlays, on the order of millions of dollars. Depending on the various methods of financing available to SGPWA, certain supplies may be more attractive or affordable than others based on economic analysis.

To finance the water acquisition or transfer cost, water agencies can and have utilized a variety of financing vehicles. Among the most common are:

- Connection Fees
- Property tax levies (particularly for SWP costs)
- Water rates
- Developer agreements
- Community facility district levies

A revenue program for SGPWA should be developed in conjunction with the acquisition of each new supply.



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### **Overview of the Administrative Processes Related to Water Transfers**

Several steps are required to complete a water sale, transfer, exchange or banking program, particularly since the California Aqueduct is generally the conveyance facility used for such transactions. Use of the Aqueduct triggers certain requirements and approvals by DWR. Generalized steps to complete a transaction are as follows:

1. Negotiate non-binding terms between buyer and seller. In some cases the buyer and seller will also negotiate an agreement to ensure the “exclusive right to negotiate.” This may involve a monetary deposit or other security. SGPWA’s legal counsel can advise the most secure means of entering into and conducting negotiations.
2. Inform DWR State Water Project Analysis Office (SWPAO) that the transaction will be taking place within the calendar year (or other estimated time frame; SWPAO usually needs several months to complete drafting, review and execution of documents). Assist SWPAO staff in completing a “Contractor Information Form” describing the transaction. Determine what type of DWR documentation will be required; a permanent transfer of Table A Amount will require a contract amendment and other actions pursuant to the Monterey Settlement Agreement. Other transfers may require a Point of Delivery Agreement or an Exchange Agreement (Article 55 of the Water Supply Contract, for non-SWP supplies). These documents can involve one or more SWP contractors or their member agencies.

If the transfer is a permanent transfer of Table A Amount, the Monterey Settlement Agreement requires a “public participation process” for the negotiations regarding the transfer (to date, this process has been conducted for two Table A transfers and the requirement was accomplished by means of a public session held in Sacramento). The public process must be scheduled to coordinate with the CEQA process. Information about this process is located in Notice to SWP Contractors 03-09, “Guidelines for Review of Proposed Permanent Transfers of SWP Annual Table A Amounts.”

3. Buyer initiates CEQA process based on the terms of the transaction. Most water transfers will require an Environmental Impact Report due to the need to assess growth-inducing impacts. DWR will be a responsible agency and will not complete the transaction until CEQA is complete. The seller must also have documented compliance with CEQA, preferably prior to the seller’s compliance.
4. As CEQA process continues, buyer and seller negotiate the final form of the purchase agreement.
5. Obtain approval in concept from the State Water Contractors (SWC) Water Transfers Committee (Committee). This can usually be done by conference call, although certain

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complicated transactions may require a Committee meeting. After the Committee has approved the transaction, it will recommend support of the transaction to the SWC Board. With Board approval, the SWC General Manager then sends a support letter to the DWR Director which is routed to SWPAO. SWPAO was recently given authority to approve certain transactions without DWR upper management review and approval; these include common landowner transfers, Point of Delivery agreements (usually related to water banking agreements), turnout/turn-in agreements, and certain other categories of exchanges and transfers. All other transactions, including contract amendments, must be reviewed and approved by DWR upper management, including DWR Legal.

6. Finalize CEQA (certify Final EIR). Notify SWPAO of CEQA Notice of Determination (NOD). SWPAO will also file an NOD on behalf of DWR for the transaction. SGPWA should confer with legal counsel as to the board action required to certify the EIR and to authorize the execution of all subsequent agreements to complete the transaction.
7. A close-to-final draft of the purchase agreement between the buyer and seller is sent to SWPAO for incorporation of its terms into the DWR documentation (contract amendment, Point of Delivery Agreement or Exchange Agreement).
8. SWPAO will produce a draft document for all SWP contractor parties to review. If the document is a contract amendment, substantial time may be required for SWPAO to draft the amendment and get necessary review and approvals from DWR Legal prior to review by the parties.
9. When document is finalized, DWR will send copies to the appropriate SWP contractor(s) for execution. All documents are signed in sequence by each party. Once all parties have signed and the documents are returned to DWR, the appropriate management level at DWR will execute the agreement and each party will receive one original for their files. Because this step can involve substantial time, SWPAO will sometimes allow the specific water transaction to be initiated prior to finalization of documents (for example, delivery of water to a banking program in advance of the Point of Delivery agreement being executed).

## **Conclusions and Recommendations**

### **Conclusions**

1. Various types of water supplies are available statewide, including long-term supplies, dry-year supplies, and reliability supplies.

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2. There are various methods available to finance the acquisition of such supplies, depending on the legal authorities and financial policies of SGPWA.
3. Water banking opportunities could occur either external or internal to the SGWPA service area, or both, and are dependent on the timing of SGPWA's service area demands and financing vehicles.

## **Recommendations**

1. SGPWA should evaluate what types of water supplies would be most appropriate in its "portfolio," based on the various available options described in this report.
2. The analysis ought to consider the progression through time of SGPWA's SWP demands and conveyance system capacity.
3. SGPWA should consider developing a Water Supply Master Plan and Environmental Impact Report to more closely analyze supply and financing options and facilitate future transactions.